

## Ability, Science, and Ethics

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Research into “ability” has been pervaded by a deep schizophrenia, nowhere more conspicuous than in my own work.

On the one hand, our research into “intelligence” has yielded more and more evidence showing that its two main components – the ability to make meaning out of confusion (“eductive” ability) and the ability to reproduce information – are as “real” and measurable as hardness or the ability to make high jumps<sup>1</sup>.

On the other hand, our research in homes, schools, and workplaces<sup>2</sup> has increasingly underlined the importance of a wide range of other abilities and, even more strikingly, of the need to think of “intelligence” as an emergent property of groups composed of people with very different talents or abilities rather than as an individual ability. (The analogy is with the way in which copper sulphate has emergent properties not possessed by copper, sulphur, and oxygen in isolation.)

It turns out that teachers’ failure to nurture these other talents must not only be regarded as a sign of gross incompetence (because the word “education” comes from the Latin root “educere”, which means “to draw out”) but also highly unethical. There are two reasons for this. First, it means that most children are unable to develop and get recognition for their talents. Second, even more seriously, because the talents schools fail to nurture are the very talents pupils will require to transform our society in such a way that our species and the planet as we know it will have a chance of survival, failure to develop and recognise these talents can only be viewed as destructive of the long term future.

This situation has developed because teachers and educational researchers have (a) failed to develop appropriate frameworks for thinking about multiple talents and how they are to be nurtured and assessed, and (b) failed to study the *sociological* forces that create a demand for a “single-factor” concept of ability. This legitimises a divided society which in turn compels most people to undertake endless unethical activities in order to avoid the degradations heaped upon those who are deemed to lack “ability”.

In short, *teachers* are lacking in the very competencies that it is most important for them to help their pupils to develop.

It is not as if attention has not previously been drawn to this situation. For example, almost a century ago, Spearman, the “father” of *g* wrote:

“Every normal man, woman, and child is a genius at something. The problem is to identify at what. This cannot be done with any of the psychometric techniques in current use”. He went on to say that the *g* for which he is famous had emerged from the correlations between tests which, in reality, had no place in “educational” institutions because they assessed neither the idiosyncratic knowledge of each pupil nor the specific talents of each child that it was the responsibility of the educational system to nurture.

It is therefore necessary to explore the reasons why this situation has persisted, even worsened, over the years.

Studying this question yields remarkable insights into the nature of competence and the kinds of behaviour that people need to engage in if they wish to be ethical.

What emerges is that, if people are to do the things they need to do, they need to be able to understand and intervene in the hidden social systems processes which overwhelmingly determine not only their own behaviour but also what happens in society.

Such a statement may be acceptable at one level. But let us note one of its deeper implications: It implies that behaviour is not primarily determined by the attitudes, values, and abilities on which psychologists and educators have, in the past, tended to focus, but by external forces that act upon them.

Let me conclude by asking a rhetorical question: Where would biologists have got to if they had tried to summarise all the variance between plants or animals in terms of 1, 2, or 16 variables (the analogies being a single factor model of ability, a 2 factor model, and the sixteen scales of the 16PF), the variance in their environments in terms of 10 variables, and then to study the effects of the environment on the animals via multiple regression studies?

Clearly, our model is wrong. To think about individual differences effectively, we need to develop a *descriptive framework* akin to a biological classification. Then we need to study at the way people and their environments interact in the way in which ecologists study the interactions between animals and their habitats.

### Notes

1. See eg Raven, J. , Prieler, J, & Benesch. M. (2005).
2. See the other references cited below. Both Raven, J., Johnstone, J., & Varley, T. (1985) and Raven, J., & Stephenson, J. (Eds.) (2001) describe the processes used by some teachers to nurture high level competencies but *Competence in the Learning Society* also summarises (a) studies of competencies required in the workplace and society, (b) ways in which these competencies can be assessed, and (c) the barriers which have in the past prevented most teachers nurturing these qualities and the steps needed to overcome them.

## References

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