

# Diving in where angels fear to tread: Pre-requisites to evidence-based interventions

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*The need to find ways of ameliorating a number of what seemed to be gross abuses of 'science', logic, and authority in relation to educational policy emerged as a priority whilst revisiting writings on early childhood and elementary education. In the current paper, it is argued that many of these abuses stem from the uncritical acceptance of reductionist science on the one hand and authoritarian, single-factor, attempts to remediate social problems on the other. Two questions then present themselves: 'What are the social forces which have led to this situation?' And 'How could we, as the British Psychological Society, and the Education Section in particular, intervene in this network of social forces?' The primary aim of this paper is to provoke a quest for answers to these questions.*

**Keywords:** *educational evaluation; evidence-based policy; systems thinking; reductionist science; manualisation; professionalism; competence; authoritarianism; research funding.*

## **PART I: PURPOSE AND BACKGROUND**

**T**HE PURPOSE OF THIS short article is not so much to promote recognition of the serious scientific and logical errors embedded in much policy-related research as to promote a discussion of steps the BPS should take to rectify the situation.

A brief characterisation of the situation is that Gaia herself, psychology in general, and the educational system in particular, are being destroyed by the combined operation of reductionist science and Campbell's law.

Reductionist science leads scientists to neglect most of the variables and issues that ought to be considered, to fail to study the processes which lie behind (and thus influence the interpretation of) correlations, and, in particular, to fail to study recursive systems processes.

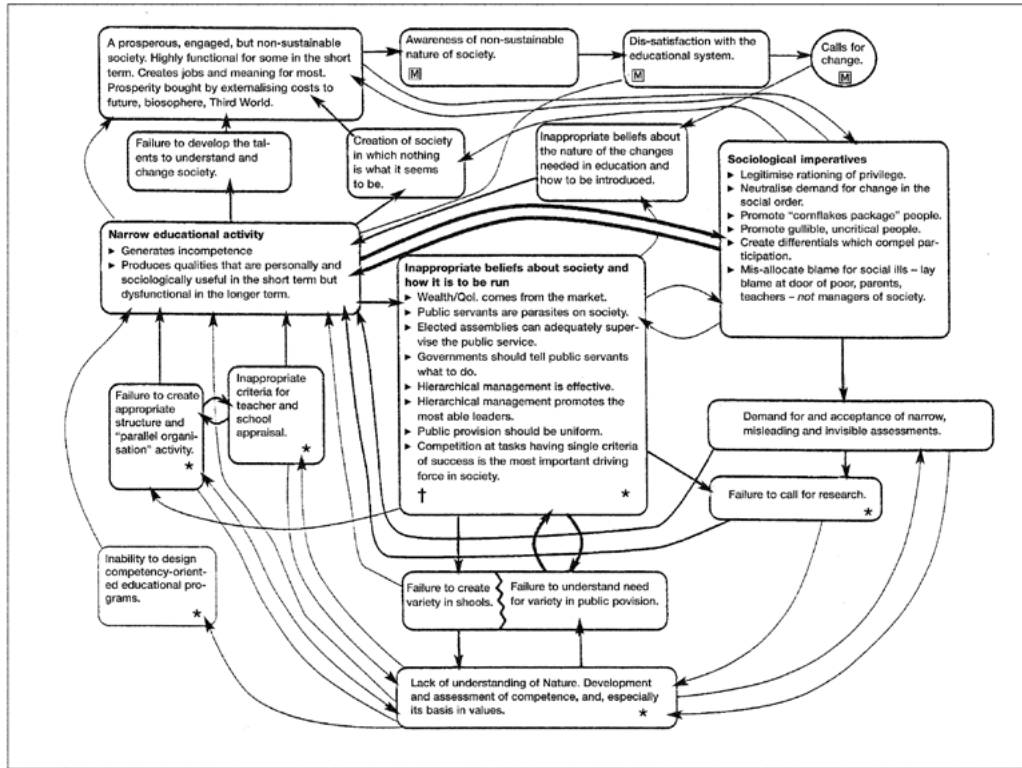
Campbell's (1979) law asserts that

*The introduction of any quantitative measure, or standard, into the evaluation of any activity has the effect, not only of leading those concerned to focus only on gaining high scores on those measures by whatever (underhand) means possible and to neglect the main goals of the system, but to the corruption of the very measures themselves.*

A combination of the two leads to misleading conclusions which are then used to support destructive social policies through an authoritarian (fascist) process which itself merits serious study.

To illustrate: Thousands of researchers have studied the correlations between aspects of parental and child behaviour, concluded that the first causes the second, and encour-

Figure 1 Feedback loops driving down quality of education (reproduced from Raven, 1994).



\*Intervention in these cells would help change the nature of the qualities nurtured and rewarded in the system. Motives which could be harnessed to do this are marked M.

†These need to be replaced by acceptance of the need to make managed economies work – to find way of giving effect to information concerning the public long-term interest, the need to explicitly create variety and information on the personal and social consequences of the options, and to find ways of holding public servants accountable for, and getting them to at it, in the long-term public interest. This means systematic, broadly based, evaluation and participative democracy.

aged administrators to impose extensive authoritarian and intrusive home-intervention programmes<sup>1</sup> to ensure that parents comply with government directives.

Few noted that it was not just that parents influenced their children. The children also provoked parental reaction, thus setting up a recursive cycle.

Still fewer (but for one example see Scarr & McCartney, 1983) suggested that children selected themselves into, and created, environments which in turn amplified their pre-existing predispositions. It was not that the environments had *no* effect but that

those aspects of the environment that did have an effect were somehow ‘chosen’ by the children!<sup>2</sup>

The methodological problems such observations pose for the study of person-environment interactions, indeed for the very distinction between person and environment, are immediately obvious. So, too, are the implications for a swathe of authoritarian intervention programmes designed to ‘remediate’ parental child rearing behaviour.

So what are the social forces that have led psychologists and educational researchers, indeed ‘scientists’ in general, to engage in

<sup>1</sup> For an example see the Scottish Government’s (2014) ‘named persons’ scheme.

<sup>2</sup> Such errors are not limited to psychology but pervade others, such as in biology’s neglect of the ways in which networks of organisms create habitats pervaded by symbiotic interactions and these emergent habitats interact with further emergent habitats to create aspects of Gaia having still wider systems properties.

behaviour which is so effectively undoing the work of the angels, manifested as Gaia herself?

As far as the 'educational' system is concerned, some of these are illustrated in the causal loop diagram (better termed systemogram) Figure 1.

If we start at the box labelled 'Narrow educational activity' in the left hand column and follow round the triangular feedback loop in the top left hand corner we see that processes associated with the narrow, knowledge-oriented, activities which dominate schools not only legitimise, and contribute to, a hierarchical, divided, society but generally fail to nurture the talents that would be required<sup>3</sup> to introduce the changes that are pre-requisites to the survival of our species.

Awareness of the inequities that result leads to outrage and calls for change.

Given the limited diffusion of an understanding of the nature of more appropriate educational arrangements<sup>4</sup> among parents, teachers, educationalists, administrators, and politicians this leads to calls for 'higher standards' and more testing.

Supported by psychologists, politicians and administrators then dive in with poorly-thought-through 'fix-it' programmes involving administrative reorganisations, more 'remedial education', tighter curriculum specification, more centralised, manual-based, micro-management of teachers, and endless intrusions into people's lives, homes, and communities.

This process is supported by a kind of resigned acceptance of hierarchical centralised government arrangements (characterised as networks of 'committees of ignoramuses' by such people as Adam Smith and John Stuart Mill) in which it is accepted that politicians should tell public servants what to do and that those servants should then follow these instructions without question.

This, of course, worsens the situation in

schools and thus fuels the cycle: *More* testing and *more* years of what is, for at least a third of the pupils (Andersson, 2001; Raven, 1994), actually destructive activity – and so on.

**BUT** haven't we missed something in focussing on this cycle? Schools, as can be seen by reflecting on the derivation of the term 'education'<sup>5</sup>, are hardly at all concerned with *education* – i.e. 'drawing out' the diverse talents of the pupils. Instead, via a pervasive, but rarely commented-upon<sup>6</sup>, social process which regularly corrupts well-intentioned social action into its opposite, schools occupy themselves contributing to, and legitimising, a divided, hierarchical, society.

These two processes – the arrangements we have made about governance and our enthrallment with hierarchy – contribute to a recursive network of social forces which reinforce psychologists' preoccupation with single-factor measures of 'ability', their disinclination to find ways of indexing the wide range of talents people possess, to teachers' failure to experiment with alternative educational processes, and to researchers' failure to contribute evaluations of educational effectiveness which would reveal the gross deficiencies in the current system.

Unfortunately, these are not the only processes at work. The sensed injustice of the system and the felt need for some kind of 'equality' shows up as a reluctance to provide choice and variety in public provision, whether in health care, housing, or education.

Collectively, these processes constitute a self-perpetuating system which not only negates efforts to introduce change but also reproduces and extends itself.

Clearly, there is a fundamental need to find ways of intervening in this system.

Recognition of this need typically leads to suggestions for more centralised, single-variable, intervention. Unfortunately, as Forrester's (1971/1995) law emphasises,

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<sup>3</sup> For a discussion of these see Raven (2014a).

<sup>4</sup> Such as those discussed in Raven (1994).

<sup>5</sup> The word 'education' comes from the Latin *educare*, which means 'to draw out'.

<sup>6</sup> However, see Raven (1997, 2019a).

*single factor intervention in poorly understood systems always has unanticipated, and usually counterproductive, effects.*

In place of single-factor system-wide interventions we need multiple systems-oriented interventions.

There is one more fundamentally important point to draw out of this discussion.

One of the things to be learned from our systemogram is that human behaviour is primarily determined by the operation of the systems in which we live and work and not by individual talents, abilities, or opinions.

An immediate implication of this is that there is little to be gained from shouting at teachers or politicians because their behaviour is primarily determined by the system.

More basically, it means that, if we are to move forward, *it will be necessary to largely turn psychology inside out* in the sense in which Newton turned physics inside out.

Before Newton, if objects moved or changed direction, it was because of their *internal* properties; they were *animated*. After Newton it was mainly because they were acted upon by a network of invisible *external* forces which could nevertheless be mapped, measured, and harnessed. If objects – birds, animals, people – were to enact their internal desires, they had, above all, to find ways of harnessing those forces.

We need an analogous transformation in psychological thinking.

But, to come back to earth, I will, in Part II of this article, discuss a few<sup>7</sup> of the gross errors in research which I encountered as I revisited an earlier debate relating to ‘closing the gap’ between the performance of more and less ‘advantaged’ pupils<sup>8</sup>. In Part III I will examine some of the processes that have contributed to the current situation. And, in Part IV, discuss some steps which the BPS might take to remedy the situation.

## **PART II: SOME PROBLEMS ARISING FROM REDUCTIONIST SCIENCE, NEGLECT OF SYSTEMS PROCESSES, AND NEGLECT OF PROFESSIONALISM**

### ***1. Most ‘evaluators’ of educational policy, like many others working within the reductionist science paradigm, offer single-variable (rather than comprehensive) evaluations of the policies under investigation.***

To illustrate, let us consider the widespread failure to include measures of progress toward, or away from, the *main* goals of education when generating what are presented as evaluations of educational policy.

The thousands of evaluations of educational policy which were brought together in Hattie’s (2009) meta-analysis of 800 meta-analyses of ‘what works in education’ include few in which attempts were made to assess the relative merits and demerits of the programmes that were studied from the point of view of recognising and nurturing the huge range of diverse talents pupils possess... this, despite the facts that: (i) as we have seen, nurturing such talents is widely believed to be the main goal of the system and is in fact implied by the term ‘education’ itself and; (ii) those diverse talents are crucial to creating the climates of innovation on which our future as a species depends.

Thus there is, in most of these studies, no way in which in which teachers and schools which do achieve the wider goals of education can get credit for their achievements and little likelihood that the benefits of such programmes will figure in the discussions of policy options which follow publication of these reports.

Worse, by not reporting on these things, these evaluations: (i) render these wider outcomes essentially invisible; (ii) actively *discredit* those educational programmes which do nurture them by, in effect, deni-

<sup>7</sup> Selected from longer lists in Raven (2019a).

<sup>8</sup> For an accessible publication on the outcome of this activity see Raven (2018b).

grating the requisite activities as distractions; and (iii) fail to reveal that, as previously mentioned, about one third of pupils are seriously damaged by the current system.

The wider consequences are horrific. Besides contributing to the process whereby the educational system fails to nurture the talents so badly needed by society, they reinforce the tendency of the 'educational' system to concentrate on *teaching* (putting in) instead of *educating* (drawing out the diverse talent of the pupils) and, in this way, contribute enormously to the process whereby the system's sociological function of legitimising hierarchy and a divided society comes to dominate over its educational function. The process amounts to more than a simple illustration of Campbell's law and it behoves us to consider the reasons for this.

One contributory factor is that *there are no accepted 'measures' of the huge range of talents pupils have the capacity to develop.*

Asking why, despite the fact that this problem was noted by Spearman (e.g. 1927) more than a century ago, this should continue to be the case raises more questions about the workings of the network of social forces driving education out of schools depicted in the systemogram discussed earlier than can be pursued here.

But one specific observation is that resolution of the problem would require a paradigm shift in the way in which 'measurement' is understood by most psychologists.

It would be necessary to develop a *descriptive* framework, akin to that used in the biological classification of plants and animals, to record pupils' diverse talents and to develop an ecological framework grounded in such things as symbiosis to discuss their nurturance and functioning<sup>9</sup>.

But, hear this:

One of the results of the absence of appropriate measures is that *the, seemingly laudable,*

*requirement that 'only reliable and valid measures shall be used in programme evaluation'<sup>10</sup> results in evaluations which are anything but scientific or objective.*

It follows that one has to ask loudly and clearly '***on what basis can the thousands of studies of 'school effectiveness' which contributed to Hattie's meta-analysis claim to be offering 'objective' evaluations of educational policy and school effectiveness?***'

Yet objectivity is widely considered to be the hallmark of science.

### *Comprehensive evaluation*

In practical terms, one thing we see here is a *failure to mount comprehensive evaluations of the activities under review.*

Comprehensive evaluation would require that an attempt be made to document ***all*** the:

- Personal and social;
- Short and long term;
- Intended and unintended;
- Desired and desirable; and
- Undesired and undesirable effects of the activity.

What is good for some of the individuals involved may be bad for others; what is good for the individuals may be bad for society; what is good in the short term may be bad in the long term, what is good for human beings may be bad for the planet.

Undesired and undesirable outcomes may outweigh desired and desirable ones.

So another base-line conclusion to be drawn out of this discussion it is that:

*The quality of an evaluation is to be judged more in terms of its **comprehensiveness** – i.e. the extent to which it yields a rough fix on **all** important inputs and outcomes – than in terms of the accuracy of its assessments of any one variable.*

<sup>9</sup> I have outlined such a framework more fully in Raven (1984a/1997, 1994, 1995, 2018a, 2019a).

<sup>10</sup> Standards for evaluations of educational programs, projects and materials (Stufflebeam, 1981). See also Raven (1984b) for other limitations of those standards.

The widespread failure<sup>11</sup> to even attempt such evaluations stems, at least in part, from an attachment to the notion that science is best progressed – even primarily about – studying the relationship between one experimental and one dependent variable at a time in order to establish causal relationships.

Unfortunately, this basic assumption results in conclusions which are often seriously misleading, unscientific, and dangerous.

Just how dangerous such studies are may be underlined by reference to agricultural research. Endless studies have been conducted to assess the relative benefits of various pesticides and fertilisers from the point of view of increasing crop yields (Shiva, 1998).

What these studies generally fail to do is to reveal their effects on such things as:

- The future fertility of the soil;
- The effects via the food chain on a wide range of species (including ourselves); and
- The diversity of species living in complex symbiotic relationships with human beings.

I would go so far as to argue that, cumulatively across all aspects of ‘science’, such studies *constitute the greatest threat to Gaia that has ever existed...* worse than the destruction inflicted by largest meteorite.<sup>12</sup>

Had the studies, and the policy discussions associated with them, been more comprehensive, the outcomes of the activities concerned would have been viewed as unconscionable. Many would claim that these oversights merely reflect failure to behave ethically, for example, failure to consider the long term effects of one’s actions and take appropriate action.

*My own claim is that they stem from the application of a distorted form of science in which one*

*is encouraged to study the relationship between one independent and one dependent variable at a time and neglect the many other, mainly systemic, processes involved.*

The wisdom of ‘the enlightenment’ has been mysteriously corrupted into its opposite.

## ***2. The researchers regularly draw illogical conclusions from correlations.***

*Example 1: If everyone gets more education, everyone will get jobs*

This is based on the observed correlation between educational attainment and whether or not people get jobs.

The illogical nature of the conclusion – essentially that if everyone gets more education everyone will get jobs – stems from failure to recognise that both are norm-referenced variables.

If one person’s scores/attainments go up another’s must go down. Unless the structure of society changes, if one person gets a job another does not.

The relationship persists even if everyone gets more education.

Unfortunately, the implications of the misinterpretation are more than serious.

One immediate consequence is that everyone has to run harder to stay in the same place.

More generally, expressed as a belief that it is ‘vital to get those test scores up’, as Berliner (2011) and others have shown, it results in:

- Horrendous narrowing of the curriculum;
- Consignment of many to punitive remedial programmes which deprive the pupils of leisure and opportunities to develop their other talents;
- The introduction of armies of inspectors with extraordinary powers to intervene in homes and schools and punish pupils,

<sup>11</sup> But see Flanagan (1976) and Goodlad (1983) for exceptions, noting the dates of publication.

<sup>12</sup> Among other things, the overall effect of studies which fail to report outcomes like those just mentioned has been to justify and facilitate the mining and release of the CO<sub>2</sub> which had been salted away to facilitate the evolution of life and the plunder of the planet’s resources in such a way as to result in the destruction of the soils, seas, and atmosphere, that is to say, our habitat.

- parents, teachers and head teachers alike;
- Academic Olympics within and between schools and countries – Olympics which result in such things as
    - Invention of ways of excluding low ability students from testing programmes as schools seek high ratings;
    - Geographical migration of parents;
    - Cheating on tests; and
    - Falsification of statistics by head teachers, bureaucrats and politicians.

Because of the norm-referenced nature of these tests, these Olympics necessarily have few winners but millions of losers.

*The process is best described and understood as the brutal imposition of Social Darwinism.*

*Example 2: The effects of ‘remedial’ intervention*

Many researchers have demonstrated that ‘remedial’ programmes targeted at ‘those with special needs’ (marginally) improve their scores on norm-referenced tests and, as a result, enable some pupils to move out of special needs classes and into classes where they are taught the regular curriculum.<sup>13</sup>

What these researchers have generally failed to notice is, in effect, that the seats those pupils occupied were not left empty but were filled by other students.

Yet that is the way norm-referenced systems work.

**3. The researchers generally fail to study the systems processes involved.**

*Parents, teachers and children*

The recursive and interacting interactions between parents and children briefly discussed earlier cannot meaningfully be studied using conventional ‘scales’ to measure home and school ‘variables’ and

then applying multiple regression techniques in the hope of illuminating their interactions. Yet thousands of researchers have attempted to do just this... publishing the results as correlations between parental child rearing practices, home climate measures, and pupil outcomes. As noted, these have resulted in endless intrusive interventions into homes, schools, and communities.

*Illiteracy and Dyslexia*

There is not space to discuss the enormously important issues posed by illiteracy in general and dyslexia in particular.<sup>14</sup> Suffice it to say that, like much ill-health, illiteracy and dyslexia are largely systems-generated problems requiring systemic, not personalised, interventions.

**4. Researchers regularly fail to fully examine the nature of the inputs to the processes the effects of which they claim to study.**

*Home and school environments*

Probably enough has been said to challenge the way the thousands of studies that have been reported in this area have been framed, their failure to sufficiently examine the interactive recursive processes involved, and the co-creation of distinctive human characteristics and environments which emerged.

*Teacher competence*

There are endless studies purporting to throw light on what makes a good teacher, if not a good educator.

Most of these fall into the trap of defining a ‘good’ teacher as one who enables his or her pupils to regurgitate temporary knowledge of snippets of out of date information in order to pass examinations.

But look at what happened when we sought out teachers who, to some extent at least, managed to operate as educators rather than teachers (Raven et al., 1985; Raven, 1994).

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<sup>13</sup> More generally they fail to notice that, if such programmes are not so targeted, as Ceci and Papierno (2005) noted in the article which prompted my re-examination of research relating to the philosophy and conduct of research relating to ‘closing the gap’, such interventions often widen the gap.

<sup>14</sup> For that discussion see Raven (2014b, 2019a)

We found that they had, not only to develop their own frameworks for thinking about the diversity of talents, not only to think about the nature of the developmental environments that would enable children to develop these talents but also to, for example, intervene with parents to legitimise the distinctive educational programmes they were offering and with school inspectors and the head teachers of other schools to the same end.

In other words, it emerged, as it had emerged in so many other areas,<sup>15</sup> that teacher competence involves the (self-motivated) competence to intervene in the wider social and civic processes which otherwise constrain what they can do in their jobs. (In a sense this is precisely what I am saying about the limited competence of researchers.)

### ***5. Researchers fail to sufficiently examine the concepts in terms of which their discussions are couched.***

There is space here for only a few illustrations.

#### *The unexamined use of the word 'education'.*

The word *education* *means*, and is perceived by most parents, teachers, pupils, and employers to involve<sup>16</sup>, *drawing out* pupils' talents.

Yet schools are mainly, as the word *teaching* implies, concerned with 'putting in'.

Put like that, it seems obvious that *teaching and education are essentially incompatible processes!*

#### WOW

Bearing in mind that such knowledge has a half-life of a year<sup>17</sup>, the evaluation of 'education' as 'putting in' implies assessment of how effectively whatever it was intended to inculcate has stuck.

Education as 'drawing out' implies the recognition, release, and development of

diverse forms of competence, for example, the enhancement of diversity. So its evaluation should imply finding out how effectively this has been done.

Yet, this has rarely been attempted.

#### *The unexamined use of the word 'learning'.*

Not unrelated to the above, 'learning' is mainly conceptualised as absorbing content.

As the word is typically used, it does not encompass such things as learning to adventure into the unknown, learning to lead, learning to create political turbulence, etc.

What is more, the perception and evaluation of programmes which do attempt to do these things [such as Revans' 'action learning' (Revans, 1977) and the few varieties of 'progressive' or 'project-based' education which set out to achieve these goals<sup>18</sup>] is typically corrupted into 'alternative ways of enabling people to learn stuff (master content)'. If an alternative to mastering content is acknowledged at all it tends to be conceptualised as 'learning to do' – and further degraded into acquiring 'technical skills'.

More specifically, the notion of *competence*, which was introduced to emphasise the importance of the pro-active, motivational-disposition-based, component of different kinds of effective behaviour (McClelland, 1973), has [as a glance at Mulder et al. (2017) will quickly reveal] typically been corrupted back into knowledge of some collection of knowledge, skills, and attitudes that some authority believes may one day be required by the individual or group in question.

#### *Failure to examine the construct validity of the tests and measures used*

In the course of my canter through the literature relating to 'closing the gap' it was

<sup>15</sup> A review of these studies will be found in Raven (1984a/1997).

<sup>16</sup> The results of opinion surveys conducted in many countries are summarised in Raven (1994).

<sup>17</sup> That is, students forget about 50 per cent of what they have been taught after one year, 75 per cent after two years, 82.5 per cent after three years and so on.

<sup>18</sup> See Note 6.19 in *Managing Education* (Raven, 1994) for a bleak review of the ways in which proponents of project-based education have presented their work.



rare to find anyone questioning whether the tests or indices they were using really merited the names given to them, still less measured the construct they were said to measure.

Thus scores on school attainment tests were regularly misleadingly said to be, and treated as if they were, measures of ‘cognitive ability’ – which is to say ‘the ability to think’ – which they conspicuously are not (and which is itself a notion in need of further conceptual analysis).

Likewise, tests said to measure ‘reading ability’, ‘scientific ability’, and ‘mathematical ability’ could rarely, if ever, be said to have construct validity in these terms<sup>19</sup>.

To take one example, most tests of ‘reading ability’ measure, at best, only one form of ‘reading’ ability... the ability to decode a string of words dealing with a topic of minimal interest to most readers and answer authorities’ questions about its content.

Among other things, these tests do not reflect such things as:

- The ability to understand written material without being able to de-code and articulate the words;
- The capacity to allow strings of poorly articulated words to evoke imagery in which one can delight or which provoke emotion and action;
- The capacity to quickly skim material to find things that relate to one’s purposes and skip the remainder; and
- The capacity to allow poorly-understood material to nevertheless evoke new thoughts.

Likewise, most measures of ‘scientific ability’ fail to measure the ability to problematise, find new material, invent alternative ways of thinking about things, test those formulations, collect evidence, and so on.

At a different level, the tests presented as measures of such things as self-confidence, resilience, creativity, and so on were deeply disturbing because, in reality, people only

display these characteristics in *relation to something*. Self-confidence in relation to putting people at ease, in relation to passing school exams, in relation to creating social turbulence? Creativity *in relation to what*? Creating chaos in a classroom? Using writing to evoke emotions?

Yet the application of the generic term (in this case ‘self-confidence’ or ‘creativity’) to the tests that are used implies that whatever it is that has been assessed in these limited domains is a *general* disposition.

There is not space here to discuss the problems with such tests in any detail or offer possible solutions.

The point is that *most researchers seemed to accept without question that the tests they were using were somehow valid measures of the wider constructs whose names were attached to them*.

More importantly, they did not seem to see themselves as having a scientific responsibility to examine such issues.

## ***6. Researchers fail to engage in the professional behaviour which might be expected of researchers engaged in activities having major implications for people and societies.***

There is space to mention only a few of these, culled from the longer list available in Raven (2019a), here.

*Failure to initiate discussion of the unintended, multiple, and social implications of implementing policies based on what were perceived to be conclusions derived from objective and value-free science.*

*Failure to challenge sponsors’ framing and definitions of the problems to be investigated.*

*More specifically, failure to recognise, and intervene in, the circular process whereby the ‘political’ framing of problems leads to unprofessional studies which support that definition, for example, failure to recognise, and intervene in, the process whereby one gets policy-based evidence in place of evidence-based policy.*

*Failure to challenge and resist the pervasive tendency to seek to impose (by force if necessary)*

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<sup>19</sup> For a full discussion see Raven (1991).

*policies which people, supported by 'research', believe to be good and right on others regardless of the multiple consequences for those concerned and society as a whole – that is, failure to challenge what appears to be a pervasive disposition to fascism*<sup>20</sup>.

### **PART III – HOW HAS THIS COME ABOUT?**

More specific constraints than those arising from the systems processes discussed earlier include many arising from the abuse of authority by politicians and others.

Among these are:

- Constriction of research funding mainly to that available by responding to government 'calls for proposals' under contractual arrangements which, among other things, prohibit enquiry into issues not specified in the call for proposals;
- Insistence that any publications arising from research conducted on this 'customer-contractor' basis should first be approved by government agencies;
- Inclusion of a right to actually alter figures in the reported results of such research; and
- The elimination of academics' time to think via pressures generated through Research Assessment Exercises (Research Excellence Frameworks).

Other abuses of authority which contribute to the unsatisfactory situation found in schools include:

- Enforcement of commands to attend school (even though that process may be seriously destructive for the individuals concerned) via an army of enforcement officers targeting both pupils directly and their parents;
- Introduction of mandatory curricula and assessments concentrating on imparting

and testing narrow snippets of irrelevant knowledge and thereby enforcing the neglect of the wider competence goals educators could potentially pursue;

- Using the results of these tests to orchestrate educational Olympics within classrooms, between schools, and between countries; and
- Infringements of human rights via mandatory sharing of data relating to individual's and families' health and crime records, income, and home environment assessments among armies of inquisitors.

At this point it is appropriate to, once again, underline the pervasive influence of neo-liberal thoughtways, for example, the belief that what is important for social survival is competitive success at tasks defined by some authority... which inherently, in and of itself, thereby implies a moral duty of compliance.

As noted earlier, this belief does not stand on its own but forms part of a constellation of beliefs associated with the notion that one has the right to impose on others, by force if necessary, thoughts and behaviours that one believes to be good and right regardless of the consequences for those individuals and society, and the implied denial of the right and the ability of individuals to take decisions for themselves, for example, fascism in all but name.

The network of social forces which contributes to this situation merits the most urgent investigation.

### **SOME CONCLUSIONS TO BE DRAWN OUT OF PART III**<sup>21</sup>

- The mountain of misleading and destructive misinformation that has emerged from the 'scientific' community is vastly greater than that brought to light by the 'replication crisis'.

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<sup>20</sup> (Political) banding together to promote a cause as represented in the symbol of a bound band of otherwise weak sticks – fascio in Italian – is only the last step in a process based on a particular agreement about what it is that should be imposed on others. In political terms this is usually agreement to impose an authoritarian, 'pure', clean, culture defined in moralistic or religious terms.

<sup>21</sup> A longer list will be found in Raven (2019a).

- The blind pursuit of reductionist science has brought the planet as we know it to the brink of collapse;
- It is essential to question the application of the word ‘objective’ to most of the studies that are presented as ‘scientific’ and objective research that can be used as a basis for ‘evidence-based’ policy;
- It is urgent to publicise the fact that, as a result of the way most current research is funded, most of what is presented as contributions to ‘evidence-based policy’ is to be understood as ‘policy-based evidence’ and, as such, to be treated with profound scepticism;
- It is necessary to insist upon *comprehensive* evaluation in studies which are intended to contribute to policy formulation;
- There is an urgent need to generate ways of indexing a wider range of human talents;
- It is necessary to resist the, seemingly pervasive, (fascist) temptation, especially among politicians and in the social media, to seek to impose what one believes to be good and right on others without regard for the values and wishes of those concerned or the wider and long-term effects on society;
- It is necessary to clarify the processes that lie behind the manufacture of hierarchy, including the brutal imposition of Social Darwinism on the one hand and the manufacture of degradation and destitution on the other, internationally, within nations, within educational systems, within schools, within classrooms, within in health services, within ‘benefits’ systems, and within communities; and
- It is necessary to clarify the network of social forces that have corrupted the thinking of the enlightenment into the prescriptions of reductionist science.

## PART IV – WHAT IS TO BE DONE ABOUT IT?<sup>22</sup>

In the light of these conclusions, it would seem that it is vital for the BPS as a whole – and members of the Psychology of Education Section in particular – to take an active role in promoting the kinds of change noted above.

My own suggestions for actions we might take include:

### *Promoting professionalism*

My most basic recommendation is to do more **to act as professionals**.

This will involve elaborating what it means to be a professional (Flynn, 2000; Schön, 2001) Among other things, acting as a professional means:

- Engaging in activities going well beyond our formal job descriptions.
  - Re-considering the basis on which certification as a competent psychologist is based<sup>23</sup>.
  - Contributing to the evolution of a climate or culture in which it is seen as not only normal but important to challenge the thinking of administrators and politicians and challenge abuses and misrepresentations.
- *Challenging the claim of those working within the reductionist science paradigm to actually be scientists.*
  - *Seriously challenging policies ostensibly supported by such research.*
  - *Disseminating knowledge of the range of research needed.*
  - *Challenging current funding arrangements.*

The necessary developments cannot be introduced in the context of the currently dominant arrangements for the funding, conduct, and evaluation of research. The arrangements to fund research via competitive responses to government ‘calls for proposals’ to conduct research on a customer-contractor

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<sup>22</sup> Again extracted from Raven (2019a).

<sup>23</sup> This will mean applying what we learned in our studies of competence, namely that the most important source of incompetence in modern society is the inability and unwillingness to engage with the wider social and political processes surrounding one’s job (Raven (1984a/1997); Raven (2014); Raven & Stephenson, Eds. (2001, Part II).

basis is particularly damaging.

*Reviewing the role of the All-Party  
Parliamentary Group on Psychology (APPG)*

So far as I can judge from the information published in *The Psychologist*, this at present operates to seek ways of bringing psychology to bear on problems as defined and framed by politicians and bureaucrats.

More emphasis needs to be placed on challenging the way politicians and the public (and, indeed, many psychologists) frame issues, isolate ‘problems’ from their contexts, and discuss their causes and remediation in terms of single variables. *Systemic* intervention is often required.

More specifically, it is to find ways of inducing politicians and public servants to seek ways of funding the kinds of research indicated above – and especially adventurous research the outcomes of which cannot be pre-specified.

*Promoting the development of alternative  
images of Governance*

Behind current images of the way in which ‘research’ should relate to ‘policy’ lies an image of governance via centralised command and control systems rather than via a network of activities stemming from, and embedded within, a pervasive climate of experimentation, comprehensive evaluation, and evolution. Although I have published (Raven, 1995) a detailed account of what an alternative (sociocybernetic) system might look like, the need is for more such proposals grounded in appropriate research.

*Providing security for whistle-blowers*

Many people are reluctant to publicise, and protest against, activities which are not in the best interests of their clients and the public in general because so doing would either put their own jobs at risk from the anticipated reactions of their employers and/or expose them to professional censorship for acting outside their designated area of competence.

This suggests that, as a professional Society we at need at least to provide security for whistle-blowers and mavericks.

In saying this I mean to imply such things as creating a fund which will support people should they lose their jobs and their prospects.

*Intervening in the network of processes  
contributing to the pervasive commitment of  
atrocities*

I have elsewhere (Raven, 2018a) made a number of suggestions relating to how it might be possible to intervene in the network of forces encouraging public servants and others to commit what can only be described as atrocities against their fellow citizens.

Among these is a recommendation to insist on naming those, at all levels, who have been involved in the sequences of decisions which lead to these outcomes.

As John Stuart Mill (1859) emphasised, one way to get people to act in the long-term public – as distinct from their own short term – interest is to make their behaviour visible to others.

*Promoting legislation requiring open  
accountability*

Self-evident though Mill’s statement may be, it would require changes in the law to force those involved to accept that their names will be associated with their actions and the consequences of those actions.

It follows that it is important for the BPS to propose and promote such legislative changes.

*Supporting those who wish to become  
involved in traditional union-type activity*

Beyond the activities just mentioned, there is the desirability of traditional union-type activity to encourage and enable members to refuse to work under contractual conditions which contribute to the production of misleading research and the implementation of destructive policies.

### *Creating a fund to support adventurous research*

One might even go further and ourselves set about creating a fund to support more adventurous research and, perhaps more specifically, research to understand the processes which lie behind the pervasive disposition to fascism and the brutal imposition of social Darwinism.

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