CAPBKDSKII: COC.doc
COC+2+3+4 PLUS GRID 1
ORIGINAL YORK VER: ARTXDSK: SPENCRIT + SPENCRI2 + SPENCRI3
PAPER FOR NEXT DAY: HECGNVQ

THE CONCEPTUALISATION OF COMPETENCE

John Raven
30 Great King St.,
Edinburgh EH3 6QH
Phone: 0131 556 2912
Fax; 0131 556 3754
Word Version Date: 4 April 1998

Background

What may be termed the competency movement – which Spady (1977) long ago described as a "bandwagon in search of a definition" – has its origins in the conspicuous irrelevance of much knowledge-based "education" – including most in-service training courses – to occupational performance (see, e.g. Berg, 1973) and the failure of educational qualifications to predict occupational success (see, e.g. Hunter & Hunter, 1984; Raven, 1977; McClelland, 1973 for reviews). The movement seeks to break the hegemony of what Schon (1983) termed the technico-rational model of competence. It argues that people need to learn to how to do what they will later have to do. Given this orientation, some 80% of those involved in the competency movement then set about trying to specify the specific knowledge and skills required to be a competent travel clerk, train driver, teacher, or psychologist. The other 20% argue that such specific knowledge and skills are easily acquired, rapidly obsolescent, and contribute little to the conspicuous differences between competent and incompetent performance of occupational roles. They argue that the competencies on which attention needs to focus consist of qualities like initiative, problem-solving ability, and the ability to build up one's own understanding of how the organisation and society in which one works and lives operates and thereafter intervene effectively in it. Such competencies may be termed generic high-level competencies. But they are hard to identify, difficult to nurture, and still harder to assess using conventional psychometric methods.

The problems which these observations pose have been side-stepped in the international network of competency specification and training programmes by legislating that occupational groups, aided by consultants, must generate their own specifications of the competencies which prospective members of those groups will have to acquire and demonstrate as a condition of entry. Given the absence of both a research base and a tradition of consultancy in this area, a huge variety of poorly researched conceptual frameworks has mushroomed to meet this bureaucratically-generated "need". This way of proceeding allows the consulting firms to attach the words "competency-oriented" to the tools and procedures they have already to hand to identify, nurture, and test qualities previously described as knowledge, skills, aptitudes, abilities, attitudes, or personality. The net result has been, as Wolf (1995) has shown, a vast renaming and proliferation of the very kinds of activity which was so much open to criticism in the first place. This will inevitably lead to discreditation of the competence-based education movement and its replacement by another, almost certainly equally poorly-founded, bureaucratic "initiative" proffered as a solution to the problem.

Given the threats to their existence posed by the comments of researchers like Barrett and Depinet (1991) on the one hand and the imminent discreditation of the all-hype-and-no-substance movement with which the term Competence-Based-Education has become associated on the other, those with a serious scientific interest in competence (or even humane interest in the reform of education) urgently need to put their house in order, state their position more coherently, and, as McClelland so forcefully states in his chapter "Where do we stand on assessing competencies?", initiate the research and development required to establish a more defensible position.

The material in this book has been brought together in an attempt to do these things. Our attempt to problematise the area and identify priorities for future research has been less successful than we had hoped. The present chapter attempts to do so mainly by raising questions along the lines "Have Spencer and Spencer (1993) – and, by implication, the whole McBer team – got it right", suggesting that they have not, and identifying what would need to be done to do better.

In the past, the author has contributed a number of studies of the nature of competence and how its components are nurtured in many homes, a few classrooms, a few colleges, and some workplaces (Raven, 1977, 1987a&b; Raven, Johnstone & Varley, 1985; Raven & Dolphin 1978). The results of this work have been brought together in two books (Raven, 1977, 1984/1997) and a number of summary articles (e.g. Raven, 1988a&b, 1989[1]. Little of this material will be summarised here. Those who are interested should therefore turn to the publications mentioned.

It has proved necessary to emphasise that this critique has been written with the intention of advancing scientific understanding and stimulating further work. This is because the authoritarian image of science which is carefully nurtured in many schools and universities results in authors whose work has been criticised coming to be regarded as unsound and thus unworthy of further support. It is therefore necessary to state in no uncertain terms that nothing that is said here is intended to give this impression. In the author's opinion, the McBer team culminating in the Spencers' book come so close to developing a framework that would *revolutionise* thinking about competence and human resource management that it would be a mistake not to do what I can to help to ensure that that revolution is carried through.

The need to develop different, but inter-related, frameworks for thinking about human competencies and occupational role requirements.

The effectiveness of *Competence at Work* is seriously undermined by conflating thinking about human competencies – genetically and environmentally determined patterns of competence to carry out certain self-motivated activities – with an attempt to describe the competencies required to perform different types of occupational role effectively.

To illustrate the point, "managerial competence" is not a competence *as it occurs in human beings*. Managerial competence is determined by an interaction between role requirements and personal qualities. What is more, people in the same occupational position actually perform different kinds of job. What we need is a framework which will enable us to think more clearly about the different types of managerial role which need to be performed, a better framework for thinking about the competencies of people who are (or who might become) managers, a better framework for thinking about the personal, organisational, and societal consequences of filling different types of managerial position with different types of people, and better ways of placing, developing, and utilising, the competencies of managers and recognising particular contributions they have made.

The need to situate all discussion of "abilities" in the context of the motives in relation to which they are, or are expected to be, displayed.

Following a tradition which has acquired hegemony over the past century, psychologists persistently think and write as if qualities like "conceptual ability", "self-confidence", and "internal locus of control" are dispositions which are generalisable across all domains of life. It is thus not altogether surprising that, despite their 30 years immersion in research into the motive-based conceptualisation and assessment of competence, the Spencers regularly fall into the same trap. Yet such qualities cannot be assessed without reference to the specific motivational dispositions of the person being assessed.

Let us consider "Self-confidence" to illustrate the point.

People display enormous amounts of self-confidence when doing things they care about and of which they have experience – such as putting other people at ease, creating mayhem in a classroom, or ingratiating themselves with their superiors. They lack self-confidence or internal locus of control in other areas. As a result, if one sets them a task which they are not strongly predisposed to undertake (or asks them questions about their confidence to undertake) one, not surprisingly, concludes that they "lack self-confidence".

As we saw in the chapter in which we introduced the McBer framework, the same is also true of such things as "analytic ability". Conceptualising, analysing, and problem-solving are all difficult and demanding activities which no one will undertake or display except in relation to activities they have a strong internal predisposition or motivation to undertake. This means that the assessment procedures most commonly employed by psychologists – which present everyone with the *same* problem (such as a Piagetian task) with a view to seeing how well they do – are off-beam. The results tell us more about the respondents' motivation to undertake tasks of that kind than they do about their actual ability to make their own observations, reason, and learn from experience.

"Analysing" is not only difficult and demanding. It is also primarily affective and conative. It involves sensitivity to fleeting feelings on the fringe of consciousness which tell one that one has a problem, "playing" with tentative insights until one stumbles upon one which "fits", experimenting with relevant aspects of the environment in order to learn more about it, "monitoring" – usually in a feeling-based rather than a "cognitive" way – the effects of one's actions in order to "learn" more about the nature of the problem and the effectiveness of one's strategies, changing one's behaviour accordingly, and so on. *All* of these activities need to be carried out effectively if one is to undertake "non-cognitive", "non-achievement" activities like putting people at ease. Yet, when carried out in such contexts they, given our current psychometric procedures, usually escape notice – and if an astute psychologist happens to notice them, he or she is inclined to be puzzled about how to categorise them, being reluctant to designate them as "thinking".

The above formulation points to another psychometric problem. If it is true that people will not display their talents, abilities, and skills unless their motives are aroused, it follows that, if we wish to assess their self-confidence, analytic ability, or knowledge in anything approaching a conventional way we will need either to study them while they are doing things they care about or set them tasks which engage with their motives. Thus, if we are to draw justifiable inferences from people's behaviour, the *first* thing we need to know is whether the task they have been set engages with their motives and thus whether it creates an opportunity for them to display their talents.

Beyond that, there is the question of whether the tasks people have been set in the past have engaged with their motives and in this way created opportunities for them to develop the competencies of which they are capable.

Our first question must always be: "*In relation to what* will this person display his or her intelligence?", rather than "How intelligent is this person?" What the Spencers – and especially Elliot

Jaques – describe as thinking at different *levels* – such as about how to put people at ease compared with thinking about how society works – is (at least in the absence of further evidence along the lines supplied by Maistriaux, 1959 – in reality thinking about different topics.

So what are people going to "think" *about*? Are they going to think about putting people at ease, or making scientific discoveries, or creating a climate of innovation, or advancing themselves in an occupational setting by doing whatever will create a good impression on their superiors or by knifing the competition, or about how to intervene in world-wide economic and social processes in order to reap maximum financial rewards and publicity for their organisation?

The need to capitalise on the full revolutionary potential of McClelland's motive-scoring framework.

The scoring system which McClelland and his co-workers developed (in the early 50s) to index the strength of *need* Achievement, *need* Affiliation, and *need* Power which was described in our Chapter summarising that framework actually handles all of the problems so far mentioned in an elegant (if psychometrically revolutionary) way. Yet Spencer and Spencer (and even McClelland himself) do not seem to realise – and certainly have not capitalised upon – this.

As we saw in the earlier chapter, one uses a framework like that summarised in Grid 1 to score *Test of Imagination* protocols and (potentially) *Behavioural Event Interviews*. To do this one first reads over a transcript of a story written about a picture or a record of an *event*, asking, essentially, "What kind(s) of activity is the person who told this story or described this incident strongly motivated to carry out?". When one has answered that question, one starts asking questions like "In relation to those activities (and *only* in relation to those activities) does the respondent make plans, anticipate obstacles, and try to think of ways round those obstacles?" (i.e. does he or she engage in *cognitive* activities). "Does he turn his feelings into the task and use these feelings to initiate action and monitor the results etc.?" (i.e. does he engage in affective activities?). And "Does she exercise willpower and persist for a long period of time?" (i.e. is there evidence of *conation*?). One puts a tick (or check mark) in each cell of the Grid under the appropriate heading for each of the components of competence that the author of the stories sees his or her characters displaying – or him or her self displayed – while carrying out activities he or she was strongly motivated to carry out. As noted in the earlier Chapter, the components of competence listed down the side of the Grid are not purely theoretical but emerged from a series of studies of what people actually do when they are starved, sexually aroused, or otherwise motivated – and it has since been extensively validated. One then adds up the number of ticks in any one column. The resulting scores obviously have nothing in common with internally consistent factor scores. They are much more like multiple regression correlations calculated by weighting a number of independent predictors of performance and adding them up. (In this case all predictors have been given unit weight.) These scores indicate the likelihood that the person concerned will carry out activities of the kind he or she cares about effectively. That is, they are indices of *competence*. Conceptually, what we have down the side of the Grid is a set of components of competence which, if brought to bear to carry out any activity, will help to ensure that that activity will be carried out effectively.

An additional benefit of the completed Grid is that it prompts us to re-phrase such questions as "How capable is this person of thinking analytically?" as "*In the course of carrying out what kinds of activity does this individual display his or her analytic ability?*"

As one reviews the Grid it is obvious that we need something akin to Dalton's atomic theory to tell us how the potentially motivating activities listed across the top group together and which components of competence down the side belong together or perhaps subsume others. We need a framework of descriptors which, in some sense, tells us which observable behaviours are elemental motives or components of competence and which are compounds. In a sense, this is what the Spencers set out to

develop, but, at least from the perspective developed here, one reason why they did not quite succeed was that they got off on the wrong foot, seemingly failing to recognise and capitalise upon one of the greatest strengths of the very framework on which their work builds most heavily.

Level of task or level of competency?

In their book, the Spencers at several points become involved in discussions of "levels of competence". They suggest, for example, that thinking about how society works reveals a higher level of competence in thinking than thinking about how to persuade a customer to buy a product. But is that really the case? It seems to me that the answer is, probably, "No". What we have here is thinking about different kinds of thing. We need to clarify the different kinds of activity people may think about. A high competency score should tell us how effectively people are likely to carry out particular kinds of task. A competency score computed as described above tells us *how many* of the previously mentioned list of multiple and substitutable competencies someone deploys to carry out activities they are strongly motivated to carry out. Thus a high competency score obtained in relation to a "low-level" achievement task tells us that the person is likely to carry out such tasks extremely well. But, in and of itself, it tells us nothing about how well they are likely to carry out other types of achievement task. If we want to find out whether they will carry out a "high-level" achievement task effectively, we need to ask about such tasks. We must beware of conflating the "level of competence" index with some possible "order" in the "levels" of task that are to be undertaken. We need to unscramble our indices of competence from our indices of what kinds of activity people find engaging. It may or may not be the case that we can order achievement (and affiliation and power) tasks on the basis of their impact on organisations or society, just as it is possible to arrange chemical elements in cycles in the periodic table. But, at least in the absence of further evidence, we cannot assume that competence to carry out tasks having greater impact is built on, and implies competence to carry out, tasks having lesser impact. The "size" or nature of the task to be undertaken or motivated activity to be executed should not be mixed up with the problem of identifying the main components of competence that can be brought to bear to carry out the activity effectively.

Although, therefore, there is no doubt that we could do with a better framework for thinking about, classifying and ordering motives and competencies, it therefore seems unlikely that the Spencers' current attempt to define **Competency Clusters** meets the need.

Respondent vs. operant measures.

I have argued that the way of thinking which lies behind Grid 1 provides us with a basis on which to build a more appropriate framework for thinking about competence and its assessment than any other used in the past. It also enables us to escape from some important mental straightjackets which have, in the past, ensnared many psychologists.

The most pervasive of these have involved the concepts of unidimensionality and internal consistency in measurement. As we have seen, competence is a value-based and internally heterogeneous quality – a fact which was implicitly, but not explicitly, acknowledge in McClelland's 1958 scoring system.

Not having explicitly recognised these things, McClelland generated alternative explanations of why his measures of *n*.Ach., *n*.Aff. and *n*.Pow did not correlate well with measures purporting to assess the same constructs that were developed using more conventional (internal consistency based) psychometric procedures and yielded different patterns of correlation with other variables.

While these "explanations" embodied observations which were important in themselves, they also carried prescriptions which, although they are actually irrelevant, have ensnared the Spencers and are likely to limit the options we believe to be open to us unless they are recognised for what they are.

Two of the most important have to do with the distinctions between operant and respondent measures and between "motives" and "values".

McClelland argued that the stories people wrote in response to his Test of Imagination pictures yielded samples of behaviour which were much less constrained by the nature of the stimulus than the answers they selected in response to multiple-choice "personality" tests. He called the former "operant" measures and argued that one learned more about people from examining such samples of behaviour than one could from pre-formatted multiple-choice tests.

Having now understood how radically McClelland's *n*.Ach., *n*.Aff. and *n*.Power scores differ from those derivable from conventional psychometric tests, it is obvious that it is not necessary to employ the distinction between operant and respondent measures (however important that is in itself) to explain the failure of most "personality" questionnaire scores purporting to index these or related constructs to correlate in similar ways with other indices of behaviour. Questionnaires purporting to measure *n*.Ach. etc. simply do not index the same constructs as do McClelland's measures. More specifically, they simply do not index the *competence* with which people are likely to be able to undertake tasks they care about. It is therefore not necessary to latch onto the operant-respondent distinction to explain the discrepancies.

McClelland also argued – and the Spencers reiterate the party line – that measures of motives must be sharply distinguished from measures of values. What we have seen beyond all dispute is that McClelland's motive measures are imbued with values! The distinction McClelland draws is therefore a red-herring which chokes us off from potential avenues in our quest for ways forward.

To explain the generally poor correlation between "attitudes" and behaviour, all one has to do is to recognise that:

a) There are all sorts of good reasons why people are unable to translate their values into effect – such as the virtual impossibility of pursuing certain life-styles given the way society is organised, the behaviour of other people in the workplace, and pressures from other people;
b) People are unlikely to be fully aware of the things they are strongly motivated to do; and
c) Most of those who have constructed "personality" questionnaires have not adequately explored the way people think and feel about the domain of issues they are dealing with, attempted to sample that domain with appropriate questions, or investigated the ways in which the questions are actually interpreted by those who answer them.

The need to question the conventional job description/job designation framework and the assumption of "hierarchy" and acknowledge the importance of "distributed competence".

A pervasive problem in the competence movement has been acceptance of the conventions employed to think about and delineate occupational groups. Most workers in the area have accepted the myth that people having the same professional designation or job title are actually performing similar jobs. In fact, people having the same job title perform a huge range of very different functions. Thus, some psychologists carry out one type of basic research, others another; some publicise other people's work claiming it as their own; some raise funds for their organisations; some make good "hatchet men", doing whatever is necessary to advance themselves in their careers; some offer direct support to clients, and so on. One manager sets about creating a vibrant and innovative organisation. Another plays the international stock market and sets about creating a facade which leads to confidence in – and therefore investment in – the company. Another intervenes in the political system to get laws mandating the use of the company's products or services onto the statute book. Another sets about creating a good impression on his or her superiors so as to obtain advancement in his or her career ... and so on.

The attempt to identify the competencies required by a psychologist, doctor, teacher, or manager in any generic way is therefore fundamentally misguided. Much more fine-grained analyses are required to find out what different people are actually doing ... and often to find ways of enabling them to get credit for what they have, in reality, contributed to their organisations. What competencies are required to contribute in one or other of a number of very different ways to one's organisation? And which sets of concerns and patterns of competence have what short and long-term consequences for the individuals concerned, for their organisations, and for society as a whole when set in the context of different organisational and societal arrangements?

Nor is this the end of the problems: The range of activities which need to be undertaken by those occupying any one occupational designation is far too wide for any one person to carry out. A *range* of people with different motives and patterns of competence is required at any job level if the job as a whole is to be carried out effectively. No one – not even a superstar – can do all that needs to be done.

One implication of the complexity is that – as I have shown elsewhere (Raven et al., 1998) – it is simply not possible to validate measures in the simplistic correlational way that is most widely advocated in textbooks on educational and psychological measurement. Instead, it will be necessary to generate a framework which will enable us to work with descriptive statements about the kinds of activity which people in some sense value or are strongly motivated to carry out, the patterns of competence they are capable of displaying while carrying out those activities, the features of the environment that are relevant to the development and display of their idiosyncratic motives, the emergent properties of the groups or organisations which emerge as they interact with others, and the consequences of interactions between people and their environments.

Making descriptive statements about people, their environments and the way one engages with the other to produce transformations in both people and their environments seems to me to have much more in common with the way in which chemists go about their work than it has with the "variable"-based work of physicists (which is what most educational and psychological measurement theoreticians and practitioners have in the past tried to emulate).

If we adopt the chemical analogy, the key questions become: What are the descriptors (analogous to the "elements" of Chemistry) that are to be used to characterise the kinds of activity people are strongly motivated to carry out and the components of competence they display while doing so? What are the key descriptors required to characterise the features of the environment which engage with, or repel, these motivational predispositions? How are we to think about and describe the emergent properties of groups and identify the basic properties of individuals within them? In this context we may note that, to pursue the analogy, the properties of Copper Sulphate are very different from, and in a sense unpredictable from, the properties of the copper, sulphur, and oxygen which makes it up [and they certainly cannot be predicted from any additive combination of these components and they are not observable *in* any of the components] and the identification of any of the elements within the compound is a difficult and demanding process. It follows that, not only may the key properties on which we need to focus be "group" competencies, the competencies an individual will display will depend heavily on those with whom they are working. The addition or subtraction of an almost invisible member of a group – especially one equivalent to a catalyst in the "environment" of others – may radically change not only the apparent characteristics of the group but also the apparent qualities of all of the others within it. Clearly, no one of the chemicals is more "important" – any more of a "superstar" – than the others. These observations suggest that our very concern with "superstars" reflects and reinforces an unjustified pre-occupation with hierarchy and authority – a suggestion which is strongly confirmed in the work of Kanter (1985) and Adams and Burgess (1989) – and suggests that what we are witnessing is a legitimisation of a

dysfunctional *sociological* process. And what environmental conditions or organisational arrangements (analogous to temperature and pressure) result in the interactions between people having different kinds of consequence?

Lest we be over-awed by the apparent enormity of the task of unscrambling such an apparently complex network of relationships, we should note that this is *exactly* what chemists have succeeded in doing.

One immediately practical implication of these observations is that the effective performance of any organisational role requires the appointment of a number of people who do very different (and complementary) things. Another is that the effectiveness of any person's actions very much depends on what other people do. And a third is that the effectiveness of an organisation depends on the *balance* of people – even within a single job designation – who do very different things. Our focus cannot therefore be on *selection*, but must be on the identification of the motives and talents of individual members of staff and their release, development, and deployment.

Additional support for this conclusion comes from the observation that the jobs people do change markedly over time.

A DICTIONARY -- OR AN ATOMIC THEORY?

The Spencers set out to develop a framework for thinking about competence which would have more in common with atomic theory than a dictionary, but, in the light of the enormity of the task, found it necessary to content themselves with an intermediary objective. While I have myself been unable to get even as far as they did, I feel that they would have got further if they had built on our own attempt (already summarised in Grid 1) to reconceptualise the motive scoring framework developed by McClelland and his colleagues in the 1950s (McClelland et al., 1958). As we have already seen, the scores generated by that framework are best understood as indices of competence to undertake intrinsically motivating activities effectively, not as indices of "motive strength". To move toward an "atomic" theory, it will be necessary to fill out, and more effectively systematise, the list of descriptors across the top and down the side of the Grid and, at the same time, resolve some of the problems inherent in McClelland's framework.

Perhaps the most important of these problems is the way in which the preoccupation with doing something *better* appears both as a sign of Achievement Motivation (across the top of the Grid) and as a component of competence which contributes to the effective execution of *any* kind of task (down the side).

This problem stems at least in part from the instructions used to arouse Achievement Motivation in the original (1953) experiments. These had the effect of arousing *different kinds* of achievement motivation in different people. This was a necessary experimental ploy because this was the only way in which the motivation of enough people could be influenced to get *any* detectable effect.

The Spencers encountered a problem when attempting to delimit *need* Achievement – but tried to resolve it by excluding hobbies and sport from the framework – and failing to connect the problems they had with the conceptualisation of *n*.Ach. with those they encountered in dealing with *need* Affiliation and *need* Power.

The basic problem is that setting standards of excellence, monitoring one's performance, and trying to do something *better* is, in the McClelland scoring system, treated as one of the three clear signs of *Achievement* Motivation. Yet such activities are crucial to the effective performance of *any* kind of task – whether of an Achievement, Affiliation, or Power nature.

It follows that neither having high standards and a concern with excellence nor persisting over a long period of time to achieve them lie at the heart of *n*.Ach.

The cluster of activities which are most often referred to as "achievement-oriented activities" seem to revolve around financial success (as in entrepreneurial behaviour), technological innovation (including the technology of organisational design) and activities, like sport, in which competition seems appropriate. The clarity of the *criterion* of excellence also seems to have something to do with our willingness to say that such activities belong to the "achievement" cluster: Standards of excellence in connection with putting people at ease or even when competing for power seem somehow less clear cut.

But the cluster of activities to which one easily agrees to use the words "achievement-oriented" to describe also seems to include thinking of better ways of identifying, developing, and utilising the talents of superiors and subordinates, releasing the know-how, creativity, and initiative of others and thus creating a hive of innovation, developing better ways of thinking about society, and acting in the public interest.

Instead of grouping together what seem to be very different kinds of activity – and rather arbitrarily excluding others – we have, in our own work, found it helpful to be much more specific about the kinds of activity which people seem to be somehow strongly motivated to undertake. And we have further found (a) that these specific motives seem to be very persistent over the life cycle and (b) that it seems to be as difficult for people to transfer their competencies from a specific area of activities that lie within the achievement domain to other activities within the same domain as it does to transfer them to activities listed under the affiliation or power headings.

The Spencers' attempt to resolve the confusion inherent in the original scoring system for *n*.Ach by limiting *n*.Ach to activities relevant to work gets them into further difficulties when they try to handle the problems posed by activities from other domains which apparently need to be carried out to achieve goals in the Achievement domain. An example would be thinking out how to influence the political process in order to raise the funds needed to carry out an experiment to test a new theoretical hypothesis or how to maintain a "warm" network of contacts to keep tabs on new options. Thinking out how to put people at ease, conducting "experiments with the problem" of putting people at ease, and soothing flared tempers can all be very important tasks to carry out at work. And they are all activities which it would seem that it would be possible to undertake either in the service of Achievement ends or as ends in themselves. But our experience is that people who are not inherently strongly motivated to carry out such activities cannot (and do not) carry them out effectively however painfully "obvious" it is to them that they *need* to do so in order to undertake some other activity which strongly attracts. It seems to me, therefore, that the way to handle the problem is to say that a particular cluster of specific motives (identified from those listed across the top of the Grid) and competencies (from down the side) is required if any one individual is to carry out some activity which calls for those motives and competencies effectively by him or her self or to accept the need for a small "team" of people each possessing key ingredients of the overall cluster. (Of course, as I have shown in Raven [1984/1997] there are many more potentially engaging or valued activities than are shown across the top of the Grid and many more potentially important components of competence than are actually shown down the side of the Grid: the Grid was produced for heuristic purposes only.)

The Spencers' treatment of "calculated" entrepreneurial risks is another area in which they have incorporated problematic thinking from the McClelland tradition into their framework without sufficient examination. Entrepreneurs are well known for their tendency to engage in activities which appear to others to be risky. But it turns out that it is not the calculation of risk that is important – for their behaviour is much less risky than others take it to be. In the first place they tend to be much more

knowledgeable than are others of personal and environmental resources which can be brought to bear to achieve their goals and which markedly reduce the risk element. In the second place, they tend to be much better than are others at monitoring the effects of their actions and capitalising on what is learned – often changing the goal to make the best of "chance" observations. They are also much more likely to make use of a series of pilot experiments to try things out and learn from the results before launching into a full-scale change. So the key issue is not that they are more willing to take "calculated" risks but that they are more competent at dealing with an evolving situation.

Moreover, it is not only in relation to entrepreneurial activities that the behaviours which are described as "risky" when they occur in connection with entrepreneurial tasks have to be taken. The same sub-set of activities is required to conduct affiliation and power tasks successfully. And, indeed, the same terminology emerges. The Spencers actually quote a power-oriented person who, having identified a chain of knock-on, domino like, activities which would probably produce the effect he desired said "I took a risk ... ". He did indeed. And in a sense it was more "calculated" than many entrepreneurial risks. But what was really important was the other things he did to minimise risk and turn chance observations to advantage. It is not on the risk-taking that we need to focus. What is important is (a) the particular idiosyncratic – and often tacit – knowledge that is brought to bear and (b) the strategies that are deployed to learn from, and handle, the developing situation.

These are not the only behaviours which fall out more cleanly if re-conceptualised in terms of the Grid framework. Qualities like "initiative", which the Spencers treat as a "molecular" component of *n*.Ach., do so too.

If we are to move forward it will also be necessary to use words like "intention" and "understanding" – which everyone working in the area regularly finds themselves obliged to use – with greater care because they create an endless network of trip wires arising from their too-cognitive connotations. What is important in the former is the predisposition, not the intention, to undertake certain activities. "Interpersonal understanding" – like the "understanding" of effective entrepreneurs, managers, panel-beaters, scientists, and authors – is, despite what the words seem to imply, not usually conscious or articulate. It usually involves non-conscious or tacit knowledge, both of a knowing-how and a knowing-that variety. Use of the word "understanding" is liable to orient people toward textbook-based courses as a means of "learning" how to do it.

Impact and Influence.

Just as the conceptualisation of the Achievement Cluster needs to be re-worked, so, too, does the Power or Influence cluster. However, unlike the Achievement cluster, this has already been subject to rework since 1958 (Winter, 1973).

Our own work suggests that *different people* are concerned to influence those above them and those below them. But perhaps that is not right: Perhaps there are those who seek to ingratiate themselves with those above them and wish to wield authority over those below them – i.e. people who are more concerned with their own position in a hierarchy of authority than with the influence they have on others or, at least, that the way they wish to influence those above them is very different from the way they want to influence those below them. Either way, it seems to be necessary to distinguish a concern to influence superiors from a concern to influence those below one.

Then there is the problem that the kind of person who seeks to *understand* wider social, economic, political and systems processes is not usually the kind of person who has good "intuitive" strategies for influencing those processes. I am not sure that a concern with interpersonal power is at all the same thing as a concern to understand and influence systems processes. The end to which the ability to influence

social processes and mass perceptions is exerted seems very important. One meets so many senior public servants and politicians who engage in Machiavellian strategies to advance themselves without the least concern with the public interest. So, again, the need seems to be to distinguish between the different *types* of activity which have been grouped together in this cluster and to spell out the strategies – or components of competence – that could be deployed to undertake any one of them effectively.

There is one final problem to be mentioned under this heading. We have been very surprised in our own work to have uncovered the extent to which behaviour is governed by perceptions and, in particular, perceptions of how society works, how one's own organisation works, and one's own role and that of others within those organisations and society.

That is why these cognitions are now listed among other components of competence down the side of Grid 1. What we have found is that the greatest source of incompetence in modern society is the inability and unwillingness to engage with the wider social, economic, and political processes which primarily determine what one *can* do *in* one's job. Of course, as the Spencers show, some people are much more interested in understanding and influencing these processes than are others. But perceptions and understandings – like understandings of other concepts like "management" and "democracy" – seem to influence the competence to carry out all valued activities effectively. So here again we encounter the problem of conceptually unscrambling the requirements for the effective performance of different kinds of activity from motivational predispositions.

Relationship Building.

Use of the two-dimensional grid also makes it possible to avoid what appear to be rather contrived arguments in this area in the Spencers' book. However, a discussion of this topic has been omitted here for the sake of brevity.

CONCLUDING COMMENT

The Spencers have provided us with the most important text that has ever been published on competence at work. Yet it hardly provides a basis on which to build the radical reform of our educational system and employment practices that is needed. It does not provide us with the information needed to rationalise the misguided, international, mandatory competence specification, training, and testing movement which has been wished upon us with the aid of terms which we ourselves helped to coin. It does not even lead directly to an adequate rejoinder to Barrett and Depinet's criticisms. It needs to be re-worked. We *really* need an atomic theory of competence. By this I mean an agreed framework of descriptors to use to make *statements* about individual patterns of motivation and competence, about groups and their emergent competencies, about environments, about how individuals and their environments interact and transform each other, and about the short and long term, personal and social, consequences of alternatives. Contrasting theses need to be developed. An army of creative, inventive, thoughtful researchers who are able to get beyond the constraints of both traditional psychometric and educational thoughtways on the one hand and of academic life in general on the other are required. Yet even to re-work the data base in which the book is rooted is problematical – because few of the studies have been published. In the end, then, it emerges that one of the central issues to be clarified and addressed is how to conduct urgently needed policy research which help us to reform our society in more appropriate ways than those being wished upon us by the Department of Education and Employment. This issue, hardly glimpsed by the Spencers, turns out to the central issue to which university staff and students dedicated to the true aims of such institutions would turn their attention. Here, without doubt, lies a role for Higher Education for Capability.

Notes and References

1. The author has also published a critique of the British government's competency programme in Raven (1995).

Adams, E. and Burgess, T. (1989). *Teachers' Own Records*. Windsor, England: NFER-Nelson.

Barrett, G.V. and Depinet, R.L. (1991). A reconsideration of testing for competence rather than intelligence. *American Psychologist, 46(10)*, 1012–1024.

Berg, I. (1973). *Education and Jobs: The Great Training Robbery*. London: Penguin Books.

Hunter, J.E. and Hunter R.F. (1984). Validity and utility of alternative predictors of job performance. *Psychological Bulletin, 96*, 72–98.

Jackson, P.W. (1986). *The Practice of Teaching*. New York: Teachers College Press.

Kanter, R.M. (1985). *The Change Masters: Corporate Entrepreneurs at Work*. Hemel Hempstead: Unwin Paperbacks.

McClelland, D.C. (1951). *Personality*. New York: Sloane, Dryden, Holt. Reprinted in 1953 by Irvington Publishers, New Jersey.

McClelland, D.C. (1973). Testing for competence rather than for "intelligence". *American Psychologist, 28*, 1–14.

McClelland, D.C. (1975). Power: *The Inner Experience*. New York: Irvington.

Maistriaux, R. (1959). *L'Intelligence et le Caractere*. Paris, France: Presses Universitaires de France.

McClelland, D.C, Atkinson, J.W., Clark, R.A. and Lowell, E.L. (1958). A scoring manual for the achievement motive. In J.W. Atkinson (Ed.), *Motives in Fantasy, Action and Society*. New York: Van Nostrand.

Miron, D. and McClelland, D.C. (1979). The impact of achievement motivation training on small businesses. *California Management Review, XXI*, 13–28.

Raven, J. (1977). *Education, Values and Society: The Objectives of Education and the Nature and Development of Competence*. Oxford, England: Oxford Psychologists Press.

Raven, J. (1984/1997). *Competence in Modern Society: Its Identification, Development and Release*. Unionville, New York: Royal Fireworks Press (1997); Oxford, England: Oxford Psychologists Press (1984).

Raven, J. (1987a). Learning to Teach in Primary Schools: Some Reflections. *Collected Original Resources in Education, 11*, F3, D07.

Raven, J. (1987b). Tell Them About Teacher Training. *Collected Original Resources in Education, 11*, F3, F13.

Raven, J. (1988a). The assessment of competencies. In H.D. Black and W.B. Dockrell (Eds.), *new Developments in Educational Assessment: British Journal of Educational Psychology, Monograph Series No.3*, 98–126.

Raven, J. (1988b). Developing the talents and competencies of all our children. *Gifted International, 5*, 8–40.

Raven, J. (1989). Parents, education and schooling. In C. Desforges (Ed.), *British Journal of Educational Psychology, Monograph Series No.4, Special Issue on Early Childhood Education* (47–67).

Raven, J. (1994). *Managing Education for Effective Schooling: The Most Important Problem is to Come to Terms with Values*. Unionville, New York: Trillium Press; Oxford, England: Oxford Psychologists Press.

Raven, J. (1995). *The New Wealth of Nations: A New Enquiry into the Nature and Origins of the Wealth of Nations and the Societal Learning Arrangements Needed for a Sustainable Society*. Unionville, New York: Royal Fireworks Press; Sudbury, Suffolk: Bloomfield Books.

Raven, J. and Dolphin, T. (1978). *The Consequences of Behaving: The Ability of Irish Organisations to Tap Know-How, Initiative, Leadership and Goodwill*. Edinburgh: The Competency Motivation Project

Raven, J., Johnstone, J. and Varley, T. (1985). *Opening the Primary Classroom*. Edinburgh: Scottish Council for Research in Education.

Raven, J.C., Raven, J. and Court, J.H. (1998). *Manual for Raven's Progressive Matrices and Vocabulary Scales. Section 4, The Advanced Progressive Matrices*. Oxford, England: Oxford Psychologists Press; San Antonio, TX: The Psychological Corporation.

Schon, D. (1983). *The Reflective Practitioner*. New York: Basic Books.

Spady, W.G. (1977). Competency-based education: A bandwagon in search of a definition. *Educational Researcher, 6(1)*, January.

Spencer, L.M. and Spencer, S.M. (1993). *Competence at Work*. New York: Wiley.

Winter, D.G. (1973). *The Power Motive*. New York: Free Press.

Winter, D.G., McClelland, D.C. and Stewart, A.J. (1981). *A New Case for the Liberal Arts*. San Francisco: Jossey Bass.

Wolf, A. (1995). *Competence-Based Assessment*. Buckingham: Open University Press.

GRID ‡
A MODEL OF COMPETENCE

Examples of components of effective behaviour.	Examples of Potentially Valued Styles of Behaviour.											
	Achievement					Affiliation				Power		
	Doing things which have not been done before.	Inventing things.	Doing things more efficiently than they have been done before.	Developing new formal scientific theories.	Providing support and facilitation for someone concerned with achievement.	Establishing warm, convivial relationships with others.	Ensuring that a group works together without conflict.	Establishing effective group discussion procedures.	Ensuring that group members share their knowledge so that good decisions can be taken.	Articulating group goals and releasing the energies of others in pursuit of them.	Setting up domino-like chains of influence to get people to do as one wishes without having to contact them directly.
Cognitive Thinking (by opening one's mind to experience, dreaming and using other sub-conscious process) about what is to be achieved and how it is to be achieved.											
Anticipating obstacles to achievement and taking steps to avoid them.											
Analysing the effects of one's actions to discover what they have to tell one about the nature of the situation one is dealing with.											
Making one's value conflicts explicit and trying to resolve them.											
Consequence anticipated: *Personal:* e.g. "I know there will be difficulties, but I know from my previous experience that I can find ways round them."											
Personal normative beliefs: e.g. "I would have to be more devious and manipulative than I would like to be to do that."											
Social normative beliefs: e.g. "My friends would approve if I did that"; "It would not be appropriate for someone in my position to do that."											
Affective Turning one's emotions into the task: admitting and harnessing feelings of delight and frustration: using the unpleasantness of tasks one needs to complete as an incentive to get on with them rather than as an excuse to avoid them.											
Anticipating the delights of success and the misery of failure.											
Using one's feelings to initiate action, monitor its effects, and change one's behaviour.											
Conative Putting in extra effort to reduce the likelihood of failure.											
Persisting over a long period, alternatively striving and relaxing.											
Habits and experience Confidence, based on experience, that one can adventure into the unknown and overcome difficulties, (This involves knowledge that one will be able to do it plus a stockpile of relevant habits).											
A range of appropriate routineised, but flexibly contingent behaviours, each triggered by cues which one may not be able to articulate and which may be imperceptible to others.											
Experience of the satisfactions which have come from having accomplished similar tasks in the past.											

Version UK, date: 30 November 1995