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## CHAPTER 8

### THE INTERNAL ORGANISATION OF THE SYSTEM

To introduce this chapter, what has been said in Part I of this book may be summarized. We have seen that:

1. The most important goals in education are heavily value-laden. This gives rise to a host of problems. It means, among other things, that it will be necessary to find ways of handling the difficulties which arise because, although teachers necessarily influence values, they need to do so more explicitly if they are to achieve their main goals, deal with the difficulties involved in assessing value-laden motivational dispositions (especially as part of the certification process), and consider the nature of the information-based public management structures - the forms of bureaucracy and democracy - required if the public is to be offered a choice between programs fostering a wide variety of value-based motivational dispositions.
2. The failure of society to come to terms with the value-laden nature of competence makes it difficult for schools to identify individuals' values, interests, and areas of competence. This contributes to the inability of the educational system to achieve its main goals - but it also has serious consequences for society as a whole: It makes for unnecessary frustration and misery among adults, an inability to identify and capitalize upon valuable human resources, and the promotion into influential positions of people lacking the willingness and the ability to tackle broader societal problems<sup>8.1</sup>.
3. Most teachers are unable to identify their pupils' values, create the developmental environments required to harness those values in such a way that pupils will engage in activities which will lead them to practice and develop high-level competencies, or to recognise and reward the development of pupils' high-level competencies.

More generally, we have seen that the introduction of a more effective educational system will require change at all levels. Teachers must pay attention to the needs of each individual child, devise a personalized developmental program to harness the child's motives and develop his or her idiosyncratic talents, monitor the effects of such activities, and adapt their activity where necessary. Tools will be needed to help teachers administer these programs, evaluate and assess their outcomes, and to credit pupils and teachers for having developed important competencies. Administrators, working with teachers and researchers, must devise a much wider range of different types of educational program, and provide the public with information on the consequences of each. It will be necessary to influence the tests employed at the interface between the school system and society (because it is what is assessed in these tests which primarily determines what happens in schools) and it will be necessary to reduce the societal demand that schools legitimize the rationing of privilege. *Systemic* - multi-pronged - theoretically-based intervention is required. This can only occur if a new management structure is introduced to provide new roles for pupils, teachers, principals, superintendents, politicians, parents, and the public.

Such pervasive change can only be achieved by creating a climate dedicated to innovation. All teachers need to pursue different goals with different pupils, and many of the necessary developments can only be introduced as teachers and administrators exercise professional discretion in dealing with the changing and idiosyncratic requirements of complex situations.

Although change is required in every nook and cranny of the educational system, and will not occur solely as a result of central decree, the establishment of an innovative climate can and should be centrally facilitated. Such a climate can only be achieved by changing (1) the way things are done within the educational system itself, and (2) the interface between the educational system and society.

This chapter will discuss the changes needed in the internal organization of the educational system. Chapter 9 will discuss the changes needed in the interface between that system and society. Chapter 10 will deal with the research and development activity required to help evolve and support the new system.

Essentially, the argument presented here is that the translation of the shared educational values identified earlier in this book into effect will *necessitate* following the research-based trail on which we have embarked well beyond even the controversial conclusions upon which we have already stumbled in order to discern its implications for the management of society. It will emerge that, unless this step is taken, other developments will yield few benefits. It is, however, essential to understand that this is a *scientific* step and that the position developed here is reasonably consistent with the available evidence. Further research-based activity is required to clarify alternative positions and assess their adequacy.

An unexpected benefit will be obtained from this journey. It will emerge that the arrangements which are required to translate our educational values into effect are precisely those required to translate crucially important wider social and environmental values into effect.

Before we move on, it is important to briefly review the reasons why "privatization" of the educational system could not provide a solution to the problems which have been identified.

Firstly, even when desired benefits *can* be obtained through the economic marketplace, this is typically a very expensive process. For example, about two thirds of the cost of consumer goods is spent on distribution and advertising. If we spent even one third of what is currently spent on "education" on an effective system of evaluation and development, we would surely have a better educational system than anything which could be achieved through privatization<sup>8.2</sup>. Market management is subject to gross inefficiency. Indeed, the explicit management of the market through taxes, grants, and levies, together with investment in non-market driven R&D (including military R&D), has contributed virtually all the major improvements in efficiency (e.g. in agriculture, communications technology, and transportation) that have been introduced in the past half century<sup>8.3</sup>. The seductive quality of market mythology derives from the way in which it creates large numbers of "high-level" jobs whilst ostensibly working to increase efficiency by reducing the numbers directly employed in low level jobs, as in the case of insurance discussed in the last chapter.

Because finding a way of tackling the problems of the educational system has centrally to do with finding a way of handling the conflict between its educational and vocational goals on the one hand and the sociological functions it performs in society on the other, it is important to spell out the message of the last paragraph in slightly more detail. It is that:

1. Even in the short term, no society-wide economic benefits derive from market management.
2. In the longer term the societal economic disbenefits of market management are huge.
3. Some people - those who benefit from the creation of vast numbers of "middle class" jobs - do derive economic benefits from privatization.
4. Privatization and market management contributes in extremely important ways to the cementation and perpetuation of a sociological system which has acquired a life of its own.

Another difficulty with a market solution to the problems of the educational system arises from the fact that what people are buying when they invest in education is not typically an improvement in their competence, but a passport for admission to a protected occupation. The privatization of education - as illustrated by the privately funded cram schools which occupy half the working life of Japanese children - leads to the attainment of economically valuable, but educationally meaningless, credentials. It leads to a narrowing of education and to a focus only on the qualities that are assessed at the point of interface between schools and other institutions, such as colleges and workplaces. Since such assessment is necessarily norm-referenced, there can be no general improvement in schools' ability to deliver even these credentials. Instead, privatization makes for even greater differences between "good" schools and "bad" ones<sup>8.4</sup>. Why should anyone try to improve the schools for those who have "failed" and who will enter low status, powerless, positions? Under these circumstances, *no school* - whether for the future managers of society or the future artisans - can afford to focus on fostering the qualities the pupils will need<sup>8.5</sup>.

As we have seen in the last chapter, the developments most urgently needed in education can take place only if a way can be found to provide parents and pupils with a choice between very different types of program which cater for a wide variety of needs. In theory, market mechanisms should lead to the provision of such variety. In practice, however, if schools are to offer variety, it will be necessary to change the criteria which are used to assess pupils at the point of interface between schools and society. To influence the assessment procedure, privatized schools would need to band together to fund the necessary - fairly fundamental - research and development. Similar collaboration would be required to evolve the new curriculum specifications that are required and the tools needed to translate them into practice.

There is also the question of how parents and pupils are to influence what happens *in* schools. Because of constraints on geographical mobility and income, most people will always have little effective choice between different types of school if provision of that variety is left to the marketplace. Some areas will have good schools and others poor ones. Even when there is a choice, schools tend to offer educational packages, most of the elements of which fail to meet a particular child's or parent's needs. It follows that, to get what they need, parents and pupils must be able to influence what goes on *within* schools.

Another problem is that some minority groups (most notably the handicapped and the poor) need special provision within education. Unfortunately, in society as it is currently organized, those in greatest need are also those least able to meet the greater financial costs of special provision.

Finally, education is not the sole province of pupils and their parents. The beliefs inculcated in schools, and the competencies they foster (or neglect to foster), have dramatic consequences for society as a whole.

Why, then, apart from being an understandable reaction against uniform and inadequate provision offered by hard-to-influence bureaucrats, are the pressures to privatization so strong? At least seven sociological processes seem to be at work:

- i. As has been the case when other services have been privatized, privatization would create many more high-level, administrative, jobs which would "demand" more "well-educated" employees - preparing brochures, collecting and keeping account of vouchers and payments, and servicing committees.
- ii. Because "good" and "poor" schools would become more sharply differentiated, there would be a stronger incentive for pupils to spend more time in the system trying to avoid the fate of the "less able". This would create still more jobs, keep young people off the streets, and, because the goals would have become clearer, make it easier to hold teachers and pupils "accountable" for "success".
- iii. It would more strongly favour the sons and daughters of those who could pay more - i.e. those already in positions of power.
- iv. It would ensure that those who are either (a) more anxious and able to obtain promotion by doing whatever other people want them to do regardless of the social and long term consequences of performing that task or (b) least able or willing to question and analyse the workings of our present system would do "well" are more likely to get promoted. In both these ways a privatized system would be more likely to promote the sort of person our society "needs" to promote the vacuous claims of its manufacturers and service providers and reinforce their claim to having produced them "efficiently" (whilst in fact doing the opposite).
- v. It would make it easier for those charged with the management of society - public servants and politicians - to lay the blame for the ills of society at the door of the poor. Instead of having to live up to the public's belief that they have appointed politicians and bureaucrats to manage society in the public interest, it would be possible for these public servants to claim that, if only the poor worked hard and made intelligent choices, they would be able to better themselves;
- vi. It would reinforce the tendency to blame teachers working in schools serving deprived areas - and not the managers of the social system - for the poor performance of their pupils since, obviously, they would have had the same resources as everyone else but made poorer use of them.
- vii. It would shift the locus of responsibility for the problems in education from the leaders and managers of society to those least able to introduce change - teachers, pupils and parents. It would become still less obvious that it is the competence (and therefore the education) of the leaders and managers of our society - and not that of unskilled workers - that is most deficient.

It follows from this discussion that *public* provision is needed to create the necessary choice between educational programs, to collect and disseminate information on their consequences, and to develop the mechanisms, information, and tools required for

effective education. Unfortunately, whether one considers education, housing, health, transport, or the environment, these are the very problems the public sector has proved least capable of tackling. Bureaucrats have long neglected the task of identifying social constraints and the means to overcoming them with a view to running systems more effectively. Instead, searching for uniformity and an easy justification for their own positions, they have tended to usurp responsibility for decisions which should have been taken by people lower down in the hierarchy - in this case, by schools and teachers themselves. The problem we face, then, is how to ensure that public servants play an appropriate role in the management of society.

Our focus during the remainder of this book will be on the question of how to create a vibrant and innovative public sector, and how to ensure that public servants (including teachers) act innovatively and in the long term interests of their clients by setting out to influence the various feedback loops shown in Diagram 1 in Chapter 7.

### *Parallel Organization Activity*

The development of an educational system concerned with innovation and improvement, in which people at all levels try to do their jobs *well*, and in which they collaborate in order to influence the wider social forces limiting their actions, will require fundamental change in the way education is managed. It will be necessary to introduce a significant emphasis on what Kanter has termed "parallel organization" activity<sup>8,6</sup>.

According to Kanter - and her conclusions are supported by our own research and that carried out by Spencer - most innovative activity is not carried out by a separate cadre of R&D specialists, but by those who undertake the day to day work of the organization.

The main requirements for effective "parallel organization" activity are that:

1. Time and resources are set aside for activities intended to result in innovation and improvement.
2. People work in a non-hierarchical relationships. Innovation requires fluid networks of *ad hoc* working groups, forming and disbanding as needs change. These groups bring together a wide variety of people, and thereby facilitate the identification, development, and utilization of normally unrecognized talents to create climates of enterprise or innovation (or what Gardner<sup>8,7</sup> has called cultures of intelligence). Whereas novel, potentially risky, ideas tend to be filtered out in hierarchical organizations, flat, non-hierarchical, arrangements bring those with such ideas into direct contact with those capable of releasing resources. The arrangements make it possible for the organization to capitalize on the insights of "coal face" workers instead of relying on "management" or "research" to initiate new developments.
3. Managers (school principals) and staff recognise the wide range of contributions required to carry out any kind of innovative activity, and assemble teams of people who contribute in very different ways to the exercise.
4. Managers and other staff identify those best able to undertake effective innovative activity, and channel the necessary resources to them. (Note that people's ability to succeed in such demanding, "risky", and adventurous activity is often unrelated to their ability to produce the formal paper "plans" so cherished by bureaucrats).
5. There are opportunities to work with people engaged with similar problems, both within the organization (school) and outside it. Such collaboration generates new ideas and

- establishes and maintains a network of contacts to provide help and support when difficulties arise. "Cascade" networks of this kind have proved crucial in other fields<sup>8.8</sup>.
6. Staff are encouraged to form "political coalitions" with others outside their own organization (school) in order to find ways of influencing external constraints. In education, these include parental expectations, the sociological functions the educational system performs for society, the expectations of those who currently manage education, and the assessment procedures available.
  7. There is access to R&D laboratories developing the required concepts, understandings, and tools, but in such a way that those concerned (in this case teachers, pupils, and parents) are able to initiate and take part in the research and development process.

*Components of a Climate Conducive to Innovation and Improvement*

The remainder of this chapter will be devoted to discussing the components of "parallel organization" activity in greater detail, using a framework developed by McClelland and co-workers<sup>8.9</sup>.

A climate conducive to innovation in schools would be one in which teachers' motivational dispositions were developed and released, enabling them to engage in more innovative activity themselves, and allowing them to gain control over social constraints on their classroom behavior. Such an environment would necessitate at least the following:

*Concern with clarity.*

Effective goal achievement requires clarity concerning the goals that are to be achieved, how they are to be reached, how to determine whether they are being reached, and how to overcome the barriers to their achievement. However, the "clarity" of an idea does not demand its "clear" formulation in words. Innovatory activity often originates in *feelings*. One might, for instance, become vaguely aware that something is not quite right, or that it might be important to embark on a particular activity. Such feelings lead directly to "experimental interactions with the environment" in which one initiates some activity to see what happens. The results of such activities are also often monitored affectively rather than intellectually. The whole processes may lead to an "understanding" which remains unverbalized. Although this process is often non-cognitive, then, there is a sense in which anyone undertaking such activity *is* concerned with clarifying problems, their nature, and potential solutions. It is a lack of such concern which characterizes much of the standardless activity which occupies so much of the time of so many of the pupils in our schools.

In collaborative work, the success of an innovative program of activity demands clear delineation of the roles to be played by everyone concerned.

*Explicit emphasis on the importance of innovation.*

One of the most important pre-requisites for innovation and improvement is a belief that it is important to find new ways of thinking about things, better ways of doing things, and new things to do. This is at odds with the belief that everything would be fine if only the government introduced some particular regulation or provided more money. Our research indicates that, by international standards, the UK and the United States have relatively few

people who think it is important to do these things. Given that teachers powerfully communicate their own priorities of this sort - and competencies they use to translate them into effect - to their pupils it is therefore vitally important that teachers both undertake more activity in this area themselves and explicitly set out to influence students' priorities and competence in the area by providing the requisite concepts and using literature and case history material to discuss the components of such behavior and illustrate the personal and social consequences. The *Edinburgh Questionnaires* have been developed to help groups such as teachers to collect personal and group data which will enable them to take a look at themselves in a kind of a mirror and ask whether they like the look of what they expect the consequences to be.

*Recognition of accomplishment using a differentiated model of competence.*

As has been mentioned, innovativeness, enterprise, and most forms of intelligence are cultural rather than individual characteristics. Successful innovation requires that one builds on the work of others, and that one's work is itself built upon. A good design for a locomotive is of no use if the materials required to build it are not available, if the track on which it is to run will not be built, and if an appropriate monetary system and a means of collecting fares have not been developed.

An integral feature of any innovative climate is some means of recognising the contributions of those who are good at initiating action, those who are good at experimenting "intuitively" with the environment, lateral thinkers, people who test ideas and insights, soothsayers, persuaders, motivators, team builders, grantsmen, publicists, people who examine (and gain control over) external constraints, people who formalize and disseminate understandings built up in the course of "failed" projects (so that it ceases to be true that such projects are failures), and people able to sift information for forward-looking, *potentially* useful, ideas.

The establishment of such a climate depends on general recognition that people possess very different talents and on the development of support systems which assist those who are doing different things in carrying out those activities. People using their most important abilities to good effect should not be castigated for neglecting other aspects of their work.

It is important to note that innovative activity often does not lead to tangible results. Such difficult, demanding, and frustrating activity is frequently fruitless. No one should be considered only as good as the success of their latest venture. Of much greater importance are the understandings and competencies developed over a long period of time.

This discussion underlines the need for a mechanism whereby all contributions and accomplishments, however intangible, can be recognised and credited. Hence the importance of the descriptive statements concerning competence which emerge from the network-based observations and informal assessments which emerge from "parallel organization" activity. However, there is a clear need to formalize such knowledge by developing the means to assess and report high-level competencies as part of the staff-appraisal process. Thereafter, systematic procedures are needed for the identification, development and utilization of previously unrecognised competencies. Exactly such a system has been developed by Burgess and Adams<sup>8,10</sup>. Teachers and head teachers keep a record of activities they consider important, including accounts of their hopes,

aspirations, and disappointments. This enables them to assess their own accomplishments and make plans for the future. The discussion of such accounts among colleagues leads to a mutual understanding of each others' motives, values, hopes, and competencies. Colleagues, superiors, and subordinates become better able to support, encourage, and capitalize upon, each others' talents. Subordinates are able to *participate* in the "managerial" process of setting organizational and individual goals, receiving recognition for their contributions *in terms which are personally important to them*.

*An emphasis on staff development and the creation of developmental environments.*

Innovation in schools requires a wide variety of people to perform very different functions. It follows that the emphasis in staff assessment should be on guidance, placement, and development rather than selection. This emphasis on staff development is reinforced by the fact that these divergent, but important, competencies are typically best developed on the job. Taken together, these observations suggest that out-of-school teacher training should largely be abandoned.

In fact, the establishment of a climate of innovation within the educational system requires the creation of *developmental environments* from which *everyone* - principals, teachers, and pupils alike - will benefit. Just as pupils need opportunities to practice and develop high-level competencies, staff need opportunities to participate in innovative activity, and thus become familiar with the cyclical learning processes required for successful innovation. Instead of depending on centralized direction, they need to learn how to engage in the step-wise process of trial, monitoring, "reflection", and improvement.

Just as school staff need to refrain from expecting their superiors to provide solutions to their problems, so they must refrain from blaming their colleagues when things go wrong. Activities that are easily denigrated as "failures" need to be regarded as opportunities to learn more about the nature of problem and the adequacy of the strategies to be used to solve them. School staff also need experience in gaining control over external forces, including those arising from parents and the range of tests that are available, and come to view such activities as crucial parts of *their jobs*. They need opportunities to participate in the management of their schools, not by serving on committees, but through the active performance of managerial roles - setting goals, motivating people to work together effectively, and dealing with those inclined to sabotage the process. They need to take more responsibility for their own development and set up networks of contacts which help them to keep abreast of developments in their own specialist area<sup>8,11</sup>.

*Support.*

It is essential, in any innovative environment, that colleagues offer each other help and support when difficulties are encountered. Any criticism offered must be constructive rather than destructive, emphasising the worthwhile aspects of the task accomplished rather than its failures. New ideas floated amongst a group of colleagues should be examined for their innovative potential rather than their limitations and practical problems.

*Participation in management.*

Principals are formally appointed as school managers. However, we have already seen that hierarchical management structures are not appropriate to all the tasks which need to

be undertaken in modern society. At one time it seemed as if the relationships to be established between managers and their staff would be subsumed within the concept of "democratic management", with its emphasis on delegation of responsibility. However, Schon<sup>8.12</sup> has pointed to the need to think about organizations in a more differentiated way and to make room for people performing a range of functions: inter-organizational gofers, fixers, visionaries, "young turks" (who challenge received views), advocates, brokers, manoeuvrers, etc. More recently, Kanter has questioned the whole notion of innovative activity within hierarchical structures which do not provide for "parallel organization activity". The widespread confusion created by equating accountability hierarchies with pay hierarchies has been underlined by Jaques<sup>8.13</sup>

Of great importance in this context are the expectations we have of public servants, including teachers. We will examine these expectations in greater detail in the next chapter, but it is necessary to anticipate that discussion here to the extent that it is important to recognise that ways must be found to hold managers (head teachers and principals) accountable for releasing the energy, enthusiasm, and know-how of their subordinates (in this case teachers). At the same time, it will be necessary to find ways of holding subordinates accountable for individual innovative activity. A few elected representatives at the top of a bureaucratic hierarchy simply cannot deal with the quantity of information involved. To a considerable extent, then, it is the manager's job to monitor the performance of subordinates as a basis for important decisions concerning their placement and development<sup>8.14</sup>. The exercise of such managerial discretion cannot be delegated to committees, or replaced by "democratic" decision-making among staff. Managerial performance must therefore be evaluated against such criteria as whether those concerned are able to carry out these kinds of activity effectively<sup>8.15</sup>.

A manager's role in any organization involves making discretionary judgments about which activities are to be carried out. This involves judging the character of subordinates in order to decide to whom to channel resources; it involves deciding which potentially valuable (but as yet untried and untested) new developments should be initiated; it involves thinking about the talents of subordinates and how to place, develop, and capitalize upon them; it involves creating a developmental and innovative environment; it involves opening doors for energetic and innovative subordinates so that they can undertake the activities they are strongly motivated to carry out; and it involves deciding how best to work with other managers to gain control over external constraints on what can be done within the organization.

*Participation* in the management process is designed to ensure that all concerned understand what is to be done and how it is to be done, to foster commitment to the organization and new developments, to help clarify the variety of different roles required, and to encourage effective performance of those roles<sup>8.16</sup>. But it can also play an important part in staff development by enabling subordinates to participate in their managers' thought processes, their prioritising, their anticipation of future difficulties and invention of ways round them, their establishment of "political coalitions" to gain control over forces from outside their organizations, their feelings of doubt and the way in which they take initial soundings and grow in confidence, and other features of personal and managerial competence<sup>8.17</sup>.

The term "delegation of responsibility" is confusing and misleading. It implies that managers are to hand over some part of their job. Instead, jobs need to be *defined* to

include responsibility for such things as taking initiative, exercising judgement and discretion, initiating action based on feelings, monitoring developments with a view to improvement etc. Looked at in this way, the person concerned already *has* responsibility for trying to invent better ways of meeting clients' needs. No one should have to spend a great deal of time trying to justify prospective courses of action to those without first-hand knowledge of a problem, or a knowledge of the personal resources which can be brought to bear to invent ways of overcoming unexpected difficulties.

#### *Changes in job definitions of teachers and principals.*

At present, teachers, and public servants generally, are not expected to engage in spontaneous innovative activity. Neither is it seen as part of their role to find better ways of meeting their clients' needs or to influence the social constraints which prevent them doing so. Instead, they are looked upon as functionaries who are expected to do the bidding of elected representatives.

If teachers are to concern themselves more with the needs of their pupils than with the directives of elected representatives, they must be held accountable for making good, discretionary, forward-looking decisions in their pupils' interests instead of for following the directives of their superiors. They must be held accountable for recognising their pupils' individual motivational dispositions and talents, and for creating personalized developmental programs designed to nurture these talents. They must be held accountable for collaborating with others in order to influence external constraints and for initiating and engaging in a public debate concerning the goals of education and how they are to be achieved. They must, in fact, be held accountable for carrying out all those activities which constitute innovative action in the public interest<sup>8.18</sup>.

In a similar vein, the Principal's job is to create a climate of enthusiasm, dedication, high standards, and concern with innovation. This requires them to gain control over external constraints and to form political<sup>8.19</sup> coalitions for the purpose. It requires them to identify those able to make good use of resources, and to allocate resources and support personnel accordingly. It requires them to identify and harness the different talents possessed by different teachers, and to ensure that teachers get recognition for their activities. It requires them to assemble teams of people capable of contributing very different things to a program of innovation, and to translate conflicts in individual priorities into useful activity<sup>8.20</sup>.

#### *Systematic monitoring and review activities.*

Our research has revealed an urgent need for more regular and systematic clarification within schools of educational goals, assessment of whether they are being achieved, if not why not, and what can be done about it. There is, at present, little activity of this kind. Any monitoring which takes place tends to be linked to staff selection rather than staff development, and is therefore threatening rather than supportive. We have also noted a great deal of skepticism concerning the value of systematic monitoring activity. This seems to derive from two sources. First, it is rightly suspected that any formal measures of goal achievement which might be introduced would not reflect the most important goals of education because these are "intangible and difficult to measure". The introduction of a narrow range of measures would yield misleading results and lead to a concentration on easily assessed goals and the neglect of more important ones<sup>8.21</sup>. Second, it a

commonplace that the results of evaluation exercises tend to disappear into the files of some external agency without having any effect on educational programs<sup>8.22</sup>.

More systematic activity requires both informal and formal monitoring.

#### *Informal monitoring.*

Kanter's work shows that informal discussion between those involved in innovative activity does lead to progress. In an educational setting, more informal meetings between staff (in the course of parallel-organization activity) could be extremely useful if the discussion focussed on goals, the means to achieving them, and barriers to their achievement.

It is important to avoid citing the elusiveness of important educational goals as an excuse for failing to monitor progress toward them: failure to introduce appropriate monitoring arrangements leads to a neglect of *all* standards. Any attempt to develop ways of measuring, or indexing, important but intangible outcomes and the ways in which they are being achieved leads to greater clarity concerning goals, their achievement, and their assessment.

In any case, many goals are not so intangible as is often claimed. This is usefully illustrated by an example from one of our own projects.

In seeking to discover whether primary school teachers utilized out-of-school visits in ways which would foster high-level competencies in their pupils, we examined displays produced by schools for inclusion in an exhibition of work arising from a zoo visit. Most of the exhibits consisted of pictures of animals, accompanied by statements about conservation or the animals depicted. There was little evidence that the visits had been used to develop the pupils' powers of observation, their ability to form an understanding of ecological processes, the influence of economics in such processes, and the pupils' own role in this cycle. Similarly, our observations of the murals which children and their teachers had constructed in schools revealed little evidence of original observation, collaborative work, leadership, or the use of layout to communicate an unwritten message. It appeared that the teachers' focus had been almost exclusively on low-level language skills, craft work, and book-reference skills. Clearly, the work "behind" the displays and murals involved much closed questioning and an emphasis on what are so often called "academic" skills - low level memorization which involves no judgment, analysis, synthesis, or critical thinking<sup>8.23</sup>.

These examples illustrate that an attempt to obtain evidence concerning the attainment of educational goals leads to improved understanding, both of the goals to be achieved and the means to their achievement.

#### *Formal evaluation.*

Two kinds of formal evaluation activity need to be considered: Outcome Focussed and Intervening-Process Focussed evaluation.

1. *Outcome focussed evaluation.* Formal evaluation procedures are most useful when an attempt is being made to reach clear goals. In an educational setting the task is more difficult than in industry. In the first place, it is difficult to assess progress toward many of

the most important goals of education. Secondly, the qualities to be nurtured vary so much from pupil to pupil. If outcome-focussed evaluations are not to direct attention away from the most important goals of education, it is essential that they be broadly based and cover *all* important outcomes<sup>8.24</sup>.

2. *Intervening-process focussed evaluation.* This concerns the *likelihood* that certain activities will lead to desired outcomes. Classroom activity can be indexed using sophisticated "classroom climate" schedules focussing on high-level<sup>8.25</sup> educational processes. This can be done by asking pupils about such things as the values of fellow pupils and teachers, the kinds of activities which are encouraged and rewarded, whether they think it important to attempt new things, and what they think would be the consequences of such attempts. Walberg and Howard<sup>8.26</sup> (and many others in the industrial sector) have shown that information collected using such measures can be used to create more productive and developmental environments. The classroom environment data collected by Howard were fed to a series of groups made up of parents, teachers, and administrators. They were asked whether they liked what they saw, what its consequences were likely to be, and what could be done to improve the situation. Repeat assessments were made to see whether the suggested changes had had the desired effect. Note that what the bureaucracy was doing was providing measures and then feeding information outward to the public rather than upward through a bureaucratic hierarchy. Note also the use of a multi-interest external group to give teeth to the information collected.

These observations suggest that the formal review process is less important than the understandings and procedures accompanying it. To be functional, those understandings and procedures must recognise the value of pursuing hunches. The real objectives and purpose of an activity often only emerge through monitoring the results of "experimental" behavior initiated on the basis of feelings. Review processes must acknowledge the importance of supportive *discussion* geared to the generation of enthusiasm and understanding, rather than gaining an accurate measure of the "quality" of previous performance. It is the cyclical improvement in depth of understanding which results in innovation - one cannot plan an adventure into the unknown with any precision. Review processes to support and stimulate innovation must be flexible and encourage those concerned to capitalize on 'chance' discoveries, learn from "mistakes", and follow up unanticipated leads. Reassurance and help is often needed to overcome the fears and anxieties associated with the exploration of unknown territory.

In concluding this section, it is important to note that these procedures, whilst forming a necessary part of an effective educational system, have an even more important role to play: they expose pupils to the procedures required to create an innovative society.

#### *Procedures for handling conflict.*

In creating a climate which supports innovation, explicit steps need to be taken to ensure that differences of opinion come out into the open and are dealt with. Nothing undermines the effectiveness of an organization more than a tendency on the part of its employees to acquiesce when decisions are being made but then to engage in activities which undermine those decisions.

What is needed is shared recognition that it is important to pay attention to differences of opinion, mull them over, and make their implications explicit. Differences of opinion do not have to be interpreted as signs of personal animosity. Indeed, they should be regarded as positive tensions offering springboards to action. It is very important to avoid the tendency to merely acknowledge and accept them by such mechanisms as attributing them to "personality clashes". This merely absolves those concerned from responsibility for thinking about the *cause* of the problem.

*Encouragement to work outside the school to identify and tackle wider constraints.*

Schools do not exist in isolation. Teachers' activities are markedly affected by the expectations of pupils, parents, Directors of Education, members of Advisory Services, and the principals of other schools (particularly those to which graduates of their school will proceed). More fundamentally, perhaps, teachers' actions are controlled by the role played by schools in the process of social selection and placement. These social forces are manifested in the demands made on schools by parents, and in the coercive power of the assessment system. Pupils appreciate the dilemmas associated with spending time on activities which foster high-level competencies if this leads to lower subject grades.

In the past, even the role of school principal has not been considered to include such things as engaging in public debate concerning the goals of education and the means to their achievement. However, so much activity is required outside schools that not only principals, but the entire school staff, need to become involved.

But this is not the only reason for emphasising the need to encourage more teachers to become involved in out-of-school activities. It is easiest to make some of the other reasons clear by an example. Teachers seldom know how to deal with a group of parents demanding change, particularly when different parents demand incompatible changes. They tend not to define such situations as problems which are capable of analysis and solution. Instead they tend to avoid creating situations which would lead them to have to deal with them. It is too much to expect most teachers to solve such problems on their own. We need to ensure that teachers can, through "parallel organization" activity, initiate the research needed to clarify such problems and participate in the activities required to tackle them.

The links between the educational system and the "outside world" have been summarized in *Diagram 1* at the end of Chapter 7. That diagram reveals the multiple interacting forces which need to be influenced, the motives which can be harnessed to influence them, and the points at which it would be possible to intervene. The task now is to find ways of doing so<sup>8.27</sup>.

*External support.*

Those engaged in innovative activity cannot expect to meet with the approval of everyone they encounter. If they are not to be discouraged, it is essential that innovators have a network of contacts outside their own organization to provide support, ideas, and encouragement.

Rogers<sup>8.28</sup> research has shown that high-level innovators establish cosmopolitan networks of contacts which allow them access to developing intellectual ideas. However,

others have networks which enable them to observe the work, and adopt the practices, of contacts at a similar level in the hierarchy of innovation. If people are required to review the work of those too far ahead in their field, they tend to dismiss the work as inappropriate to their own situation, citing differences in resources, clientele, etc. A facilitative "cascade" structure is required in education, and the need is not satisfied by an imposed cascade structure involving training which takes no account of the person's present position and competencies, or external constraints.

#### *An appropriate concept of risk.*

Suggestions as to how public provision might be improved are often met with the view that nothing can be done because the suggestion has not been tried, tested, and shown to work - "One cannot take risks with public money". The truth behind such assertions is that public servants are averse to taking responsibility for risky activities suggested by those below them in the bureaucracy or outsiders. Given what has been said above concerning the role of public servants in the management of modern society, such abdication of responsibility cannot be allowed to continue. However, public servants *do* need opportunities to develop the competencies required to undertake adventurous activities, just as the public need to develop more appropriate standards and criteria against which to evaluate the activities of public servants.

In order to reap the benefits of innovation, a reasonable degree of failure must be anticipated. There must be greater tolerance of false starts coupled with an enhanced capacity to learn from adventures that have "failed" and subsequently capitalize on what has been learned. The risk to be taken is not a gambler's risk, but simply that involved in a speculative attempt to find a way of ameliorating a problem or effect important change. It should always be possible to learn enough from an adventure to justify having undertaken it. However, if enhanced understanding is to be a sufficient justification for having embarked upon adventurous activity, it will be necessary to have some formal mechanism to crystallize and disseminate what has been learned. This will often require those concerned to employ researchers with particular skills in this area and then encourage them, not merely to write articles, but also to disseminate - and revise - what has been learned through the network-based management structures which were hinted at above and which will be described more fully in the next chapter.

The conclusion to which this discussion points is, then, that a climate which is conducive to innovation must, while tolerating failure and resisting the temptation to insist that one be certain that any particular course of action will succeed before embarking on it, ensure that those concerned have the competencies and expectations, and access to the support structures, required to ensure that something worthwhile emerges from virtually any activity initiated. All of these are sadly lacking in the educational system at present.

#### *Summary*

In this chapter we have discussed the changes needed to create a climate of innovation within the educational system. There is a need to allocate time for, and create appropriate structures to carry out, what Kanter has called "parallel organization activities". These require "flat", non-hierarchical, arrangements which allow information to flow freely between people at different levels in a bureaucratic structure and enable resources to

reach innovative individuals. Such activities also require the establishment of networks of contacts within schools and between schools and outside organizations.

More generally, we have discussed those dimensions of organizational climate which require attention if innovation is to be promoted. New job descriptions for principals, teachers, and administrators are called for. It will be necessary to increase teachers' involvement in the management of their schools, and to evolve new concepts of management. Developmental environments must be created for teachers within schools, and they should also be encouraged to spend more time *outside* their schools attempting to gain control over the social constraints which currently prevent them pursuing educational goals effectively within their classrooms. Most important of all, it will be necessary to find ways of giving all concerned credit for engaging in such difficult and demanding activities. Burgess and Adams have developed and tested a mechanism for promoting the flow of information between different levels in a hierarchy, encouraging recognition of neglected concerns and competencies, providing a support structure, and offering recognition for the outcomes. Their work shows that it is *not* necessary to wait for legislation and sociological change before anything can be done: It is *now* possible for teachers to act in a more professional way to gain more control over their destinies and do their jobs more effectively.

### Notes

- 8.1. Hogan (1990) has documented how three types of self-interested people destroy their organisations for the sake of personal advancement.
- 8.2. It may be noted that a Japanese delegation visited Britain and America shortly after the first world war and were so horrified at the inefficiency of market management that they set up a system of explicit management which has been in place - and highly successful - ever since.
- 8.3. Something which has been noticeable in Britain, but which may not have been so characteristic of the United States, is that when large firms get into financial difficulties they are bought by the State at rock-bottom prices. It is the State which then sets about modernising them, pouring in millions of pounds, and then, when they are viable, selling them back into private ownership.
- 8.4. Dockrell (1991)
- 8.5. See Dockrell 1991.
- 8.6. It is important to note that Kanter's research was not confined to private sector organisations.
- 8.7. Gardner's (1987) use of the term "cultures of intelligence" to refer to cultures which utilize people with different preoccupations and areas of competence in a complementary way to generate new ideas and ways of doing things is technically correct. This can be shown by considering the concept of "Military Intelligence". Military Intelligence is a noun which is used to designate a body of tentative knowledge. The qualities required to develop this knowledge include the ability to seek out, collate, re-interpret, and piece together, scraps of unreliable information in order to perceive something new. They include the ability to make good judgments about which scraps of information to rely on and which to discard. These judgments have to be made in the light of impressions of the reliability of the sources of the information and the emerging whole. But the qualities required to establish military intelligence also include the motivation and the ability to do such things as set up and manage networks of contacts to obtain the information, the ability to supply those contacts with appropriate guidance as to the kind of information that should be sought and is likely to be useful, and the ability to prise information out of people who do not want to part with it. This process clearly involves the exercise of the two components of *g* identified by Spearman (1923) i.e. eductive and reproductive ability. But it also involves the effective use of accumulated specialist knowledge of military operations, people, and systems. It involves the ability to discriminate the significant from the insignificant, the ability to engage in the political activity required to set up and manage an effective system for trawling for information, and the ability to select and develop staff to perform those roles. Cultures of intelligence therefore involve the complementary (if not spontaneously cooperative) exercise of competencies which go well beyond even the seven intelligences discussed by Gardner, never mind the much more limited kind of intelligence that comes to mind when the term is used. It is therefore preferable to describe the sometimes stressful cultures in which a range of distinctive but complementary competencies are utilized to produce new things to do,

new ways of doing things, and new ways of thinking about things as cultures of enterprise or innovation rather than as cultures of intelligence.

There is, however, a sense in which none of these terms conjure up quite the right image. None of them call to mind the ideas evoked by the term "developmental environment". Yet teachers need to be able to develop the confidence and the competencies required to undertake the diverse tasks required for innovation. In using the term "cultures of enterprise and innovation" we wish, therefore, to conflate the two meanings of "culture".

- 8.8. Rogers (1962/1983)
- 8.9. Litwin et al. (1967); Klemp et al. (1977)
- 8.10. Burgess and Adams (1986)
- 8.11. Rogers (1962) has provided a useful account of these processes at work.
- 8.12. Schon (1972/73)
- 8.13. Jaques (1989)
- 8.14. Jaques (1989) has argued that it is the task of the manager *once removed* to undertake such guidance, placement, and counselling, because only he (or she) has the breadth of vision and understanding that is necessary.
- 8.15. See also Jaques (1989).
- 8.16. *Records of Achievement* (Burgess and Adams, 1986) contribute to this process because they lead people to make explicit their own understanding of the process of which they form a part - and of their contribution to that process - and then to discuss those perceptions with their colleagues and superiors.
- 8.17. For a fuller discussion see Raven (1984).
- 8.18. Raven et al. (1985); Raven (1987); Huff et al. (1982); Schneider et al. (1981).
- 8.19. The word political is used to signal (a) that these coalitions are designed to influence wider social processes and (b) that the groups are not made up of people who share all their concerns and interests, but groups of people who have in common the aim of changing certain processes in the wider society.
- 8.20. Raven et al. (1985); Raven (1987); Huff et al. (1982); Klemp et al. (1977); Schneider et al. (1981)
- 8.21. That these fears are well founded is illustrated in Raven (1988, 1991). Adams et al. (1981) clearly demonstrate this effect in the polytechnic they studied, while much of my own research has in a sense documented the effects which 'payment by results' has in education when very few of the most important outcomes show up on the measures; a much fuller discussion of the damaging effects of the limited range of formal evaluation procedures will be found in Raven (1984, 1985, 1991).
- 8.22. Harlen's (1984) research shows that this is indeed the case.
- 8.23. The assertion that there was no evidence that the pupils were doing these things is dependent on introducing and applying criteria that the teachers were *not* using (Johnstone & Raven, 1985; Raven et al. 1985).
- 8.24. cf. Raven (1984, 1985, 1991).
- 8.25. The words "high-level" are intended to signal that the low-level measures of the kind produced by Walberg (1974) deflect attention away from the relevant issues.
- 8.26. Walberg (1985); Walberg and Haertel (1980); Moos (1979, 1980); Howard (1980, 1982, 1982, 1982)
- 8.27. It is of interest that, according to Kuhn (1962), Newton was unable to identify the practical implications of the theories he developed about how the universe worked: that came later.
- 8.28. Rogers (1962/1983)