

Towards a Theory of Large Scale Organisation by E.F. Schumacher

To follow is the full text of the second of five essays on 'Organisation and Ownership' in the final part of 'Small is Beautiful: a study of economics as if people mattered' first published in 1973 by Blond & Briggs (ISBN 0 349 13132 5).

Almost every day we hear of mergers and takeovers; Britain enters the European Economic Community to open up larger markets to be served by even larger organisations. In the socialist countries, nationalisation has produced vast combines to rival or surpass anything that has emerged in the capitalist countries. The great majority of economists and business efficiency experts supports this trend towards vastness.

In contrast, most of the sociologists and psychologists insistently warn us of its inherent dangers - dangers to the integrity of the individual when he feels as nothing more than a small cog in a vast machine and when the human relationships of his daily working life become increasingly dehumanised; dangers also to efficiency and productivity, stemming from ever-growing Parkinsonian bureaucracies.

Modern literature, at the same time, paints frightening pictures of a brave new world sharply divided between *us* and *them*, torn by mutual suspicion, with a hatred of authority from below and a contempt of people from above. The masses react to their rulers in a spirit of sullen irresponsibility, while the rulers vainly try to keep things moving by precise organisation and co-ordination, fiscal inducements, incentives, endless exhortations and threats.

Undoubtedly this is all a problem of communications. But the only really effective communication is from man to man, face to face. Franz Kafka's nightmarish novel, *The Castle*, depicts the devastating effects of remote control. Mr K, the land surveyor, has been hired by the authorities, but nobody quite knows how and why. He tries to get his position clarified, because the people he meets all tell him: 'Unfortunately we have no need of a land surveyor. There would not be the least use for one here.'

So, making every effort to meet authority face to face, Mr K approaches various people who evidently carry some weight; but others tell him: 'You haven't once up till now come into real contact with our authorities. All these contacts are merely illusory, but owing to your ignorance...you take them to be real.'

He fails utterly to do any real work and then receives a letter from The Castle: 'The surveying work which you have carried out thus far has my recognition...Do not slacken your efforts! Bring your work to a successful conclusion. Any interruption would displease me...I shall not forget you.'

Nobody really likes large-scale organisation; nobody likes to take orders from a superior who takes orders from a superior who takes orders...Even if the rules devised by bureaucracy are outstandingly humane, nobody likes to be ruled by rules, that is to say, by people whose answer to every complaint is: 'I did not make the rules: I am merely applying them.'

Yet, it seems, large-scale organisation is here to stay. Therefore it is all the more necessary to think about it and to theorise about it. The stronger the current, the greater the need for skilful navigation.

The fundamental task is to achieve smallness *within* large organisation.

Once a large organisation has come into being, it normally goes through alternating phases of *centralising* and *decentralising*, like swings of a pendulum. Whenever one encounters such *opposites*, each of them with persuasive arguments in its favour, it is worth looking into the depth of the problem for something more than compromise, more than a half-and-half solution. Maybe what we really need is not *either-or* but *the-one-and-the-other-at-the-same-time*.

This very familiar problem pervades the whole of real life, although it is highly unpopular with people who spend most of their time on laboratory problems from which all extraneous factors have been carefully eliminated. For whatever we do in real life, we must try to do justice to a situation which includes all so-called extraneous factors. And we always have to face the simultaneous requirement for order and freedom.

In any organisation, large or small, there must be a certain clarity and orderliness; if things fall into disorder, nothing can be accomplished. Yet, orderliness, as such, is static and lifeless; so there must also be plenty of elbow-room and scope for breaking through the established order, to do the thing never done before, never anticipated by the guardians of orderliness, the new, unpredicted and unpredictable outcome of a man's creative idea.

Therefore any organisation has to strive continuously for the orderliness of *order* and the disorderliness of creative *freedom*. And the specific danger inherent in large-scale organisation is that its natural bias and tendency favour order, at the expense of creative freedom.

We can associate many further pairs of opposites with this basic pair of order and freedom. Centralisation is mainly an idea of order, decentralisation, one of freedom. The man of order is typically the accountant and, generally, the administrator; while the man of creative freedom is the *entrepreneur*. Order requires intelligence and is conducive to efficiency; while freedom calls for, and opens the door to, intuition and leads to innovation.

The larger an organisation, the more obvious and inescapable is the need for order. But if this need is looked after with such efficiency and perfection that no scope remains for man to exercise his creative intuition, for *entrepreneurial* disorder, the organisation becomes moribund and a desert of frustration.

These considerations form the background to an attempt towards a theory of large-scale organisation which I shall now develop in the form of five principles.

The first principle is called *The Principle of Subsidiarity* or *The Principle of Subsidiary Function*. A famous formulation of this principle reads as follows: 'It is an injustice and at the same time a grave evil and disturbance of right order to assign to a greater and higher association what lesser and subordinate organisations can do. For every social activity ought of its very nature to furnish help to the members of the body social and never destroy and absorb them.' These sentences were meant for society as a whole, but they apply equally to the different levels within a large organisation. The higher level must not absorb the functions of the lower one, on the assumption that, being higher, it will automatically be wiser and fulfil them more efficiently. Loyalty can grow only from the smaller units to the larger (and higher) ones, not the other way round - and loyalty is an essential element in the health of any organisation.

The Principle of Subsidiary Function implies that the burden of proof lies always on those who want to deprive a lower level of its function, and thereby of its freedom and responsibility in that respect; *they* have to prove that the lower level is incapable of fulfilling this function satisfactorily and that the higher level can actually do much better. 'Those in command (to continue the quotation) should be sure that the more perfectly a graduated order is preserved among the various associations, in observing the principle of subsidiary function, the stronger will be the social authority and effectiveness and the happier and more prosperous the condition of the State.' (from the encyclical '*Quadragesimo Anno*')

The opposites of centralising and decentralising are now far behind us: the Principle of Subsidiary Function teaches us that the centre will gain in authority and effectiveness if the freedom and responsibility of the lower formations are carefully preserved, with the result that the organisation as a whole will be 'happier and more prosperous'.

How can such a structure be achieved? From the administrator's point of view, i.e. from the point of view of orderliness, it will look untidy, comparing most unfavourably with the clear-cut logic of a monolith. The large organisation will consist of many semi-autonomous units, which we may call *quasi-firms*. Each of them will have a large amount of freedom, to give the greatest possible chance to creativity and *entrepreneurship*.

The structure of the organisation can then be symbolised by a man holding a large number of balloons in his hand. Each of the balloons has its own buoyancy and lift, and the man himself does not lord it over the balloons, but stands beneath them, yet holding all the strings firmly in his hand. Every balloon is not only an administrative but also an *entrepreneurial unit*. The monolithic organisation, by contrast, might be symbolised by a Christmas tree, with a star at the top and a lot of nuts and other useful things underneath. Everything derives from the top and depends on it. Real freedom and *entrepreneurship* can exist only at the top.

Therefore, the task is to look at the organisation's activities one by one and set up as many quasi-firms as may seem possible and reasonable. For example, the British National Coal Board, one of the largest commercial organisations in Europe, has found it possible to set up quasi-firms under various names for its opencast mining, its brickworks, and its coal products. But the process did not end there. Special, relatively self-contained organisational forms have been evolved for its road transport activities, estates, and retail business, not to mention various enterprises falling under the heading of diversification. The board's

primary activity, deep-mined coal-getting, has been organised in seventeen areas, each of them with the status of a quasi-firm. The source already quoted describes the results of such a *structurisation* as follows: 'Thereby (the centre) will more freely, powerfully and effectively do all those things which belong to it alone because it alone can do them: directing, watching, urging, restraining, as occasion requires and necessity demands.'

For central control to be meaningful and effective, a second principle has to be applied, which we shall call *The Principle of Vindication*. To vindicate means: to defend against reproach or accusation; to prove to be true and valid; to justify; to uphold; so this principle describes very well one of the most important duties of the central authority towards the lower formations. Good government is always government by exception. Except for exceptional cases, the subsidiary unit must be defended against reproach and upheld. This means that the exception must be sufficiently clearly defined, so that the quasi-firm is able to know without doubt whether or not it is performing satisfactorily.

Administrators taken as a pure type, namely as men of orderliness, are happy when they have everything under control. Armed with computers, they can indeed now do so and can insist on accountability with regard to an almost infinite number of items - output, productivity, many different cost items, non-operational expenditure, and so on, leading up to profit or loss. This is logical enough: but real life is bigger than logic. If a large number of criteria is laid down for accountability, every subsidiary unit can be faulted on one item or another; government by exception becomes a mockery, and no-one can ever be sure how his unit stands.

In its ideal application, the Principle of Vindication would permit only one criterion for accountability in a commercial organisation, namely profitability. Of course, such a criterion would be subject to the quasi-firm's observing general rules and policies laid down by the centre. Ideals can rarely be attained in the real world, but they are none the less meaningful. They imply that any departure from the ideal has to be specially argued and justified. Unless the number of criteria for accountability is kept very small indeed, creativity and *entrepreneurship* cannot flourish in the quasi-firm.

While profitability must be the final criterion, it is not always permissible to apply it mechanically. Some subsidiary units may be exceptionally well placed, others, exceptionally badly; some may have service functions with regard to the organisation as a whole or other special obligations which have to be fulfilled without primary regard to profitability. In such cases, the measurement of profitability must be modified in advance, by what we may call *rents* and *subsidies*.

If a unit enjoys special and inescapable advantages, it must pay an appropriate *rent*, but if it has to cope with inescapable disadvantages, it must be granted a special *credit* or *subsidy*. Such a system can sufficiently equalise the profitability chances of the various units, so that profit becomes a meaningful indication of achievement. If such an equalisation is needed but not applied, the fortunate units will be featherbedded, while others may be lying on a bed of nails. This cannot be good for either morale or performance.

If, in accordance with the Principle of Vindication, an organisation adopts profitability as the primary criterion for accountability - profitability as modified, if need be, by rents and subsidies - government by exception becomes possible. The centre can then concentrate its activities on 'directing, watching, urging, restraining as occasion requires and necessity demands', which, of course, must go on all the time with regard to all its subsidiary units.

Exceptions can be defined clearly. The centre will have two opportunities for intervening exceptionally. The first occurs when the centre and the subsidiary unit cannot come to a free agreement on the rent or subsidy, as the case may be, which is to be applied. In such circumstances the centre has to undertake a full efficiency audit of the unit to obtain an objective assessment of the unit's real potential. The second opportunity arises when the unit fails to earn a profit, after allowing for rent or subsidy. The management of the unit is then in a precarious position: if the centre's efficiency audit produces highly unfavourable evidence, the management may have to be changed.

The third principle is *The Principle of Identification*. Each subsidiary unit or quasi-firm must have both a profit and loss account and a balance sheet. From the point of view of orderliness a profit and loss statement is quite sufficient, since from this one can know whether or not the unit is contributing

financially to the organisation. But for the *entrepreneur*, a balance sheet is essential, even it is used only for internal purposes. Why is it not sufficient to have but one balance sheet for the organisation as a whole?

Business operates with a certain economic substance, and this substance diminishes as a result of losses, and grows as a result of profit. What happens to the unit's profits or losses at the end of the financial year? They flow into the totality of the organisation's accounts; as far as the unit is concerned, they simply disappear. In the absence of a balance sheet, or something in the nature of a balance sheet, the unit always enters the new financial year with a nil balance. This cannot be right.

A unit's success should lead to greater freedom and financial scope for the unit, while failure - in the form of losses - should lead to restriction and disability. One wants to reinforce success and discriminate against failure. The balance sheet describes the economic substance as augmented or diminished by current results. This enables all concerned to follow the effect of operations on substance. Profits and losses are carried forward and not wiped out. Therefore, every quasi-firm should have its separate balance sheet, in which profits can appear as loans to the centre and losses as loans from the centre. This is a matter of great psychological importance.

I now turn to the fourth principle, which can be called *The Principle of Motivation*. It is a trite and obvious truism that people act in accordance with their motives. All the same, for a large organisation, with its bureaucracies its remote and impersonal controls, its many abstract rules and regulations, and above all the relative incomprehensibility that stems from its very size, motivation is the central problem. At the top, the management has no problem of motivation, but going down the scale, the problem becomes increasingly acute. This is not the place to go into the details of this vast and difficult subject.

Modern industrial society, typified by large-scale organisations, gives far too little thought to it. Managements assume that people work simply for money, for the pay-packet at the end of the week. No doubt, this is true up to a point, but when a worker, asked why he worked four shifts last week, answers: 'Because I couldn't make ends meet on three shifts' wages,' everybody is stunned and feels check-mated.

Intellectual confusion exacts its price. We preach the virtues of hard work and restraint while painting utopian pictures of unlimited consumption without either work or restraint. We complain when an appeal for greater effort meets with the ungracious reply: 'I couldn't care less,' while promoting dreams about automation to do away with manual work, and about the computer relieving men from the burden of using their brains.

A recent Reith lecturer announced that when a minority will be 'able to feed, maintain, and supply the majority, it makes no sense to keep in the production stream those who have no desire to be in it'. Many have no desire to be in it, because their work does not interest them, providing them with neither challenge nor satisfaction, and has no other merit in their eyes than that it leads to a pay-packet at the end of the week. If our intellectual leaders treat work as nothing but a necessary evil soon to be abolished as far as the majority is concerned, the urge to minimise it right away is hardly a surprising reaction, and the problem of motivation becomes insoluble.

However that may be, the health of a large organisation depends to an extraordinary extent on its ability to do justice to the Principle of Motivation. Any organisational structure that is conceived without regard to this fundamental truth is unlikely to succeed.

My fifth, and last, principle is *The Principle of the Middle Axiom*. Top management in a large organisation inevitably occupies a very difficult position. It carries responsibility for everything that happens, or fails to happen, throughout the organisation, although it is far removed from the actual scene of events. It can deal with many well-established functions by means of directives, rules and regulations. But what about new developments, new creative ideas? What about progress, the *entrepreneurial activity par excellence*?

We come back to our starting point: all real human problems arise from the *antinomy* of order and freedom. Antinomy means a contradiction between two laws; a conflict of authority; opposition between laws or principles that appear to be founded equally in reason.

Excellent! This is real life, full of antinomies and bigger than logic. Without order, planning, predictability, central control, accountancy, instructions to the underlings, obedience, discipline - without these, nothing fruitful can happen, because everything disintegrates. And yet - without the magnanimity of disorder, the happy abandon, the *entrepreneurship* venturing into the unknown and incalculable, without the risk and the

gamble, the creative imagination rushing in where bureaucratic angels fear to tread - without this, life is a mockery and a disgrace.

The centre can easily look after order; it is not so easy to look after freedom and creativity. The centre has the power to establish order, but no amount of power evokes the creative contribution. How, then, can top management at the centre work for progress and innovation? Assuming that it knows what ought to be done: how can the management get it done throughout the organisation? This is where the Principle of the Middle Axiom comes in.

An axiom is a self-evident truth which is assented to as soon as enunciated. The centre can enunciate the truth it has discovered - that this or that is 'the right thing to do'. Some years ago, the most important truth to be enunciated by the National Coal Board was *concentration of output*, that is, to concentrate coal-getting on fewer coalfaces, with a higher output from each. Everybody, of course, immediately assented to it, but, not surprisingly, very little happened.

A change of this kind requires a lot of work, a lot of new thinking and planning at every colliery, with many natural obstacles and difficulties to be overcome. How is the centre, the National Board in this case, to speed the change-over? It can, of course, preach the new doctrine. But what is the use, if everybody agrees anyhow? Preaching from the centre maintains the freedom and responsibility of the lower formations, but it incurs the valid criticism that 'they only talk and do not *do* anything'. Alternatively, centre can issue instructions, but, being remote from the actual scene of operations, the central management will incur the valid criticism that 'it attempts to run the industry from Headquarters', sacrificing the need for freedom to the need for order and losing the creative participation of the people at the lower formations - the very people who are most closely in touch with the actual job. Neither the soft method of government by exhortation nor the tough method of government by instruction meets the requirements of the case. What is required is something in between, a *middle axiom*, an order from above which is yet not quite an order.

When it decided to concentrate output, the National Coal Board laid down certain minimum standards for opening up new coalfaces, with the *proviso* that if any Area found it necessary to open a coalface that would fall short of these standards, a record of the decision should be entered into a book specially provided for the purpose, and this record should contain answers to three questions:

Why can this particular coalface not be laid out in such a way that the required minimum size is attained?

Why does this particular bit of coal have to be worked at all?

What is the approximate profitability of the coalface as planned?

This was a true and effective way of applying the Principle of the Middle Axiom and it had an almost magical effect. Concentration of output really got going, with excellent results for the industry as a whole. The centre had found a way of going far beyond mere exhortation, yet without in any way diminishing the freedom and responsibility of the lower formations.

Another middle axiom can be found in the device of *Impact Statistics*. Normally, statistics are collected for the benefit of the collector, who needs - or thinks he needs - certain quantitative information. Impact statistics have a different purpose, namely to make the supplier of the statistic, a responsible person at the lower formation, aware of certain facts which he might otherwise overlook. This device has been successfully used in the coal industry, particularly in the field of safety.

Discovering a middle axiom is always a considerable achievement. To preach is easy; so also is issuing instructions. But it is difficult indeed for top management to carry through its creative ideas without impairing the freedom and responsibility of the lower formations.

I have expounded five principles which I believe to be relevant to a theory of large-scale organisation, and have given a more or less intriguing name to each of them. What is the use of all this? Is it merely an intellectual game? Some readers will no doubt think so. Others - and they are the ones for whom this chapter has been written - might say: 'You are putting into words what I have been trying to do for years.' Excellent! Many of us have been struggling for years with the problems presented by large-scale organisation, problems which are becoming ever more acute. To struggle more successfully, we need a

theory, built up from principles. But from where do the principles come? They come from observation and practical understanding.

The best formulation of the necessary interplay of theory and practice, that I know of, comes from Mao Tse-tung. Go to the practical people, he says, and learn from them: then synthesise their experience into principles and theories; and then return to the practical people and call upon them to put these principles and methods into practice so as to solve their problems and achieve freedom and happiness.