In the dictionary of social institutions, the word “controls” is not the plural of the word “control.” Not only do more controls not necessarily give more control, but the two words have different meanings altogether.

The synonyms for controls are “measurements” and “information.” The synonym for control is “direction.” Controls pertain to means; control to an end.

Controls deal with facts, that is, with events of the past. Control deals with expectations, that is, with the future. Controls are analytical, concerned with what was and is. Control is normative and concerned with what ought to be.

We are rapidly acquiring great capacity to design controls because of a great improvement in techniques, especially in the application of logical and mathematical tools and in the ability to process and analyze large masses of data very fast.

What does this mean for control? Specifically, what are the requirements for these greatly improved controls to give better control to management?

For, in the task of a manager, controls are purely a means to an end. The end is control.

The person in an organization who is charged with producing the controls is the controller.

But most executives — including most controllers themselves — would consider it gross misuse and abuse of controllership were this controller to use controls to exercise control in the organization.

This, they would argue, would actually make the organization be “out of control” altogether.

The reasons for this apparent paradox lie in the complexity both of human beings and of the social task.

If we deal with a human being in a social institution, controls must become personal motivation that leads to control.

Instead of a mechanical system, the control system in a human-social situation is a system based on will.

That we know very little about the will is not the central point.

A translation is required before the information yielded by the controls can become grounds for action — the translation of one kind of information into another, which we call perception.

In the social institution there is a second complexity, a second “uncertainty principle.”
It is almost impossible to determine ahead of time the responses appropriate to a certain event in a social situation.

We can, and do, build controls into a machine that slow down the turning speed whenever it exceeds a certain figure.

We can do this either by mechanical means or by instrumentation that shows a human operator what the turning speed is and gives him the specific, unambiguous instruction to turn down the speed when the indicator reaches a certain point.

But a control-reading “profits are falling” does not indicate, with any degree of probability, the response “raise prices,” let alone suggest by how much; the control-reading “sales are falling” does not indicate the response “cut prices,” and so on.

There are a large number of equally probable responses – so large that it is usually not even possible to identify them in advance.

There is also no indication in the event itself which of these responses is even possible let alone appropriate or right.

The event itself may not be meaningful.

But even if it is, it is by no means certain what it means.

And the probability of its being meaningful is a much more important datum than the event itself – and one that is almost never to be discerned by analyzing the event.

The Characteristics Of Controls

There are three major characteristics of controls in any social institution.

1. Controls can be neither objective nor “neutral.”

When we measure the rate of fall of a stone, we are totally outside the event itself.

By measuring we do not change the event; and measuring the event does not change us, the observers.

Measuring physical phenomena is both objective and neutral.

In a perceptual situation of the complexity we deal with in organizations, the act of measurement is neither objective nor neutral.

It is subjective and, of necessity, biased.

It changes both the event and the observer.

Events in the social situation acquire value by the fact that they are being singled out for the attention of being measured.

No matter how “scientific” we are, the fact that this or that set of events is singled out for being “controlled” signals that it is being considered to be important.

Everybody who ever watched the introduction of a budget system has seen this happen.

For a long time – in some organizations, forever – realizing the budget figures becomes more important than what the budget is supposed to
measure, namely economic performance.

Managers, upon first being exposed to a budget system, often deliberately hold back sales and cut back profits rather than be guilty of “not making the budget.”

It takes years of experience and a very intelligent budget director to restore the balance.

And there are any number of otherwise perfectly sane research directors who act on the conviction that it is a greater crime to get research results for less than the budgeted amount than to not get any research results at all while spending all the “proper” budget money. ¶¶¶

Controls in a social institution such as a business are goal-setting and value-setting.

They are not “objective.”

They are, of necessity, moral.

The only way to avoid this is to flood the executive with so many controls that the entire system becomes meaningless, becomes mere “noise.” ¶¶¶

Controls create vision.

They change both the events measured and the observer.

They endow events not only with meaning but with value.

And this means that the basic question is not,

“How do we control?” but, “What do we measure in our control system?”

2. Controls need to focus on results.

Business (and every other social institution) exists to contribute to society, the economy, and the individual.

In consequence, results in business exist only on the outside, in the economy, in society, and with the customer.

It is the customer who creates a “profit.”

Everything inside a business – manufacturing, marketing, research, and so on – creates only costs.

In other words, the managerial area is concerned with costs alone.

But results are entrepreneurial. ¶¶¶

We can easily record and therefore quantify efficiency, that is, efforts.

We have very few instruments to record and quantify effects.

But even the most efficient buggy-whip manufacturer would no longer be in business.

It is of little value to have the most efficient engineering department if it designs the wrong product.

The Cuban subsidiaries of U.S. companies were by far the best run and, apparently, the most profitable – let alone the least troublesome – of all U. S. operations in Latin America.

This was, however, irrelevant to their takeover by the Castro government.
And it mattered little, I daresay, during the period of IBM’s great expansion, in the 1950s and 1960s, how efficient its operations were; its basic entrepreneurial idea was the right, the effective one.

The outside, the area of results, is much less accessible than the inside. The central problem of the executive in the large organization is insulation from the outside. This applies to the president of the United States as well as to the president of United States Steel. What today’s organization therefore needs is synthetic sense organs for the outside.

If modern controls are to make a contribution, it would be, above all, here.

3. Controls are needed for measurable and nonmeasurable events.

Business, like any other institution, has important results that are incapable of being measured.

Any experienced executive knows of companies or industries bound for extinction because they cannot attract or hold able people.

Every experienced executive also knows that this is a more important fact about a company or an industry than last year’s profit statement.

Any logician who tried to tell an executive that this statement, being incapable of unambiguous definition, is a “nonstatement” dealing with a “nonproblem,” would be quickly – and correctly – dismissed as an ass.

The statement cannot be defined clearly, let alone “quantified,” but it is anything but “intangible” (as anyone ever having to deal with such a business quickly finds out).

It is just nonmeasurable.

And measurable results will not show up for a decade.

But business also has measurable and quantifiable results of true meaning and significance.

There are all those that have to do with past economic performance. For these can be expressed in terms of the very peculiar measurement of the economic sphere, money.

This does not mean that these are “tangibles.”

Indeed, many of the things we can measure by money are totally “intangible” – take depreciation, for instance.

But they are measurable.

The measurable results are things that happened; they are in the past.

There are no facts about the future.

Measurable events are primarily inside events rather than outside events.

The important developments on the outside, the things that determine that the buggy-whip industry disappears and that IBM becomes a big business, are not measurable until it is too late to have control.
A balance between the measurable and the nonmeasurable is, therefore, a central and constant problem of management and a true decision area. Measurements that do not spell out the assumptions with respect to the nonmeasurable statements that are being made – at least as boundaries or as restraints – misdirect and misinform.

Yet the more we can quantify the measurable areas, the greater the temptation to put all emphasis on those. And the greater, therefore, the danger that what looks like better controls will actually mean less control, if not an organization out of control altogether.

**Specification For Controls**

To give the manager control, controls must satisfy seven specifications:

1. They must be economical.
2. They must be meaningful.
3. They must be appropriate.
4. They must be congruent.
5. They must be timely.
6. They must be simple.
7. They must be operational.

1. Control is a principle of economy.

The less effort needed to gain control, the better the control design. The fewer controls needed, the more effective they will be. Indeed, adding more controls does not give better control. All it does is create confusion.

The first question the manager therefore needs to ask in designing or using a system of controls is, “What is the minimum information I need to know to have control?” The answer may vary for different managers.

The company’s treasurer needs only to know the total amount invested in inventories and whether it is going up or down. The sales manager needs to know the half dozen products that together account for 70 percent of inventory, but the total inventory amount is not of primary importance to him or her. Neither the treasurer nor the sales manager needs complete inventory figures, except once or twice a year; a fairly small sample should give them all the information they need.

But the warehouse manager needs daily figures – and in detail. The capacity of the computer to spew out huge masses of data does not make for better controls.

On the contrary, what gives control is asking the question, “What is the smallest number of reports and statistics needed to understand a
phenomenon and to be able to anticipate it?"

And then one asks, “What is the minimum of data regarding this phenomenon that gives a reasonably reliable picture?”

2. Controls must be meaningful.

That means that the events to be measured must be significant either in themselves (e.g., market standing) or as symptoms of at least potentially significant developments (e.g., a sudden sharp rise in labor turnover or absenteeism).

Controls should always be related to the key objectives and to the priorities within them, to “key activities” and to “conscience areas.”

Controls should, in other words, be based on a company’s definition of what its business is, what it will be, and what it should be.

Controls Follow Strategy

Whatever is not essential to the attainment of a company’s objectives should be measured infrequently and only to prevent deterioration.

It should be strictly controlled by “exception.”

A standard should be set, measurement should be periodical and on a sample basis, and only significant shortfalls below the established standard should be reported.

That we can quantify something is no reason for measuring it.

The question is, “Is this what a manager should consider important?”

Is this what a manager’s attention should be focused on?

Is this the proper focus for control – that is, for effective direction with maximum economy of effort?”

3. Controls have to be appropriate to the character and nature of the phenomenon measured.

This may well be the most important specification; yet, it is least observed in the actual design of controls.

Because controls have such an impact, it is important that we select not only the right ones but also the appropriate ones, to enable controls to give right vision and to become the ground for effective action.

The measurement must present the events measured in structurally true form.

Formal validity is not enough.

Formal complaints or grievances coming out of a workforce are commonly reported in this form, “five grievances per thousand employees per month.”

This is formally valid.

But is it structurally valid?

Or is it misdirection?

The impression this report conveys is, first, that grievances are distributed
throughout the workforce in a random manner.

And second, the report gives the impression that they are a minor problem, especially if we deal with five grievances per thousand employees per month.

This, while formally valid, completely misrepresents and misinforms.

Grievances are a social event.

And social events are almost never distributed in the “normal distribution” we find in the physical world.

In this case, the great majority of departments in the plant, employing 95 percent of the workforce, normally do not have even a single grievance during one year.

But in one department, employing only a handful of people, we have a heavy incidence of grievances — so the “five per thousand” may well mean (and in the actual example from which I took these figures, did mean) a major grievance per person per month.

If this department happens to be the final assembly through which all the production has to pass, and if the workers in this department go out on strike when their grievances are being neglected by a management that has been misled by its own controls, the impact can be shattering.

In this case, it bankrupted the company.

Most measurements of sales performance, whether of the entire sales force or of the individual salesperson, report sales in total dollars.

But in many businesses this is an inappropriate figure.

The same dollar volume of sales may mean a substantial profit, no profit at all, or a sizable loss — dependent on the product mix sold.

An absolute sales figure not related to product mix, therefore, gives no control whatever — neither to the individual salesperson, nor to the sales manager, nor to top management.

These are elementary things.

Yet few managers seem to know them.

The traditional information systems (especially traditional accounting) conceal appropriateness rather than highlight it.

Without controls that bring out clearly what the real structure of events is, the manager lacks knowledge and therefore will tend to do the wrong things.

For all the weight of the daily work pushes him or her toward allocating energies and resources in proportion to the number of events.

There is a constant drift toward putting energies and resources where they can have the least results, that is, on the vast number of phenomena which, together, account for practically no effects.

4. Measurements have to be congruent with events measured.

Alfred North Whitehead (1861-1947), the distinguished logician and philosopher, used to warn against the “danger of the false concreteness.”
A measurement does not become more accurate by being worked out to the sixth decimal when the phenomenon is only capable of being verified within a range of 50 to 70 percent.

This is “false concreteness,” and misleading.

It is an important piece of information that this or that phenomenon cannot be measured with precision but can be described only within a range or as a magnitude.

To say, “We have 26 percent of the market,” sounds reassuringly precise. But it is usually so inaccurate a statement as to be virtually meaningless.

What it really means, as a rule, is “We are not the dominant factor in the market, but we are not marginal either.”

And even then the statement is no more reliable than the definition of the market that underlies it.

It is up to the manager to think through what kind of measurement is appropriate to the phenomenon it is meant to measure.

He has to know when approximate is more accurate than a firm-looking figure worked out in great detail.

He has to know when a range is more accurate than even an approximate single figure.

He has to know that larger and smaller, earlier and later, up and down, are quantitative terms and often more accurate, indeed more rigorous, than any specific figures or range of figures.

5. Controls have to be timely.

Frequent measurements and very rapid “reporting back” do not necessarily give better control.

Indeed, they may frustrate control.

The time dimension of controls has to correspond to the time span of the event measured.

It has lately become fashionable to talk of “real-time” controls, that is, of controls that inform instantaneously and continuously.

There are events where “real-time” controls are highly desirable.

If a batch of antibiotics in the fermentation tank spoils as soon as temperature or pressure deviate from a very narrow range for more than a moment or two, “real-time” monitoring on a continuous basis is obviously needed.

But few events need such controls.

And most cannot be controlled by them.

“Real time” is the wrong time span for real control.

Children planting a garden are so impatient, it is said, that they tend to pull out the radishes as soon as their leaves show, to see whether the root is forming.

This is “real-time” control – misapplied.
Similarly, the attempt to measure research progress all the time is likely to confound research results.

The proper time span for research is a fairly long one.

Once every two or three years, research progress and results should be rigorously appraised.

In between such appraisals, an experienced manager keeps in touch.

He or she watches for any indication of major unexpected trouble, and, even more, for any sign of unexpected breakthroughs.

But to monitor research in “real time” – as some research labs have been trying to do – is pulling up the radishes. ¶¶

There is also the opposite danger, of not measuring often enough.

It is particularly great with developments that

a. take a fairly long time to have results, and

b. have to come together at a point in the future to produce the desired end result.

6. Controls need to be simple.

Every major New York commercial bank worked in the 1960s on developing managerial controls, especially of costs and of allocation of efforts.

Everyone spent a great deal of time and money on the task and came up with control manuals.

In only one of the banks were the manuals being used.

When the executive in that bank was asked how he explained this, he did not (as his interviewer expected him to) credit a massive training program or talk about his “philosophy.”

He said instead, “I have two teenage daughters.

They know nothing about banking and are not terribly good at figures.

But they are bright.

Whenever I had worked out an approach to controlling an activity, I took my intended procedure home in draft form and asked my girls to let me explain it to them.

And only when I had it so simple that they could explain back to me what the procedure was intended to accomplish and how, did I go ahead.

Only then was it simple enough.” ¶¶

Complicated controls do not work.

They confuse.

They misdirect attention away from what is to be controlled, and toward the mechanics and methodology of the control.

If the user has to know how the control works before he can apply it, he has no control at all.

And if he has to sit down and figure out what a measurement means, he has no control either.
7. Finally, controls must be operational.

They must be focused on action.

Action rather than information is their purpose.

The action may be only study and analysis.

In other words, a measurement may say, “What goes on we don’t understand; but something goes on that needs to be understood.”

But it should never just say.

“Here is something you might find interesting.”

This then means that controls – whether reports, studies, or figures – must always reach the person who is capable of taking controlling action.

Whether they should reach anyone else – and especially someone higher up – is debatable.

But their prime addressee is the manager or professional who can take action by virtue of his or her position in the flow of work and in the decision structure.

And this further means that the measurement must be in a form that is suitable for the recipient’s needs.

Workers and first-line supervisors should receive measurements and control information that enables them to direct their own immediate efforts toward results they can control.

Instead, typically, the first-line supervisor receives each month a statement of the quality control results for the entire plant – and the worker receives nothing.

And top management usually receives the information and measurements operating middle managers need and can use, and little or nothing of pertinence to their own top-management job.

The reason for this is largely the confusion between control as domination of others and control as rational behavior.

Unless controls are means toward the latter, and this means toward self-control, they lead to wrong action.

They are miscontrol.

The Ultimate Control Of Organization

There is one more important thing to be said.

There is a fundamental, incurable, basic limitation to controls in a social institution.

This lies in the fact that a social institution is both a true entity and a fiction.

As an entity, it has purposes of its own, a performance of its own, results of its own – and survival and death of its own.

These are the areas of which we have been speaking so far.

But a social institution is composed of persons, each with his or her own purpose, ambitions, ideas, and needs.
No matter how authoritarian the institution, it has to satisfy the ambitions and needs of its members, and do so in their capacity as individuals, but through institutional rewards and punishments, incentives and deterrents.

The expression of this may be quantifiable – such as a raise in salary.

But the system itself is not quantitative in character and cannot be quantified.

Yet, here is the real control of the institution, that is, the ground of behavior and the cause of action.

People tend to act as they are being rewarded for their actions.

To them, this is the expression of the true values of the institution and of its true purpose and role.

A system of controls that is not in conformity with this true, this only effective, this ultimate control of the organization, which lies in its people decisions, will therefore at best be ineffectual.

At worst, it will cause never-ending conflict and will push the organization out of control.

Summary – Controls, Control, and Management

Controls and Control are different.

Controls are the means; control the needed end.

Controls can be neither objective nor neutral in a human organization.

They are goal setting and value setting.

Controls need to focus on results.

Controls are needed for measurable and nonmeasurable events.

Controls must satisfy seven specifications for effective control.

And people decisions are the ultimate control of an organization.