Organisation theory: an interdisciplinary approach

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Undergraduate study in Economics, Management, Finance and the Social Sciences

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For more information, see: www.londoninternational.ac.uk
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Introduction

Welcome to MN3127 Organisation theory: an interdisciplinary approach, which is offered under a number of degree and diploma programmes.

This is an interdisciplinary course drawing centrally upon psychology, sociology, economics and, to a lesser extent, management theory. The subject guide is structured around readings from two textbooks. One is written substantially from an economic perspective on organisations or firms (to use the economists' favoured term). The other adopts a much more psychological and sociological standpoint.

You might well ask why I adopt an interdisciplinary approach. For instance, many courses carry the titles ‘organisation theory’ (largely a sociological term) and ‘organisation behaviour’ (largely a psychological term). ‘Organisation theory’ and ‘organisation behaviour’ are more often than not taught independently of each other and both almost completely separately from theories of the firm/organisation deriving from economics. In my view, however, this is wrong. It is no longer intellectually sensible to proceed in this manner. Each discipline has its own contribution to make and one can only begin to understand the structure and functioning of organisations by incorporating insights from each. Sometimes they complement each other, sometimes they invite alternative interpretations and sometimes they are in conflict – though much less often than many suppose.

Economists inevitably pay more attention to organisations with a clear economic purpose (firms) whereas the other disciplines take a wider viewpoint embracing any sort of organisation (for example, churches, prisons and so on). Of course these also have their economic aspects. The central difference in emphasis is upon those organisations that are held together by monetary incentives and those that are otherwise coordinated, for example, by cultural norms or power and coercion. As we shall see, however, most organisations use a mixture of mechanisms designed to hold them together.

This subject guide will concentrate upon ‘economic’ organisations though both textbooks invite you to think about a more varied menu of organisations.

I hope that you enjoy this guide and wish you good luck with your studies.

Aims and objectives

This course explores the ways in which organisations can be designed (by management or others) in order to achieve their objectives. It will expose you to the ways in which economists, psychologists and sociologists address this and related issues. It is, therefore, an interdisciplinary course, comparing and contrasting the contribution of the core social science disciplines to the study of organisations. The course draws upon both theoretical and empirical materials and you will be encouraged to draw upon your own local knowledge in pursuing your studies. There will be an emphasis (though not exclusively) on organisations set up with an economic objective.
Learning outcomes

At the end of this course and having completed the Essential reading and activities, you should be able to:

• describe the essential features of organisations
• discuss the factors shaping these features
• describe the evolution of different organisational designs/types
• discuss how managers may build and change organisations
• describe how different organisational forms impact on the individual within organisations.

How to use this subject guide

The aim of this guide is to help you to interpret the syllabus. It outlines what you are expected to know for each area of the syllabus and suggests relevant reading to help you to understand the material. It must be emphasised that this guide is intended to supplement the textbooks, not replace them.

It is important to appreciate that the different topics covered are not self-contained. There is a degree of overlap between them and you are guided in this respect by cross-referencing between different chapters. In terms of studying this subject, the chapters of this guide are designed as self-contained units of study, but for examination purposes you need to have an understanding of the subject as a whole.

Reading advice

Essential reading

This subject guide is structured around readings from two textbooks. They are:


I shall refer to these texts respectively as ‘B and H’ and ‘D and S’ throughout the subject guide. Occasionally I shall refer to other books and papers where I feel that these two Essential reading texts do not adequately cover the requisite material. Unlike many other subject guides, you can, by and large, follow the course from the pages of the two texts. However, they often refer you to copious further reading, so if there is a particular part of the course you find interesting you may wish to follow your own interests.

Detailed reading references in this subject guide refer to the editions of the set textbooks listed above. New editions of one or more of these textbooks may have been published by the time you study this course. You can use a more recent edition of any of the books; use the detailed chapter and section headings and the index to identify relevant readings. Also check the virtual learning environment (VLE) regularly for updated guidance on readings.

You can study the course perfectly well by restricting your attention to the subject guide, the two essential texts and the occasional additional references provided. I have, though, attempted to keep the latter to a
minimum. The readings from the textbooks are indicated at appropriate points in the text of the subject guide. The guide does not provide a summary of the readings but rather tries to achieve a theoretical synthesis.

In respect of learning activities, opportunities to stop and criticise and practical examples or cases, both texts provide these along with summaries. I have provided learning outcomes in this subject guide which complement those provided in the textbooks. In both textbooks, the central concepts are listed in the left-hand margins.

Further reading

Please note that as long as you read the Essential reading you are then free to read around the subject area in any text, paper or online resource. You will need to support your learning by reading as widely as possible and by thinking about how these principles apply in the real world. To help you read extensively, you have free access to the VLE and University of London Online Library (see below).

Other useful texts for this course include:


Works cited
Online study resources

In addition to the subject guide and the Essential reading, it is crucial that you take advantage of the study resources that are available online for this course, including the VLE and the Online Library.

You can access the VLE, the Online Library and your University of London email account via the Student Portal at: http://my.londoninternational.ac.uk

You should have received your login details for the Student Portal with your official offer, which was emailed to the address that you gave on your application form. You have probably already logged in to the Student Portal in order to register! As soon as you registered, you will automatically have been granted access to the VLE, Online Library and your fully functional University of London email account.

If you have forgotten these login details, please click on the ‘Forgotten your password’ link on the login page.

The VLE

The VLE, which complements this subject guide, has been designed to enhance your learning experience, providing additional support and a sense of community. It forms an important part of your study experience with the University of London and you should access it regularly.

The VLE provides a range of resources for EMFSS courses:

• Self-testing activities: Doing these allows you to test your own understanding of subject material.
• Electronic study materials: The printed materials that you receive from the University of London are available to download, including updated reading lists and references.
• Past examination papers and Examiners' commentaries: These provide advice on how each examination question might best be answered.
• A student discussion forum: This is an open space for you to discuss interests and experiences, seek support from your peers, work collaboratively to solve problems and discuss subject material.
• Videos: There are recorded academic introductions to the subject, interviews and debates and, for some courses, audio-visual tutorials and conclusions.
• Recorded lectures: For some courses, where appropriate, the sessions from previous years' Study Weekends have been recorded and made available.
• Study skills: Expert advice on preparing for examinations and developing your digital literacy skills.
• Feedback forms.

Some of these resources are available for certain courses only, but we are expanding our provision all the time and you should check the VLE regularly for updates.

Making use of the Online Library

The Online Library contains a huge array of journal articles and other resources to help you read widely and extensively.

To access the majority of resources via the Online Library you will either need to use your University of London Student Portal login details, or you
will be required to register and use an Athens login:
http://tinyurl.com/ollathens

The easiest way to locate relevant content and journal articles in the Online Library is to use the Summon search engine.

If you are having trouble finding an article listed in a reading list, try removing any punctuation from the title, such as single quotation marks, question marks and colons.

For further advice, please see the online help pages:
www.external.shl.lon.ac.uk/summon/about.php

A note about the appendices

At the end of this guide there is a series of appendices which have been provided to supplement various chapters. I think that it is important for you to have an opportunity to look at the mathematics which supports the theories and arguments, and it also provides you with more detail on some of the theories mentioned in the chapters. I must stress that you do not need to be able to use or apply the mathematics; as I mentioned above, the Essential reading for this course is the two core textbooks. The appendices are purely additional information for those of you who want to understand and explore the subject in more depth.

Syllabus

1. Introduction
   • Attempts to define organisations of differing types and differing objectives. Normative and positive theories.
   • Division of labour, specialisation, productivity, economies of scale and the problem of coordination (motivations/incentives and information).
   • Markets and organisations as alternative coordinating mechanisms. Contrasting market and employment contracts (incentives, risk sharing and information assets).
   • The market-organisational contractual continuum. Competitive markets, ‘real’ markets, long-term contracts (fixed cost to cost plus), joint ventures, alliances, informal networks, franchising, etc.
   • Coordination and role of: motivation/incentives, communication/information/knowledge, bargaining power and authority, culture/norms/trust/commitment, democratic process.
   • Introduction to the nature of hierarchical organisations.
   • Vertical boundaries (make-buy).
   • Horizontal boundaries (divisional, conglomerates, etc.).
   • Hierarchical structures (size, span, depth).
   • Ownership/governance.

2. Theories of boundaries
   • Transaction costs; assumptions, bounded rationality, opportunism, incomplete contracts; transactional characteristics, asset specificity, uncertainty, complexity, frequency. Team production and externalities.
   • Property rights theory.
Introduction

- Monopoly power, information knowledge and rents, competitive advantage.
- Role of managerial objectives/motivation.
- Role of legislation (national variations).
- Ideology.

3. The evolution of organisations
   - Evolution of contracts.
   - Evolution of organisational types: peer groups, multifunctional; multi-divisional, conglomerates, alliances, networks, long-term (relational) contracting. Centralised v decentralised organisation (discretion).

4. Studying organisations
   - Organisation, group and individual levels of study and their interrelationship.
   - Contribution of statistical models and case studies.
   - Contribution of elementary game theory (one-shot and repeated).
   - Contribution of network (graph theoretic) models.
   - Critical theories of organisation.

5. Organisations as contractually coordinated mechanisms
   - Taylor, standardisation, rationalisation and scientific management; ‘Fordism’.
   - Theories and critiques of bureaucracy.
   - Centralisation, decentralisation and discretion/incomplete contracts.
   - Organisation as an algorithm.
   - Control loss, coordination loss.

6. Organisations as incentive/motivationally coordinated mechanisms
   - Introduction to principal–agent theory.
   - Team production and externalities.
   - Psychological models of motivation: human relations; human resource management; group and team context (production); motivational reactions to organisational design.

7. Organisations as authority/power/coordinated mechanisms
   - Nature of power. Authority and influence.
   - Bargaining power.
   - Sources of power.
   - Power and participation/decentralisation.

8. Organisations as information/knowledge distributively coordinated mechanisms
   - Coordination and information (games).
   - Theory of teams.
   - Hidden information/action.
   - Demand for information and participation.
9. Organisations as ‘culturally’ coordinated mechanisms
   - Nature of culture.
   - Trust, leadership, sacrifice and commitment.
   - Social capital.
   - Corporate culture/ambient cultures.
   - National business systems.

10. Determinants of hierarchal structures (shape)
   - Contingency theory.
   - Population ecology/institutional theory.
   - Hierarchy (or hybrid organisation) as an optimal mechanism – given operating environment – for combining: rules/contracts, incentives, authority, information, culture.

11. Corporate governance
   - Ownership and control; participation and organisational democracy.

Examination advice

Important: the information and advice given here are based on the examination structure used at the time this guide was written. Please note that subject guides may be used for several years. Because of this we strongly advise you to always check both the current Regulations for relevant information about the examination, and the VLE where you should be advised of any forthcoming changes. You should also carefully check the rubric/instructions on the paper you actually sit and follow those instructions.

Structure of the examination

The examination for this subject is a formal three-hour unseen written examination in which you will be required to answer four questions from a choice of 12. A sample examination paper is included at the end of this guide. The Examiners attempt to ensure that all of the topics covered in the syllabus and subject guide are examined. Some questions could cover more than one topic from the syllabus since the different topics are not self-contained.

Examination preparation

You should ensure that you answer four questions, allowing an approximately equal amount of time for each question. Remember to devote some time prior to answering each question to planning your answer, and please write clearly and legibly. You should ensure that the question answered is the question posed, and not a pre-learnt answer that has little bearing on the question. Take care to structure your answers clearly by the use of paragraphs, and make sure your answers are closed with a summary or conclusion.

You might want to illustrate your answers with the use of simple diagrams like the ones that I use throughout this guide. You are welcome to do this but please do not spend a lot of time drawing very precise diagrams with rulers, etc. This is not necessary. A clear hand-drawn diagram is fine. You may also want to refer to writers or theories that you have read about if their work is relevant to the question. Don’t worry about this too much, or waste your time by putting full references but, for example, ‘Powell and
DiMaggio (1991)’ would indicate to the Examiners perfectly adequately who or what you were referring to.

Remember, it is important to check the VLE for:

- up-to-date information on examination and assessment arrangements for this course
- where available, past examination papers and Examiners’ commentaries for the course which give advice on how each question might best be answered.
Chapter 1: Getting started

Aim of the chapter
To introduce and compare economic, sociological and psychological approaches to organisations.

Learning outcomes
By the end of this chapter and having completed the Essential reading and activities, you should be able to define and explain the following terms and concepts:

- organisations as control/coordination mechanisms
- assumptions of rational and self-interested behaviour/action
- ideal types
- division of labour
- transactions/exchanges; control/coordination; governance
- motives/incentives
- competitive markets
- normative and positive theory
- market-organisation continuum
- di-graphs and graphs
- roles/contracts/norms
- incomplete information/uncertainty
- discretion
- vertical, horizontal, hierarchical and financial boundaries.

Essential reading
Detailed section references are provided throughout the chapter.


Further reading


1.1 Introduction
All societies that we know of seem to possess some kinds of organisations; they are probably cultural universals. Organisations are, however, not easy things to define as they are, particularly in modern societies, rather varied in nature. It is, nevertheless, useful to open with a definition, in order to focus our studies. We may start as follows:
Organisations are constructed mechanisms for controlling and coordinating human activities and symbolic and physical resources in order to achieve certain objectives.

Activity

Now read Section 1.1 in D and S.

A great deal of organisation theory is concerned with describing and explaining the occurrence of different sorts of mechanisms for achieving control and coordination. Although there is no settled consensus about the definition of these central concepts, let us start with the following.

Control mechanisms are the means by which the actions/behaviour of actors (sometimes individual human beings, sometimes groups or collections of human beings) are motivated in order to achieve the objectives of the organisation.

Coordination mechanisms are the means by which the actions/behaviours of actors (again, individual or collective) are brought into alignment with each other in order to achieve the objectives of the organisation.

Note here that the terms action and actors are sociological in derivation. Psychologists may refer to behaviour whereas economists may refer to behaviour and agents. Sociologists distinguish between action, which means motivated or intentional behaviour, and behaviour itself.

In regard to the above definition of organisation, you should note that:

- organisations are usually consciously constructed (but by whom?) with an objective in mind (but whose objective?)
- there may be differing opinions within an organisation about what its objectives are or should be
- there may be many different mechanisms for controlling and coordinating human activities both within and outside organisations
- the objectives of an organisation may change over time
- organisations can be more or less effective (efficient) in achieving their objectives.

We shall study these issues, among others; you might, however, ponder two fundamental questions at this early stage in your studies:

- Why are some human activities coordinated/controlled within organisations whereas others are not?
- How are (should) the boundaries of organisations (be) drawn?

If you know the answers to these questions, you don’t really need to study this course. If you don’t, then I hope the course will prove helpful and interesting.

The study of organisations: a multidisciplinary approach

Until quite recently it was largely sociologists and psychologists who studied organisations. Management theorists also made a contribution. They all asked questions about how organisations impacted upon human activities and vice versa. Pugh (1990) defines organisational behaviour (the favoured term of psychologists) as follows:

The study of the structure and functioning and performance of organisations and the behaviour of groups and individuals within them.
Economists traditionally evidenced little interest in the ‘structure and functioning’ of organisations (or firms as they would call organisations with an economic objective). Firms were almost invariably treated as ‘black boxes’ with the particular objective of maximising profits (often in a competitive market environment; see Section 1.3). Thus, questions were not normally posed as to how their internal arrangements (control and coordination mechanisms) achieved this objective. Indeed, quite often the profit-maximising objective was pictured as being a consequence of competitive evolutionary forces which drive out firms that do not operate according to this particular objective (see Chapter 9).

Recently, however, this situation has changed and now, as D and S’s book testifies, we have several economic approaches to organisations. So modern organisation theory increasingly must become a multidisciplinary endeavour, combining ideas from economics, management theory, psychology and sociology. Some other disciplines like anthropology and operations research also have relevant things to say. Unfortunately, multidisciplinarity is not entirely acknowledged in the respective disciplines, with the result that studies of organisations still tend to evolve independently of each other and there are currently no textbooks which straddle the disciplinary boundaries. Indeed, most books carrying the title ‘organisation theory’ are written almost exclusively from a sociological perspective. Psychologists tend to use the phrase ‘organisation behaviour’.

Furthermore, the level of sustained rigour, so essential in modern social science, is markedly different across the disciplines. Much economics, but little psychology and sociology, is expressed mathematically. Although mathematics is not essential to rigour, it is very helpful, but - failing mathematical exposition - clear prose is most important. You will, unfortunately, encounter texts which are far from transparent, particularly in the sociological tradition. I shall try to avoid referencing such texts though you will find them referred to in Buchanan and Huczynski’s book – these authors tend to use the term ‘difficult’ to describe them.

It is useful to start with a brief overview of the differing perspectives adopted by each discipline when studying organisations.

**The economists’ approach to the study of organisations**

Economists integrate their theories of organisation (or firms as they call organisations with an economic objective) into a standard theory of production. You will probably have encountered this theory in your introductory economics.

**Economists will almost invariably assume that economic actors (or agents) will behave/act rationally. They will usually seek to understand the ‘structure and functioning’ (control and coordination) of organised firms, assuming that those involved are rational optimisers (they may,**
however, relax this assumption in various ways – see Chapter 10). In so doing, they will unfailingly ask us to centre our attention upon the balance of costs and benefits in pursuing different courses of action and, thus, on how to make the best use of resources – namely, the optimal or efficient allocation of resources. Clearly, although this way of thinking is most relevant to firms, economists do invite us to apply it to all organisations. Although the conception of rational action or behaviour is technically quite difficult to tie down (you may have encountered formalisations of expected utility theory in your economics units), practically it implies an assumption whereby individuals (agents) are deemed to seek (i.e. have preferences for) the best outcome they can secure for themselves, given the range of opportunities they face (i.e. their opportunity set). These opportunities and preferences are also often deemed to be given (exogenous). If not, then the factors shaping preferences and opportunities are usually regarded as independent of each other. Furthermore, economists will usually, though not invariably, concentrate upon monetary consequences to measure the success of outcomes. The two key words are ‘best’ and ‘themselves’. Strictly speaking, rationality only implies choosing the best (i.e. optimal) course of action, given the preferences (or utility functions) and opportunities of the actor. However, economists, at least initially, usually assume, in addition, that individuals look out for themselves (i.e. they have self-regarding sentiments). That is to say, they disregard possible altruistic (positive other-regarding) and spiteful (negative other-regarding) sentiments (see Chapter 7). Furthermore, they often assume that actors have identical preferences (homogeneous preferences). Whatever assumptions they may eventually make, they are adamant that any theories of organisation should be derivable from the choices of individual actors. This is sometimes described as methodological individualism, reductionism or getting the micro foundations right. Sociologists, as we shall see, are much less inclined to worry about micro foundations. Indeed, one tradition invites us to take an organisation as the unit of analysis.²

Those of you who have not encountered much economics before may well feel alarmed by this lengthy list of assumptions. You should recognise, however, that most economists do acknowledge that they are theoretical simplifications. Indeed, they are willing to relax most of them, other than optimality (though even this may be weakened: see Chapter 10 on bounded rationality). You will find both sociologists and psychologists criticising economists for making unreal assumptions.

Although economists do not often use the term, you might want to interpret self-interested optimisation as an ideal type³ and later compare it with some of the sociologists’ ideal types. The most fundamental question that economists address in respect of organisation theory is why certain exchanges of goods and services (transactions) between actors take place in markets whereas others occur within organisations (firms). As you might expect, they will try to find an answer in terms of self-interested optimisers. In so doing they will make use of another ideal type – perfectly competitive markets.

**Activity**

Now read Section 2.6 in D and S.

² See Appendix 5.2.

³ You may have come across this in course SC1021 Principles of sociology.
Although we shall investigate later, in detail, the choice between market and organisational transactions, it is worth commenting here upon the way in which an answer is provided. The following assumptions are made.

- The division of labour, which is driven by exogenous (i.e. given or assumed) technological forces, generates a pattern of potential (economic) transactions.

- These transactions could be controlled and coordinated (governed) by either the price mechanism in the (competitive) market or by organisation control and coordination. Another way of expressing this divide is between a market contract and an employment contract. You will find that economists think in terms of efficient contracts. Later I shall ask you to compare the economists’ use of the term ‘contracts’ with the sociologists’ term ‘rules’.

- There are various costs and benefits attached to each type of ‘governance’.

- The governance chosen will/should maximise net benefit. (We will return to the distinction between ‘will’ and ‘should’ below.)

In fact, although this is the standard manner in which ‘transaction costs’ economics analyses the problem, one needs to be a little cautious. As we shall see later, what transaction costs show is that, under certain circumstances, an organisational transaction will produce more net benefit than a market transaction. However, it does not follow that an organisation makes an efficient use of resources. All it will show is that organisations, in those circumstances, are better than the market. One would need additional theoretical ideas to show that the organisation is ‘first best’ (i.e. efficient).

Let us now assume that an organisation is chosen. The major contribution of economists to organisation theory is principal-agent theory (PA theory).

**Activity**

We will study principal-agent theory later but you might now like to look at the beginning of Chapter 7 in D and S.

PA theory seeks to answer the question: what sort of incentives (usually monetary ones) must a (rational) principal (which for the moment might be the owner-manager of a firm) set, in order to motivate (i.e. control) their (rational) agent in order to contribute the agent’s efforts to achieve the principal’s objectives (usually profit maximisation)?

So PA theory, as formulated, is a theory of optimal incentives that controls the activities of the agent. If we now extend the idea to two or more agents then it is a matter of coordination (see the opening definition of an organisation). It is important to recognise that PA theory is a general theory of how one person or group of persons can get others to work effectively for them.

Economists’ theories of organisation can be used positively (i.e. to describe and explain how organisations actually do control and coordinate their constituent activities) and normatively (i.e. to describe and explain how organisations should control and coordinate their activities). You should recognise here that the ‘should’, in the economists’ conception of normative theory, ultimately relates to the efficient allocation of scarce resources. As we shall later find, because neither psychologists nor sociologists start their enquiries from this standpoint, they do not draw a
sharp distinction between positive and normative theory. Their objectives are more often than not directed at positive theory. But be careful here: the positive use of theory is not the same thing as positivism (i.e. broadly the idea that the physical and social sciences have identical explanatory logics).

Activity
If you are not familiar with the above issue, you might read pp.19–25 in B and H.

The psychologists’ approach to the study of organisations
Psychologists, who usually use the term ‘organisational behaviour’, address two main issues.

1. How do organisational features (e.g. their control and coordination systems) impact upon individual and group behaviour within organisations?
2. How (to what extent) does individual and group behaviour contribute to the achievement of organisational objectives (which may be much broader than economic ones)?

Activity
Now read Chapter 1 in B and H.

Psychologists may or may not assume that behaviour (i.e. action) is optimal but, generally, assume (or find evidence for) a much broader range of motivating factors than economists do (for example, status, self-esteem, work satisfaction, personal or group power and so on).

Furthermore, they are more likely than economists to assume individual differences in motivations. B and H refer to this as the ‘organisational dilemma’ (p.19).

You should eventually ask the question as to whether this picture of diverse heterogeneity among individual human beings (the organisational dilemma) can be made consistent with the economists’ PA model. A principal would have to design incentive systems which acknowledge the more elaborate and diverse preferences (utility functions) of his/her agents. Furthermore, principals may themselves have non-economic objectives, like a desire (economists’ term: a ‘taste’) for power.

Psychologists also explore altruistic motives under the heading of commitment: individuals may be committed to an organisation or part thereof, in the sense that they may make sacrifices for others in the organisation. Whereas economists will usually assume that people arrive at an organisation pre-equipped with clear preferences (constructed from beliefs and values), psychologists study how preferences constructed from beliefs (truth), affects (likes/dislikes) and values (good and bad) are acquired within organisations. Like sociologists (see below) they emphasise learning, socialisation and behavioural modification. Furthermore, since they entertain individual differences, they engage with issues about ‘controlling and coordinating diverse personality types’.

Studying and categorising personalities inevitably leads to a consideration of the emotional side of human beings (emotions like openness, hostility, impatience and ambition). There is a marked contrast in how psychologists and economists start thinking about the action/behaviour of individuals in organisations. Economists, as we have seen, will start with a simple ideal-type model of individuals. Psychologists, on the other hand, will often emphasise the ‘organisational dilemma’ in incorporating a wide
variety of dispositions. Such disputes may undermine at least a simple common-sense notion of rational action.

Both economists and psychologists also recognise that organisations are significantly controlled and coordinated by the flow of human communication. Again, whereas economists treat the issue in an abstract way in terms of information distributions - 'who knows what and will rationally impart or conceal what' (Chapter 2), psychologists concentrate upon much finer-grained distinctions. They have developed descriptive theories of different sorts of communication (e.g. verbal/non-verbal, impression, management and so on).

Finally, whereas economists tend to assume that individuals perceive the world 'the way it is' (despite many philosophical reservations about this), psychologists find room for misperception and systematically biased perception.

All this might incline you to the view that the two disciplinary approaches are deeply incompatible. But this would, I think, be over-hasty. You must always, in adjudicating between different models of individuals (some more detailed than others), ask the question: 'What am I trying to explain?' If, for instance, you are trying to understand the difference in performance between firms then a rather simple model of the individual will probably suffice. If you want to explain the differing experience of church-goers at their place of worship, then a much more detailed model of perception, communication and emotional response will be needed. One of the advantages of theories like PA is that they can be adjusted to incorporate richer models of human beings.

Don't be over-hasty in finding irreconcilable differences (as some practitioners of particular approaches often are) between different intellectual traditions.

The sociologists' approach to the study of organisations

Sociologists, while addressing identical questions to those posed by psychologists, have in addition placed their study of organisations in a much wider context. They have asked questions like: what impact do organisations have upon society at large: how do evolved systems of beliefs and values (i.e. culture) and the distribution of power in society influence the ways in which organisations are structured and function (are controlled and coordinated)? Furthermore, while pondering these 'macro' questions, they engage with issues about the appropriate way to conceive of social (or organisational) science.

The sociological study of organisations has been strongly influenced by Max Weber's ideal type of bureaucracy. Broadly speaking, Weber thought that the control and coordination of activities within modern organisations are achieved by formally specifying the rules of appropriate behaviour or action for most organisation participants (certainly, the organisationally subordinate participants – think of those working on a production line).

A bureaucracy is, for Weber, characterised by (among other things):

- an exogenously generated division of labour
- a hierarchical authority/power structure
- formal rules of behaviour/action.

A useful way to think about a bureaucracy is as an algorithm specifying the standards (i.e. a set of interrelated rules) of appropriate activity for each organisational participant (compare this with a completely

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4 If you have access to it, you may also like to re-read the section on Weber in course SC1021 Principles of sociology.
automated system). If the appropriately specified rules are followed (a big if!) then control and coordination should be achieved. Clearly there is some similarity between the economists’ concept of employment contract and the sociologists’ concept of rules.

You will eventually need to understand how sociologists use and further develop the idea of bureaucracy, but for the moment, note that, in contrast to the economists’ perspective, the concepts of power and authority (see Chapter 6) are brought into prominence. Indeed, Weber spoke of ‘rational bureaucratic authority’ as the mechanism for controlling and coordinating a modern organisation (but note when he was writing). Observe the word rational here. Weber used the term to mean an efficient means to an end; so bureaucracies are conceived as efficient collective mechanisms (means) for achieving a given objective. We now know, however, that this is a very partial picture. Precisely what Weber meant by rational is much disputed, but we can assume that he was pretty much in accord with the economists in his use of the term. So, for the moment, a bureaucracy is a mechanism which is deemed to result in an efficient allocation of resources.

Sociologists (and psychologists) also place considerable emphasis upon social norms as a mechanism of achieving, and, indeed sometimes offering resistance to, organisational control and coordination. By ‘social norms’ they mean widely accepted beliefs about appropriate standards of behaviour (action) in specified circumstances. Social norms (which should be contrasted with personal norms) can arise from the wider society (societal norms) or a section of society (e.g. social class norms) or even be generated within organisations. You will need to distinguish between mechanisms that generate social norms and mechanisms that can rely upon, or are indeed needed to defeat, already existing norms. Social norms have a contingent feature: people tend to follow them only as long as others do so. You should draw a distinction (though it is not always done) between rules (after Weber) and social norms. Both enjoin certain sorts of behaviour or action but rules don’t necessarily have to be widely accepted.

Sociologists usually see social norms as a component part of culture. This latter concept, as we shall see later, is very difficult to tie down – there are literally scores of different definitions in the literature. It relates, however, to the ‘symbolic and physical resources’ mentioned in our opening definition of organisation. ‘Corporate culture’ (whatever it might mean) is sometimes described as a controlling and coordinating mechanism which is either generated within an organisation or draws upon the ambient culture surrounding the organisation.\(^5\)

Sociologists (and recently some economists) have come to study how ‘institutions’ impact upon organisation design. The basic idea is that, rather than trying to understand how organisations are structured and function in terms of individual motivations, one starts with a received (exogenous) way of doing things (an institution) which is then copied. Since social norms are also propagated in this manner, it is sometimes a little difficult to know why we need both terms. Institutions are, however, often best interpreted as bundles of norms and ways of looking at the world (social cognition). For instance, institutions have been defined by Powell and DiMaggio as: ‘cognitive, normative and regulative structures and activities that provide stability and meaning to social behaviour’. We shall look at institutional ideas in Chapter 12.

The study of organisational change tends to divide economists and sociologists. Since economists usually want to study organisations that are
at an efficient equilibrium, change is not placed at the centre of things. Organisations that are not in equilibrium are treated as of little interest. The exceptions to this way of reasoning are evolutionary models, that we shall study in Chapter 9. Sociologists pay more attention to change and we shall distinguish between adaptive and selection-based models. The latter often operate through an understanding of birth and death rates.

Finally, sociologists and some economists have taken an interest in how democracy or voting procedures might be used as a control and coordinating mechanism (see Chapter 8). For instance, contrast a firm owned by shareholders on the basis of one share one vote; a consumer cooperative where each member consumer has a vote; and a producer cooperative where the ‘workers’ control and coordinate on the basis of equal voting power.

**An initial comparison of the three differing perspectives**

You have encountered, but in outline only, three differing disciplinary perspectives about effecting the control and coordination of human activities within organisations. They suggest the following mechanisms:

- rationally designed monetary incentives (employment contracts)
- broader incentives (rational or otherwise?)
- rules of behaviour/action
- power and authority
- norms and culture
- democratic precepts.

You might be troubled at this stage, wondering how economists can apparently ignore much of the complexity in human motivation and relationships which the other two disciplines seem to wish to embrace. Many non-economists voice such complaints about economics. One needs, however, to be careful in making this sort of complaint.

In the final analysis, economists are concerned to understand how individuals respond to relative price changes (or, more generally, the balance of benefits and costs). They would argue that, characteristically, human motivations remain unaltered through these changes and, as a consequence, one can isolate the effect of price changes without delving into broader matters. You should think carefully about this as you progress in your studies. Notice that this argument is not exclusive to ‘monetary prices’; it could equally be applied to balance and costs of a non-pecuniary nature.

**Activity**

At this early stage in your studies you should try preliminary answers to the following questions:

- To what degree are the various approaches of organisation theory compatible with each other?
- To what degree are they contradictory?
- Do they complement each other?

I would not expect you to have clear answers at this stage. Although we have tended to follow the economists and think in terms of firms, you should get into the habit of thinking about organisations in general. For instance, hospitals and churches – do you think the above-identified control and coordination mechanisms apply to these sorts of organisation?
1.2 Division of labour, specialisation and productivity

Introduction

All disciplines are agreed that the need for organisation largely arises because of the division of labour. In a society of self-sufficiency there would be no division of labour between individuals, no need for exchange of goods and services (transactions), nor any organisations except perhaps the family and organisations of social control. But note, even within the family there is usually a division of labour.

A division of labour is defined as the splitting of activities into component parts which are then performed separately.

Activity

Now read ‘The pin factory’ on p.5 in D and S.

The division of labour leads to specialisation, and increased specialisation can lead (but see Section 2.2) to increased productivity (i.e. output per unit of input, such as time or effort).

Activity

Read Sections 1.2 and 1.3 in D and S.

It is often useful to express these simple ideas in terms of a diagram, as in Figure 1.1 (also see Appendix 1.1 of this guide).

![Diagram]

**Figure 1.1**

Economists often consider a division of labour as given (exogenous) and then ask how organisations and markets can be built upon it. Alternatively, they see it as driven by competitive market forces that procure an optimal division of labour, leading to optimal productivity.

Some sociologists, on the other hand, study how the division of labour is generated both within organisations and in the wider society. That is to say, they search for explanations of why the division of labour takes a particular direction – the assumption often being that, rather than being optimal in a narrow economic sense, it is shaped by issues pertaining to power and authority.\(^6\) See Chapter 6.

Scientific management (Taylorism)

Activity

Now read Chapter 13 in B and H and compare it with Section 1.2 in D and S.

Scientific management and its extension, Fordism, have until recently been extremely influential in ‘work design’ – or what we might term the detailed
division of labour. Fordism is sometimes described as ‘Taylorism plus the production line’.

The basic idea is that human beings may react negatively to ‘too much’ fragmentation of activities and this may reduce their productivity or increase the difficulties in achieving coordination and control. We shall return to these issues (see Section 3.2) and also to the associated concept of de-skilling. Nevertheless, keeping this potential line of criticism in mind, it is still useful to start our analysis with an exogenous division of labour necessitating some mechanism of control and coordination.

### 1.3 Coordination: markets and organisations

#### Introduction

If we assume that an exogenous division of labour leads to improved efficiency, then we need to pose two strongly interrelated questions:

1. **How should** (normative theory) and **how are** (positive theory) activities, generated by the division of labour, controlled/incentivised/motivated?
2. **How should** (normative theory) and **how are** (positive theory) exchanges (transactions), generated as a consequence of the division of labour, coordinated?

The questions are interrelated in the sense that individuals need to be controlled/incentivised/motivated to coordinate their activities. However, in this section we concentrate upon coordination.

#### Activity

Now re-read Sections 1.4 and 1.5 in D and S.

D and S identify two distinct methods for coordinating activities (you may read these as ideal types – later we will complicate the picture):

- organisation coordination
- competitive market coordination.

I call these ‘methods’, not mechanisms, since each (particularly organisation) may involve a number of the mechanisms identified at the end of Section 1.1.

We will return to the market/organisation choice in a moment.

#### Coordination and di-graphs

At this stage it will prove helpful to develop diagrams which can depict transactions/exchanges.

#### Activity

Now read Appendix 1.2 of this guide.

Consider a division of labour generating a sequence of activities (a production line would be an example) as in Figure 1.2.

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**Figure 1.2**
The points (nodes) represent activities performed by distinct agents, where the output of one agent becomes the input of the next one down the line (a sequence of arcs). Figure 1.2 is a **di-graph**. We shall find that di-graphs or graphs are often constructive in depicting various features of organisations, so you should familiarise yourself with the basic ideas. Note that they can be used at different levels of aggregation. The di-graph in Figure 1.2 could, in principle, be further decomposed in the division of labour so the activities could be disaggregated into a finer picture. At a more aggregate level the di-graph in Figure 1.3 depicts rather aggregate activities.

![Figure 1.3](image)

Each of the aggregate activities might be a separate organisation or they may all be integrated into a single organisation embracing oil extraction to retailing of refined products or any other combination. It would be interesting to know which is the most efficient arrangement or, failing this, why one arrangement is found rather than another.

**Market coordination**

<table>
<thead>
<tr>
<th>Activity</th>
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<tbody>
<tr>
<td>Read Sections 2.5 and 2.6 in D and S.</td>
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</table>

If transactions are coordinated through the (perfectly competitive) market, then the equilibrium price is a ‘sufficient statistic’ (see D and S) in effecting both control and coordination. Note carefully the conditions necessary for one to be able to say that markets are perfectly competitive. If the four individual activities depicted in Figure 1.2 were to be so coordinated, then agent 1 would sell his/her output to agent 2, 2 to 3 (both at equilibrium prices) and so on down the chain. In Figure 1.3, at a higher level of aggregation, the price mechanism would coordinate the various organisations, though they themselves would presumably have an internal division of labour. You may encounter the term **value chain** to describe chains of transactions at any level of aggregation.

The competitive market at equilibrium also guarantees the optimal (i.e. Pareto efficient) level of trade (exchange or transaction). This is a very neat guarantee, but all is dependent upon the perfect-market assumptions. What would happen if there were not many buyers and sellers and/or the parties to trade were not fully informed? We can’t answer these questions at the moment. But notice that if all (exogenously generated) transactions were to be embedded in perfectly competitive markets then, in theory, all transactions could be controlled and coordinated by market prices. In such a world, there would apparently be no need for any organisations – at least those which coordinate transactions – at all.

**Organisational coordination**

If the activities in Figure 1.3 were to be brought into a single organisation, then the flow of inputs and outputs would not normally (though there are exceptions) be coordinated by the price mechanism but rather by an organisational mechanism. This is the subject matter of our future studies.
Again a diagram may help to fix ideas. Consider a transaction between A and B, then the choice between coordinating it using a market or an organisation can be depicted as in Figure 1.4.

![Figure 1.4](image)

**Figure 1.4**

Note that the organisational choice assumes a coordinator/manager with, shall we say, a hierarchical relation to both A and B. We might also assume here that the coordinator will need to motivate/control A and B – perhaps using a variety of those mechanisms we earlier identified. We now have what we might term a **hierarchical division of labour**. The coordinator/manager can also be described as having **span of control** of two.\(^7\)

One way of describing the adoption of an organisation as in Figure 1.4 is to say that the price mechanism is suppressed in favour of an administered or planned transaction. Another way of describing this situation is to say that the choice is between ‘buy’ (market) and ‘make’ (organisation). Yet a further locution is to contrast a purchasing with an employment contract. You could now imagine putting various types of organisational coordination onto the transactions depicted in Figure 1.3.

Although many organisations are constructed by coordinating transactions (the term ‘vertical integration’ is often used), activities can also be brought into an organisation where there is no obvious transaction, as in Figure 1.5 (the term ‘horizontal integration’ is often used).

![Figure 1.5](image)

**Figure 1.5**

I say ‘obvious transaction’ because, as we shall see later, there may be less obvious transactions relating to the horizontal division of labour.

**Markets and organisation in economics**

We can imagine a given (i.e. exogenous) division of labour generating a network (di-graph) of potential transactions. There are then two ideal-typical coordination methods:

1. All the transactions in the network (di-graph) are coordinated by markets (no organisations).
2. All the transactions in the network (di-graph) are coordinated by an organisation (a planned economy).
Activity

For further reading on this, see Milgrom and Roberts (1992) Chapter 1.

This is a very abstract, but nevertheless useful, way of thinking about the choice between a market and a planned economy. Of course all economies (even those described as planned) comprise a mixture of plan (organisation) and market. But I hope you will agree that the intriguing questions are: firstly, where should the boundaries of organisations be drawn on the network (the normative question)? Secondly, where are they actually drawn (the positive question)? And, finally, if the answers to these two questions are different – why so?

1.4 Coordination and information

The economic perspective

Activity

Read Section 1.6 in D and S.

Economists tend to interpret the (rational) choice between market and organisational coordination in terms of the information available to the potential contracting parties (e.g. the information required to enter into a purchasing or an employment contract). In the ideal typical world of perfectly competitive markets where all contracting parties are deemed to possess all the information required to make fully informed rational choices (about past, present and future contingencies), they are indifferent between market and organisational coordination. It is when information is incomplete (and in practice it nearly always is) that the choice is pertinent for contracting parties.

Note, in passing, that this argument would not work if parties had a taste for power, which, in turn, is only generated inside organisations (see Chapter 6).

You might now begin to think in terms of the choice between ‘real’ markets (rather than perfectly well-informed competitive markets) and organisations.

Activity

Read Section 2.5 in D and S.

Economists distinguish between:

• complete contracts – where all the relevant information (i.e. all possible contingencies, past, present and future are covered) is available to the contracting parties when the contract is entered into

• incomplete contracts – where all the relevant information is not available to at least one party.

A diagram might help you to appreciate the possible distribution of relevant information between contracting parties – call them A and B (see Figure 1.6)
Chapter 1: Getting started

From Figure 1.6 you should distinguish:

- complete information
- common information
- private information/asymmetric information.

We progress, therefore, to the viewpoint whereby the rational choice between organisation and ‘real’ markets is one of information and incomplete contracts. Thus you will later encounter the idea that an organisation is a nexus of (incomplete) contracts, particularly in what I have termed the hierarchical division of labour.

**Activity**

You might like to make a preliminary reading of Section 7.5 in D and S, though you will not find it easy at this stage.

Organisation theory becomes a search for optimal or efficient non-market contracts. You will find as we progress that whenever economists analyse a situation (normatively or positively) in terms of contracts, they raise issues about:

- optimal incentives (see Chapter 4)
- the distribution of information – who knows what
- the optimal distribution of risk and uncertainty.

This is because in a world of incomplete contracting one cannot be certain about the future and therefore the allocation of resources is a risky/uncertain business.

So organisations and markets can, from an economist’s point of view, be studied as the interplay of:

- incentive mechanisms
- information-revealing mechanisms
- insurance or risk/uncertainty sharing mechanisms (who bears the risk/uncertainty?).

**The sociological and psychological perspective**

**Activity**

Read Chapter 6, pp.174–96, in B and H.

Chapter 6 in B and H will give you a good idea of how important both psychologists and sociologists view communication to be (i.e. the flow of information between individuals and groups) for the functioning of organisations. They are entirely in accord with economists in this respect.
Psychologists, however, study the process of information transmission in much more detail than economists. For instance, they study non-verbal communication, and link communication into issues surrounding organisational power and manipulation (see Chapter 6) and culture (see Chapter 7). But they agree that information/communication always underpins coordination and control (including markets, of course).

We shall see later how economists envision the strategic manipulation of information (in a world of incomplete and asymmetric information) in order to gain advantage. You should eventually seek to link the detailed psychological study of communication to the economists’ approach to information revelation in designing incentive mechanisms.

Sociologists, as we have noted, tend to analyse organisations from the standpoint of the operation of rules. Although you will not find the idea addressed in your textbooks, it is useful to find a parallel between sociologists’ use of the term rules and economists’ conception of contracts. Both words are used to describe what – attendant upon the division of labour – actors/agents (should) do in differing circumstances (contingencies).

Economists will almost invariably regard employment contracts (complete or incomplete) as coordinating and controlling activities through the use of appropriate financial incentives and monitoring (i.e. observing compliance with the contract). So, information flows and distributions are tied into this way of looking at organisations. Sociologists, on the other hand, are more likely to consider a wider range of mechanisms, but notably power and authority, in enforcing the rules. Note that economists are divided as to whether organisations and employment contracts do or do not involve power relations (see Chapter 6). A lot depends on how we eventually define this difficult concept. But sociologists often regard information asymmetries as indicative of power differentials – those with relevant information are relatively powerful compared to those without it.

Weber’s ideal type of bureaucracy may be equated with the economists’ ideal type of complete contracts. Both, of course, serve as exaggerated benchmarks enabling us to reason about what would happen under ‘ideal’ circumstances. But notice that if, as we argued earlier, we have complete contracts then the choice between organisation and market is not determined. So if we choose to equate complete contracts and rules, we are then inevitably held to the idea whereby if a perfect Weberian bureaucracy could be realised (i.e. an algorithm written covering all possible contingencies), then control and coordination could equally be achieved in a market or an organisation. So, the argument for organisation, or shall we say partial bureaucracy, arises only in default, when a complete bureaucracy cannot be so designed.

Although not expressing themselves in this manner, a number of sociologists working within the Weberian tradition have suggested that as uncertainties increase, we encounter the limits of bureaucracy. Uncertainty (i.e. incomplete information, particularly about the future) implies that it is not possible to specify in advance the appropriate rules (to complete the contract). So, organisations arise when rules can only partially control and coordinate activities. You will find that many different words are used by sociologists to describe the level of uncertainty – for example, turbulence, unpredictability, noise, and so on. It is best, however, to use the term ‘uncertainty’ as it is common to economics and sociology.
We might find a common picture as in Figure 1.7.

![Diagram](image)

**Figure 1.7**
The question now arises as to how organisational control and coordination are to be achieved when the contracts/rules are incomplete (as they always are, but to differing degrees); that is to say, when information about controlling and coordinating activities is incomplete. Sociologists use the terms *formalisation* and *standardisation* to describe the degree to which an organisation is bureaucratised or explicitly rule governed (see Chapter 11).

It is useful to have a concept for situations where contracts/rules (i.e. pertinent information) are incomplete. Economists use the terms *residual* or *extra-contractual control*; sociologists, unfortunately, use many words, but I suggest we use the term *discretion*. I shall use both terms, depending on context.

If the contracts/rules which are designed to achieve the coordination and control of activities are not fully specified, then how should the residual control/discretion be handled? Much of organisation theory is concerned with this issue. All organisations are a mixture of contractual and discretionary mechanisms. Economists will seek to understand the balance between the two in terms of the costs and benefits of gathering additional information to reduce the degree of incompleteness. Figure 1.8 summarises our arguments so far.

![Diagram](image)

**Figure 1.8**

Note that this way of thinking can still lead to either a market or an organisation.

**Activity**
Can uncertainty-generated discretion be best handled within the framework of a market (where price is a sufficient statistic) or an organisation (where employment contracts will operate)?

Both psychologists and sociologists recognise that individuals may, in various systematic ways, not perceive things in an entirely ‘objective’ manner, but their perceptions can have real behavioural consequences. (There are some social scientists who even reject the whole notion of an objective reality.) It is important to distinguish between systematic factors affecting perception and random mistakes.

**Activity**
Now read Chapter 7 in B and H. You should use the chapter as a resource – it is not necessary to commit its contents to memory.

Economists have also recently begun to study systematic cognitive departures from expected utility theory. The ideas are referred to as
prospect theory. For instance, people are often ‘overconfident’ (underestimate the probability of events that carry negative utility (value)). Economists are currently strongly divided over the extent to which the precepts of prospect theory should be incorporated into mainline theory.

1.5 Organisational control and coordination

Introduction

Activity
Now read Chapter 3 in D and S.

In the previous section I urged you to find an intellectual parallel between two ideal types – Weberian bureaucracy and complete contracting. The real world is more complex. Organisations are coordinated and controlled by diverse mechanisms, sometimes complementary, sometimes alternative (substitutes) to each other. D and S, in Section 3.2, review six mechanisms identified by Mintzberg (1989). These, in some ways, cut across the two ideal types. Standardisation of work processes, standardisation of outputs, standardisation of skills and standardisation of norms are each finer-grade distinctions of the rules/contract concept.

Activity
Now read Chapters 14 and 15 in B and H.

This subject guide will be organised rather differently from either of your textbooks in order to bring into relief the impact of the three disciplinary approaches. In passing we have identified several major mechanisms for controlling and coordinating activities (and also resources) in the context of incomplete contracts. Let us think of these in the context of a simple principal–agent (PA) relationship.

• **Formalised rules/contracts**: P designs the contract in order to control A’s activity.

• **Incentives**: P designs an incentive mechanism for A. Incentives may involve anything that motivates A.

• **Monitoring**: P observes A. P can observe either A’s input (e.g. effort) or A’s output, or both.

• **Power and authority**: P uses her/his (bargaining) power/authority to shape A’s contract/activity. A uses her/his (bargaining) power in the same manner.

• **Cultural**: P uses or generates beliefs/values in order to achieve A’s compliance (e.g. commitment).

• **Democratic**: P and A use a voting mechanism to shape contracts/activities.

Note that I have not included information in this list as all the mechanisms involve flows of information.

Many organisations make use of a mixture of some or all of these mechanisms. You should recognise that there is no settled agreement about how to conceptualise the range of control and coordination mechanisms. You will have to compare different schemes and make your own judgement as to what is most useful.

8 Note: the coordination mechanisms are:

- mutual adjustment
- direct supervision
- standardisation:
  - of work
  - of outputs
  - of skills
  - of norms.

(Mintzberg, 1989, p.102).
Activity
For further reading, see Miller (1992) Chapter 1 and Milgrom and Roberts (1992) Chapter 1.

The market-organisation continuum
So far you have learned to think about whether exchanges/transactions should (or empirically do) take place in a market or an organisation. You have, of course, no answer as yet. But before we begin to fashion one it is essential to realise that the boundary between the two is not clear.

Activity
Now read Section 3.4 in D and S.

Organisations might make use of internal markets – that is to say, they may use a price mechanism, often shadowing (attempting to copy) the price that would operate in an external market to exchange goods, services or capital. They may also be more or less centralised. There are, in addition, many hybrid forms which have some features of markets and organisations. Furthermore, ‘ideal markets’ – or, indeed, markets even closely approximating perfect competition – are rare.

Activity
Now read Sections 2.5 and 2.6 in D and S.

It is useful to think in terms of an organisation-market or contracting continuum as in Figure 1.9.

Activity
There are some new terms here like long-term contracting and franchising. We shall develop these ideas later, but for the moment think of yourself as a manager/entrepreneur requiring a component to complete your product (e.g. a windscreen for a car); where on the continuum should you locate your acquisition of the component?

1.6 Hierarchy and the boundaries of the firm/organisation

Introduction

Activity
Now read Section 8.4 in D and S and Chapter 14 in B and H.

Four main boundaries of organisations can be recognised:
- vertical
- horizontal
- hierarchical
- ownership/financial.
Vertical boundaries

It is easiest to introduce the vertical boundary concept by way of an example. Consider the process running from crude oil extraction to retailing of petroleum to the consumer, depicted as a di-graph in Figure 1.3.

Each of these sequential vertical transactions can, in principle, be governed at any position on the contractual continuum (Figure 1.9). Note also that Figure 1.3 is constructed at a level of aggregation whereby each node could be further disaggregated to a finer level of vertical transaction or division of labour.

But let us simplify for the moment to the extreme poles of the continuum - market and centralised organisation. There are many possible ways of coordinating the transactions lying in between:

• all the transactions are markets using the price mechanism (buying and selling)
• all the transactions are vertically integrated in one large organisation running from extraction to retailing.

If all the transactions are governed by markets, then we have five independent firms, but then these firms could vertically integrate backwards or forwards (except of course oil extraction, which can only forwardly integrate, and retailing, which can only backwardly integrate). The vertical boundaries of the firm/organisation are determined by the pattern of integration down vertical chains (sometimes called value chains).

Clearly, what we eventually want to know is: where should/are the boundaries (be) drawn?

Horizontal boundaries

If an organisation integrates more than one vertical chain of activities, usually as separate departments/divisions, then this is referred to as horizontal integration (see Chapter 11).

Hierarchical boundaries

When activities are integrated into an organisation then it is usual for the control and coordination to be structured as a hierarchy. We will later study why this is so (Chapter 12). A rather simple hierarchy is depicted in Figure 1.10 below.

Figure 1.10

Note that a hierarchy is a graph (see Appendix 1.2 of this guide).

There are a number of important associated concepts:

• Size of the organisation, \(N\) (\(N = 9\) in Figure 1.10).
• Size of the bottom level, \(n\) (\(n = 6\) in Figure 1.10).
• Spans of control, \(s\). The number of immediate subordinates to a superordinate (\(s = 3\) and 2 in Figure 1.10.)
• The number of levels (sometimes called vertical span), \( L = 3 \) in Figure 1.10.
• The administrative component \( (N - n) \). \( (N - n = 3 \) in Figure 1.10).
• The number of hierarchical relations \( (N - 1) \).

Note that given \( n \) (the exogenous division of labour), as \( s \) increases (for whatever reason) then \( L \) (the hierarchical division of labour) decreases and vice versa. The hierarchal shape changes. Organisation theory is concerned with explaining why hierarchies take on different shapes in differing circumstances.

It is usual to compare hierarchies with non-hierarchical peer groups.

**Activity**

Now read Section 8.4 in D and S.

Small organisations (up to where \( n \) is approximately 15) sometimes adopt a peer group organisation. Peer groups are also sometimes democratically coordinated.

**Ownership/financial boundaries**

At this stage we cannot say very much about these issues. The questions are: who should/does provide the capital (debt and equity) and who owns and controls the physical and certain symbolic (e.g. brands) assets of the organisation? These are often the same people, but not necessarily so. You should recognise that we are dealing with complex contractual and principal-agent problems.

**Activity**

You might like to read Section 7.2 in D and S.

**A reminder of your learning outcomes**

Having completed this chapter and the Essential reading and activities, you should be able to define and explain the following terms and concepts:

• organisations as control/coordination mechanisms
• assumptions of rational and self-interested behaviour/action
• ideal types
• division of labour
• transactions/exchanges; control/coordination; governance
• motives/incentives
• competitive markets
• normative and positive theory
• market-organisation continuum
• graphs and di-graphs
• roles/contracts/norms
• incomplete information/uncertainty
• discretion
• vertical, horizontal, hierarchical and financial boundaries.
Sample examination question

1. Compare and contrast the assumptions economists and sociologists make when analysing organisations.
Chapter 2: Organisational control and coordination: information and knowledge

Aim of the chapter
To introduce how it is that information underpins the various control and coordination mechanisms which an organisation might adopt.

Learning outcomes
By the end of this chapter and having completed the Essential reading and activities, you should be able to define and explain the following terms and concepts:
• adverse selection
• moral hazard
• information and monitoring
• information, power and authority
• information and culture.

Essential reading
Detailed section references are provided throughout the chapter.

2.1 Introduction
As we have observed in the previous chapter, there are several different ways of controlling and coordinating an organisation, but underpinning them all is the distribution of information and knowledge – who knows what, who needs to know what, who is willing to reveal what they know and who can use what they know and others don’t know to their own advantage and to others’ disadvantage.

Activity
Read Sections 4.1 to 4.3 in D and S.

In recent years, economists have developed a whole sub-discipline (sometimes called ‘information economics’) and many of its insights are appropriate to organisation analysis – particularly the choice between markets and organisations (see the continuum in Figure 1.9). It is important to understand the information implications inherent in the concept of sufficient statistic implied by the ideal typical perfectly competitive market. At equilibrium, the price signal contains all the information a potential purchaser requires – the competitive forces of the perfectly competitive market have already driven out any substandard purveyors. So the purchaser has only to make a decision about the quantity of a good, which is homogeneous across all potential purveyors,
which he or she wants to purchase. Furthermore, the purchase will have no appreciable impact upon the price. So, at equilibrium, the heroic assumptions about complete information are no longer required.

Putting it another way: the search costs in locating a suitable purveyor and the risks of being deceived are absent. A wonderful result – but how are purchasers to know that they are facing a perfectly competitive market at equilibrium? In practice also, as we have noted, many markets are likely to be neither perfectly competitive nor necessarily at equilibrium. Organisation analysts, while appreciating the important intellectual role that competitive markets play in organising our thoughts, need to understand the significance of unevenly distributed information in less tidy situations. Nevertheless, setting out the assumptions that underpin ideal typical models helps us to be explicit about the implications of progressively relaxing them.

You should fully understand the following two concepts:

- **Adverse selection** (sometimes called hidden information, pre-contractual hazard or an *ex ante* information problem). Adverse selection arises when one or more parties have private (i.e. not easily observable) information/knowledge relevant to a potential transaction. There is thus information asymmetry before the transaction is entered into. You should recognise that both organisations and real markets can be impacted by adverse selection problems. The question is (*ceteris paribus*),\(^1\) which is the best (least costly to monitor/risky) choice when confronted by adverse selection?

- **Moral hazard** (sometimes called hidden action, post-contractual hazard or an *ex post* information problem). Moral hazard arises when a party to a transaction/contract subsequently has an incentive (post-contract) to use their private information/knowledge to act in a way that is not observable to the other party but is to their own advantage and to the disadvantage of the other party.

It is important to recognise that it is the anticipation of adverse selection and moral hazard that can make it difficult for otherwise willing parties to enter into a mutually beneficial transaction/contract (organisation or market or hybrid). So, although moral hazard is post-contractual, its anticipation can be pre-contractual and, unless resolved, can prevent a transaction from being realised. If so, then the outcome will be **Pareto inferior**. That is, both parties could be better off, or one better off and the other not worse off, if the transaction could be arranged.

The information asymmetries inherent in situations where adverse selection and moral hazard occur enable actors to act strategically or opportunistically.\(^2\) They can and may take advantage of their private information and available unobservable actions. Clearly an interesting question is whether organisational mechanisms can be put in place that will either induce individuals to reveal their information or make their actions more visible.

### Activity

One – if only a partial – view of the choice between organisation and market coordination is in terms of addressing adverse and moral hazard problems. For instance, would ‘buying’ an input rather than ‘making’ it address the issues more efficiently? You can’t fully answer this question yet – but think about it.

I hope the above line of analysis has made you appreciate the idea that information has **value**. Not surprisingly, economists have developed ways of measuring it.
Activity
Now read Section 1.4 in D and S.

Decision trees
Pay attention also to the concept of a decision tree, which is another example of a graph structure (see opening section of Appendix 5.1). Trees of this sort will prove useful when we come to study strategic interaction and game theory (see Appendix 5.1 of this guide).

2.2 The psychologists’ and sociologists’ approach
Although traditional organisation theory (i.e. the creation of sociologists and psychologists) refers to neither adverse selection nor moral hazard (the terms do not appear in the subject index in B and H), the idea of taking advantage of private information and knowledge is widespread. You have already studied Chapter 6 in B and H.

In Chapter 1 of this guide we identified several control and coordination mechanisms which we shall study in the following chapters. But let us now see how information issues enter into each of them.

Organisation monitoring
We can interpret an organisational hierarchy as, among other things, a complex monitoring mechanism. It is sometimes said that in a hierarchy, directions flow down and information flows up. The basic building blocks of a hierarchical organisation are, indeed, spans of control. An organisation is the union of a set of spans of control. Spans of control are sub-organisations where a line manager (P) supervises a number of ‘subordinates’ (agents A, B, ...). Note that it is useful to think of hierarchically structured spans as a cascade of principal-agent relationships. We noted earlier that monitoring can be achieved by gathering information (observing) on an agent’s input (effort, application, etc.) or output (some measure of performance). If these are deterministically related, it does not matter which. The difficult issue arises when it is difficult/costly to observe either of them or when the relationship is not deterministic (see Chapter 4).

Imagine, for instance, you are supervising a number of research scientists in a Research and Development department where it is difficult to observe either the effort put in or who is responsible for the scientific discovery. No amount of information gathering is going to make this an easy monitoring problem. But monitoring usually takes place in the context of incentives. Assuming for the moment that P’s objectives are the ones that matter, is it possible to design incentives for A... which obviate the need for close monitoring? Note that, in effect, the perfectly competitive market, with its attendant concept of sufficient statistic, achieves precisely this. One way of interpreting perfect markets is as a control and coordination mechanism which requires minimal or no monitoring and thus flows of information. Alternatively, an organisation will also usually meld monitoring and incentives. But observe that the incentives may be much broader than economic ones.

Activity
Consider how a church or army might control and coordinate its activities. (Not many people advocate markets in these contexts!)
Let us assume a simple organisation where P spans A and B which is structured, following Weber, as a rule/contract-governed bureaucracy. P then designs the algorithm which specifies, as far as possible, A and B's activities. In general, as we have seen, the rules, because of inherent uncertainties, will not cover all conceivable future contingencies (incomplete contracting) so situations will arise where there will be potential discretionary activities. In this context it is analytically useful to distinguish between monitoring (and information flows) which are:

- designed to understand whether the contract/rules are followed
- designed to control and coordinate discretionary activities.

Monitoring is subject to adverse selection and moral hazard problems, which now (once we are inside an organisation) will concern not only the relationship between A and B but also their hierarchical relationships with P. Will A and B reveal to P, and P to A and B, appropriate ex ante and ex post private information? We shall need some game theory to address these problems.

Activity

Now read Chapter 9 in B and H. Pay particular attention to the pages which cover the famous ‘Hawthorne experiments’. Pay particular attention to ‘chiselling’, ‘squealing’ and ‘rate busting’. These are all, from the standpoint of organisational design, examples of information asymmetry.

Organisation power and authority

Many sociologists urge that ‘information is power’. This would perhaps be better expressed as ‘asymmetric information confers power’. We shall discuss these difficult issues in much more detail in Chapter 6. The central question which arises now is how the distribution of information/knowledge in an organisation determines the way it is controlled and coordinated and, thus, perhaps also its objectives. If people have different objectives (e.g. workers and managers, or prison supervisors and inmates), it is not unreasonable to assume that they will use their private information to their advantage. **Adverse selection and moral hazard** can influence people's bargaining power. However, the hierarchical division of labour is usually based upon a division of knowledge (expertise), which also can be seen as a source of legitimation. Those in hierarchically superior positions with relevant knowledge are accepted as being appropriately qualified to exert power (i.e. give directions). Weber's concept of rational bureaucratic authority is so constructed: experts have specialised knowledge which others respect and which leads them to confer authority upon the experts. More generally, the mechanisms which transmute power into authority are, according to many psychologists and sociologists, central to the functioning of organisations.

Sociologists raise far more fundamental issues about the connection between knowledge and power. They detect power relations to the degree that one actor (individual or collective) can, in some manner, affect the beliefs, affects and values of another actor. Sociologists often express this as determining the discourse. So you will encounter expressions like ‘dominant discourse’ or ‘hegemonic discourse’. We might refer to this as the ‘thought control’ conception of power. If I want to control you, can I ‘make you’ want/believe/like what I want (e.g. follow the dictates of my rules/contract – perhaps even without further incentives)? These sorts of control mechanism are highly complex and difficult to study. This does not mean, of course, that they are not important. Since beliefs, values and
affects are also conceptually part of another difficult concept – culture – there is a connection to be drawn between the concepts of power and culture. There is a significant divide between those who see cultural control and coordination mechanisms as part of the story about power (many sociologists) and those who don’t (many of those small number of economists who think about these issues).

**Activity**
Now read pp.57–58 in B and H.

We might ask here how an economist would address these issues. We noted earlier that economists usually start with individuals blessed with (exogenous) often homogeneous preferences (utilities) and options. These options are believed to lead, often probabilistically, to consequences upon which the actor places value (utility). The actor then chooses the best option. This picture can be quite difficult to establish, but eventually we finish with the maximisation of expected utility. This appears to be very different from the sociological approach. But one way of beginning to reconcile them, which we shall study later, is to make either or both of the preferences and opportunities endogenous. This can, under certain assumptions, open up the economists’ picture to the idea that this endogenisation is a species of power relationship.

Reading this way can also link into issues of perception. Can one actor constrain the perceptions of another and, thus, limit the second’s recognition of available options? This is a very tricky problem to study. Many Marxist scholars favour this interpretation of power relations between capital/management and labour. They will refer to ‘hegemonic culture’, meaning, at least in part, that one group in society exerts ‘power’ over another by limiting its perception/cognition about what is possible or feasible (see Chapter 6).

**Organisation and culture**

We have just noted that there can be a close theoretical alliance between coordination and control through power and authority and by cultural means. If either society or a section of society or, indeed, an organisation itself can in some way inculcate beliefs (i.e. knowledge), then this can impact upon control and coordination – sometimes making it easier, sometimes harder.

Particularly important components of cultural control and coordination are trust and commitment. If A and B both believe they can productively transact with each other, but are diffident because a complete contract cannot be signed (adverse selection issue), they may resolve their diffidence if they can trust each other not to take advantage of the post-contractual situation (moral hazard issue). Commitment can play a similar role. So trust relations in the wider society can alter the relative costs and benefits of transacting in markets and organisations and can supplant power mechanisms.

**Organisation and democracy**

People can choose to control and coordinate their joint activities by various democratic procedures. Small peer groups sometimes use a form of direct participatory democracy based upon the principle of one person one vote. Larger groups, even when adopting a democratic procedure, usually develop a hierarchical division of labour and are more likely to adopt some form of representative democracy. Different forms of enfranchisement
can arise. Representative organs can be seen as agents of their electorate (principal).

Whereas a Weberian bureaucracy usually attempts to legitimate a hierarchical power distribution in terms of competence (rational bureaucratic authority), a democratic organisation may resort to what we might term rational democratic authority. People see unequal power as legitimate because of the underlying democratic principles. Whatever structure is adopted, members of the organisation need information to enable them to participate as well-informed organisational citizens.

A reminder of your learning outcomes

Having completed this chapter and the Essential reading and activities, you should be able to define and explain the following terms and concepts:

- adverse selection
- moral hazard
- information and monitoring
- information, power and authority
- information and culture.

Sample examination questions

1. Explain how asymmetric information may influence the control and coordination mechanisms in an organisation.

2. What, if any, is the relationship between organisational culture and authority?
Chapter 3: Coordination and control: monitoring

Aim of the chapter
To provide an understanding of how an organisation can be conceived as a monitoring mechanism.

Learning outcomes
By the end of this chapter and having completed the Essential reading and activities, you should be able to define and explain the following terms and concepts:
- observations of inputs/outputs
- role of Taylorism/Fordism
- control loss
- de-skilling
- technology and organisation control.

Essential reading
Detailed section references are provided throughout the chapter.

Further reading

3.1 Introduction

Activity
Now read Chapter 13 in B and H.

One way of analysing an organisation is as a monitoring mechanism. The hierarchical division of labour is then viewed as a complex monitoring structure. In practice, of course, monitoring is mingled with the other mechanisms we have identified, particularly incentive mechanisms, but it is analytically insightful to separately consider hierarchies as monitoring mechanisms. By and large, it is sociologists and to a lesser extent psychologists who have studied the variety in these mechanisms. This is why the extensive reading you have just done is found in B and H’s book. Economists have usually linked monitoring with incentives in PA theory, by asking questions about optimal incentives. We shall study their approach in the next chapter. You should nevertheless recognise that monitoring and incentives are inextricably linked: the more effective the latter, the less of the former one needs.

As we noted in Chapter 2, there are two fundamentally different ways P can monitor A. For example, a first line manager or supervisor (P) can monitor a worker (A) by observing their output (e.g. product) and by observing their input (e.g. effort). The choice is only relevant when output
is not a known (by P) deterministic function of input. For the moment let us assume P and A are individuals and that P is A's hierarchical 'superior'. So it is P who is monitoring A, who in turn is in P's span of control. Indeed, for the moment, P has a span of one. All this might sound so obvious as not to be worth saying, but when we come to study power mechanisms we shall see that it is sometimes averred that the hierarchical division of labour is a process of mutual monitoring up and down a hierarchy. Let us put this idea to one side for the moment and take what we might quite naturally term a 'top-down' viewpoint. P would, in a conventional sense, be called A's manager.

Some important terminological issues, nevertheless, arise in making economists' and sociologists' perspectives on monitoring consistent with each other. When referring to monitoring, economists usually mean 'costs of observing' or perhaps even 'costs of observing and drawing useful conclusions'. So, if P can 'costlessly' observe A's output or input or infer the latter from the former, there is literally no need for monitoring. Perfectly competitive markets at equilibrium prices have this characteristic. Some sociologists, though, assume (often implicitly) that there is no such thing as costless observation so they find that monitoring is universal. But as long as we are aware of this and interpret 'monitoring mechanisms' as costly, then no difficulties should arise. Of course, economists have standard ways of talking about the efficiency of monitoring mechanisms which equate benefits and costs at the margin (see Chapter 4).

Two further points. First, you will find economists also using the term 'signalling', whereby the motive to reveal information for monitoring purposes can be examined. Second, economists sometimes distinguish between verifiable observations/signals which can be described ex ante\(^1\) and verified ex post\(^2\) to a third party (e.g. a court of law) and can be used to specify a formal contract, from observations which fail this test. The latter are more likely to be associated with what sociologists call informal monitoring. In sum, it is probably useful to distinguish between the following:

- **'Costless' observation** of inputs/outputs (usually some sort of ideal type).
- **Monitoring costs**: the cost of the time and effort devoted to observing inputs/outputs. The costs of the administration component (see Chapter 10) may be partially attributable to monitoring costs, though the administrative hierarchy has many other costly functions.
- **Monitoring intensity**: the time devoted to monitoring, which will, of course, imply monitoring costs.

We may formulate the monitoring (and incentive – which we will study in Chapter 4) problem as follows:

- Assume the output of A is dependent solely upon A's 'effort'.
- P knows this to be the case.
- P can observe/monitor A's output and infer the 'effort'.
- In so far as the observation of A's output is straightforward, P will have to devote few resources to monitoring A. P's span of control (supervisions of A) can go up. P has no need to monitor A's input, which we might assume would be more costly (i.e. constantly watching A).

If however, either P does not know the relationship between A's effort and output; or P cannot 'easily' observe A's individual output (e.g. A is a member of a group/team which produces a 'collective output' (see Chapter 5)); or A's output is dependent upon his/her effort and other factors which

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\(^1\) Latin: 'as a result of something done before'.

\(^2\) Latin: 'after the fact'.
are costly to observe by P, then, under any of these conditions, P will face a more difficult monitoring problem. P will have to devote time and effort in attempting to overcome the monitoring problems (monitoring costs and intensity). This will negatively impact the span of control of P. If, furthermore, the performance of various agents in a span of control are interdependent (see Chapter 12) then it will be the span of coordination which is affected. In practice, organisational monitoring combines a mixture of observing inputs and outputs.

Sociologists, following Weber, picture a bureaucratic organisation as utilising procedures whereby P both sets the rules for A (implicitly signs the contract with A) and monitors A’s performance. A span of control (remember that a hierarchy is built of spans of control) is thus, on this reading, a mechanism for both directing and monitoring. Your intuition should tell you that, other things being equal, the more time/effort P has to put into these activities, the lower his/her span of control will be (i.e. number of subordinates).

If we extend the picture to situations which, because of uncertainty, cannot be entirely covered by rules/contracts (i.e. incomplete contracts) then discretion will arise. This complicates monitoring. The discretion can be either decentralised to A or centralised with P. If it is decentralised then P will monitor, ex post, A’s decisions in handling the discretion. If it is centralised, P will handle the discretion him/herself and issue appropriate directives. We will study these issues in Chapter 12. As you might expect, they will have an impact upon the span of control and thus the hierarchical division of labour.

An organisational hierarchy can be viewed as a complex structure (depicted as a graph) designed to coordinate and control human activities through direction and monitoring. Figure 3.1 depicts a simple hierarchy with various spans of control and a depth of four. Ultimately, we shall be interested in what determines this variation (see Chapter 12).

![Figure 3.1](image)

It is natural to think of the bottom of the hierarchy as the ‘production line’ – though this might be a rather awkward term if we are talking about, say, a church. As we move up the levels we encounter first line supervisors (with, in Figure 3.1, spans of two and three) and then second line supervisors with spans of two; and so on. Viewed this way, the hierarchy is a structure of cascading P–A relationships devoted to directing and monitoring.

This enables us to introduce an important concept – control loss. (Unfortunately neither textbook introduces the concept.) If we continue
to take a top-down standpoint on the objectives of the organisation then we can envisage it as lines of control running downwards from the peak coordinator. There are as many links in a line as the depth of the hierarchy. The hierarchy depicted in Figure 3.1 has 10 such lines. For a hierarchy to effectively control and coordinate the activities of its constituent members, the activities of ‘production line’ members must contribute to the objectives of the first line supervisor which, in turn, must contribute to the objectives of the second line supervisor, and so on up to the peak coordinator. To the degree that this is not the case then there will be control loss. Since we have incorporated the idea of coordination into our definition of organisation, we might also refer to coordination loss (see Chapter 12).

To get an impression of the nature of these important concepts, you might think in the following terms: attach an (independent) probability number to each link in a hierarchical line of control measuring the extent to which the activities of the subordinate member contribute to the objectives of the immediate superior. Then the control loss down the line is computed by multiplying these numbers together and subtracting from 1. If they are all 100 per cent, then there is perfect control or no control loss. If, however, any depart from 100 per cent, then we find control loss. Notice that the longer the line (the depth of the organisation), the more likely it is that we shall find control loss and even small departures from 100 per cent will have a dramatic effect (for example, multiply 0.99 together four times).

As your reading will have revealed to you, the balance of scholarly activity has centred upon the direction and monitoring of the ‘workforce’ or bottom layer in organisations. Taylorism (or scientific management) and its development as Fordism have had a profound impact upon the study of direction and monitoring.

### 3.2 Taylorism and Fordism

Taylorism (which we encountered along with its alternative name scientific management in Chapter 1) is a process whereby activities (sometimes called jobs or tasks) are decomposed into simpler components. Taylorism can facilitate the production line, which with the addition of mass consumption is usually referred to as Fordism. The term ‘Fordism’ is thus used to describe a wider socio-economic phenomenon which became pre-eminent in industrialised economies until the 1970s. Taylorism/Fordism spread from the US to other advanced economies from the decade following the First World War, and though its credentials were called into question in the latter half of the twentieth century it continues to have a hold on the organisation of work and design of organisations.

Once again, using a di-graph depiction is helpful. Figure 3.2 illustrates some decompositions.

![Figure 3.2](image-url)
In Figure 3.2a the complex task is decomposed into four simpler tasks which are sequentially organised. The operational procedures for each task are then formulated as relatively simple rules and targets (routinisation). In general the work flow can be depicted as a di-graph, and the other di-graphs in Figure 3.2 are possible examples. Taylorism focused upon the lowest level in the hierarchical division of labour although the ideas also had some impact upon the decomposition of managerial tasks. Decomposing complex tasks into simpler ones reduces the difficulty (costs) of monitoring (unless people resist – see Section 3.3) by increasing the transparency between inputs and outputs. Other things being equal, it should increase the spans of control of first line supervisors and accordingly decrease the administrative costs (overheads). It should increase the capacity of management to control and coordinate labour by making performance more transparent and simplifying the incentive system. It also enables managers to reap the benefits of mass production, economies of scale and increasing plant utilisation rates.

Although Taylorism and Fordism were initially applied to manufacture (particularly automobiles), the ideas can be applied to the provision of services and to people servicing and handling organisations. It is generally held that, although Taylorism was devised and proposed as a ‘scientific’ method of organising (controlling and coordinating) human activities, it had wider implications:

- It de-skilled some categories of labour (Section 3.3), though the story about de-skilling and re-skilling is a complicated one.
- It reduced the bargaining power of labour; in the terminology developed here, Taylorism decreased, by simplifying tasks, the information asymmetry about the nature of work which traditionally benefited skilled labour. It also reduced the degree to which the production process could be held up by units of labour – they became more easily replaceable. However, as the system evolved, labour also was increasingly demotivated to use any residual ‘tacit information’ to improve production.
- It increased the bargaining power of management and ultimately the owners of organisations; management’s adverse selection and moral hazard problems in monitoring labour were reduced.
- It created a role for two new categories of labour – namely, maintenance and quality control workers – both removed from direct involvement in production but with significant bargaining power. They became essential to the smooth running of particularly the production line (Fordism – see below). A new form of information asymmetry evolved, conferring power with respect to management. These workers, being in relatively small numbers, were able to use their bargaining power to elevate their relative wages.
- It facilitated the transition from skills-based to mass trade unions.

**Activity**

Much has been written about the causes, consequences and diffusion of Taylorism which falls beyond the boundaries of organisation theory per se. You might, however, in this respect like to read Guillen (1994).
Taylorism was an American invention and it is argued that the particular circumstances of North American society were conducive to its genesis and growth. In this respect the potential of home mass markets and the relative disorganisation of skilled labour and lack of trade unions are often cited. Accordingly those societies (e.g. Germany) where neither or both of these conditions were present proved less hospitable to its spread.

It is important to understand what Taylor and those who advocated his ideas had in mind when describing their prescriptions as scientific. Firstly, the label ‘scientific management’ clearly gave a legitimacy to the prescriptions; to describe something as scientific is to imply that it is in some sense correct. But, more importantly, Taylor believed that the precepts of scientific management would, if systematically applied, guarantee improved efficiency and thus both management/owners and labour could share in the fruits of this improvement. The fragmentation of labour and appropriate incentives would, indeed, lead to a Pareto improvement (i.e. all could be better off) though this terminology was not used. When Taylor was promoting his ideas the US was very much in thrall to the ‘progressive movement’, which embraced science and technology as the harbinger of the good society.

Taylor tended to see people very much as most economists do: as motivated solely by financial incentives and as effort-shy. He also believed that quality would be improved and monitoring costs reduced with the routinisation of production tasks. The design of the fragmented labour process was clearly, in Taylor’s mind, also the prerogative of management. Though these may have been reasonable assumptions, particularly in North America, in the early part of the twentieth century, they became progressively less convincing as the decades passed (see Chapter 5). Furthermore, in societies with deeply embedded cultural traditions which commit people to the intrinsic value of skilled work, the diffusion fared less well.

Fordism may be defined as Taylorism, developed as the production line, along with a strong emphasis on economies of scale (minimising unit costs) and mass consumption. It is thus usually used to describe the period in advanced industrial societies from the development, by Henry Ford, of the production line (1914) up to the 1970s. Since then, the virtues of the production line have increasingly been called into question, but not entirely so, and the phrase ‘post-Fordism’ is sometimes used to characterise this subsequent period.

The production line evolved, courtesy of Taylorism, from craft-based production. In craft production, the product (e.g. an early automobile) occupied a fixed position on the factory floor and components were conveyed from stock (inventory) and assembled at this point. The stock might have been produced in-house or bought in (‘make or buy’; see Chapter 10). The information required to effect coordination and control was significantly in the hands of the skilled workforce. Contracts (rules) were not formalised and highly incomplete. Management was accordingly to a degree dependent upon the goodwill of the workforce and inevitably decentralised much discretion to the shop floor. The effort level exerted by individual workers was by no means transparent to management though the group output was. Organisations were relatively small by later twenty-first-century standards and had wide spans and few levels. The system was probably reasonably stable as long as the potential power (see Chapter 6) of skilled workers was used for the benefit of the organisation/management. This absent control loss becomes a serious problem. Taylor very much saw scientific management as undermining the power of skilled workers.
The production line, in contrast, conveyed the product to a sequence of fixed production positions (micro-vertical integration). Skilled labour gave way to semi-skilled labour and the amount of buying-in declined. Individual effort levels became more transparent to management and determined by the speed of the production line. Contracts (rules) became formalised and more complete. Discretion was almost eliminated. First line spans of control remained high, reflecting the ease of monitoring. As we have noted, spans were also, in so far as they were formalised, high under skilled labour assembly. This brings out the point that identical spans can originate for quite different reasons. In the case of skilled assembly, decentralised discretion and cooperative labour relations permitted high spans. The assembly line, on the other hand, achieved the same objective by reducing discretion and simplifying the monitoring.

Payment systems (see Chapter 4) were rather variable, probably reflecting the increasingly contested nature of the speed of the assembly line. Time pay (wage rates) led to annual disputes about rates whereas payment by results led to continual, often costly, negotiation between management and labour (see Chapter 5).

The success of the production line and mass production depended upon mass consumption. Ford facilitated this by boosting the wages of his workers and introducing credit, enabling them to purchase the cars they had produced. As the emphasis upon consumption spread throughout the industrial economies, it is sometimes claimed that this encouraged the state to engage in demand management and paved the way for Keynesian economics. By the 1960s auto workers were among the highest paid in industrial societies and this fuelled a debate about the role of the ‘affluent worker’.

Production line technology proved less attractive in those countries (e.g. Germany) where skilled labour persisted, where small companies continued to play a strong role in the economy and where national mass markets were more difficult to establish. As the twentieth century wore on, Fordism became increasingly vulnerable to a number of socio-economic developments both in the advanced and in the industrialising economies:

- Low-wage industrialising countries could adopt the assembly line, etc., and undercut the high-wage economies (Japan, Korea, Malaysia...).
- Mass consumer markets began to sunder into more specialised markets, which also increasingly placed emphasis upon product quality (sometimes called the ‘BMW effect’). This often required cooperation of labour and increased discretion, particularly in respect of quality.
- Flexible technologies were developed.
- Resistance to the assembly line de-skilling.

### 3.3 The de-skilling debate

**Activity**

Now read Chapter 13 in B and H.

Although the division of labour in the assembly line did increase productivity, it was explicitly designed to reduce worker skills. Work on the production line is tedious (simple repetitive tasks; work rate controlled by the speed of the line; little pride in production or product; no involvement in the design of work; boredom; minimal discretion and power, and so on). The reaction of workers to these conditions was complicated, varying
with individual characteristics, over time and with cultural context. On the one hand, increased affluence enabled some to take an entirely instrumental attitude to their work, accepting relative affluence as a suitable reward for the unpleasant nature of their work experience. On the other hand, others increasingly showed resistance, which produced a serious monitoring problem. De-skilling was interpreted, particularly by sociologists, as leading to both objective (i.e. via technology) and subjective feelings of alienation from work and to proletarianisation (a homogeneous unskilled labour force). This line of analysis was particularly promoted by those of a Marxist persuasion (see Chapter 5). Braverman's book (1974) is the most sustained effort to argue that de-skilling was, at that time, a near universal trend in capitalist societies. It is now almost universally held that Braverman's thesis was over-simplistic – varying trends in what is often termed by sociologists 'the labour process' are now acknowledged. B and H give a well-balanced overview of this debate – the story is one of both up- and down-skilling. The important lessons we can learn for organisation theory from this debate, which was not always prosecuted in a politically detached manner, are as follows:

- Developments in technology can have a marked influence upon patterns of monitoring (and also incentive systems) and thus on organisational control and coordination and, ultimately, design.
- Sometimes, equally effective alternative technologies are available, each respectively allowing more or less discretion to hierarchical subordinates. This eventuality then creates a choice of technologies. How this choice is resolved may depend on the relative power of managers/owners and subordinates within firms and in wider society (see Chapter 6). It may also depend on prevalent cultural values and trust between management and subordinates (see Chapter 7).

### 3.4 Technology, coordination, control and monitoring

**Activity**

Now read Chapter 3 in B and H.

Since Taylorism and Fordism have each had such a significant impact upon control and coordination mechanisms, and thus on the design of organisations, it is quite natural to ask the question as to whether the production technology always has such an impact. The viewpoint which suggests this is the case is sometimes called 'technological determinism', which is contrasted with the idea of choice. You should, however, use these terms rather carefully. A better term for the former would be 'a determinant'; thus technology would then be conceived as one determinant among possible others in shaping the control and coordination mechanisms (namely, monitoring, incentives, power authority, etc.). Unfortunately the literature is not always analytically precise and this comes out in B and H's chapter (e.g. the concept of social technology). For instance, issues of discretion and power, incentives and monitoring are all run together.

**Activity**

Although these concepts are all ultimately interrelated, it is important initially to keep them analytically separate. In this context it might prove useful for you to use the box and arrow models introduced in Appendix 1.1 when reading B and H's chapter.
For the moment, we are interested in the degree to which technology may determine the nature of monitoring. First, however, we need to be clear about the converse term ‘choice’. It is important to distinguish between: the choice of (production) technology and the choice of control and coordination mechanisms (including monitoring) given a particular technology.

B and H’s chapter is written from a sociological perspective. It might be useful to consider how economists would address the issues raised. Unfortunately, D and S don’t really discuss these issues.

Economists always start from the idea of choice. So firms (i.e. their principals) will choose both a technology and control and coordination mechanisms, but (assumed) competitive forces will constrain them, eventually to adopt the most efficient procedures. So it is in this sense that they are determined. I think this is the best way of interpreting the term ‘determination’ in B and H’s chapter. It is implicit in the adoption of a number of the work design systems they introduce you to but since, as we noted earlier, sociologists and psychologists often fail to set their ideas within the framework of efficient control and coordination, the reasoning is unfortunately not made explicit.

The economists’ reasoning can break down under either of two circumstances: firstly, if competitive conditions do not hold; or, secondly, if there is ‘more than one best way’ of achieving efficient outcomes. B and H call this latter possibility ‘equifinality’ but you should be cautious about using technical-sounding terms where there appears to be no analytical advantage in doing so. If either of these conditions obtain then there is scope for ‘choice’ in the sense that B and H use the term.

If there is choice in either of the above respects, then other factors will shape the technology chosen, the job design and the control and coordination mechanisms (including monitoring) adopted. It has been suggested that principals and their managerial agents may continue to choose technologies and job designs that minimise the skill and discretion (and thus the bargaining power) of workers. There is, however, no systematic evidence of this.

B and H introduce a number of attempts to alter the production line. They include:

- job enlargement (reducing the fragmentation in the division of labour)
- job enrichment (increasing discretion/autonomy)
- job rotation (multiple jobs)
- autonomous work groups (increasing the discretion/autonomy given to work teams which self-manage their division of activities)
- flexible specialisation
- self-management
- empowerment
- lean production.

You should make sure you understand how each of these terms is used and how they are interrelated.

All post-Fordist attempts to redesign the organisation of work now acknowledge the importance of conceiving of a social-technical system. This merely means that when adopting a technology and designing jobs, it is imperative to take into account not only the anticipated efficiency of the monitoring mechanism but also people’s reactions to the job design. In
particular, it is important to know whether the nature of work or the job will influence their level of motivation and willingness to innovate. These issues are, however, best considered under the heading of incentives.

Activity

Now read the recap and revision section of Chapter 3 in B and H.

As we noted at the start of this chapter, from an economist’s perspective, the need to monitor activities within an organisation in theory only arises if the incentive (motivation) mechanism fails to perfectly align agents’ activities with the organisation’s (the principal’s) objectives. This is more likely to occur to the degree to which the organisation faces uncertainties of one sort or another and, thus, to the allocation of discretion. At one extreme the manager (principal) may decentralise discretion to an agent, trust the incentive mechanism, and monitor the output. Alternatively, the manager may centralise the discretion and issue directives as to the appropriate activity. A production system can thus be characterised by a number of key variables:

- the degree of environmental uncertainty
- the mix of routinisation and discretion depending on the level of uncertainty
- the design of the system; determined by P or jointly by P and A
- the incentive mechanism; individual or group/team
- monitoring individual and group
- discretion; centralised with P or decentralised with A
- innovation; centralised with P or joint with P and A.

It may be useful to distinguish between a number of ideal types which parallel the typology given in B and H. I shall formulate these in terms of principal P and agents As.

**Type 1**

- Uncertainty is ‘low’.
- P designs a routinised (rule-intensive) production system (i.e. jobs which may or may not be interdependent).
- P contracts with As on an individual incentive basis.
- P monitors the output of As.
- Discretion is low (absent in the extreme case).
- Innovation is low.

**Type 2**

- Uncertainty is ‘moderate’.
- P designs a limited routinised (rule-intensive) production system.
- P contracts with As on an individual incentive basis.
- P monitors the output of As.
- P centralises the discretion.
- Innovation is determined by P.
**Type 3**
- Uncertainty is ‘high’.
- P designs very limited routinisation and the distribution of discretion (centralised with P or decentralised with As).
- P contracts with As on an individual basis.
- P monitors discretionary performance.
- Discretion decentralised to As.
- Innovation determined by P.

**Type 4**
- Uncertainty is ‘very high’.
- P and A jointly design the production system.
- P contracts with As on a team (economists’ term) or group basis.
- P monitors group performance.
- Discretion decentralised to the group of As.
- Innovation jointly determined by P and As.

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**A reminder of your learning outcomes**

Having completed this chapter and the Essential reading and activities, you should be able to define and explain the following terms and concepts:
- observations of inputs/outputs
- role of Taylorism/Fordism
- control loss
- de-skilling
- technology and organisation control.

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**Sample examination questions**

1. Discuss some mechanisms which you think might reduce the level of control-loss in an organisation.

2. ‘Organisations are mechanisms designed to enable hierarchical superiors to monitor subordinates.’ Discuss.