INTRODUCTION

Studies of the production of the built environment are full of statements about 'sectors' of activity. Usually this labelling of sectors is treated as a simple matter, as 'obvious' or as being simply conditioned by the availability of statistics. Thus we read of

- the house-building industry
- the construction sector
- the building materials sector
- a leading sector
- contracting (distinguished from speculative) sectors
- infrastructure production
- promoters or developers

and numerous other such groupings. The items in this list are drawn from many conceptually different divisions of human activity. It is rather like the list

- animals
- cows
- salami
- antipasti
- food.

It is, of course, entirely necessary to dissect the world as part of understanding it. The act of naming is an inseparable part of the act of analysis. But the process of dividing the production of the built environment into 'sectors' and parts is often not recognised for what it is: the fitting of specific abstractions to the actual experiences of workers, to the products of their labour or to the capitals which set them to work.(1)

2. The research done so far on the production of the built environment (2) includes:

(a) contributions which are helpful in unravelling the character of sectorisation - in showing how a sector comes to emerge or disappear as a significant entity, how it can be defined and divided up in a manner which is coherent with the analysis being done and with the purpose of that analysis.

(b) contributions which are detailed analyses of production within a particular and well-defined sector.

(c) other contributions which can be used more effectively if their assumptions about sectorisation are made clear.

3. The aim of this paper is to set out some of the diverse systems of dividing up the field which are to be found in this literature; to clarify the strengths, weaknesses and inter-connections of these diverse systems; and tentatively to propose certain practices as better than others.

4. Summer School papers, especially those written by the British, have often been criticised for using a mass of more-or-less-synonymous terms interchangeably (perhaps because the British are educated to vary their words to remain interesting). For clarity I have used only the word 'sectorisation' in place of the great variety of words and phrases which are found such as 'categorisation', 'classification'.

THE PREDOMINANT SECTORISATIONS

5. THE WHOLE AND THE PARTS. The process of production of the built environment does not have any self-evident boundary separating it from other kinds of human labour. If we include all the prior labour involved in the processing of raw materials, all the desk work, financing and marketing, the maintenance and management of the infrastructure, of buildings and of their main contents - then we speak of perhaps the majority of all paid labour in West European society. But if, at the other extreme, we speak only of what happens on building sites we are dealing only with a tiny proportion of activity in modern capitalist economies. (3) Thus the

(1) the paper by Walter Perrie, Time and the Subject (PBIS 5, 1.13 - 1.20) has been especially helpful in the formulation of this paper and is very strongly recommended as a treatement of what names and abstractions mean in social terms.

(2) Most of the work referred to here is published in the Proceedings of the BISS, volumes 1 - 6, or in an associated volume, Ball and others (1985) referred to here as 'Land Book'.

(3) Two papers in PBIS 4 are particularly helpful in pointing out, mapping
problem of sectorisation is not just a question of how to divide up a known whole in to bits: it is united with the problem of defining the subject of study as a whole.

6. In each of the following sections we proceed in a uniform manner:

explaining the particular sectorisation in simple terms, with examples; and

discussing the purposes, strengths and weaknesses of the approach.

7. The main sectorisations appear to be the following:

A DIVISION BY TYPE OF PRODUCT
B DIVISION BY CHARACTER OF THE LABOUR PROCESS
C DIVISION BY CHARACTER OF CAPITAL
D DIVISION BY LOCATION OF PRODUCTION
E DIVISION BY THE TYPE OF EXCHANGE RELATIONS
F DIVISION IN RELATION TO THE EXTENDED REPRODUCTION OF CAPITAL.

These phrases may sound very technical, and perhaps obscure. They should all become clear as we go along.

A. TYPE OF PRODUCT

8. Here we find the familiar division of things and the things are divided up in two ways: along successive stages of production (so that the extraction of clay is separated from the making of bricks and that again from the making of brick walls) and between distinct products (so that schools are separated from houses and from offices). The main categories are commonly as follows:

A1 Infrastructure

9. Here are the roads and bridges, sewers, water systems and the energy distribution networks. In the more lofty and abstract discussions the definitions tend to be absent or implicit. (4) The more detailed and the more historical studies tend to pay more

and measuring this kind of 'boundary problem': Janssen on 'formal and Real Subsumption...', especially Chart 2 and the related text, and McGilie and Ives on "The relation of construction to other industries..." pages 2.2-2.10 and 3.3-3.12 respectively.

(4) Edwards on the British New Towns (PBISS 5, 2.11-2.19); Bentivegna on Italian Public Works (PBISS 3, 5.1-5.4).

attention, if not to definitions, at least to the precise ways in which elements of infrastructure help determine and/or are determined by the production and realisation process in the built environment. Particularly helpful are the analyses of the role of service networks in the development of the structure of Rio de Janeiro (5) and of the way in which eighteenth and nineteenth century patterns of landownership in British coalfields facilitated the development of the surface infrastructure for the coal industry (6).

10. Professional perspectives differ: the architect tends to think of everything outside the edge of the building as infrastructure while planners and economists tend to think only of the primary networks of the city as infrastructure, treating the more local networks as part of building production. This difference in usage reflects the way work is divided up and the way contracts and responsibilities are allocated. Thus another sort of sectorisation is creeping in and distorting this one: we become involved in who does what, rather than what is produced.

11. Infrastructure is sometimes discussed as though it were the same as the output of the 'civil engineering' industry. Clearly this can be wrong, for some civil engineering work is making private (rather than shared) facilities for single users (single capitals) e.g. water storage within an industrial plant. But this begs a question: does the definition of infrastructure rest on the functional purpose of the use values created (e.g. water storage) or on the shared character of the resulting use? A road network linking up firms on an industrial estate is clearly infrastructure, but what about the road network within a large plant?

12. Finally we should note that writing about infrastructure is often simultaneously writing about land, land markets and location. Indeed it is often through the role of infrastructure in changing the relative location of sites that the use values and thus the exchange values of sites change. (7)

(5) Smolka (PBISS 5, 2.4 - 2.10).
(6) Fine (Land Book, 107-126).
(7) Ives's study of Merseyside (PBISS 1, 162 - 173) and Hudson's study of Washington New Town (PBISS 1, 142 - 161) both deal with the role of the state in infrastructure provision at regional scale and with the relation between infrastructure provision and the industrial capitals which made use of the new locations created. Similar issues are taken up by Edwards (PBISS 5, 2.11 - 2.19) in relation to the financing and design of new settlements and by Topolov and Lipietz in their discussions of the
A2 Building production

13. This is the self-evident core of the production of the built environment.

14. A difficulty arises when we try to define a building 'industry', rather than buildings as things: Then we are moving to a classification of capitals engaged wholly or mainly in the production of buildings, and many other capitals will be found to contribute to the production of buildings. Even the work done on sites includes workers employed by essentially non-building firms, as indicated by Janssen in his attempt to quantify construction labour (PBISS 4, Chart 2). We return to this general problem in paragraph 40 below.

15. It is normal to assume in Europe that buildings are produced after the infrastructure, or most of it, is in place. But this is a very culturally- and historically-specific assumption. Harding, in analysing the suburban expansion of Barcelona in this century showed how most elements of infrastructure followed after the buildings, if they came at all, (PBISS 2, 79 - 90) while Smolka's work on Rio is partly useful for its demonstration of how the provision, late provision or non-provision of services plays a central role in the structuring of social class in that city's housing system and in diverting social protest away from employers towards the state as service-provider (PBISS 5, especially 2.7 - 2.10).

16. Buildings are produced using materials drawn from other sectors and equipment from yet further ones (discussed below). But the production process cannot be defined purely in terms of site operations: related managerial and office activities play a part (8).

17. Buildings can of course be subdivided, for example between

| houses | shops | factories | etc |

and further divided (quite independently) between

formation of land rents in France (Land book, 25 - 45 and 129-155 respectively). Topalov is particularly clear and explicit in his definition of stages and categories in the production of housing and site infrastructure (see his table on page 31).

(8) See section D below for a discussion of the on-site / off-site distinction.

Janssen (PBISS 4 2.2 - 2.10) is particularly helpful on these distinctions, stressing the great importance of maintenance and repair in the West German building process.

A3 Building materials

18. Here again there is a 'commonsense' core to the category: the production of materials and components which are used wholly or mainly in building. It thus includes pre-fabricated building elements unless (as Gravejat proposes, PBISS 4 2.11 - 2.17) these are produced within the building sector. It will also include bricks, cement, much timber working and often the merchants through whom these goods are distributed to the builders. But here again we are shifting from a classification of things to a classification of capitals (see section C below).

19. A problem arises with those materials which are also inputs to other production processes (e.g. steel, plastics) or inputs to virtually all social processes (e.g. water, transport). In addition there is the problem of how far 'back' to go along the chain of transformation of raw materials: while with brick-clay the whole chain from initial extraction relates exclusively to building, in the case of timber much of the growing, felling and milling is not building-specific. Building products only appear at the stage of windows, doors and so on.(9)

A4. Equipment

20. Much of the equipment used in building is also used by industries making other things: trucks, hand tools, cranes and so on. While the category is clear conceptually it is hard to implement in practice, Ike (PBISS 4 3.13 - 3.20) has tried to define at least parts of this field in relation to the UK and discusses the practical problems which arise in trying to use published statistics in this context.

A5. "Developments"

21. In the sphere of building production as commodity production, which dominates capitalist countries(10),

(9) a full discussion of these issues is to be found in Ike and McGhie (PBISS 4, 3.3 - 3.12).

(10) Hooper (PBISS 6) discusses commodity production in the built environment.
building production is usually now commissioned (or undertaken speculatively) by companies - 'developers' or 'promoters'. Should we be thinking of the resulting buildings also as developments? Should we be thinking of a 'development sector' which takes the output of the building sector as an 'input' and produces marketable interests in buildings as its own output? As yet we have no systematic discussion of this issue, and in the mean time it seems best to treat the 'developer' not as another kind of producer - after all the developer does not produce things other than the things produced by the building sector. Instead we can think of developers as being among the kinds of capitals engaged in the wider processes of production and circulation associated with the built environment - and as such they are considered in more detail in section C below.

22. This essential sectorisation has an obvious appeal and many uses. If we think of society's activity as successive stages of transformation of nature to yield final use values and exchange values, then the sectorisation of activity between these stages (extraction, the processing of materials, the working-up of components, the assembly of final products) and the further division by kind of use (car parts, building parts, houses, schools) has an obvious function.

23. For this reason the division corresponds more-or-less to the basis of official statistics: the standard industrial classifications of most countries. Most researchers have to use it, though not all are conscious of the blinkers it can impose.

24. Most data, however, are not direct classifications of things, nor of types of use values or of commodities (building materials, houses, cranes) but of capitals (firms) or of production centres (establishments). The way firms and establishments are classified varies between countries and over time. Usually firms and establishments are classified to an industry group according to their predominant product. (In the UK many establishments were re-classified to the 'manufacturing' category away from the service sector) when a selective employment tax, penalising non-manufacturing establishments, was introduced.) The conglomerate capital which produces many outputs for many markets can defy classification as a firm. Even within the broad field of construction the drive to accumulation can force firms to change their internal corporate and establishment structure substantially. (11)

25. The process of change can lead to particular production processes becoming separated under the control of distinct capitals (12) or the reverse - being internalised within the branch which uses them as inputs (e.g. the absorption of many UK property development companies within financial institutions). While historical analyses which unravel these shifts can be valuable explainers of change (13), the problem can greatly distort static or comparative static or international studies unless dealt with very carefully. (14)

26. This division bears no necessary relation to the way labour is organised in trade unions nor to the 'markets' in particular categories or types of labour.

27. Finally we should note the problem raised by Hellward's concept of the 'production of space'. Here, especially in the later formulations (PBISS 5 1.34 - 1.38), the intention is, I believe, to create a relatively unchanging concept of the mental and material processes involved in the production and transformation of the built environment. Part of his purpose is to show how the actual 'production of space' in this sense has changed its form with the rise and growth of capitalism, and how it has been divided and re-divided relative to the conventional categories of economists' classifications. He seeks to emphasise the distortions and narrowing consequences of mechanical categories. Thus my reading of Hellward is as a caution about how static, mechanical categories can blind us in our attempt to understand changes in the way things are produced; he is not trying to add a category ('space') to the list of things, use values or commodities which can be produced.

(11) Tuckman presents a very useful case study of a firm's re-structuring (PBISS 4, 1.10 - 1.22) and Gordon discusses the mechanical engineering sector as hovering ambiguously between the 'construction' and the 'engineering' categories (PBISS 4, 3.54 - 3.59). I've also in PBISS 4, 3.13 - 3.20 confronts the inconsistency of commodity groups and industry groups directly.

(12) See Janssen (PBISS 4, especially Figure 1b etc).

(13) Clarke and Janssen (PBISS 3, 1.1 - 1.17 and 1.52 - 1.70 and PBISS 4, 7 - 38) and Topalov (Land Book, 25 - 45) are good examples.

(14) Folin's comparison of post-war housing production in a number of countries is a very clear attempt to deal with this problem, not for industry groups but for housing agencies (Land Book, 46 - 70).
B DIVISION BY CHARACTER OF THE LABOUR PROCESS

28. Here we have the important controversies about the 'backward' or 'advanced' character of building and about the coexistence of both forms as 'sectors'. These controversies are dealt with in papers by Linda Clarke and Jörn Janssen in this volume. A closely related issue is the question of 'leading firms'.

29. A firm or group of firms (which may thus loosely constitute a sector) may be defined as those within their field which are either

(i) ahead of their rivals in terms of some change which is coming to affect them all - a change in the labour process, in product design, in method of production, in marketing or in financing. They are firms which thus enjoy an essentially transitory competitive advantage over their competitors - though they may be able to sustain this lead through a monopoly position, through patents on processes, through a commanding position in the land market, through privileged access to contracts or in other ways; or

(ii) in some other sense dominant.

The distinction between these sources of power may be hard to draw in practice, but it is worth making since dominance can flow either from the dynamics of firms' interactions or from other sources.

C DIVISION BY SIZE OR CHARACTER OF CAPITALS

30. Here we can group a number of kinds of distinction, including

large versus small firms - a distinction which has much in common with that between 'monopolistic' and 'competitive'.

Functional distinctions - between building capitals, financial capitals, development capitals, merchant capitals and so on.

31. SIZE of capitals has been a constant preoccupation of analysts of the construction sector since the wide spread in the size distribution has posed such conundrums for conventional analysis. (15) Almost every book on the sector deals with the matter at length but in most cases the reasons for doing so are obscure. Within the papers of the Summer School we can, however, find some helpful empirical analyses of the fortunes of particular building firms or categories of firms (16) and other literature on the same theme (17) and on the related theme of the fate of development companies in their struggles with financial institutions. (18)

32. A further hazard with sectorisation by the size of firms is that, in building contracting at least, firms which are large in terms of output may be small in terms of their own capital employed - because of those features of contracting which minimise the advances required from contractors. (19) And to contrast things (e.g. large and small) is often to miss their interdependence. The contrasts may obscure the symbiotic relationship which often exists between co-existent, but very different, capitals. It is shown in Clarke's paper how some of the confusion surrounding the 'backwardness' of construction arises in this way.

33. A critical issue in these distinctions is the concept of 'a capital'. What is it? Essentially it is an ownership and control concept and such concepts are very slippery in the modern world. In a world of small-scale capitalism, family or local ownership and competitive relations between firms it was fairly easy to see what a firm was, who owned it and perhaps even where those owners' interests lay. The contemporary world is more difficult to deal with for a number of reasons. Firstly ownership of the capital of firms can nowadays be highly diffused and/or can reflect strong competing interests. The building firm can partly own a gravel extraction and trucking company; it may diversify into property speculation, shipping, tourism or any other field. Secondly a given firm may appear to be in some sense an autonomous ownership unit but may be more or less subordinated to one or more others through the operation of strong forces in its markets. In these cases small 'independent' capitals may be nothing more than the satellite divisions of a single larger one. And that situation may not be very different in its effects (upon labour or upon the product) from the actual subordination of a firm by means of explicit take-over.

34. It should be pointed out that much of the research reported here relates to

(16) Tuckman (PBISS 4, 1.10 - 1.22)
(17) HEWH material, especially Cripps (1980).
(19) Burchell and Hill (1980)

(15) Sugden (PBISS 1, 1 - 6) examines the degree of concentration of ownership in construction.
advanced western capitalist countries in which highly developed capital markets and sophisticated systems of ownership and asset management are the norm (notwithstanding national variations). Some important insights into the role of specific capitals in changing the built environment and changing the process of its production have, however, come from other continents. Thus, for example, Smolka on Rio and Mechkat on the Persian Gulf (20) emphasise the importance of building production for small capitalists - for whom the absence of a capital market prevents access to investment in other spheres. Likewise we find that in the post-war boom in the Canary Islands (21) distinct local, national (Spanish) and foreign capitals confronted very different opportunities and engaged themselves in very different transformations of the built environment. The most we can come to the scope of insight in modern metropolitan Europe is in Topalov's examination of French housebuilding. (22)

35. A related kind of distinction is that which seeks to divide the history of capitalism into periods dominated by particular modes of regulation. This approach to economic history is due to Agricola's development of Mandel's approach. (23) The rapid growth of capitalism in the nineteenth century is seen as having been regulated essentially by competition between individual capitals. Modern – and especially post-war – capitalism is seen as being regulated through the state and is characterised as state monopoly capitalism. The use of this categorisation of capitals and of modes of regulation is basic to many summer school papers. (24) The evident failure of the current mode of regulation is precipitating capitalism into some yet further system of macro-organisation.

36. FUNCTIONAL distinctions among capitals are common: here we essentially refer to the problem discussed in section A above where distinctions which are fundamentally between commodities or between use values (houses, shops, schools) are implemented by the assignment of firms to the relevant categories. Much has been said on the issue, but this is conceptually the place where it belongs – so all the basic problems of classifying capitals apply.

37. The most important basis for the classification of capitals, however, is according to the 'circuits' in which they engage. This is an approach to classification which goes back to the roots of classical economics and was central to Marx's analysis. He essentially distinguished three kinds of circuit in which capitals can engage: production, merchant activity and banking. Production capital rotates purely through the process of production, commanding means and objects of labour and labour power itself, realising and increasing itself through the profitable sale of the product. At the other extreme we find capitals which are essentially interest-bearing: banking capitals which circulate and grow through lending out to production or mercantile capitalists. The merchant capitals are defined as those which expand themselves through the purchase and sale of commodities without any production taking place.

38. These sectorisations gain their meaning as part of the wider debate on the dynamics of production process as a whole, including the process of circulation (25). They contribute to the discussion of the processes of concentration and centralisation under capitalism.

39. A further important function of these sectorisations (especially the 'leading sector' notion) relates back to the analysis of changes in the labour process – changes in technology. Marx, in his analysis of industrial change, talks in terms of the leading producers who gain an advantage over others through some innovation – an advantage they enjoy until the innovation becomes standard or widespread enough to determine the price of production of the commodity concerned.

D LOCATION OF PRODUCTION

40. The distinction between on-site and off-site production is overwhelmingly an obvious, a commonsense one. It has immense power in relation to the everyday experience of building workers who are separated (like miners and sailors) from the common experience of working in fixed and controlled environments. It has power, too, in relation to the specificity, the uniqueness, of the individual site as that is experienced by professional and manual workers alike: every one is different. (26)

(20) Smolka (PB1SS 5, 2.4 - 2.10) and Mechkat (PB1SS 4, 4.8 - 4.45 and in an English translation of the French original obtainable from the BISS).
(21) Bergasa and Caceres (PB1SS 4, 4.46 - 4.57).
(22) Topalov (Land Book 25 - 45).
(24) Marco (PB1SS 5, 1.27 - 1.33) and Lipietz (PB1SS 6) in particular.
(25) See for example Bentivegna on the way relations of land ownership are treated in this framework (Land Book 191 - 202).
(26) See the report of the working group on land (PB1SS 5, 2.20 - 2.22) and
41. This relation to experience is not to be underestimated. It is reflected in Hellgård’s stubborn refusal to see building production homogenised like car production into arid categories (27) and in all the analyses of health and safety in construction (28).

42. A function of the on-site/off-site distinction is that it brings out that crucial feature of the production of the built environment: the relation of production to land and land ownership. The product is rooted in the ground and the whole analysis of the relations of rent and land price thus tends to enter the struggle over the surpluses generated in production. This observation does not justify any rigid separation of on-site from off-site activities, however.

43. It has been pointed out in many papers that site operations cannot be understood on their own, but only in relation to the wider processes of which they are part – especially when the analysis is historical, since the very boundary between on-site and off-site production can be a critical changing element. (29)

44. Note also that many other branches of production have on-site or equivalent stages of assembly or implementation.

E TYPE OF EXCHANGE RELATIONS

45. This is essentially the distinction between speculative and non-speculative (contract) building. Again we find sub-divisions, e.g. between spec housebuilding and spec building of other types; between contractors to the state and contractors to other capitals on to households; and between prime contractors and sub-contractors. (30) Together with co-operative and similar forms of housing are to some extent sectorisations which belong in this general system of division.

46. This is the perspective which it is essential to take where the aim of analysis is to examine how different sets of exchange relations condition production or are conditioned by it.

Gravejet’s careful attention to definitions (PBISS 5, 3.1 – 3.4). The paper by Janssen already referred to is also helpful (PBISS 4, 2.1 – 2.10).

(27) Hellgård (PBISS 5, 1.34 – 1.38).
(28) Leopold (PBISS 4, 1.28 – 1.38) for example.
(30) See Clarke on sub-contracting (PBISS 2). Schwartz is particularly stimulating on the problem of who the consumers are (PBISS 5, 5.1-5.6).

The large mass of research on speculative development has shown how the dominant forms of funding and circulation in the built environment can be key explainers of what is produced and of the organisation of labour in production (31). Equally the analysis of contracting forms has shed great light on the changing forms of construction capitals and construction labour (32). Here too we should note the examination of the British experience with building organised through the directly-employed labour of local authorities – the Direct Labour Organisations (DLOs). The DLOs are distinctive in two ways: in the way the product enters into the circulation process – not as a commodity for exchange but as a more-or-less directly produced use value – and in the way in which labour power exchanges – as a commodity, but not purchased by a capitalist employer in the usual way. (33)

F POSITION IN EXTENDED REPRODUCTION

47. Here we have the distinction between the final production of wage goods for workers (and of consumption goods for the property-owning classes) and all other production – which is of equipment and materials for further production. Here we find something related to, but quite different from, the neoclassical distinction between production for ‘final demand’ and the production of ‘capital goods’ and ‘intermediate goods’. In Marx’s terms we are working with the division of production into Department 1 and Department 2.

48. The importance of this sectorisation is that it engages with the wider debate on the momentum and development of the economy as a whole where the balance between the output of Department 1 (production goods) and Department 2 (wage and consumption goods) is a crucial – though hotly debated – issue. Analysis here is essentially dynamic and concerns growth and accumulation rates. (32)

49. In this sphere we have valuable empirical contributions to the analysis of sectors of production defined in terms of this distinction. (33) Janssen has sought to analyse the distribution of the (broadly-defined) construction...
labour force in West Germany between the production of different kinds of output (PBIS 4, 2.2 - 2.10); Edwards and Bentivegna have suggested some lines of investigation as to where construction output goes in different kinds of regions (PBIS 4, 4.2 - 4.7). There is also a discussion of the character of the "office" building in this framework (Luithlen, PBIS 6). The theoretical issues here are taken up only to a limited extent, and relate strongly to the debate on 'modes of regulation' referred to in para 35 above.

50. A problem here is that the "built environment" as a product is itself a mixture of Deparments 1 and 2. Factories are for production capitals to use; houses are a final product directly used (though not quickly used up) in our reproduction of our own lives. Not all construction outputs are so easy to classify. What is the military base? What is a highway? The school? The shared infrastructure of the industrial estate? There is much untidiness to be sorted out here, including some recently-created categories like 'collective means of consumption'.

References

PBIS (1980-) The Production of the Built Environment, Proceedings of the Bartlett International Summer School, Bartlett School, University College London. (Dates given are for publication, usually the year following the meeting.)


Bentivegna, V. (1985) 'Theory of urban rent and class movements: the case of Italy,' in Ball et al (ch 10)

Bentivegna, V. and M. Edwards (1985) 'The Spatial Distribution of Accumulation in Construction' in BISS, 4.2-4.7


Clarke, L. and J. Janssen (1983) 'On a theoretical approach to the study of labour in building and construction' in BISS, 7 - 38


Cullen, A. (1982) 'Speculative Housebuilding in Britain: some notes on the switch to timber-frame production methods' in BISS, 4.12-4.18


Hailey, Patsy, Local Plans in British Land Use Planning, Oxford, Pergamon


McMahon, M. (1985) 'The law of the land: property rights and town planning in modern Britain,' in Ball et al (ch 5)


Rent Book: see Ball and others 1985.

Topalov, C. (1972) Le capital, la propriété foncière et l'Etat, Centre de Sociologie Urbaine, Paris

Tuckman, A., (1983) 'Labour sub-contracting and capital accumulation in the British contracting industry,' in BISS pp 1.10-1.22