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IS THERE A SERVICE ECONOMY? THE CHANGING CAPITALIST DIVISION OF LABOR

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INTRODUCTION[1]

THE CONCEPTS "SERVICES" and "the service economy" have entered the language with little critical examination. The notion is widespread that the advanced economies have entered an era of "post-industrialism" and that the "services sector" has replaced manufacturing as the engine of economic growth.[2] These views have begun to come under closer scrutiny.[3] Nonetheless, the lack of a systematic framework of analysis continues to dog the field. Many disparate phenomena are haphazardly loaded onto a single overburdened concept, "services."[4] Stanback and his colleagues refer to this as "the misconception of homogeneity."[5] Marx would have called it a "chaotic conception."[6] Our task is to sort out the various aspects of the "service economy" with the help of the Marxian theory of capital.[7]

The service thesis is, first of all, a theory of output. Our analysis must therefore begin with the distinction between services and "goods" as products of labor. The crudest version of the conventional wisdom takes personal consumption, or "consumer services," as its starting point, and argues that consumer tastes now favor services over goods.[8] This has generated the fallacious notion of "an economy of barbershops and laundries."[9] More recent approaches focus on "producer services."[10] This still rests on a conception of services as a product — consumed by businesses instead of individuals. Stanback *et al.* realize, however, that one must not only talk about "what we produce" but "how we produce."

We must, therefore, address the problem of production. To speak of production is to take up the question of labor. The distinction between goods and services turns on the form of labor involved in their production. But this is not enough. One must deal with complex production systems, or what Marx called "the collective laborer." What is needed is a way of handling the division of labor in the modern capitalist economy. The treatment of production by Stanback *et al.*, for example, is a theoretical muddle that throws together fragmented ideas about markets, firms and economies of scale.[11] Part I of this paper is an attempt to dissect the division of labor, focusing on the concrete labor involved in the production and circulation of use-values. It requires a far more complex vocabulary than the impoverished categories of neoclassical economics.

1 Thanks to Flavia Martinelli, whose interest in services stimulated me to think about the topic, and to Pravin Varaiya for his provocations and comments, which forced me to rethink it more carefully.

2 Daniel Bell, *The Coming of Post-Industrial Society* (New York, 1973).

3 Thomas Stanback, *Understanding the Service Economy* (Baltimore, 1979). Thomas Stanback, Peter Bearse, Thierry Noyelle, and Robert Karasek, *Services: The New Economy* (Totowa, NJ, 1981). Thomas Stanback and Thierry Noyelle, *Cities in Transition* (Totowa, NJ, 1982). Jonathan Gershuny, *After Industrial Society?* (Atlantic Highlands, NJ, 1976). H.L. Browning and J. Singelmann, *The Emergence of a Service Society* (Springfield, VA, 1975). Joachim Singelmann, *From Agriculture to Services* (Beverly Hills, 1978). Eli Ginzberg and George Vojta, "The Service Sector of the US Economy," *Scientific American*, vol. 244/3, pp. 48–65, 1981.

4 Throughout the paper, I use the terms service, service economy, service theory, service sector, and post-industrial economy as casual referents in their original, i.e. uncritical, meaning. The only analytic category of services I retain is "labor services," defined below.

5 Stanback *et al.*, 1981, *op. cit.*, p. 2; Singelmann, *op. cit.*, p. 24.

6 Andrew Sayer, "Explanation in Economic Geography: Abstraction versus Generalization," *Progress in Human Geography*, vol. 6/1, pp. 68–88, 1982.

7 I take a rather functionalist view here, as a necessary simplification. I do not mean to imply that the modern economy is a simple determinate effect of the logic of capital playing itself out; only that its development is structured by the relations of capitalism, which do have a logic. That is, I take what is today is called a realist or structuration view, or what used to be called a dialectical view, of method and historical process. See Roy Bhaskar, *A Realist Theory of Science* (Atlantic Highlands, 1978); Anthony Giddens, *Central Problems in Social Theory* (Berkeley, 1979).

8 Victor Fuchs, *The Services Economy* (New York, 1968). Bell, *op. cit.*

9 Edward Denison, *Accounting for Slower Economic Growth* (Washington, D.C., 1979). Quoted in Stanback *et al.*, *op. cit.*, p. 2.

10 Flavia Martinelli, "Producer Services in a Dependent Economy," Department of City and Regional Planning (Berkeley, 1983). Stanback *et al.*, *op. cit.*; Stanback and Noyelle, *op. cit.*

11 Stanback *et al.*, *op. cit.*

The service thesis is also a theory of economic development. In conventional terminology, there has been a shift over time from primary (extractive) to secondary (manufacturing) to tertiary (service) activities,[12] or a transformation from an industrial to a post-industrial economy.[13] This thesis has two aspects: services have replaced goods as the principal *output* of the economy and service jobs have replaced industrial jobs as the principal *occupation* of workers. Gershuny has done yeoman work in distinguishing the two interpretations, salvaging the first, and directing attention to the changing occupational structure.[14] Nonetheless, he proves unable to break decisively with conventional discourse.

The stalemate arises because the debate never leaves the realm of concrete labor and forms of labor. The issue is not one of outputs versus occupations, but of two kinds of "output" from the actions of labor, use-value and (surplus) value. Gershuny points to the contribution of some occupations to the *productivity* of others. We must therefore consider, in Part II of this paper, the kinds of productive labor, in terms of value and surplus value. This is essential to the Marxist case for continuity in the capitalist character of production and the logic of capital behind economic development and the changing division of labor. But it forces us to reconsider the question of productive and unproductive labor, for which purpose I develop the notion of *indirectly* productive labor.

The notion of post-industrialism also carries a sociological and political message: capitalism has been replaced by post-industrial society. Social revolution is unnecessary because it has already happened.[15] This proposition is not logically distinct from the theory of the post-industrial economy in conventional thinking, which does not distinguish between forces of production (industrialism) and relations of production (capitalism), nor between class relations and the division of labor.[16] The argu-

12 Colin Clark, *The Conditions of Economic Progress* (London, 1940). Allen G.B. Fisher, "A Note on Tertiary Production," *Economic Journal*, vol. 62, pp. 820–34, 1952.

13 Bell, *op. cit.*

14 Gershuny, *op. cit.*; Singelmann, *op. cit.*, likewise acknowledges that trade and producer services are primarily goods-oriented.

15 For a good review of the post-industrial literature in its full sociological trappings, see Gershuny, *op. cit.*

16 Richard Walker, "Class, Division of Labor and Employment in Space," in *Social Structure and Spatial Relations*, ed. D. Gregory and J. Urry (Cambridge, 1984).

ment that runs throughout this paper, particularly Part II, is that recent changes in the division of labor can be comprehended within a theory of capitalist development. The products, activities and types of labor may change over time, but the purpose of labor under capitalism remains the same: the generation and accumulation of surplus value.

Four other aspects of the service economy thesis will not be dealt with in this paper. One is that jobs and workers have become more skilled and professionalized, hence work has become more pleasant, creative, and independent. These crude notions have been subject to devastating empirical refutation: the bulk of "service" jobs are low paying, low skill, dead-end, and occupied by women and minorities.[17] A second theme is that professional, technical and administrative workers form a new class that has displaced the capitalist class from power. This, too, is dubious.[18] Nevertheless, the debate over class has historically been closely tied to the rise of "service" occupations and the changing division of labor.[19] I have dealt with these issues elsewhere, but their resolution depends, in part, on the kind of clarifications about service activities undertaken here.[20] Third, government and non-profit activities are normally included within the service sector. This begs every significant question as to what the state does and what its relation is to capital. A somewhat contrary theme to the dominant thrust of the service literature is that service work has lower labor productivity than goods production, and is therefore a drag on economic growth. This notion appears to be false on its own empirical ground.[21] Moreover, the whole project of

17 Marcia Freedman, *Labor Markets: Segments and Shelters* (Montclair, NJ, 1976). Russell Rumberger, "The Changing Skill Requirements of Jobs in the US Economy," *Industrial and Labor Relations Review*, vol. 34/4, pp. 578–90, 1981.

18 Pat Walker, ed., *Between Capital and Labor* (Boston, 1979).

19 Adam Przeworski, "Proletariat into Class: the Process of Class Formation from Karl Kautsky's *The Class Struggle* to Recent Controversies," *Politics and Society*, vol. 7/4, pp. 343–401, 1976.

20 Richard Walker and Douglas Greenberg, "Post-industrialism and Political Reform in the City: A Critique," *Antipode*, vol. 14/1, pp. 17–32, 1982. R. Walker, *op. cit.*

21 Robert Gallman and Thomas Weiss, "The Service Industries in the 19th Century," in National Bureau of Economic Research, *Studies in Income and Wealth*, v. 34, pp. 287–353 (New York, 1970).

measuring productivity and aggregating across sectors is theoretically and empirically dubious.[22]

I. *WHAT IS A SERVICE? USE VALUES AND USEFUL LABOR IN A COMPLEX DIVISION OF LABOR*

The conventional view sees services everywhere: "business services" such as legal counsel and equipment leasing, "consumer services" from hotels and fast food chains, "non-profit"/consumer/collective services such as medical care and education, "repair services" by auto mechanics, "financial services" performed by insurance companies, and so on.[23] Table I shows a typical classificatory scheme using census data.

Apparently, the old-fashioned "good," along with its world of factories, is passing from the scene. In its place has come the "service," a term that implies personalized labor, immateriality, information, and greater human satisfaction, and fundamentally different modes of production, movement, and organization than in the industrial age. These presumptions do not hold up to a careful dissection of the forms of useful labor in the modern capitalist economy. The term "services" begs all significant questions about what is done in banks, repair shops, or hotels. Few of these putative "services" are either new or indecipherable in the language of industrialism. This part of the paper is therefore an exercise in disaggregation and analysis of concrete activities, or tasks of labor, in an economy still based on the production, exchange and consumption of useful products, mostly in the form of commodities and chiefly in the shape of goods.

A. *THE PRODUCT AND SIMPLE LABOR*

The category "services" is conventionally defined in contrast to goods. Since all goods render a service of some kind, i.e., are useful, the crux of the distinction must rest with production, not

22 Victor Perlo, "The False Claim of Declining Productivity and its Political Use," *Science & Society*, vol. 46/3, 1982, pp. 284–327.

23 The "conventional view" is an amalgam of the works cited at the beginning of the paper. Citations to specific authors are made only when their position on an issue stands out. Some familiarity with the common catechism of service activities is assumed. I intend to concentrate on conceptual questions rather than delve carefully into the numbers involved.

Table I

Distribution of Full-Time Equivalent Employees by Industry, 1948 and 1977 (in percentages)

Industry	*1948*	*1977*
Agriculture, extractive, and transformative (total)	43.39	31.60
Agriculture	4.31	1.90
Extractive and transformative (total)	39.08	29.70
Mining	2.06	1.02
Construction	4.74	4.58
Manufacturing	32.27	24.10
Services (Total)	56.61	68.40
Distributive services (total)	13.54	11.36
Transportation	5.93	3.34
Communication	1.54	1.41
Utilities	1.10	0.92
Wholesale	4.97	5.68
Producer services (total)	6.06	11.96
Finance, Insurance, Real Estate	3.49	5.29
Other producer services	2.57	6.67
Retail services (total)	12.57	14.18
Mainly consumer services (total)	7.67	4.99
Hotels and personal services	2.71	2.00
Auto and miscellaneous repair services	0.73	0.86
Motion pictures, amusement, and recreation	0.96	0.85
Private households	3.27	1.27
Nonprofit services (total)	2.16	6.34
Health	1.72	5.19
Education	0.89	1.15
Government (total), of which	14.16	19.57
Public education	2.95	6.44
All domestic industries	100.00	100.00

Source: Stanback and Noyelle, *op. cit.*, and based on Singelmann and Browning, *op. cit.*

consumption. We therefore begin with the simplest terms regarding concrete labor and its products, or use-values.

a1. *Goods and labor-services: the forms of concrete labor*

The distinction between goods and services lies in the form of labor and its product. A good is a material object produced by human labor for human use, such as a ship or can of beer. In its simplest form, it is tangible, discrete, and mobile. A labor-service, on the other hand, is labor that does not take the intervening form of a material product, such as a play or a lecture. It is thus normally irreproducible by other workers and involves a unique transaction between producer and consumer. The difference is not that between mass production (machinofacture) and craft work. Even though the latter is relatively unique and irreproducible, if it generates a material product, it is goods production.

This is not an altogether simple distinction.[24] The crux of the matter is the socio-technical nature of how to produce a desired result, and the consequent ease with which a discrete line can be drawn around the production process and its product. A halfway case is the haircut, which is a tangible product of labor — if it were a toupee it would unquestionably be a good — but adheres to the wearer, making it personal, unique and irreproducible. Another is a sculpture, which while a discrete object and reproducible through a good casting, is also a unique act of labor, beyond ordinary craftwork some would say, which communicates to the consumer in a very personal way. The haircut I would ordinarily call a service and the sculpture a good, but sharp divisions are not essential to our task.

a2. *Joint products*

Much confusion is caused by production that joins goods and labor-services. Restaurants and other food outlets, for example, are ordinarily considered part of the service sector. Yet the meal is a good produced in the kitchen (notwithstanding some uniqueness in each dish). Waiting table is, however, a separate act of labor, which is often part of the pleasure of dining out. It

24 Objections immediately spring to mind which can only be dealt with by a careful examination of several additional issues.

is a labor-service. The restaurant produces a joint product. This is not the case at McDonald's, where the service has been eliminated in the interest of mass production. It is absurd to include fast food outlets in the service economy when they mark the triumph of industrial food preparation (see also d3, below).

a3. *Simple versus collective products*

Collective, or public goods, such as transportation, education and utilities, are commonly listed among the services industries. This rests on a false identification of goods with individually produced and consumed products. It ignores the theory of public goods (*sic*): products which cannot be easily divided for private ownership and consumption, such as roads, reservoirs, and defense systems. In some cases, as in a water or gas supply system, production and distribution are collective but consumption of the final product can be individualized and measured. Collective products raise special problems of production and circulation which are far more significant than whether the product is a good or a labor-service (see also f1 and f3).

a4. *Long-lived and immobile goods*

Products such as housing, factories and pipelines are large and (relatively) immobile. These elements of physical infrastructure are usually produced *in situ*, and have thus given rise to a special industrial category, construction. The service literature has some difficulty finding a place for this industry in its classification schemes.[25] Construction, though often done on a craft basis, is not a labor-service; its product is a good. As a distinct industry in the US it goes back at least to the early 19th century, when it was proportionately much larger than today.[26] The collective nature of many immobile goods is an additional source of confusion. Long-lived goods also generate special problems of circulation in time (see below, f3).

25 Singelmann, *op. cit.*, pp. 34–35.

26 Stanley Lebergott, "Labor Force and Employment, 1800–1960," in *Output, Employment and Productivity after 1800*, ed. National Bureau of Economic Research, pp. 117–210 (New York, 1966). Gallman & Weiss, *op. cit.*

a5. *Information and substance in a product*

Some service theorists think we have entered an age of information and communication, leaving industry and goods behind.[27] The information explosion is readily apparent. But information is not a free-floating ether; it is directly related to practical knowledge and the practical business of production and consumption, i.e., to acts of labor. It is therefore embodied in all products of labor.

All goods and labor-services contain both information and dumb substance. The information content relates both to how they are made and how they are used. Human beings speak through their objects and actions as well as through their throats. Chairs carry very little information and are utterly conventional: "these are objects to sit on," they say (though in the case of a throne, a great deal more is implied!). On the other hand, the principal use-value of some goods, such as computer programs, lies in their ability to store, transfer and interpret information. Similarly, labor-services may be employed for relatively dumb purposes — a trimmed hedge, for instance — or to impart vast reservoirs of wisdom. A tipster writing a scratch-sheet produces a good; one who whispers in your ear performs a service. The information content is the same in both cases. So information cuts across the good/service boundary (more on information below, c5).

a6. *Tactile and non-tactile goods*

A good deal of confusion has arisen over the changing physical nature of goods, leading some observers to see services where none exist. This derives in part from increasingly sophisticated manipulations of nature involved in modern production, particularly via electronics. Many people have an antiquated notion of goods derived from the mechanical age. They fail to see that a computer program, which takes the form of electrons on a tape or disk, is every bit as much a material good as a chair. It was produced by labor, it has a continuing existence, and it performs a useful function. It has a discrete and tangible form, unlike a true labor-service. The real distinction here is between tactile and non-tactile goods, or things that are easily seen and grasped, and those that are not.

27 M.U. Porat, *The Information Economy*, US Department of Commerce, Office of Telecommunications, Washington, DC, 1977, 2 volumes. Cees Hamelink, *Finance and Information* (Norwood, NY, 1983). Bell, *op. cit.*

There is also a problem conceiving of written, essentially informational, products as goods rather than services. Yet a legal brief or an environmental impact statement is simply a bit of intellectual craft applied to paper, as a chair is a piece of woodcraft applied to lumber. As long as the brief remains in the lawyer's head she may perform labor services, such as advice-giving; but once it is on paper, taking a material form, it is potentially available to anyone to use.

It may be argued that the informational aspect of goods is rising over time, and that it is wrong to emphasize the paper content over the informational content of a written document. My argument is that one should not confuse the use-value (information content) and the materiality of physical objects and, in the process, leap over the tangible acts of labor involved in their production.

B. *COMPLEX PRODUCTION AND THE DIVISION OF LABOR*

Division of labor refers to the differentiation and specialization of labor within complex production processes and diversified production systems. Service theorists have carved the economy into boxes labeled "goods sectors" and "service sectors" treated in isolation, rather than as parts of an integrated economy.

b1. *Intermediate inputs: producer goods and producer services*

Too much can be made of the explosion in "producer services." It has long been understood that some commodities serve as means of production for others within complex production processes.[28] These are called "intermediate inputs," and may be either goods or labor services. The growth of producer services says nothing about the nature of final output. The term "producer services" implies that all such inputs are labor services when in fact many are goods, e.g., legal briefs (see above, a6). But even if there are labor services, they are likely to be intermediate inputs in the production of goods, e.g., engineering

28 Karl Marx, *Capital* (New York, 1967).

consultants hired to help design a factory. The expansion of producer services does not indicate a growth in service outputs; only that the social division of labor in the production of *all* products is steadily expanding. It replicates the stage in 19th century industrialization when capital goods production spun off from consumer goods in separate firms and industries[29] (producer services are taken up further below, g3).

This expansion cuts both ways. All goods production requires some labor service inputs and all labor services are produced with the use of goods.[30] Thus an expansion of "health services," for example, requires more pills and x-ray machines, and is, therefore, by no means a triumph of services over manufacturing. The question whether goods or services production predominates leads to a lengthy regress through the input-output matrix of the economy. This task is further clouded by the shifting lines of the social and detail divisions of labor, to which we now turn.

b2. *The social and detail divisions of labor*

The division of labor is a badly muddled category.[31] The social division of labor traditionally means work in different product sectors, e.g., the tinsmith versus the shoemaker. The detail division of labor, on the other hand, refers to the specialization of tasks within the workshop, e.g., between the pattern cutter and sewer in shoe production. The detail division of labor has particularly been associated with the process of breaking production down to discrete steps, either sequential or simultaneous (followed by assembly of parts).[32]

The classic distinction between the two divisions of labor runs into difficulties with intermediate inputs. When is steelmaking an industry and when is it a part of automobile manufacture, as it was at Ford's River Rouge plant? The distinction breaks down altogether where single production systems are divided into several smaller factories, as has become more common. We need to redefine the social division of labor in terms of

29 *Ibid.*

30 Gershuny, *op. cit.*

31 R. Walker, *op. cit.* Here I introduce the most basic definitions, to be built on in later sections.

32 Marx, *op. cit.*

the separation of work groups, normally having a spatial component as work *places*, and confine the term detail division of labor to the task specialization within work groups.[33]

Returning to the relative weight of goods and labor services in the economy's input-output matrix, we see that the matrix is typically confined to the level of the *social* division of labor, and usually at the industry rather than the workplace level. Much of the information needed is hidden in the matrix cells, within the detail division of labor. This suggests that occupational data are the only way to get at the problem, as Gershuny has argued. He observes that service outputs amount to slightly more than 10% of the UK economy, while so-called service *occupations* add up to almost 50% of all jobs.[34] Unfortunately, Gershuny never offers more than an *ad hoc* definition of "service occupations." Evidently, a large number of jobs are not involved in the immediate process of production; but the term "service," which connotes a type of product from a *completed* labor process, does not pertain to a discussion of the *parts* of a complex division of labor.

At the level of the detail division of labor, individual jobs rarely have a discrete product, so all work becomes "services," if we are to take Gershuny literally. Certainly, many tasks do not directly contribute to the production process, playing only an auxiliary role in the workplace. An example is the work of the janitor. One would not want to draw hasty conclusions about the post-industrial economy from the number of janitors. The definitional problem exists at the level of the social division of labor, as well, because many of the collective tasks of different workplaces do not generate discrete products.

As a result we are forced to come up with a different way of thinking about the division of labor that speaks to the problem of direct versus indirect labor, rather than goods labor versus service labor. This task of redefinition is taken up in Part II.

33 Richard Walker and Michael Storper, "The Theory of Labor and the Theory of Location," *International Journal of Urban and Regional Research*, vol. 7/1, pp. 1–44, 1983. The line demarking the detail division of labor from the social division of labor is quite fungible. The solution chosen to the problem of organizing complex production systems depends on business practice and profitability. For example, janitorial services may be supplied internally or purchased as a commodity from another firm. In the first case they are part of the detail division of labor, in the latter, part of the social division of labor.

34 Gershuny, *op. cit.*

C. *CIRCULATION*

The focus has thus far been on the production of use-values. We have said nothing about circulation: the transfer and movement of goods, labor services, money and information between producers and consumers and among units of the social division of labor. Along the way we introduce the notion of *value*, or abstract labor, because certain kinds of concrete labor are applied to the circulation of value.[35]

c1. *The mode of exchange: commodities and non-commodities, value and use-value*

A commodity is any product of labor sold on the market in exchange for money. Commodities can be either goods or labor services. Commodities are both useful products and embodiments of *value*, a measure of the abstract (socially necessary) labor time involved in their production.[36] Circulation therefore encompasses flows of value as well as of use-values.

Not all goods and labor services circulate as commodities. Markets are not the only mode, or institution, of exchange. This has caused no end of confusion for service theorists, who often confuse the distinction between goods and labor services with that between commodities and non-commodities. There are both market and non-market forms of organizing and integrating the division of labor. Because we take "the market" as a fact of life, we are led to the false conclusion that any other mode of economic integration is an aberration or a complete break with the past.

Markets are socially constructed institutions, built up over centuries.[37] The forms of market exchange are numerous. We can, for example, distinguish between open markets, in which parties are equals and transactions are momentary, approximated by the stock exchange, and controlled markets, in which

35 We will not take up the production and accumulation of surplus value as central questions until Part II.

36 Some objects of nature, which are not produced goods, are exchanged and hence take a commodity form and have exchange values, but they do not embody labor value. On the three-fold division of value, exchange-value, and use-value in Marx, see David Harvey, *The Limits to Capital* (Oxford, 1982).

37 Fernand Braudel, *The Wheels of Commerce* (New York, 1982); *Capitalism and Everyday Life, 1500–1800*, vol. II.

the transaction lasts for some time and the power of the two parties is unequal, e.g., contracts between giant grain merchants and midwestern farmers. But market form and market power do not affect the nature of the product nor the commodity nature of the exchange.

In this century market exchange has been increasingly augmented by the corporate form of business organization. Massive amounts of goods and labor services are transferred within firms, without any price formation, change in property rights, or exchange of money. Whether a company supplies itself via the market or non-market route is strategic for cost and risk, but is often rather arbitrary (see b2, above). The growth of corporate organization is quite separate from the question of the type of output, good or labor service. The mode of exchange does not affect the form of the product.

Corporate organization of the division of labor does not, in my view, annul the law of value, given that the dominant mode of exchange remains the market and large corporations actually replicate the market internally, seeking not to overthrow but to perfect the rules of equalization of (socially necessary) labor time and profit rates among productive activities.[38] Value production and circulation remain the order of the day under internal (non-commodity) as well as external (commodity) exchange. Corporations have as their principal goal organizing industrial production and circulation, not overthrowing it (for more on organization, see section G, below).

c2. *The circulation of commodities: retailing and wholesaling*

Retail and wholesale trade are ordinarily counted among the "service" sectors. Yet most trade involves goods. (Because labor services link producer and consumer so closely together, their exchange requires little mediation.) Trade activities have grown large wherever commodity exchange has developed, and long before the industrial revolution.[39] Wholesaling dominated the early U.S. economy.[40] Retailing had its greatest growth in

38 Harvey, *op. cit.*

39 Braudel, *op. cit.*

40 Glenn Porter and Harold Livesay, *Merchants and Manufacturers* (Baltimore, 1971). James Vance, *The Merchant's World* (Englewood Cliffs, 1970). Gallman & Weiss, *op. cit.*

the early 20th century, with the spread of mass consumption.[41] Today their size is chiefly a measure of industrial productivity, plus the mass of goods in circulation and the competitive sales effort among firms.

The confusion of trade with "services" arises because retail sales often do involve additional labor services, beyond merely handing over the product (see above, a2).[42] The salesperson may provide the buyer with information, instruction, or a package of goods and labor services — as in the case of the holiday tour prepared by a travel agent.[43] But in so far as the sales labor merely *transfers* the product from one owner to another, facilitating exchange, or *promotes* the product, as in advertising, nothing has been added to the product or its usefulness — no production has taken place. Such labor is wholly that of circulation, a category apart. Production and the form of the product, good or labor service, is not the issue.

c3. *The circulation of value: money and finance*

Financial "services," or the circulation of money, are always included among the litany of the service economy. Yet finance is an integral part of the goods-producing, or industrial, system. The development of a money system is part of the construction of the institutions of market exchange. Money serves as the medium of commodity exchange and the measure of exchange value. It everywhere antedates capitalism in this role. It also serves as the store of (labor) value accrued through commodity production, which gives the bearer command over a portion of the social product. Finally, it functions as capital to be invested in profit-making activities (see also sections F and G, below).[44]

It requires a certain portion of social labor to speed money on its way. But this has nothing to do with the form of products, whether goods or labor services. The growth of financial activities speaks principally to the growing volume of commodities,

41 Stanback *et al.*, 1981, *op. cit.*

42 Wholesale trade, in contrast, involves nothing more than shifting goods about; there is little excuse for calling this a "service." Stanback and Noyelle, *op. cit.*, wisely break with tradition and define only retailing as a service activity.

43 Stanback *et al.*, *op. cit.* This sort of sales labor blends into post-production labor, discussed below, e2.

44 Marx, *op. cit.*; Harvey, *op. cit.*; Braudel, *op. cit.*

value and capital in circulation, i.e., to the expansion of the industrial system, not its transcendence (finance is discussed further in section F, below).

c4. *The circulation of goods: transport*

Transportation is always counted among the "service" sectors. Yet transportation is only a labor service in the case of the movement of final consumers on vacations and the like. Even there, it is a labor service only in so far as additional labor is required to perform the function, as in the case of cabin stewards. The chief feature of the purchase of rides on transport systems running fixed routes, such as railroads or airplanes, is the rental of space on collective infrastructure, i.e., the marginal cost of each additional passenger is low (see below, f1). The service label thus rests chiefly on a failure to distinguish collective and individualized goods (see above, a3). Personal transport in the individual car is, rightly, never counted as part of the "service" sector. Cars are simple private goods.

Moreover, the vast bulk of transport involves goods. As part of circulation, transport allows the completion of exchange across space. Labor must be expended, just as in wholesale storage and distribution.

But transport is not "mere" exchange, in the sense of a transfer of ownership between buyer and seller. It is lodged within the complex division of (useful) labor in production (see section B, above). The majority of goods transported are intermediate products, not final output; often they are incomplete, between stages of processing or assembly. Movement through space is an essential part of all production, whether inside a factory or between factories. The internal movement tends to use conveyor belts and dollies, external movement trucks and trains. But the latter cannot simply be identified with "circulation" and the former with "production."[45]

Historically, the development of better means of transport, from steamboats to canals, was central to the industrial revolu-

45 In addition, a great deal of the people movement counted under transportation is not final consumption, but the transfer of workers and managers to and from different workplaces. Commuting is an intermediate situation, which occurs outside the workplace and worktime but offers no "service" other than getting to work.

tion.[46] Railroads, in particular, were the wonder of the 19th century, and long the most advanced sector of industry in terms of scale and organization.[47] Transportation employment as a percentage of the total was little different than today.[48] As production and circulation have grown in scale, complexity and geographic dispersion, the means of transportation have had to expand to a commensurate degree, and periodic technical revolutions have taken place to facilitate this role.[49] Growth of the transport sector is principally a mark of the generalization of capitalist industrialism, not its eclipse by a service economy.

c5. *The circulation of information: communications*

Communications are also considered part of the "service sector." In fact, the circulation of information, like the circulation of goods, is principally part of the spatial division of labor in complex production systems. Every act of production involves communication, i.e., transfer of information, as well as transfer of material. Most of this information is nuts and bolts stuff regarding the tasks to be done, the interaction between individual tasks and work groups, and monitoring quantity and quality of production. With increasing mechanization, automation, and, now, computerization, of production, the volume of recorded and mechanically/electronically handled data about production has increased. More exact meshing of material flows in and out of production (and inventory storage) also requires more rigorous information. As work units within complex production systems have become more numerous and/or geographically far-flung, the amount of information transfer has increased proportionately.

Marketing also requires information. From the earliest merchant activities across long distances, information on market conditions has been a necessity for profitable exchange of goods. One of the most important bits of information in a market system is, of course, price. Behind price lies an even more fundamental type of "information" about commodities, value. Money

46 George Rogers Taylor, *The Transportation Revolution* (New York, 1966).
47 Alfred D. Chandler, *The Visible Hand* (Cambridge, 1977.)
48 Gallman and Weiss, *op. cit.*
49 David Harvey, "The Geography of Accumulation: A Reconstruction of the Marxian Theory," *Antipode*, 1975.

is the essential means of communication of this special information, and monetary data is one of the bulk items in the present-day flow of information.[50] As money is invested as capital, additional information is needed about the external conditions of production. Finally, as corporate organization supersedes the market in many areas (c1, above), data about the organization itself are added to the load of required business information.

In short, the bulk of economic information in circulation parallels the stocks and flows of materials, commodities, money, and capital, and is a basic fiber of market and organizational networks. Of course, information is not just raw data, "mere" reflection of "real" movements; it is also analytic knowledge about the functioning of the economy (on knowledge production, see e1). In that sense, information production and circulation may grow faster than national product. Nonetheless, in the first instance, the vast bulk of information pertains to the industrial economy itself, and does not form a self-generative "informational economy."[51]

Communications also involve the rental of infrastructure. In the days of errand boys there was a measureable input of labor to communications. Today, moving a voice requires almost no additional expenditure of labor above that needed to secure and maintain equipment. Even the coordinative role of telephone operators is rapidly disappearing. The principal relation is the short-time rental of equipment provided by the phone or telegraph company (see f1, below).

What was said of the historical and geographic relation of transport to industrialization may be said of communications (see above, c4). The circulation of information, like that of money, was vital to the merchant of long ago.[52] Improved systems of communications were at the heart of the industrial revolution and the development of the U.S.[53] AT&T was the largest

50 Hamelink, *op. cit.*
51 For instance, of the international information exchanges among banks, 73% have to do with money and credit transfers, 15% with administrative matters, and only 12% with miscellaneous customer "information." In another survey, 79% of bank communications were within and between banks, and only 21% with outside clients. Hamelink, *op. cit.*
52 Braudel, *op. cit.*
53 Allan Pred, *Urban Growth and the Circulation of Information, 1790–1840* (Cambridge,

industrial corporation for much of this century. In short, the information economy is nothing new.

D. *CONSUMPTION*

Consumption has been a silent partner to the discussion of production and exchange. It merits further comment as to its purposes and modes.

d1. *The form of consumption: need fulfillment by goods and labor services*

Some service theorists believe that as people grow more affluent they tend to satisfy their needs through personal labor services, rather than goods.[54] There is no evidence for a trend in this direction. On the contrary, consumer services appear to have declined since a peak earlier in this century.[55] Indeed, the 19th century was a golden age of domestic and personal service, while the 20th century has been characterized by the mass consumption of goods.[56] The principal objects of mass consumption have been houses, cars and appliances, and their accessories. The chief occupational effect of this consumption pattern has been an increase in sales labor, repair labor, and consumer finance (see sections E and F, below).

As Gershuny has pointed out, goods and labor services may be substitutes in the satisfaction of a given need.[57] One may take concerts or records, a vacuum cleaner or a maid, a French laundry or a home washer and drier, a trip to the doctor or a pill; the results are largely the same, though never precisely so. There are strong reasons of cost for mass-produced goods to replace labor services over time. Yet new needs which can only be satisfied by labor services appear to take their place. The long-run tendency, if any, is difficult to discern.

d2. *The goal of consumption: needs versus reproduction of labor power*

The growth of "consumer services" is infused with great significance by service theorists, as indicative of the development of human potential. They draw their inspiration from the notion of a "hierarchy of needs," up which people move as they grow more affluent.[58] This theory has no historical or anthropological foundation, other than the trivial notion that as people gain more income they cut back on potatoes and eat more steak. Human needs and the capacity to fulfill them develop in dialectical fashion. There is not a preexisting list of wants to which one turns as one's income goes up. The materially impoverished do not simply fulfill basic needs while the rich attend to all the finer aspirations of humanity. This trivializes human culture and elevates the activities of the wealthy, who are by no means necessarily in the vanguard of civilization.[59]

The service theorists also draw on the neoclassical economic principle of consumer sovereignty, in which personal consumption is the endpoint and goal of all production. But one can look at the matter differently: if the accumulation of capital is the main goal of economic activity, personal consumption may be seen as in large part an *input* into production. The use-values of consumer products are themselves two-fold: as things desired and as things *required* for self-reproduction. Take, for example, the role of education and medical care, which represent more than half of what are commonly called "consumer services" — and virtually all of the growth in this area since World War II.[60] While the final output of these sectors usually comes in the form of a labor service (i.e., teaching or doctor's visits), the matter does not end there. Very few people consume schooling or medicine as ends in themselves; they are something most suffer to be functioning adults.[61] They are means to ends. This is largely true, as well of the other biggest items of personal consumption,

1973). Allan Pred, *Urban Growth and City Systems in the United States, 1840–60* (Cambridge, 1980).

54 Bell, *op. cit.*

55 Gershuny, *op. cit.*, p. 80; Stanback *et al., op. cit.*, pp. 16, 44.

56 Gershuny, *op. cit.*

57 *Ibid.*, p. 56.

58 David Ley, "Liberal Ideology and the Post-Industrial City," *Annals of the Association of American Geographers*, vol. 70/2, pp. 238–58, 1980. Bell, *op. cit.*; Stanback *et al., op. cit.*

59 Michael Lebowitz, "Capital and the Production of Needs," *Science & Society*, vol. 41/4, pp. 430–48, 1977–78. Walker and Greenberg, *op. cit.*

60 Gershuny, *op. cit.*, p. 82, Stanback *et. al., op. cit.*, pp. 15–16. The latter group recognize the special character of medical care and education, but put the weight on their mode of provision (non-profit) — which is chiefly the result of their nature as collective products and their infrastructural role in reproduction. The main point, however, is their function.

61 Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America* (New York, 1976). Lesley Doyal, *The Political Economy of Health* (Boston, 1979). Gershuny, *op. cit.*

housing and cars. The self-actualization involved in using a car, as in visiting the doctor, is not great enough, in my view, to signal the dawn of a new era of human freedom — despite the obvious gains in welfare that they indicate. Such basic consumption fits into the round of industrial existence in a way that is captured by the idea of the "reproduction of labor-power."[62]

Seen from this perspective, the growth of employment in sectors providing basic consumer services and goods is more of an indication of the growing division of labor throughout the industrial system (see above, section B), than it is of a fundamental shift towards a service economy.

d3. *Mode of production and mode of consumption: capitalist penetration of the household*

The growth of consumer products, both goods and labor services, is in part due to the replacement of household labor by commodities purchased in the market. Historically, this transfer from non-capitalist to capitalist production has been a fundamental source of expansion of the home market.[63] The process still goes on with a vengeance, as demonstrated by the growth of fast food outlets. The transfer of education to schools and medical care to hospitals is partly due to the same phenomenon. To some extent, no new needs are satisfied; they are just met from a new quarter. Of course, capitalist penetration also ordinarily means the creation of new needs and new products to meet them.[64] In either case, the expansion of consumer industries in this century is a sign of the triumph of capitalist industrialism.

E. *PRODUCTION AND CONSUMPTION OVER TIME*

Up to this point we have ignored the passage of time. Time raises some of the thorniest problems regarding the classification of economic activities and complicates the debate over services. To deal with the modern division of labor, we must break with the fiction that everything happens in an instant and begin to

62 Consumption cannot, of course, simply be reduced to a functional adjunct of capitalist production. On the error of reducing everything to reproduction of labor-power, see Ehrenreich's trenchant comments, in *Socialist Review*, 1984.

63 Rolla Tryon, *Household Manufacturers in the United States*, 1640–1860 (Chicago, 1917).

64 Lebowitz, *op. cit.*.

grapple with extended (or foreshortened) processes of production and consumption.[65]

e1. *Pre-production labor: research, development and design*

Organized research and development, involving both product and process innovation, is a characteristic feature of modern-day capitalism. It is often claimed for the "service economy." Much of it actually represents a stage in the production of goods (and some labor services), which we may call *pre-production* labor. Prototype design, development and testing are often necessary steps before regularized production of a product can begin. It is integrally linked to ordinary production, even though every single product does not go through the process.[66] Most engineering work on process design also precedes direct production in time. Product and process development were once carried out by the same people doing the manufacturing and marketing work.[67] As products have become more sophisticated, these activities demand more specialized labor: the division of labor grows.[68] Only if we hold to the naive view that all acts of labor must generate finished material products, however, are we likely to confuse an *extended* division of labor with a service-producing economy (see above, b2).

Primary research presents a more difficult problem because it rarely pertains to one product or product line.[69] Most scientific research enters into the stream of available knowledge and cannot be separated into discrete, privatized bundles. In this, it has the characteristics of a collective product (see above, a3). It is

65 Extending production in time raises much the same issues regarding complex (sequential) labor processes, transportation and communication as were previously encountered in dealing with complex production and circulation in space. Indeed, intertemporal labor processes are today typically divided up geographically. Thus, circulation must link together workplaces in both time and space.

66 Pre-production labor should not be confused with the early steps of a sequential labor process (see above, b2). The dividing line between short developmental runs and regular production is imprecise, however. Where R & D directly generates a marketable commodity (e.g., a patent, a custom product) it is ordinary direct labor.

67 Nathan Rosenberg, *Perspectives in Technology* (Cambridge, 1976).

68 Some product and process work still requires daily interaction with the shop floor. This comes under the heading of "auxiliary" labor (see above, b2, and Part II).

69 Science and technical change do not move hand in hand from research to development to innovation to diffusion, as commonly imagined. See Nathan Rosenberg, *Inside the Black Box: Technology and Economics* (Cambridge, 1982).

the production of basic knowledge about physical systems, which serves as the infrastructure for more specific productive activity — much as urban infrastructure lays the basis for city growth (see above, a4). Such labor is usually far removed in time and location from the immediate process of production.[70] The indirect and infrastructural nature of research labor is more significant than its form as a good or labor service.

Scientific activity is, nonetheless, most definitely ordinary *labor*, not a mysterious spontaneous generation of knowledge from the brow of the scientist.[71] As a type of craft-work done on a one-time basis and generating knowledge rather than objects, research may be considered a labor service in form. On the other hand, the product of science frequently comes to resemble a good because of the replicability of results, their published form, and the ways in which universities and labs succeed in recreating the industrial form of production for intellectual workers, emphasizing mass output over knowledge. Research findings may also be sold as commodities, in the form of patents, as is becoming increasingly popular among universities.

e2. *Post-production labor: from packaging to repair*

Labor often continues to be applied to the product, or as an adjunct to the product, after the immediate process of production. Such post-production labor cannot be captured by the simple production/sales duality used so far (see above, c2). Both wholesaling (packing and shipping) and transportation (delivery) must be thought of in terms of time, as well as space (see above, c2, c3). The time of retail sale may extend to installation, adjustment and instruction on use, especially in equipment sales to other businesses. The product is useless without these acts of labor, so they cannot be considered "mere" circulation.

Another kind of post-production labor, repair and maintenance takes place after the product has been put into use. "Repair services" are part of the aggregation of services. Yet the product of labor is a good physically restored to proper working

70 Knowledge production raises special questions of communications and information circulation as well (see above, c5). Information is usually treated as dumb data, and knowledge as the passive reflection of that data, in an empiricist fashion. In fact, information readily slips over into realms of analytical (i.e., theorized) knowledge.

71 Sayer, *op. cit.*.

order. No labor service has been done except to calm the consumer's nerves. The labor process has been extended because the original good has an extended life and consumption period (see also e4). As the stock of fixed capital and consumer durables has grown, so has the need for their maintenance and repair.[72]

e3. *Land improvements*

Land must be treated apart because it is irreproducible by human labor.[73] Nonetheless, *improvements* in land are products of labor. How do we classify labor literally plowed back into the earth: e.g., leveling a field? On one hand, like any labor expended on long-lived means of production, it might come under the heading of "maintenance and repair." On the other hand, it might be considered a necessary precursor to normal production on the land, making it "pre-production" labor. Finally, improvements on nature *in situ* are akin to labor services in their unique attachment to one spot. This makes them a halfway case, like a haircut (see above, a1). I am inclined to treat "land improvements" as a category apart. They are in many ways parallel to the inputs into labor reproduction in that both are improvements to nonproduced inputs to production (see d2, above).

e4. *Time of consumption: material life of the product*

Adam Smith's definition of a service is that which disappears in the moment of consumption.[74] This confuses the materiality of the good with its useful life. Many solid, tangible goods that are not labor services disappear in the moment of consumption, e.g., hamburgers and Bic razors. Some, such as bars of soap and tubes of toothpaste, are consumed bit by bit. Some are hardly diminished at all by consumption, e.g., radios. The great increase in fixed capital and consumer durables in this century argues against a view that "services" in the Smithian sense are on the rise.[75] The useful life of most labor services is also normally

72 Ordinary maintenance and repair in most factories appears as part of a simultaneous division of labor, rather than an extended labor process, i.e., as auxiliary labor. But there the question of "repair services" never arises.

73 We will not discuss land rent here. See Harvey, 1982, *op. cit.*.

74 Gershuny, *op. cit.*

75 Stanback *et. al., op. cit.*

not extinguished in the moment of consumption, like the memory of a great play or the information learned from a good class.

F. *CIRCULATION IN TIME*

Variant forms of exchange complicate the simple model of circulation of section C. In the service literature these activities are commonly mistaken for a type of *production*, i.e., labor services. Nonetheless, the labor involved falls entirely within the realm of circulation.

f1. *Temporary exchange: rental/leasing*

"Leasing services" are a commonly cited growth area of the service economy. In fact, leasing represents a separation of ownership and use, in which one person pays a rent for the temporary use of a good owned by another. It is an incomplete form of exchange.[76] This practice is of long standing in real estate. It has only recently become commonplace for business equipment and vehicles, leading to the mistaken view that something entirely new is afoot. Leasing has important repercussions for the financial sphere (see below, f3), and requires a labor force for sales and management of properties.

Leasing also appears in the realm of "consumer services," e.g., the ticket to a movie. Most movies can be purchased outright, but this is expensive. Watching the movie in a theater with others is far more economical. The theater leases the movie from the studio and, in turn, "rents" seats for the evening. The result is not a labor service. A movie is just as much a good as a refrigerator, which one can also gaze into for entertainment on occasion. Hotel rooms are another example. While there may be a good deal of personal fawning at a good hotel, anyone who has stayed in a chain motel knows that such labor services are not the watchword of the industry; most hotel workers are doing maintenance on the building and rooms (see above, e2).

f2. *Temporary exchange: renting labor-power*

Another recent phenomenon is the growth of organized

76 The reason is usually to effect the sale of collective and/or long-lived goods (see above a3 and a4).

temporary labor markets, in which a worker for one company is rented for a short term by another.[77] The practice of subcontracting labor (the gang-boss system) is as old as capitalism,[78] but has taken on new twists in the form of independent consultants, large firms specializing in office labor, and the systematic subcontracting of maintenance. Such practices help the firm maintain flexibility, externalize risk and reduce labor costs, but have nothing to do with a shift to a "service"-producing economy.

f3. *Extending exchange and accelerating circulation through credit*

In the simple model, money as coin is given for commodities at the moment of exchange. But circulation is slowed by such rigid limitations. Credit has arisen to facilitate payment over time (and space), bridging gaps between sales, between production and sale, and between paychecks.[79] Fixed capital and consumer durables create additional problems of payment capacity that are reduced by extending payments over the useful life of the product. Credit is also used to raise large masses of investment funds quickly. Finally, with credit there is interest, and a whole new source of surplus value enters into circulation, further augmenting the financial sphere of circulation.

Historically, credit money expanded with the development of commerce in the mercantile era.[80] It grew apace with the rise of industrialism in this country.[81] Since then the financial sector has increased rapidly along with the general growth in circulation of commodities, greater use of fixed capital and consumer durables, growing scale of production and organization — and greater mass of value produced.

77 D. Mayall and K. Nelson, "The Temporary Help Supply Service and the Temporary Labor Market," *Report prepared for the US Dept of Labor Employment and Training Administration* (Salt Lake City, 1982). This does not refer to ordinary hiring of workers off the street. That sort of activity comes under the heading of normal (preproduction) circulation, the gathering of labor-power and other inputs in advance of production.

78 Marx, *op. cit.*

79 Marx, *op. cit.*; Harvey, 1982, *op. cit.*

80 Braudel, *op. cit.*

81 Paul Studenski and Herman Krooss, *Financial History of the United States* (New York, 1962). Richard Sylla, "American Banking and Growth in the 19th Century: A Partial View of the Terrain," *Explorations in Economic History*, Vol. 9, pp. 197–227, 1971/72. Porter and Livesay, *op. cit.*

f4. *Interrupted circulation and delayed consumption: savings, pension funds, insurance and inventories*

Interrupted circulation involves diverting sums of money or commodities from ordinary circulation and holding them so as to increase or maintain future income and consumption levels. Ordinary savings may be either for personal consumption or business investment. Pension funds and other retirement schemes are a special form of savings over long periods and for large groups of workers. Insurance is also a kind of savings aimed at reducing losses from death, injury, destruction of assets, broken contracts, and other plans gone awry. Inventories are commodities, rather than money, used to smooth over variations in production and sales.

All such forms of savings would disrupt the ordinary course of circulation of money and commodities were it not for the activities of financial institutions which pool withdrawn money and put it to use elsewhere. This use includes credit-creation and capital investment, but savings do not, in themselves, require either. Interruptions are a normal part of the circulation of money, commodities and capital in a goods-producing economy. The development of institutions to overcome such interruptions is as old as merchant capitalism and their present growth marks progress toward the perfection of ordinary circulation and industrial capitalism, not beyond it.[82]

f5. *Shadow circulation: paper titles and claims*

The first form of shadow circulation concerns brokerage of real property. Because land and buildings cannot easily be taken possession of whole and carried home, paper titles are created to complete the exchange. Special real estate institutions broker the transactions. Markets in gold, silver and the like operate in much the same way, as the circulation of titles to real assets. Futures markets advance the transactions in time.

A different form of paper circulation involves financial claims of varying degrees of security. These are usually claims on a portion of income (surplus value), but may adhere to assets as well. Common examples are stocks, bonds and mortgages. I

82 Harvey, *op. cit.*; Braudel, *op. cit.*; Studenski and Krooss, *op. cit.*

refer here not to the initial issue of such instruments, which is merely a means of direct finance, but to the secondary markets which arise for the speculative trading of pieces of paper with a nominal future value.

Both forms of shadow circulation have come into being in the normal course of capitalist development, to facilitate real exchange, financial flows and the ordinary speculative temptations of investors.[83]

G. *ORGANIZATION AND MANAGEMENT*

Conventional service theory commonly includes management among "services," in the form of managerial occupations, headquarters activities, or independent "business services." Because the result of managerial labor is not a "good," it is assumed, by default, to be a "service" to production.[84] But management stands as a category apart in the social division of labor, irreducible to the labor of production and circulation it organizes and commands. As such it cuts across all the types of labor considered up to now.

g1. *The management of work units: administration of the detail division of labor*

Every workplace requires some coordination, oversight and trouble-shooting, whether the product is a symphony or an organic solvent. As the scale and complexity of the labor process increases, an element of technical competence enters into these tasks as well. The labor of "management" may be considered a universal feature of all large-scale and complex production of use-values.[85] Its existence bears no relation to the kind of product, good or labor service.

g2. *The management of multifunctional corporations: coordination of the social division of labor*

83 Studenski and Krooss, *op. cit.*

84 The "products" of management are such things as a better marketing strategy, a more effective accounting system, or a new investment, as will be clear from what follows.

85 Marx, *op. cit.* Of course, the transfer of managerial functions from skilled workers to professional managers has been intimately related to deskilling and labor control, but that is another story. See literature cited in Storper and Walker, 1983, *op. cit.*

In the modern capitalist economy, work units of diverse kinds are linked to one another by means of corporations as well as by the market (see c1, above). This, too, requires labor of coordination. Corporate management has as its purpose, among other things, reducing the cost and time of circulation, coordinating far-flung production processes, and linking pre- and post-production labor inputs for more effective product development and sale.[86] Corporate administration has grown rapidly with the concentration of capital. Nonetheless, this type of labor is not new. The railroads pioneered in modern management in the mid-19th century.[87] Before that, the same functions of circulation and coordination were played by merchant capitalists.[88]

g3. *The division of labor in management: business services*

Most "business services" are an extension of the division of labor within management. As management has grown, it has commonly become lodged in separate work places, known as headquarters. Within these headquarters there are various divisions of management labor, such as the legal unit or accounting unit. Specialized management inputs may also be provided through the market, from outside firms. The growth in "business services" is chiefly due to the emergence as separate industries of work formerly carried on within large corporations.[89] Such activities tend to cluster around the corporate headquarters, which are their biggest customers.[90]

This phenomenon seems to raise a contradiction: while management is not itself production, it may utilize inputs that take a simple product/commodity form. There is nothing wonderful in this, however; it parallels the situation in which a consumer service, e.g., medical care, is produced using goods as inputs (see above, b1). (See section II.C for more on this point.) Many business services take the form of labor services, but some

86 Chandler, *op. cit.*
87 *Ibid.*
88 Porter and Livesay, *op. cit.*; Pred, 1980, *op. cit.*; Braudel, *op. cit.* Commercial capital and management have not entirely disappeared from the scene, of course.
89 Fuchs, *op. cit.* It can go both ways, however. See "A New Corporate Powerhouse: The Legal Department," *Business Week*, April 9, 1984, pp. 66–71.
90 Stanback and Noyelle, *op. cit.*

are provided in the form of goods, such as computer software. In either case, the information content is likely to be high, but this does not alter the form of the product, the mode of circulation, or the managerial purpose of the labor input. As the scale of management operations increases, the provision of managerial inputs can itself become a kind of industrial production, carried out in "back offices" by armies of clerical workers.[91]

g4. *Capitalist management and the management of capital*

So far we have viewed management purely from the point of view of organizing the production and circulation of use values. Capitalist management encompasses another dimension however: the generation and accumulation of surplus value. The foundation of surplus value production is class power, exploitation and labor control; this function of management permeates all the others previously considered.[92] Similarly, the economic calculus of profit is everywhere on the mind of managers. Labor is, indeed, in the service of capital. But this does not make for a service economy.

Disposition of surplus value in the form of money-capital is a fundamental role of top management. It is something quite apart from handling of money as a means of circulation (see c3, above). The special labor of planning for future production and investing is the prerogative of the highest levels of capitalist management. The labor of disposing of *capital* is the finest flowering of the capitalist division of labor. It has grown to where many hands are involved instead of a single capitalist.[93]

II. DEVELOPMENT AND PRODUCTIVE LABOR: THE DYNAMICS OF A CHANGING DIVISION OF LABOR

The discussion so far has been a static classification of the parts of a modern capitalist economy. It will not do, however, to rest on the ahistorical conclusion that industrialism still reigns

91 Kristin Nelson, *Back Offices and Female Labor Markets: Office Suburbanization in the San Francisco Bay Area, 1965-1980*, unpublished Ph.D. Dissertation, University of California, Berkeley, 1984.
92 Harry Braverman, *Labor and Monopoly Capital* (New York, 1974). Richard Edwards, *Contested Terrain* (New York, 1979). Marx, *op. cit.*; Storper and Walker, 1983, *op. cit.*
93 Edward Herman, *Corporate Power, Corporate Order* (New York, 1982).

(and therefore always will), without addressing the legitimate issues of change raised by the service theorists. What is now needed is an assessment of capitalist development that recognizes the growth of new types and products of labor. This requires a shift in emphasis from the activities of concrete labor (the production and circulation of use values) to the efforts of abstract labor (the production surplus value). We have considered only the usefulness of various types of labor, not their productiveness in terms of value and surplus value. To ask *why* the division of labor has changed, we must focus on the capitalist logic of surplus value extraction and accumulation. Marxian value theory must be supple enough to allow for the reallocation of productive labor. It must defend the position that the relations of production, epitomized in the production and accumulation of surplus value, promote the development of the productive forces, including technical change, the changing division of labor, organizational change, the growth of knowledge, etc., rather than vice versa, and remain the heart of the industrial system.

We now turn to the disposition of surplus value, the generation of more (relative) surplus value, and the presence of surplus value in diverse products of labor.

A. *THE MASS OF SURPLUS VALUE: THE EDIFICE RAISED ON PRODUCTIVE LABOR*

At the outset we may say that capitalist industrialism has not been transcended, but simply extended, deepened and perfected. As has been shown, the great majority of "services" are the classic activities of a goods-producing, industrial economy. To a large degree, therefore, the "service economy" thesis is a fraud. While it is important to study innovation and change, one must not lose sight of an elemental constancy: the growth of so-called "service" activities rests on the productive power of the industrial system. Consumption levels have risen and products proliferated. With the mass production and consumption of goods has come the mass of labor engaged in distribution centers, retail outlets, elaborate sales efforts, and transportation. The value produced along with the goods circulates through a massive financial structure, speeding exchanges, bridging time

and space, leveraging capital accumulation. Specialized appendages have sprouted on this financial edifice, from leasing companies to secondary mortgage markets. Information about the economy swirls through communications channels created by that industry. Armies of managers rule over the system, paid out of the surplus of those they supervise; alongside them come the specialists in management inputs.

In short, an enormous superstructure has been erected on the value and wealth generated by modern industry. The superstructure is often called the "service economy" and invoked as a self-generating force, but it would collapse without its industrial foundation.[94]

The image of base and superstructure raises the old question of productive and unproductive labor. This simple distinction has been badly mauled by years of misguided debate. Marx was merely taking a first cut at the distinction between production and circulation labor, in which he wished to maintain consistency with the basic premise of his theory of surplus value: that value must be produced by someone before it can be appropriated by someone else, i.e., it involves class exploitation. In other words, contrary to appearances and bourgeois ideology, money does not breed more money without production and "mere" exchange of commodities does not create value (this is nicely put by Bradby).[95] Nor, as is commonly held in our own time, does management create its own profits, information give birth to new value, or science create anything without people and practical knowledge being put to work to create new use-values. But the orthodox Marxist view can be equally unsatisfactory when it restricts all productive labor to basic acts of hacking, bending, bolting and hewing, and the like. The problem, then, is how to mesh the distinction between productive and unproductive labor in the value sense with the many varieties of useful labor previously discussed.

The answer lies, I believe, in a structural approach. That is, value relations operate beneath the level of relations of useful la-

94 The geographical separation of "service" activities from manufacturing and other basic production, often carried out on other continents, heightens the illusion of self-development.

95 Barbara Bradby, "The Remystification of Value," *Capital and Class*, Vol. 17, pp. 114–33, 1982.

bor. They capture certain essential features of the capitalist system, especially the necessity of employing wage-labor to produce value and surplus value somewhere in the economy. But we would not expect to read off tidy distinctions between productive and unproductive labor from everyday occupational categories, any more than we may read off values from everyday prices.[96] Therefore, any attempt to carve up a complex, dialectical and structured division of labor into neat boxes of productive and unproductive labor is bound to be futile.[97]

Thus the simple view of base and superstructure, while a proper antidote to the inverted pyramids of the service thesis, only goes part way toward a correct view of the situation. We need to take a second look at the productive-unproductive labor relation, one which teases out the sources of productivity of the industrial base, many of which lie in the "superstructure" itself. This will not be a fully structural analysis, but a first approach to it which at least recognizes the broad spectrum of productive activities and the shadings across this spectrum from the most directly productive to the most indirectly productive labor.

B. *THE RATE OF SURPLUS VALUE AND CAPITAL ACCUMULATION: THE CONTRIBUTION OF INDIRECT LABOR TO OVERALL PRODUCTIVITY*

Capitalist industrialization has been synonymous with raising the productivity of labor, or increasing relative surplus value and lowering the cost and time of circulation. Together these increase the rate of capital accumulation.[98] Marx's analysis of this process within a single work unit begins with three categories: simple cooperation, division of labor, and mechanization. I will not elaborate on these methods of raising labor productivity here. These need to be supplemented by an analysis of productivity growth that cuts across work units to include all types of labor, including that of circulation and management. That means dissecting the several layers of *indirect* labor.[99]

In the press to increase labor productivity and to speed capital accumulation, the emphasis has shifted from direct to indirect labor. As a result, the "hands-on" work of goods production has diminished as a percent of total social labor. This may well indicate a revolution in the organization of production as profound as the 19th century shift from workshop manufacture to factory "machinofacture," or at least as great as that from mechanical to electro-mechanical techniques within the factory in the early 20th century.[100] It is, in any event, the crux of the "service economy" phenomenon.[101]

1. *Primary or direct labor*[102]

Primary labor is work expended directly on a product, whether good or labor service. It is "hands-on" labor. The range of direct labor is wider than is often supposed, however, once the complexities of production in space and time are introduced. We can distinguish two groupings of primary labor. The first is work within the *immediate workplace*, including processing, transfer and assembly steps. The other is *supplementary* work expended at another place or time, including the various types of post-production labor, such as transport and repair. Transport, for example, is only "mere" circulation if we take a reductionist view of space. But a good out of reach is not useful, as Marx recognized.[103] Where transport is an integral step in production, as

96 Gerard Dumenil, "Beyond the Transformation Riddle: A Labor Theory of Value," *Science & Society*, Vol. 47/4, pp. 427–50, 1983/84.

97 Marxian class analysis has also foundered on an undialectical approach to productive/unproductive labor. R. Walker, *op. cit.*

98 Marx, *op. cit.*; Harvey, 1982, *op. cit.* I ignore (at some peril) such sources of relative surplus value as worldwide proletarianization under conditions of gross labor surplus and household production based on the exploitation of women.

99 These have already been introduced in the course of Part I, but not developed in terms of value production.

100 My focus is on the division of labor, which pertains most directly to the service economy thesis. I do not consider technological developments in mechanization/automation within work units.

101 As Gershuny recognizes in defining "service labor" by its degree of remove from immediate production. While I prefer to drop the term "service" altogether in favor of "indirect" labor, we agree that the main issues have little to do with the form of the product, i.e., goods versus labor services.

102 In the following typology I mimic the service theory labels, primary through quaternary, but here they are affixed to types of labor rather than types of output. This mimicry is chiefly polemical; the terms' vacuousness is intended to call attention to the heuristic nature of such a classification system, which stands as only a broad brush over the problem.

103 Marx, *op. cit.*, Vol. II.

previously argued (point I.c4), the case for its productiveness is sealed.

2. *Secondary labor*

Secondary labor embraces those jobs that are a step away from direct labor, the shop floor or the immediate site of primary labor. Two general types may be discerned. The first consists of certain tasks within the immediate workplace; these may be labeled *auxiliary* labor. As the detail division of labor grows, the direct connection of these tasks to hands-on production becomes attenuated. Examples are the stockboy, the quality checker, and the process engineer or supervisor on the shop floor. Such workers do not themselves process, transfer or assemble materials, but their efforts cut down on labor time expended by direct laborers, improve general coordination and intensity, and monitor production data (production related information gathering and communication).

Another group of secondary workers, *preparatory* labor, opens the way for primary labor. One thinks here of such preproduction labor as product development and process design. One could also add the humble janitor who cleans up before and after work. This labor is not part of the daily production process, but sets and maintains the context in which labor may be expended productively. (If we think of maintenance work as part of the normal round of production, rather than post-production repair of a consumer commodity, it would fall under this heading.)

In short, secondary labor releases primary labor from extra tasks, makes production go more smoothly and makes it competitive (conforming to the dictates of socially necessary labor time).

3. *Complementary labor*

The category of secondary labor begins to capture the way in which the division of labor contributes to the productivity of primary workers. What we also need to recognize is the way that various kinds of primary labor contribute to each other's productivity. I am thinking here principally of the social division of labor, but the idea is the same for the detail division. Because the products of work units feed into each other, in the complex

flows captured in input-output matrices, their labor is *complementary*. The economies realized by one work unit lower the costs for their purchasers and raise demand for their suppliers (creating further potential economies of scale). The contribution of fixed capital goods producers, whose machinery embodies the techniques that raise labor productivity in other branches, is of special importance. Buildings, land improvements and other infrastructure, largely created by construction labor, similarly play a special role in augmenting productivity while adding no new value to the production processes that rely on them. The creation of pools of labor and labor skills, and other spatial agglomeration effects need to be mentioned here, too, as do technical complementarities between industries that are external to the market.[104] The notion of complementarity ultimately extends to secondary and tertiary labor, as well.

4. *Tertiary labor (circulation and management)*

Under the heading of *tertiary* labor are included many types of labor not ordinarily considered productive (of value): trade, management, advertising, banking, leasing, some transport and communication, insurance, etc. These all stand at some distance from direct production, but contribute to the overall integration and coordination of a complex production system, the rate of capital accumulation, and the long-term productivity of the economy.

Most of these activities are circulation labor. The common position that this is "unproductive labor" takes a narrow view of circulation as completion of simple exchanges, a mere property transfer. No new use-value is created, no value added; all that is involved is "realization" of existing value in the form of money. This misses the role of circulation in an ongoing process of production and development of the forces of production. The labor of circulation is an important lever of capitalist growth.[105]

First, better commodity flows contribute to labor productivity by linking together workplaces, expanding markets, and lowering input costs, thereby augmenting the field in which pri-

104 Allan Pred, *The Spatial Dynamics of Urban Growth in the United States, 1800-1914* (Cambridge, 1966). Rosenberg, 1982, *op. cit.*

105 Harvey, 1975, *op. cit.*

mary, secondary and complementary labor operate. The same may be said of the flows of money and information that parallel the movement of products. But here we refer only to the simple rate of surplus value. Second, better circulation of *capital*, in terms of fuller realization of value (sales), more rapid turnover, and lower costs of circulation, accelerates the accumulation process. That, in turn, contributes to the successive development of the forces of production by generating larger masses of investible funds, a more rapid rate of investment in new technologies, more funds for R&D, marketing and organizational growth, etc. That is, one must treat the growth of labor productivity and of the rate of surplus value *over time*.

The same arguments apply to the component of managerial labor that plays an organizing role similar to the market's (see above, I.c1, I.g2). The work of organizing production and circulation is a special type of indirect labor that facilitates the meshing and increases the performance of all the other types of labor. Effective workplace and corporate organization has permitted a degree of industrial productivity and capital accumulation far greater than would have been possible through reliance on the market alone. The functionality of managerial control is more arguable. But one cannot take a positivist stance outside of capitalism to decide what is necessary labor and what is not. Since class/labor control is part of the capitalist system of production, it must count as partially productive labor, though only in the indirect sense I have given it here.[106]

5. *Quaternary labor*

Knowledge production and worker reproduction are the hardest categories to handle. In Part I, their functional links to capitalist production and circulation were emphasized. From that perspective, they contribute, from a considerable distance, to the productivity of direct labor. Science and other forms of inquiry contribute to the store of useful knowledge adopted by firms and learned by workers. Education prepares the worker for learning tasks and solving problems. Medical care keeps the worker working. They are all, therefore, preconditions for ordinary labor of all kinds, and add in obvious ways to the growth of labor productivity over time.[107]

106 Michel deVroey, "On the Obsolescence of the Marxian Theory of Value: A Critical Review," *Capital and Class*, Vol. 17, pp. 34–59, 1982.

6. *Indirect labor upon indirect labor, or division of labor ad infinitum*

Each of the above types of indirect labor is subject to further division in order to raise its productivity. The phenomenon of indirect labor should be clear without spinning out the web any further, however.

Finally, not every contribution to productivity can be captured within the tidy confines of the preceding categories. The whole is greater than the sum of the parts. The development of social labor stimulates the productivity of all the collective human enterprise in unpredictable ways. Some of this rubs off on economic production in the narrow sense and benefits capital.

C. *USE VALUES AND SURPLUS VALUE: SHIFTS IN THE OBJECTS OF LABOR*

We have thus far drawn a static picture of the material products of labor, and their use values. We must now consider the relation between indirect labor, or the shifting base of labor productivity, and product innovation, or the shifting base of commodity production. The production of surplus value requires only that labor be applied to useful products, regardless of their nature. Since product innovation is a fundamental means of gaining competitive advantage and making profit, one should expect capitalists continually to introduce new and unfamiliar goods and labor services.

The industrial revolution transformed the kinds of material inputs handed down from agrarian/handicraft production. That process has continued in this century as wood has given way to fiberglass in boat hulls, steel to concrete in bridges, and copper to plastic in piping.[108] Industrialization has also transformed the

107 As Bradby, *op. cit.*, argues pointedly, value analysis can do as much to mask reality as to reveal it if applied to the wrong problem. Nonetheless, as said before (I.d2), the bulk of labor that goes into the process of labor reproduction occurs outside capitalist relations of production, e.g., in the family. Its analysis has less to do with the changing division of labor within capitalism than with the exploitation of women, articulation of modes of production, etc.

108 Barnett and Morse, *Scarcity and Growth* (Baltimore, 1962).

kinds of use-values being produced. What I wish to emphasize here is how industrialism creates new needs out of its own development, i.e., serves as its own stimulus to product innovation. Consider again the shift from agriculture to industry — the historical parallel always drawn upon by the service theorists. The agrarian economy was at one time the principal market for manufactured goods, but the industrial economy soon stood on its own feet, becoming its own biggest market.[109] Today the realm of indirect labor may be the principal locus of industrialism, to which most product development (including means of production) is directed. For example, as US Steel Corporation grows it demands computers for the management of its accounts; computers, in turn, generate demand for microchips, plastic, cathode tubes, etc. — not steel. Similarly, banks generate an enormous demand for money handling, telecommunications and data processing equipment to carry out their financial functions.[110]

Doesn't this mean a shift from manufacturing to some sort of "service" or "tertiary" economy? The content of output is certainly changing, in three ways. The users of products are increasingly those engaged in indirect labor. The use-value of products increasingly emphasizes "information" (see I.c5, above). And the materials involved in the products have shifted toward such "insubstantial" things as paper and printing, electrical impulses and disk drives (see above, I.a6). None of these changes is incommensurate with an industrial (manufacturing-based) economy, however.

Furthermore — and this is the point usually missed — the labor involved increasingly takes a commodity form, and goods are substituted for labor services as fast as the latter can appear in new realms of production.[111] In other words, segments of the "superstructure" continually enter directly into, or generate demands for commodities that are part of, the industrial "base." The net effect is a change in the material and use-value content of industrial commodities, but the use of labor to produce marketable products (chiefly goods) and surplus value continues as

109 Diane Lindstrom, *Economic Development of the Philadelphia Region, 1810-50* (New York, 1978). Pred, 1960, *op. cit.*

110 Hamelink, *op. cit.*

111 Gershuny, *op. cit.*

before. There is nothing sacred about an industrial base of steel and cement being used to produce cars and dams. They may go the way of flax, and disappear almost completely, or the way of wheat, which while essential and produced in large volume, occupies only a small fraction of the modern labor force. Industry may concentrate increasingly on microprocessors and optical fibers for the use of communications and management. But because of the continual replenishment of the base with new products, there is no discernible tendency for commodity production, or even goods production, *as a whole*, to fade away.[112]

III. CONCLUSION

The preceding critique has gone in two directions, both aimed at demolishing the flimsy analytics of conventional service theory. Our first line of attack was to show how much of the purported "new economy" of services could be understood in the classic terms of capitalist industrialism. It argued for the considerable degree of constancy in the basic framework of the economy, even if certain branches of labor have swollen in size in a more productive, more complex, more geographically dispersed, more integrated industrial system. It also repeatedly noted the historical roots of current activities, so as to correct the tendency to confuse the contemporary with the new. A lot of people in the U.S. have been doing something besides basic production for a long time. In fact, employment in manufacturing in the U.S. has never been higher than 27% of the workforce.[113] In 1880, the manufacturing workforce was 19% of total employment, while services, conventionally defined, were already larger, at 25% of the total.[114] At the same date, the service component of the urban workforce was roughly 60%.[115] In other

112 Moreover, most new industries, from microchips to computer programs, are quite labor intensive, having not yet gone through the process of mechanization. It may be the case, however, that the newer industries have a larger component of indirect labor, given the growing sophistication of products and processes over time. (Thanks to Amy Glasmeier for pointing this out.) Indirect labor processes may be quite labor intensive, of course.

113 Lebergott, *op. cit.*; Singelmann's figures for manufacturing plus utilities hit a peak of 36% and are higher in 1970 than in 1920 (33.9 versus 32.9%). Singelmann, *op. cit.*

114 Lebergott, *op. cit.*; Gallman and Weiss, *op. cit.*

115 Thomas Weiss, "Urbanization and the Growth of the Service Workforce," *Explorations in Economic History*, Vol. 8/2, pp. 241–58, 1970/71.

words, the United States has long been a "service-intensive" economy relative to other developed capitalist nations.[116]

On the other hand, there has been continuous upheaval in the shape of industrial capitalism, which I have no wish to deny. The second line of argument therefore spoke to forces for change. That, too, is no surprise given the history of capitalism. We should be prepared for an industrial world that is persistently disorienting. This is the same advice that one would have given our grandparents, but is forever forgotten by generations who consider themselves the embodiment of the modern. Capital is ordinarily far bolder and accepting of the new than most intellectuals. It cares only that people labor to create surplus value; their concrete tasks and products are simply a means to this end.

The revolutionary force of capital has generated dramatic shifts in the division of labor in society. It is this, more than any change in the products or the form of the products, that is at issue in the debate over the "service economy." The locus of competitive advantage — and of capital accumulation in general — has shifted over the last century from simple productive efficiency among direct laborers to the realm of indirect labor, which augments the productivity of social labor and speeds the accumulation of capital. In the process, the "indirect" economy has increasingly become the focus of production, feeding on itself as an engine of growth.

In order to grasp these seemingly contradictory conclusions, we require a supple mode of thinking, capable of seeing change and stasis simultaneously. There is a structural consistency about the last two centuries that is captured by the concept of *capitalism* as a mode of production. It rests on private property, the extraction of surplus value from workers who sell their labor-power, and the production and circulation of commodities bearing the stamp of value. It remains an *industrial* capitalist system, as well, in which such characteristic features of production as the tangible "good," mechanization, and the factory system predominate. It has also long been a *corporate-finance* capitalist system. While these "constants" do, in fact, change through a continual process of restructuring, they nonetheless remain recognizable beneath

116 Singelmann, *op. cit.*

the flux of everyday life in a way that specific commodities and jobs do not.[117] There may be good reason to add yet another adjective to contemporary capitalism, such as "informational," "electronic," "global," or "indirectly productive." But the case must be made on solid grounds that do not blithely dismiss essential relations and the deep insights of Marxist theory. The concept and theory of "services" are so badly misconceived as to merit rejection in further analytic work.

As for the political debate over the social implications of economic change and the potential for human liberation, that, too, remains open — and little aided by the contribution of the "post-industrial" theorists. The growing technical prowess, changing division of labor, and developing human potential of capitalist civilization *do* create historic possibilities for social change.[118] The 20th century revolutionary project is not that of the 19th century, just because wage-labor and factory production can be found in both. The dreams of the post-industrial theorists have some basis in reality. But an idyllic future will not be served to us, as consumers of history, on a silver platter. If there is to be a new age of enlightenment, classlessness and human service, it will not be born without struggle. And we must all be sobered by the barbaric prospects posed by certain of the weapons, politics and ideas of capitalist civilization. One sees less liberal optimism about the human prospect in the age of Reagan than when Daniel Bell wrote *The Coming of Post-Industrial Society.* Alas, it is not at all clear that civilization can be much further advanced — or even salvaged — as long as it remains tethered to the short leash of capital and its narrow, exploitive motives.

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117 For an attempt to capture the constancy and change in the concept of class, see R. Walker, *op. cit.*

118 Fred Block and Larry Hirschborn, "New Productive Forces and the Contradictions of Contemporary Capitalism: A Post-industrial Perspective," *Theory and Society*, Vol. 7/3, pp. 363–96, 1979.