

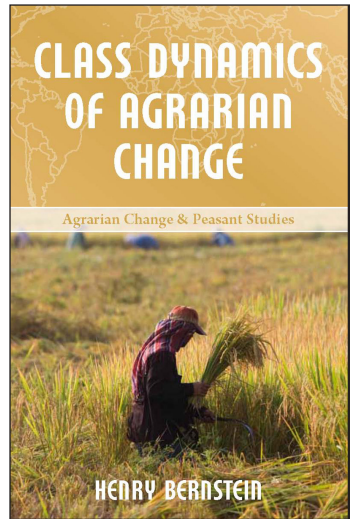
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Class Dynamics of Agrarian Change

Henry Bernstein

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Introduction

The Political Economy of Agrarian Change

Agrarian political economy, as defined in the mission statement of the *Journal of Agrarian Change*, investigates “the social relations and dynamics of production and reproduction, property and power in agrarian formations and their processes of change, both historical and contemporary.” Understanding agrarian change in the modern world centres on the analysis of capitalism and its development. By capitalism I mean a system of production and reproduction based in a fundamental social relation between capital and labour: capital exploits labour in its pursuit of profit and accumulation, while labour has to work for capital to obtain its means of subsistence. Beyond this initial and general definition, and indeed within it, there are many complexities and challenges that this book aims to explore and explain.

First, I want to set the scene, introduce my approach and identify key issues it addresses.

The Big Picture: Farming and World Population

Tony Weis (2007: 5) suggests that “the origins of the contemporary global food economy could be traced back through a series of revolutionary changes, which once took shape over the course of millennia, then over centuries, and which are now compressed into mere decades.”

Millennia – From about 12,000 years ago, one form or another of settled farming became the material foundation of society. The reference to revolutionary changes taking place over millennia indicates that although changes were profound in their consequences they were typically gradual, more usually termed “evolutionary.” Agrarian civilizations came to encompass most people in Asia, the “sown” areas of North Africa and Europe, and parts of the generally

less populated expanses of sub-Saharan Africa and the Americas. In these agrarian societies the vast majority worked the land as peasant farmers. By 1750, they supported a world population of some 770 million.

Centuries – From the second half of the eighteenth century, the emergence and spread of industrialization started to create a new kind of world economy, to “accelerate history” and to transform farming. By 1950, world population had grown to 2.5 billion.

Decades – World population grew to six billion in 2000 (and is expected to increase to about nine billion by 2050). This suggests the part played by increases in the productivity of farming, which have kept up with population growth. And in 2008, global urban population equalled rural population for the first time, and started to overtake it.

One part of the big picture, then, is the growth in food production and in world population, especially since the 1950s. Both are aspects of the development of capitalism and of the world economy it created. Another part of that picture is massive global inequality in income and security of livelihood, and in quality of life and life expectancy, as well as in productivity. While more than enough is produced to feed the world’s population adequately, many people go hungry much or all of the time.

Who Are the Farmers Today?

Some Figures

As countries industrialize, the proportion of their labour force working in agriculture declines. In 2000, the proportion of the total labour force employed in agriculture in the U.S. was 2.1 percent, in the European Union (E.U., then with fifteen member countries) 4.3 percent, in Japan 4.1 percent, and in Brazil and Mexico 16.5 percent and 21.5 percent respectively. In China, the proportion of the total labour force employed in agriculture has declined from about 71 percent in 1978 to less than 50 percent, which still amounts to over 400 million people. With an additional 260 million people in India and 200 million in Africa working in farming — in both cases about 60 percent of their “economically active population” — it is clear

that the vast majority of the world's agrarian population today is in the Third World, or South.

This is corroborated by the standard estimate, derived from the FAO (Food and Agriculture Organization of the United Nations), that today "agriculture provides employment for 1.3 billion people worldwide, 97 percent of them in developing countries" (World Bank 2007: 77).¹ Some of those 1.3 billion qualify as "farmers," subject to many variations of what type of farmers they are, where, and *when*: during peak moments of the annual agricultural calendar? In good or bad rainfall years? Good or bad market years? In other words, not all farmers are farmers all the time. Many rural people may not qualify as "farmers" in any strong sense — perhaps a majority in some countrysides at some times and over time — because they lack land or other means to farm on their own account or are engaged in only "marginal" farming. Peter Hazell et al. (2007: 1) define marginal farming as "incapable of providing enough work or income to be the main livelihood of the household." They point out that in India, for example, the term is used for farms of less than one hectare, which make up 62 percent of all landholdings but occupy only 17 percent of all farmed land.

Terms and Concepts: Peasants and Small-scale Farmers

Terms like "peasant," "small" or "small-scale" farmer, and "family" farmer are often used interchangeably in ways that are easily confusing. This is not just a semantic issue but has important analytical issues and differences. The term "peasant" usually signifies household farming organized for simple reproduction, notably to supply its own food ("subsistence"). Often added to this basic definition are presumed qualities such as the solidarity, reciprocity and egalitarianism of the village and commitment to the values of a way of life based on household, community, kin and locale. Many definitions and uses of the term "peasants" (and "small-scale" and "family" farmers) have a strong normative element and purpose: "taking the part of peasants" (Williams 1976) against all the forces that have destroyed or undermined peasants in the making of the modern (capitalist) world. In my view, the terms "peasant" and "peasantry" are best restricted to analytical rather than normative uses and to two kinds of historical

circumstances: pre-capitalist societies, populated by mostly small-scale family farmers (see Chapter 1) and processes of transition to capitalism (see Chapters 2 and 3).

With the development of capitalism, the social character of small-scale farming changes. First “peasants” become petty commodity producers, who have to produce their subsistence through integration into wider social divisions of labour and markets. This “commodification of subsistence” is a central dynamic of the development of capitalism, as explained in chapter 2. Second, petty commodity producers are subject to class differentiation. The historical framework of these processes is presented in Chapters 2 to 5, and its theoretical basis is explored further in Chapters 6 to 8. I suggest that as a result of class formation there is no single “class” of “peasants” or “family farmers” but rather differentiated classes of small-scale capitalist farmers, relatively successful petty commodity producers and wage labour.

Concerning size, some sources define “small farms” as those with less than 2 hectares of crop land, while others characterize small farms in the South by low levels of technology, reliance on family labour and a “subsistence” orientation (that is, “peasant”-like attributes). Thus, one criterion is spatial (farm size) and the other sociological (type of farming). The two criteria can diverge according to the conditions of farming:

A 10-hectare farm in many parts of Latin America would be smaller than the national average, operated largely by family labour, and producing primarily for subsistence The same-sized holding in the irrigated lands of West Bengal, on the other hand, would be well above the average size for the region, would probably hire in much of the labour used, and would produce a significant surplus for sale. (Hazell et al. 2007: 1)

Finally, the term “family farm” often conflates farms that are family *owned*, family *managed* or worked with family *labour*. Some “family farms” combine all three characteristics, but others do not, as I explain further in Chapter 6.

Snapshots from the South

Beyond the statistical, definitional and conceptual issues noted so far, the following five quotations provide vignettes of farming in northern India, Bangladesh, Tanzania, Brazil and Ecuador.

In the new capital-intensive agricultural strategy, introduced into the provinces in the late 1960s, the Congress government had the means to realize the imperial dream: progressive farming amongst the gentry. Within a year or two... virtually every district could field a fine crop of demonstration *ex-zamindars*... with their 30-, 40-, 50-, 100-acre holdings, their multiplication farms of the latest Mexican wheat and Philippines paddy, their tube wells gushing out 16,000 gallons an hour, much of it on highly profitable hire, their tractors, their godowns stacked with fertilizer, their cold-stores. (Whitcombe 1980: 179)

Sharecropping is not much better. I do all the work, and then at harvest time Mahmud Haj takes half the crop. When I work for wages, at least I bring home rice every night, even if it's not enough. But when I work on my sharecropped land, I have to wait until the harvest. In the meantime I have no cow or plough. I have to rent them from a neighbour. The price is high — I plough the land for two days in return for one day's use of his cattle. In this country, a man's labour is worth half as much as the labour of a pair of cows! (Landless villager quoted in Hartmann and Boyce 1983: 163)

Women weed the coffee, they pick coffee, pound it and spread it to dry. They pack and weight it. But when the crop gets a good price, the husband takes all the money. He gives each of his wives 200 shillings and climbs on the bus the next morning... most go to town and stay in a boarding house until they are broke. Then they return and attack their wives, saying "why haven't you weeded the coffee?" This is the big slavery. Work had no boundaries. It is endless. (Rural woman activist quoted in Mbilinyi 1990: 120–1)

The reason for all this was land speculation: two thousand hectares of virgin forest would be cleared, a thousand turned over to pasture, and then rubber tappers were deprived of their livelihood. From this developed the struggle for extractive resources in Amazonia, which is also a tribal area. The Indians... do not want private property in land, we want it to belong to the Union and rubber tappers to enjoy usufruct rights.... [In 1980] a very important leader, who headed all the movements in Amazonia, was murdered. The landowners... had him killed. Seven days later the workers took their revenge and murdered a landowner. This is the way justice operates. (Mendes 1992: 162, 168, interview published after Mendes' murder on December 22, 1988)

The *hacendado* moved to Guayaquil during the crisis. My father knew him well and he would rent us as much land as we wanted. The *hacendado* just wanted someone to watch his property until cacao came back. Javier and I had our little farm. We grew corn, beans, fruits. We even had a cow or two. But this was extremely hard. Sometimes there was nowhere to sell what we grew. And it was just my husband and I. We worked side by side in the fields. We didn't have children who could help out. And my family couldn't help much. The two of us had to do everything. We had few tools and no resources. And we didn't really own the land. So eventually I said let's follow Javier's brother Paco to Guayaquil. (Ecuadorean woman labour migrant quoted in Striffler 2004: 14–5)

The first vignette describes the wealth of rich farmers, who benefitted most from the Green Revolution in grain production in India, introduced by its Congress Party national government from the late 1960s. Elizabeth Whitcombe identifies those farmers as former *zamindars* or landowners, but they also included many rich peasants who had accumulated enough to become capitalist farmers (Byres 1981). They have highly capitalized farms and command substantial quantities of the “inputs” required to get the best yields from the new high-yielding varieties (HYVs) of wheat and rice seed

introduced by the Green Revolution: tractors, irrigation pumps and fertilizer, stacked in their “godowns,” or stores. The HYVs they use — and multiply themselves for future planting — originated in agricultural research stations in distant parts of the world. And the size of their farms would seem very big to most of their neighbours, and to nearly all farmers in Bangladesh or Tanzania, for example, but very small to their counterparts in Brazil.

The second vignette — that of a landless poor villager in Bangladesh — offers many contrasts with the first. It suggests a relentless daily struggle for a livelihood, with particular reference to that most basic need: securing enough to eat. The villager combines renting land, draft animals and a plough, to grow his own rice crop, with working for others for wages. Compared with the first vignette, this one does not provide any glimpses of places outside the immediate rural locale of the sharecropper. At the same time, the reference to working for wages might prompt us to ask who provides the labour on the thriving commercial grain farms of northern India described in the first vignette.

The third vignette, from Tanzania, provides a strong illustration of highly unequal gender relations (see Chapter 1). Unlike the previous two, it concerns an export crop produced for international markets, in this case by small farmers. We might want to ask how the land, labour and other resources devoted to growing coffee affect the cultivation of food for household consumption. Here, the payment after a good harvest, most likely the bulk of cash income for a year, is not used to meet the needs of the family but is spent on a “binge” by the male head of the household.

In the Brazilian vignette, we encounter themes long familiar in the agrarian histories of the modern world, including competition for land between different uses, and not least competition over forests — in this case between those who gain their livelihood from tapping rubber from wild rubber trees and those who want to clear forest to create pasture for large-scale ranching or to plant soy, which will be processed for animal feed. We also see a conflict over conceptions of property in land: between land as private property for the exclusive use of its owners and land as a common resource, to which particular communities or groups share usufruct rights,

that is, common rights to use it. Moreover, as in so many countries formed from a colonial history, this conflict occurs between groups of people who are differentiated ethnically and culturally, as well as in terms of their power.

The final vignette describes the attempt of a young landless couple in Ecuador to make a go of modest farming on land rented from a *hacendado*, the owner of a *hacienda*, a relatively large estate in Latin America. The landowner had planted his land to cacao (cocoa) but abandoned it when the price declined drastically, the crisis that Maria refers to. Here, we have another international export crop — as in the case of Tanzanian coffee and Brazilian soy and beef — and also a glimpse of the difficulties of small-scale farming. Maria tells us that she and her husband Javier lacked enough labour between them to succeed, which raises questions about the kind of land they were farming and the tools they had to farm it. She also indicates that while they grew food for their own consumption, they also had to sell some of their crop because they needed money to purchase basic goods they did not produce themselves. While they were still young, they decided to follow Javier's brother Paco to see if they could earn a more secure livelihood in the large port city of Guayaquil, on Ecuador's Pacific coast.

These five vignettes point to the immense variety of types of farming and their social relations, of market conditions for crops, “inputs” and labour, and of environmental conditions of farming in different regions and for different types of people in the South. That variety makes any simple empirical generalization impossible. Nonetheless, in all their local and specific detail, these few vignettes give us glimpses of the following broader themes and dynamics of agrarian change:

- class and gender differentiation in the countryside;
- divisions of access to land, divisions of labour and divisions of the fruits of labour;
- property and livelihood, wealth and poverty;
- colonial legacies and the activities of states;
- paths of agrarian development and international markets (for technology and finance as well as agricultural commodities); and

- relations of power and inequality, their contestation and the violence often used to maintain them, from “domestic” (gendered) violence in Tanzania to organized class violence in Brazil.

The agrarian political economy, and the political economy of capitalism more broadly, used in this book to explore these broader themes and dynamics derives from the theoretical approach of Karl Marx.

Marx's Political Economy

Living in England from the 1850s to the 1870s, Marx (1818–1883) witnessed the transformations wrought by the world's first industrial revolution. In his great (and unfinished) theoretical work, *Capital*, Marx sought to identify the key relations and dynamics of the “capitalist mode of production” in its (then) most advanced industrial form. For Marx, capitalism — and especially industrial capitalism — is “world historical” in its nature and consequences. There was nothing natural or inevitable about its emergence as a new, and indeed revolutionary, mode of production, but once established its unique logic of exploitation and accumulation, competition and continuous development of productive capacity (Chapter 2), imposes itself on all parts of the world.

The fact that Marx analyzed the capitalist mode of production with reference to the industrial capitalism of northwest Europe leaves plenty of scope for different interpretations and debates about the histories of capitalism *before* modern industrialization and *since* his time, including

- how capitalism developed in primarily agrarian societies before industrialization (Chapters 2–3) ;
- how agrarian change has been shaped by industrial capitalism once it was established and spread (Chapters 3–5).

My goal is to use some of the concepts of Marx's theory of the capitalist mode of production to make sense of diverse and complex agrarian histories in the modern world. I propose some very general

themes of the world-historical career of capitalism and try to connect them with the complex variations that particular histories weave from them (to borrow, from a different context, the formulation of the anthropologist Michael Gilensan [1982: 51]). There is no suggestion that Marx provided everything we need to know about capitalism in theory or in terms of its histories, as he was the first to point out. Indeed the relation between his theoretical system (which is necessarily highly *abstract*, as well as incomplete) and its application in historical or *concrete* investigation remains a source of great tension and debate. In his notes on “The Method of Political Economy,” Marx (1973: 101) suggested that “The concrete... is the concentration of many determinations” or what we might call, more loosely, “causal factors.”

Each chapter in this book introduces theoretical ideas and questions and briefly illustrates them historically, sometimes through summary generalizations. Such generalizations, like those I use in Chapters 2 to 5 to outline the formation of the modern capitalist world, cannot do justice to historical specificities and variations. The same warning applies to the conventions of historical periodization: usually marked in centuries or part-centuries, periods are necessary to identify change, and we are unable to think about history without them, without asking what changed, how, why *and when*? At the same time, periodization runs the danger of obscuring the complexities of discontinuity and continuity. Historical periods in this book serve as “markers” of important changes: they do not signify that change from one period to another was always an encompassing, and dramatic, rupture with what existed before, although some historical processes involve more radical changes than others. With these necessary qualifications, the historical outline and sketches in this book are offered to illustrate an analytical approach that readers can test — that is, interrogate, apply, adapt or reject — for themselves.

To grasp that analytical approach and assess its usefulness is challenging. This is a challenging book, but how can understanding the world we inhabit, with all its complexity and contradictions, be simple? My aim is to provide some tools to think with, not to tell simple morality tales that we might find ideologically appealing (for

example, “small is beautiful” versus “big is ugly,” virtuous peasant versus vicious corporate agriculture).

Finally, the strongest arena of disagreement about Marx’s ideas, and how to interpret and apply them, is among Marxists, or those strongly influenced by Marx. Those familiar with this history and its debates will no doubt recognize particular interpretations of materialist political economy that I present in this short book. But the book does not assume any prior knowledge of political economy, and I provide a glossary of key terms. An author’s only hope is that readers will find enough that is relevant, interesting and provocative to reflect on and pursue further for themselves.

Note

1. Numbers of “small farmers” in the South are often exaggerated, sometimes greatly so, by those “taking the part of peasants” (see further below), for example, Joan Martinez-Alier (2002) and Samir Amin (2003), who give figures of two and three billion respectively.

Chapter 1

Production and Productivity

Labour and Nature

We presuppose labour in a form in which it is an exclusively human characteristic. A spider conducts operations which resemble those of the weaver, and a bee would put many a human architect to shame by the construction of its honeycomb cells. But what distinguishes the worst of architects from the best of bees, is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally. Man not only effects a change of form in the materials of nature, he also realizes his own purpose in these materials. (Marx 1976: 283–4)

An initial and general definition of “production” is the “process in which labour is applied in changing nature to satisfy the conditions of human life.” As proposed by Marx, labour presupposes *agency*: the purpose, knowledge and skill, as well as energy, of the producer. In acting on natural environments, producers therefore modify the ecosystems they inhabit and indeed are part of.¹ Associated with production, and central to questions of human well-being — satisfying the conditions of human life — is the idea of *productivity*. Different concepts of productivity express the results of certain ways of doing things relative to other ways. Measures of productivity calculate the quantity of goods produced by the use of a given quantity of a particular resource.

In farming, one measure of productivity is land output or yield: the amount of a crop harvested from a given area of land.² Another measure of productivity concerns labour: the amount of a crop

someone can produce with a given expenditure of effort, typically measured or averaged out in terms of time spent working, or labour time. Labour productivity depends to a great extent on the tools or technology the producer uses. For example, a farmer in the U.S. using a tractor and a combine harvester can produce a metric tonne (1000 kg) of grain, or grain equivalent, with much less expenditure of time and effort than a farmer in India using an ox-plough. In turn, the latter can produce a tonne of grain using less time and physical effort than a farmer in sub-Saharan Africa who cultivates with a hoe and other hand tools.

Alternatively, we can imagine how much producers using different kinds of tools produce on average over a certain period of time. In farming, a year is a relevant period because seasonality, according to weather conditions, is a key factor almost everywhere. We might find that in a year the African farmer produces one tonne of grain, the Indian farmer five tonnes and the American farmer 2000 tonnes. The Indian farmer's labour productivity is five times that of the African farmer, and the American farmer's labour productivity is four hundred times that of the Indian farmer and two thousand times that of the African farmer. These remarkable figures are suggested by French agronomists Marcel Mazoyer and Laurence Roudart (2006: 11), who also observe that the gap between the lowest and highest average labour productivities in the world's farming systems has increased massively since 1950 (see Chapters 4–5).³

Returning to my simple example, several further observations can be made. First, increases in labour productivity are associated with the application of other forms of energy than human muscle power: the animal energy of draught animals, the energy generated by the internal combustion engines of tractors and combine harvesters. Harnessing and applying other forms of energy, therefore, frees production and productivity from the limitations imposed by the energy of the human body alone. Second, it also allows a larger area of land to be cultivated relative to the numbers of those working on it. The area of land cultivated per farm worker in the U.S. has been calculated as fifty times the world average (Weis 2007: 83). Third, the productivity of farm labour is not just a matter of the forms

of energy used in cultivation, but, like the productivity of land (yields), also reflects the quality of other “inputs”: seeds, fertilizer, irrigation and so on. Finally, as farm labour productivity increases, smaller numbers of producers can supply food for greater numbers of people.

Different concepts and measures of productivity may come into conflict with each other; for example, in certain circumstances, yield in the sense of land output may be a more relevant measure than labour output. In the simple illustration above, average grain yields are significantly higher in the U.S. than in sub-Saharan Africa, although the difference in yield is much less than the extraordinary gap in labour productivity.

Other measures of productivity, like energy accounting, pioneered as long ago as the nineteenth century, and more recently atmospheric accounting, reflect concerns for the environment. Starting from the other end of the labour process — holding output rather than input constant — relative efficiency can be calculated by the units of energy (calories) used to produce a quantity of crops of a given energy or calorific value. In this instance, “low-input” farming, like hoe cultivation of grain, might be considered more efficient than “high-input” mechanized grain farming, even if it has lower yields and much lower productivity of labour (hence can feed many fewer people).

Additionally, we may want to calculate the implicit costs of the use of non-renewable resources — for example, the petroleum that fuels farm machinery — and the costs of pollution and other environmental damage (for example, soil erosion or degradation). These elements constitute what is now called the “ecological footprint” of particular types of production and consumption, in farming as in other economic activities.

So far I have illustrated one aspect of productivity — the tools and technology used in farming — and implied another aspect — the quality (as well as quantity) of human labour, that is, its command of the capacities demanded by certain kinds of tasks. If those capacities are not fully available, this affects the productivity of labour adversely: for example, a producer who lacks the skill to use tools effectively — whether hoe, ox-plough or tractor — or

whose ability to perform arduous farm work in Africa or India is undermined by low levels of nutrition and health more generally, the effect of poverty. A third element has also been implied: the “raw materials” of farming, presented by different natural environments, which vary a great deal and can be managed more or less effectively — conserved, degraded or improved. Productivity also depends then on

- the fertility of soils, which can deteriorate or be maintained or improved through applications of organic or chemical fertilizers and different methods of cultivation;
- types and qualities of seeds, which may be improved; and
- the supply of water and its effective management, including dealing with the uncertainties of rainfall in non-irrigated farming.

The aspects of production and productivity noted so far concern some of the *technical conditions* of farming. But, as Marx remarked (1973: 86): “political economy is not technology.” Farmers’ activities involve them in relations with other people: whether in the labour processes of farming; whether the tools and materials they work with, including land they cultivate or graze their livestock on, belongs to them or to someone else; what sort of claim they have on the harvests their labour produces, and so on. These questions point us towards the *social conditions* of production: all the relations between people that shape how production is organized, including its technical conditions.

Divisions of Labour and Cooperation

We can assume that the three farmers in our simple example above did not make their own tools. This is perhaps obvious for the American farmer but is also a realistic assumption for the many farmers in India and Africa today who use factory-produced hoes and ploughs. Farmers have to obtain their tools from others, whose work is to produce those different kinds of tools. This is a simple example of the *social division of labour* between producers of different kinds of goods and services whose activities are complementary and who are

related to each other through the exchange of their products. As the social division of labour increases in complexity, it makes available a more diverse range of goods and services across larger geographical spaces, which in turn presupposes effective means of transport and communication.

While we can assume that the three farmers are working on their own, this would not make sense in the case of the factories that produce the hoes, ploughs and tractors. Factory production requires a *technical division of labour*: the combination of different tasks performed by a number of workers to manufacture a single product. This suggests workers' *specialization* in different tasks, hence cooperation between them and coordination of their efforts, and an enlargement of the scale of production beyond what would be possible for single producers working separately. This makes possible a far higher productivity of labour than could be achieved, say, by an individual mechanic performing all the tasks necessary to produce a tractor.⁴

The greater the technical division of labour, the more complex cooperation it requires. Cooperation can also enhance the labour productivity of farmers using simple tools like hoes by enabling the following:

- economies of scale in the construction of common facilities (e.g., grain stores, water tanks);
- “complementation effects,” that is, “adding individual labour to a process which only makes sense as a completed whole” (e.g., digging sections of an irrigation channel or building sections of a fence to protect crops); and
- timing effects, that is, concentrating effort to carry out tasks that have to be finished within a critical time (e.g., relating to seasonality in farming, like periods of rainfall) (von Freyhold 1979: 22–25).

The main points about technical divisions of labour and cooperation in these examples are that “the whole is greater than the sum of the parts” (what Marx termed “the collective worker”); technical divisions of labour and their effects for productivity require social

organization; and what any single producer or worker does cannot be understood in isolation from the activities of others.

We have widened our understanding of the technical conditions of production as we have proceeded, especially with reference to agency, with which this chapter started. What Marx termed the “productive forces” includes not only technology and technical culture but people’s capacity to organize themselves to make decisions about production, to carry them out and to innovate — all of which are shaped by the social conditions of production.

Reproduction

As indicated, the elements of the process of production themselves have to be produced. Even the land used in farming, while originally a “gift” of nature, is changed through people’s interactions with it; for example, its fertility can deteriorate or be maintained or enriched. All those needs of constantly producing the conditions of farming, as of other human activities, are termed *reproduction*: reproduction of the means of production (land, tools, seeds, livestock), of current and future producers, and of the social relations between producers and between producers and others. For the moment, let us assume that all the needs of reproduction, securing the conditions of *future* production, have to be met from what is produced *now*. We can think of what is produced at any given time, say a harvest, in terms of the demands on it of various kinds of reproduction “funds.”

I begin with the most obvious, the *consumption fund*: everybody has to eat to live, and the consumption fund refers to the immediate and daily need for food (as well as shelter, rest and other basics). Part of the harvest has to be allocated to the consumption of the producers and those who depend on them: children and those too old or unfit to farm.

Next I outline the *replacement fund*: tools used in cultivation become worn-out after a time; other “inputs” (or “instruments of labour,” in Marx’s term) tend to be used up more quickly, for example, seeds and fertilizers used up in each cycle of farm production. Therefore, part of current production has to be allocated to replace them. This can happen in a variety of ways, according to different

social conditions. Throughout much of history, replacement was carried out within farming households: a certain proportion of the harvest was selected and saved as seed for the next cycle of cultivation; simple tools were made by farmers themselves or by neighbours who were specialized artisans (and who had to be compensated in some way for their work). In effect, satisfying the replacement fund represents a claim on labour and its product, whether keeping back part of the harvest for seed, using food stored from a previous harvest to feed people while they carry out tasks crucial to reproduction in-between farming seasons, acquiring basic means of production, and consumption, that farmers might not produce themselves.

Among the claims on the replacement fund, one is of distinctive significance: producing the next generation of producers, or what is called *generational reproduction*. What I have said so far has contained no reference to, nor used the prepositions of, *gender* — unlike Marx, in the quote above, who follows the old convention of “man” as a generic term for humanity and who assumes that the architect of his analogy is male (virtually all architects at his time were men). I signal gender now because bearing children — the first and necessary step in generational reproduction — is exclusively a female capacity, determined by biology. However, the exercise of that capacity is a social practice, shaped by social relations. While it is “ordained by nature” that only women can bear children, there is nothing “natural” about *whether* all women bear children, *when* they bear them, *how many* children they bear, nor, in some cultures, the pressure on women to bear sons. There is nothing “natural,” apart from an initial period of breast-feeding, about the fact that the responsibility for bringing up children devolves on their mothers — or grandmothers, aunts, older sisters or female servants. Similarly, there is no “natural” or biological necessity that it is mostly women who carry out the tasks of maintaining the current generation of producers — cooking, cleaning, washing clothes, fetching water and collecting firewood — the activities of *domestic labour*, which are as vital to reproduction as any of the others considered here.

Domestic labour illustrates a further, and different, type of division of labour. We saw earlier one meaning of the division of labour as the specialization of productive activities between and within units

of production. In the case of gender, specialization is established by the position that people occupy in particular structures of social relations. Gender relations — social relations between women and men, and the ideologies that shape them or justify them — provide the most widespread case of the social division of labour, although the particular forms of gender relations vary greatly across societies and groups within societies. They also change historically (which shows that they are not “fixed” by nature) and extend beyond the sphere of domestic labour to a range of other productive and reproductive activities, not least in farming systems, which exhibit a range of gendered divisions of labour.

Next is the *ceremonial fund*, which refers to the allocation of the products of labour to activities that create and recreate the cultures and social relations of farming communities (Wolf 1966), for example, rituals performed in preparation for cultivation and festivities after harvest. Other examples include celebrating rites of passage (e.g., birth, marriage), building a home for a new household, and marking the death of a community member (e.g., wakes, funerals).

Consumption, replacement and ceremonial funds all exist in societies centred on the “subsistence” needs and activities of their members and which may have little social differentiation other than gender and generation, e.g., the special authority of “elders.” The fourth and final claim on the products of labour — the *fund of rent* — is a quite different arena of social relations.

Surplus, Exploitation and Accumulation

The replacement and ceremonial funds require a “surplus” product above what is required for immediate consumption. This is true of all societies, of which we can distinguish three broad categories in a kind of evolutionary sequence. The first is what we can properly term “subsistence” societies, which reproduced themselves at constant levels of consumption (and typically population size as well). This does not mean that those societies were “poor” in their own terms. Indeed, small groups of hunters and gatherers, or of those practising nomadic shifting cultivation (swidden farming), could often meet their limited needs with relatively little expenditure of labour time

and effort — typically less time and effort than settled agriculture required (Sahlins 1972).

According to historian Colin Duncan (1996: 13), agriculture is “most usefully defined as the cultivating (or tilling) of soil marked out in fields,” in contrast with “shifting cultivation” and nomadic pastoralism. Like many others, Duncan also observes that this “constituted a decisive break with previous modes of interaction between humankind and nature” (13). Settled agriculture emerged through human domestication of plants and animals and made possible a fund of rent and the historical emergence of a second category of society: agrarian *class* societies, whose development was charted in growing population size and density and in the formation of ruling classes, the state, cities and urban culture.

The fund of rent refers to payments farmers have to make to others. Those others might be landlords, who appropriate rent in kind (part of the farmers’ crop), in labour or in money. Or they might be states, exacting payments as taxes in kind or money, or as labour conscripted for public works or military service; or religious authorities that are landlords or have the power to impose taxes or tithes. Or those others might be moneylenders or merchants, from whom farmers borrow against the value of their next harvest, as a money economy takes shape.⁵

In agrarian class societies, then, a “surplus” has to be produced above the needs of the producers for their consumption, replacement and ceremonial funds, in order to support dominant classes of non-producers. The capacity to *appropriate surplus labour* — labour beyond what producers expend on their own reproduction — signals social relations of *exploitation*.

The dominant or ruling classes of agrarian class societies consisted of royal dynasties, military and civilian aristocracies, religious and civil bureaucracies and merchant groups. Their consumption and reproduction — and those of the often large retinues that supported them (servants, soldiers, religious functionaries, clerks, court painters and poets — and architects!) — rested on the exploitation of producers, whether slaves, feudal serfs, other peasant farmers or artisans. Some of these societies — the famous agrarian civilizations of Asia and North Africa, Europe and Central America — experienced

periods of expansion of territory and population. Those expansions were sometimes associated with innovations in the techniques and organization of farming and other productive activity, as well as of communications (e.g., the invention of writing), transport (especially water-borne transport), trade and military power.

While such ruling classes were concerned to regulate economic activity — the better to appropriate its surplus labour — and sometimes to stimulate it (e.g., by organizing the construction and maintenance of irrigation works), they did not attempt to “save” and reinvest the surplus product they appropriated to develop the productive capacities of their societies in any systematic way. Rather they were preoccupied with land and labour as the sources of their wealth (through rents, taxes, tribute), their power (supplying and supporting armies) and their glory (enabling them to consume luxuries, to build palaces, temples and churches, and to act as patrons of religion and the arts).

Exploitation of labour driven by the need to expand the scale of production and increase productivity in order to make profit — in short, *accumulation* — is a defining characteristic of the third category of society, namely capitalism. This is the subject of my next chapter, and indeed the rest of this book. Before moving on, I want to pull together some of the ideas and concepts of this chapter in terms of four key questions of political economy.

Political Economy: Four Key Questions

The following four key questions of political economy concern the social relations of production and reproduction.

Who owns what?

Who does what?

Who gets what?

What do they do with it?

1. Who Owns What?

The first question concerns the social relations of different “property” regimes: how the means of production and reproduction are distributed. “Ownership” and “property” have had different meanings in

different kinds of society at different moments in history. The ideas and practices of *private* ownership and *private* property have been invented under capitalism and help to define it. This is particularly so in relation to *land*, the basis of farming. The widespread of conversion of land into private property — into a *commodity* — is one of the defining characteristics of capitalism.

2. *Who Does What?*

The second question is about social divisions of labour. Who performs what activities of social production and reproduction is structured by social relations between, for example, those who undertake specialized tasks within units of production; producers making different kinds of things; men and women; and the different classes in agrarian societies and in capitalist societies.

3. *Who Gets What?*

The third question is about the social division of the “fruits of labour,” which is often termed the distribution of “income.” As with ownership and property (above), that term does not just refer to income in the sense it has acquired in capitalism, namely individual or corporate money income. In forms of society before capitalism, and in some important areas of life under capitalism today, there are “fruits of labour” that do not take the form of money income. One example is food produced by small farmers for their own consumption; another example is the fruits of domestic and other unpaid labour.

4. *What Do They Do With It?*

The fourth question is about social relations of consumption, reproduction and accumulation. I have sketched this in terms of funds for consumption, replacement and ceremonial activities, found in all agrarian societies from the beginning, and for rent, which emerges with the formation of agrarian class societies. I have also noted, as unique to capitalism, the appropriation of surplus labour for purposes of productive accumulation. This final question is about how different social relations of production and reproduction determine the distribution and uses of the social product.

These four key questions can be usefully applied across different sites and scales of economic activity, from households to “communities” to regional, national and global economic formations. They can also be applied to different types of societies at different historical moments. There is also an implicit sequence in the four questions: social relations of property shape social divisions of labour, which shape social distributions of income, which in turn shape the uses of the social product for consumption and reproduction — which, in the case of capitalism, includes accumulation.

Notes

1. This last point is signalled in concepts of ecology made up of human and extra-human nature and their interactions.
2. For the sake of simplicity, I do not go into issues of plant or animal yield, although both have been central to processes of rising agricultural productivity, as indicated below. One measure of plant yield, of great interest to agrarian historians, is the ratio of crop harvested to seed planted.
3. That gap is reflected in shares of world trade in agricultural commodities today. Ten percent of the world's total agricultural production is traded internationally, of which the U.S. and E.U. each account for 17 percent, Canada, Australia and New Zealand combined account for 15 percent, and Brazil, Argentina, Chile and Uruguay together 13 percent. In short, 62 percent of world agricultural exports (by value) comes from countries with 15 percent of the world's population and just 4 percent of the world's agricultural labour force (Weis 2007: 21).
4. The situation in the earliest days of motor vehicles, before their mass production in large factories.
5. This represents a shift from the earlier assumption that all the needs of reproduction have to be met from what is produced now. Credit represents a claim on future production or income in order to satisfy current consumption and reproduction needs.