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The Moral or the Rational Peasant? Competing Hypotheses of Collective Action

DAVID FEENY

The moral-economy approach to modeling peasant collective behavior is a significant challenge to a number of other approaches. This essay will examine an important example of the moral-economy approach, James C. Scott's *The Moral Economy of the Peasant*, in terms of its analytical foundations and how well it explains political economic trends in nineteenth- and twentieth-century rural Southeast Asia.

Scott (1976) argues that peasants are risk averse and have therefore collectively developed social-insurance mechanisms. These are reinforced by a fundamental value in a peasant society, the ethic of subsistence, whereby the right of the peasant to subsist is supposed to be assured. Scott further argues that patron-client relations in peasant societies are regulated by an ethic of reciprocity as the other fundamental value. The norm is one in which the respect of the peasants for their elites and the payments made to those elites are supposed to be balanced by a return flow of justice, protection, and subsistence insurance.

According to Scott, the effect of the colonial system and penetration of world markets during the nineteenth and twentieth centuries was to erode the security and welfare of peasant societies in Southeast Asia. Commercialized agriculture increased the risks to which peasant producers were now subjected, while colonial governments made heavy fixed demands on the peasant economies. Both the ethic of subsistence and the ethic of reciprocity were violated, and the resulting moral outrage of the peasants often led to rebellions, such as those experienced in lower Burma, Annam, and Cochin China in the 1930s.

Scott's moral-economy model is appealing as a story of why these rebellions occurred or as a description of how peasant societies are organized and how peasants behave. However, there are areas where his arguments and evidence need to be examined more closely. First, the moral-economy model assumes that peasants act on the basis of their normative view of the world. The ethics of subsistence and reciprocity govern the development of village welfare and social-insurance institutions as well as rebellion. I will compare that normative model of decision making to one that assumes that peasant households are utility maximizers. Second, Scott frequently implicitly assumes that what is collectively rational is also individually rational.

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However, behavior motivated by individual incentives is not necessarily consistent with collective welfare. Third, the assumption of risk aversion by peasant producers does not always lead to the conclusions that Scott draws and may not be as widely applicable as Scott assumes it is. The thrust of this discussion is that Scott needs to present additional evidence to justify his assumptions and exclude other explanations for the events observed. Finally, the introduction of markets does not always increase the risk faced by peasant producers or necessarily lead to a deterioration in the economic welfare of peasants. Each of these points will be discussed.

Risk and Peasant Decision Making

Scott argues that peasant producers operate in a world with a substantial random component in the outcome of their production efforts. The claims of outsiders also represent a source of uncertainty and, frequently, inflexibility. In response to this risk and uncertainty, traditional practices are seen as a collection of activities that reduce the likelihood of severe production shortfalls, although they may not maximize the expected value of output (or profit).

As evidence in support of this approach, Scott discusses the characteristics of traditional seed varieties, selected for their resistance to pests, floods, droughts, and diseases and not solely on the basis of their expected yield. Furthermore, because of risk aversion, peasants whose incomes are near the subsistence level favor subsistence crops over cash crops with higher expected profits. Peasants are also willing to engage in insurance schemes to disperse risk. These arguments are plausible, and there is evidence (much of which Scott has cited) that is consistent with the hypothesis of risk aversion.[1] Scott also carefully draws on a safety-first model developed by Roumasset (1976) for application to decision making by subsistence farmers in Southeast Asia. In that model the family acts to maximize expected profits, unless the risks are too high. If risks are too high, the family acts to minimize the probability that their income will fall below a disaster level, culturally defined as subsistence requirements plus urgent debt minus the value of readily salable liquid assets. This represents a danger level of real income, below which the status of the family in the community or its basic health and nutritional status are threatened.

Given this approach—or more broadly—an assumption of risk aversion by peasant producers, can the evidence that Scott describes as being the result of risk aversion or safety-first behavior unambiguously be considered as such? Scott interprets the strong preference of peasant producers for subsistence crops over nonedible cash crops as evidence of the safety-first behavior in which the peasant producer ensures his subsistence before allocating resources to cash crops with higher expected profits. For a discussion of the economics of uncertainty relevant to this argument, see Masson

[1] A person indifferent between receiving a lottery with expected payoff X or receiving that same amount with certainty is said to be risk neutral; a person who would choose the certain payment instead of the lottery is said to be risk averse. Many measures of risk aversion have been developed; Diamond and Rothschild (1978) discuss most of them. Evidence consistent with risk-averse behavior by peasant farmers is found in Behrman (1968), Herath, Hardaker, and Anderson (1982), Scandizzo and Dillon (1979), Singh and Day (1975a, 1975b), and Moerman (1968). The higher marginal propensity to save out of transitory income may also be indirect evidence of risk aversion; for empirical estimates of permanent-income-hypothesis savings functions in less-developed countries, see Bhalla (1978), Williamson (1968), Yotopoulos and Nugent (1976), and Hyun, Adams, and Hushak (1979). For more on risk aversion and peasant economic behavior, see Feder (1980), Roumasset (1976, 1978a), and Roumasset, Boussard, and Singh (1979).

(1974) and Menezes, Geiss, and Tressler (1980). For evidence on this hypothesis, see Behrman (1968), Kunreuther and Wright (1979), Masson (1974), Moerman (1968), McAlpin (1979), Scandizzo and Dillon (1979), Shahabuddin (1982), Singh and Day (1975a, 1975b,), and Wright and Kunreuther (1975).

However, a risk-neutral peasant might behave in exactly the same manner if faced by imperfect or costly product markets (Roumasset 1976, 1978a). Because the farmer buys the subsistence crop for his own consumption from local merchants at prices in excess of those for which he could sell that same crop, he has an incentive to produce more of his own consumption needs than an expected profit calculation that ignored marketing costs would indicate.

Crop diversification is often taken as evidence of risk aversion. There are, however, complementary explanations for crop diversification. My discussion draws on Roumasset (1976) and does not imply that because of risk aversion a farmer might not wish to diversify his plots and crops, but that such diversification does not necessarily imply risk aversion. First, a farmer may have different types of land within a single farm and be planting different crops on land with different characteristics—thus maximizing expected profits in the process. Second, a farmer may devote a small plot to a new crop or technique as an experiment. Third, if different crops make different temporal demands over the season on such fixed factors of production as family labor, the crop mix may have been selected to maximize the use of those fixed factors and expected profits. A good example is found in the technological changes in silk rearing that permitted Japanese rice farmers to use their slack labor time in silk rearing (Le and Hayami 1979). Thus, behavior that is ascribed to risk aversion may be the result of other considerations.

Risk aversion can also lead to a reliance on cash crops or modern cash-intensive techniques of production, contrary to the impression created by the moral-economy literature in which risk aversion is believed to slow the rate of adoption of new techniques or reduce the reliance on cash crops. Using Simon's notion of bounded rationality, Roumasset (1976) constructs a choice-of-technique model for farmers who use safety-first rules of thumb. Under his safety-principle rule for decision making, there is no monotonic relationship among risk aversion, the disaster level, and the cash intensity of the optimal technique.[2] Farmers with very low and very high disaster levels may choose the most cash-intensive technique with heavy applications of fertilizer, while those with intermediate disaster levels would choose the traditional variety or the high-yielding variety with moderate levels of fertilizer use. One interpretation of these results is that, under safety-first decision making, if you are very poor, you may be led to adopt the technique with the highest expected return in spite of the higher risk. Indeed, behavior of this sort has been observed.[3]

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[2] Roumasset's safety-principle rule for decision making is a combination of the safety rule under which the decision maker acts to minimize the probability that his return will fall below the disaster level and the chance-constrained programming rule, which indicates that the decision maker maximizes his return subject to the constraint that the probability of disaster does not exceed some level. See also Feder (1980) who uses an expected utility maximization model to derive additional, sometimes counterintuitive, results concerning the adoption of new technologies by risk-averse peasant farmers.

[3] One example is found in the postbellum southern United States. Wright and Kunreuther (1975) develop a safety-first model of crop choice for the antebellum and postbellum cotton economies of the South. In the antebellum period, they find a positive relationship between farm size and cotton acreage and a negative one between cotton acreage and the number of household members per acre. In short, the safety-first goal appears to have led farmers to allocate sufficient land to corn to ensure their subsistence needs. For the postbellum period, in

The discussion so far draws on both theoretical analysis and empirical evidence, which indicate that, though it may be useful to assume risk-averse and, in particular, safety-first behavior by some peasant farmers, it does not follow that risk aversion will consistently lead to increased crop diversification, avoidance of cash crops, increased reliance on subsistence crops, or avoidance of cash-intensive techniques. In particular, risk aversion may in some cases systematically lead to behavior the opposite of what the moral economists (and many others) expect. Furthermore, while the safety-first model itself is plausible, its predictive powers are moderate.[4]

Casual empiricism indicates that the income of some peasants was low enough for risk-averse behavior to emerge and that the depression of the 1930s increased distress, but that evidence does not necessarily lead to Scott's conclusion that the colonial period created increasingly unstable conditions for peasant producers.

Scott is correct in pointing to the increasing inflexibility in the taxes levied on peasants. The increased taxes were a significant part of the increased insecurity. But Scott fails to present evidence on household income levels for a significant group and how they changed over time. Some evidence of this nature would make his argument more convincing. Scott could also improve his case by providing more evidence on how many peasants lost their land or became laborers when they had been tenants. Scott's assertions are correct for some groups and some periods and quite accurately apply to the 1930s. Until more evidence is provided (and additional evidence may corroborate Scott's assertions), his arguments need to be qualified.

On the issue of living standards for peasant farmers, we have some evidence that standards increased in a number of areas from the late nineteenth century until the 1920s or 1930s, when living standards declined. Lewis summarizes the trends in cropical development in the period from 1870 to 1913 in the following way:

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spite of declining cotton prices, they find an inverted U-shaped relationship between the share of land devoted to the cash crop (cotton) and farm size. Risk-averse farmers and tenants with small farms appear to have chosen to concentrate more heavily on the cash crop, and indeed for the South as a whole cotton increased its share in total agricultural output. On the smaller size farms more common after emancipation, farmers were no longer able to reduce the probability that their incomes would fall below the disaster level to a given level and instead acted to minimize the probability of disaster. In short, they were "forced" to gamble on the cash crop to have any chance of achieving their target incomes. This finding is further discussed in McGuire and Higgs (1977), McGuire (1980), Wright and Kunreuther (1977), and Wright (1979)

Shahabuddin (1982) also finds some evidence consistent with "gambling" type behavior in his study of crop portfolio decisions by small farm households in four districts in Bangladesh. He employs a safety-first model based on Roy's safety principle where the goal of the farmer is to minimize the probability that his income falls below a subjective target level. Shahabuddin's evidence generally favors the safety-first with respect to the expected profit-maximization approach. For more on Bangladesh and the U.S. South, see Kunreuther and Wright (1979). Sansom (1970) finds that fertilizer use per hectare with traditional varieties in several South Vietnamese villages was strongly inversely related to land per person in the farm household. Here small farms used the more cash-intensive techniques to help achieve their subsistence goals. Scott (1976) also discusses similar cases.

[4] Roumasset (1976) specifically used safety-first models as well as a risk-neutral model (expected profit maximization) in a case of choice of technique — the application of fertilizer — in rice growing in several areas in the Philippines. He found that the risk-neutral model predicted actual fertilizer use as well as or better than the safety-first models. However, this finding may largely reflect the fact that there was no strong conflict between expected profits and risk in the situation studied. Binswanger (1980) found in his gambling experiment study in India that, when the stakes are low, risk aversion is not very important, but, when the stakes are high, it was almost universally important, regardless of wealth or other personal characteristics. Sillers (1980) and Walker (1981) obtained similar results in related studies in the Philippines and El Salvador, respectively; see also Binswanger (1979, 1981, 1982). In each of these three important gambling experiment studies, the investigators found that the degree of partial risk aversion rose with the size of the gamble. This evidence is inconsistent with the implications of the lexicographic safety-first models that Scott (1976) and Roumasset (1976) use.

> So in the developing tropics, even those at the bottom of the social hierarchy experienced a rise in their standard of living. Further up the social hierarchy a whole range of opportunities was created by economic expansion. (1978:192)

> Reliable national income figures do not exist for this period, but there is no doubt that income per head was raised by exports. For the tropics as a whole food supply kept pace with population growth, while exports increased by 3.5 to 4 percent per annum in terms of real purchasing power. (1978:216)

Lewis also points out that the trends in the world economy from 1913 to 1948 disrupted the economic progress of the tropical countries. For Cochin China, Sansom (1970) indicates that substantial gains were made in rural living standards from the 1880s to the late 1920s and that those gains were largely erased in the 1930s. Similarly in the Thai case, crude information indicates that rural living standards increased from the mid-nineteenth century until the early 1920s, when productivity declined and the depression of the 1930s eroded most of the gains (Feeny 1976, 1982a). Once again crude evidence on trends in Burmese real per capita income shows gains from 1870 to 1931 and then sharp declines during the depression (Aye Hlaing 1964). For a review of economic change and agricultural development in colonial Burma, see Adas (1974, 1981).

Thus, it appears that the 1930s were years of distress for a large number of peasant producers whose incomes were reduced to (or below) their disaster level and thus might well act along the lines of a safety-first model. For the earlier periods, it appears that the incomes of many peasant producers were rising, and as a result they were less likely to act in a highly risk-averse manner. Of course, as Scott rightly stresses, the level of income is not the single crucial variable. The instability in incomes and subsistence assurances was also important. Although instability may have increased in the pre-1930s period, Scott has not presented quantitative evidence. In sum, except for the depression of the 1930s, Scott has not demonstrated the extent of the empirical relevance of his safety-first model. His arguments must be qualified. His ideas best apply to a unique period in world economic history—the depression of the 1930s. As Scott would argue, it is probably not a coincidence that a number of peasant rebellions occurred in this period.

Sharecropping and Risk

Scott argues that sharecropping as a contract for land rental is a major means of risk sharing in a peasant economy and that the reduction of the number of share contracts in Cochin China in favor of wage or fixed-rent contracts during the 1930s significantly increased the income instability for peasant farmers. Share tenancy contracts are widely believed to provide for risk sharing, yet Scott's arguments need to be examined more closely.

First, Scott overlooks other relevant explanations for the choice of a share contract, which may be important in explaining the trends in contract choice. In the absence of a model to explain the choice of rental contract, Scott's conclusions about the switch from share contracts to fixed-rent contracts may not follow. Furthermore, Scott has generally not provided the necessary evidence or analysis to exclude other viable interpretations.

A share contract may be viewed as in part a mechanism to share management decisions. The literature on this point is substantial; see Reid (1973, 1975, 1976a, 1976b, 1977a, 1979a, 1979b, 1979c), Hallagan (1978a, 1978b, 1980), Higgs

(1973, 1974, 1977), Alston and Higgs (1982), Huang (1973), Rao (1971), Roumasset (1976), Bell and Zusman (1976), Lucas (1979), Allen (n.d.), and Alchian and Demsetz (1972). Whereas under a wage contract the landlord provides all the management, makes all the decisions, and takes all the risk, under a share contract the management, decision-making, and risk-taking roles are shared. Fixed-rent-contract tenants assume all the management, decision-making, and risk-taking roles, and thus those contracts may be preferred whenever a moral hazard problem exists whereby it would be difficult for the landlord to know whether poor returns were the result of bad luck or poor decision making by the tenant. In a situation where these three types of contracts exist, tenants may self-select themselves on the basis of their managerial and decision-making skills. Because under the share contract the compensation is decided *ex post*, the contract provides an incentive for the tenant to provide his managerial skills as well as his labor input and thus reduces the enforcement costs for the landlord. The thrust of this argument is that share contracts may be used as a screening, enforcement, and incentive device independently of any risk-sharing function they may also perform.

Another function performed by a share contract is that of reducing imperfections in capital markets. By sharing in the output, the landlord has an incentive to share in the costs of production through the provision of credit and other inputs. Capital-market imperfections and credit relationships between landlords and tenants are examples of interlocking factor markets that arise in part because of the high cost of information. (See Bardhan 1979a, 1979b, 1980; Bardhan and Rudra 1980; Akerlof 1970; Braverman and Srinivasan 1981; Braverman and Stiglitz 1982; Newbery and Stiglitz 1979; Posner 1980; and Raj 1970.) Personalized transactions reduce the cost of monitoring and enforcement and provide spillover benefits for transactions in other markets. Imperfect labor markets for family labor as well as imperfections in credit markets and markets for draft animal services often result in the intermixing of markets and transactions. In the sharecropping case, the landlord provides credit and land to the tenant who provides the use of his and his family's labor and the use of his draft animals. The landlord has more information on the tenant than other potential creditors and more effective means of ensuring the repayment of his loans. The institution of sharecropping links markets together and helps overcome information cost and enforcement problems.

Share contracts may also be interpreted as a form of insurance to prevent breach of contract. (This idea was in part stimulated by discussions with Peter J. McCabe; see also Allen n.d.; Hallagan 1980; Higgs 1977; Newbery and Stiglitz 1979; Raj 1970; Ransom and Sutch 1977; and Wright 1979.) Because payment for labor services rendered by the tenant in producing the crop output are made only at the end of the season and are contingent on the size of the crop, the landlord is reducing the probability that the tenant will break the contract during the season. Ransom and Sutch (1977) highlight this advantage of share tenancy in comparison to fixed-rent contracts for the early postbellum period in the South. In the event of a poor crop, a fixed-rent-contract tenant would probably default. Because many tenants were recently freed slaves and had few assets, the landlord would be left with no means of recovering payment for the rent. The share contract on the other hand allowed for the collection of at least some rent.

Thus, in situations where tenants have few assets and landlords have limited means to prevent default on rent and other debts, share contracts may be preferred, independently of any risk-sharing function they may perform. Share contracts might

also be chosen in imperfect capital markets and when potential tenants lacked detailed knowledge of local agricultural practices and land qualities or where landlords had limited information on the skills of potential tenants.

All these attributes describe the frontier conditions in Cochin China where share tenancy predominated. (See Hammer 1955; Popkin 1979; Sansom 1970; and Scott 1976.) Many tenants were migrants from other regions in Vietnam who may have had few assets and lacked knowledge of local conditions. Share contracts provided them with cheaper access to credit markets, some entrepreneurial and management inputs from the landlord, and some risk sharing. The landlord could use such contracts to screen potential tenants on the basis of their skills and to reduce the incidence of noncollectable rents. It is frequently observed that only tenants who possess draft animals or other collateral usually obtain fixed-rent contracts (Wright 1979; Bell and Zusman 1976; Higgs 1977; and Winters 1978). More than risk sharing appears to motivate contract choice.

The risk-sharing nature of the share contract also needs to be more carefully examined. If transaction costs are zero and agricultural production is characterized by constant returns to scale, a share contract would never be preferred on the basis of its risk-dispersal advantages (Reid 1973, 1975, 1976b; Stiglitz 1974; Newbery 1975a, 1977; and Newbery and Stiglitz 1979). Tenants who wished to reduce risk could spend part of their time as wage workers for landlords who would assume the risk and part of their time as fixed-rent tenants where they assumed the risk; they could thus arrive at their preferred degree of risk holding. If, however, the transaction costs and information requirements of the separate wage and rental contracts exceeded those of the share contract or if there were indivisibilities in production such that small production units could not fully use the indivisible input, then the share contract would indeed be preferred. Roumasset (1976) argues that, in imperfect labor markets, family labor may be a fixed factor; see also Mazumdar (1975). Bardhan (1979a, 1979b, 1980), Bell (1977), Bell and Zusman (1976), Braverman and Stiglitz (1982), Newbery (1975b), and Newbery and Stiglitz (1979) point to imperfections and indivisibilities in capital, draft-animal, and management-input markets. Warr (1978) argues that optimal share rental contracts require less information on land quality than fixed-rent contracts and thus may be preferred when tenants are uncertain about land quality. In this second best world, the share contract may be an efficient risk-dispersal arrangement. Furthermore, because of the difficulties of supervising labor inputs of wage workers, there may be limits to how large a farm a landlord can effectively manage himself, and thus the incentives for the tenant that are built into the share contract in reducing shirking by labor are another reason for its choice.

Share contracts may also be used to reduce employment risk and labor-recruitment costs. A tenant may wish to be a sharecropper because that contract essentially offers him guaranteed employment during the crop season, and as a result he can avoid the risk of unemployment. (See Newbery 1975a, 1975b, 1977; Newbery and Stiglitz 1979; Bardhan 1977; and Bardhan and Srinivasan 1971.) Similarly, landlords may wish to form enduring implicit or explicit contracts with workers to reduce their labor search and recruitment costs during peak seasons. Thus, they have an incentive to enter into share contracts with tenants before the start of the crop season when the opportunity cost of the time spent in negotiations is relatively low. (See Bardhan 1979a, 1979b, 1980; Kikuchi and Hayami 1980; Hossain 1978; and Raj 1970.) In an agricultural economy, both the wage and the amount of employment may depend on the state of the crop, which in turn depends in part on the state of nature. In such

an economy, the share contract offers additional risk-sharing advantages over some combination of wage and fixed-rent contracts because wage contract employment is itself uncertain.

Finally, examing the risk-sharing function of the share contract, Stiglitz (1974) finds that, if a landlord is less risk averse than a tenant, then the tenant will pay a higher share of the output as rent with the extra rental payment representing a risk premium—a payment the tenant makes to reduce the risk he bears. The share contract acts in part as an insurance contract. Similarly, if the landlord is more risk averse than the tenant, then an increase in crop risk will decrease the rental share paid to the landlord by the tenant. Cheung (1969a) found that, in China in the 1930s, the average rent paid under share contracts exceeded the average paid under fixed-rent contracts, suggesting that tenants were typically more risk averse than landlords. Higgs (1977) and Winters (1974, 1977, 1978) provide evidence that the average share rent paid typically exceeded the average rent for land under fixed-rent contracts in the postbellum South and in nineteenth-century Iowa, respectively. They suggest that the higher share rents reflected the use of managerial and other inputs provided by the landlord as well as risk sharing. For more on the risk-sharing function of share contracts, see Cheung (1968, 1969b) and Bardhan and Srinivasan (1971).

In sum, the sharing of managerial functions; imperfections in capital, labor, draft-animal, and other input markets; the creation of incentives for labor effort to avoid shirking and supervision costs; transaction and enforcement costs; the reduction of the incidence of contract breach; and the sharing of employment risks and of environmental and decision risks—all may provide incentives for the choice of share contracts, not just the sharing of environmental risk that Scott stresses in his discussion of share tenancy.

Scott argues that the switch from share contracts to fixed-rent contracts that frequently accompanied colonial economic change shifted risk onto unwilling tenants, thus increasing the instability in their incomes and threatening their subsistence. This trend was often exacerbated by colonial governments that usually refused to reduce taxes in the face of crop failures and declining prices for agricultural products, and often, instead, raised taxes in an effort to keep the government solvent. Many governments acted in this way, and their actions contributed to an increase in the instability of peasant incomes and a lowering of the average.

The shift from share to fixed-rent contracts needs to be examined further. Scott reports that share contracts were more common in upper Burma, but, in the commercialized rice-exporting area of the lower Burma delta, fixed-rent contracts were more common. In Cochin China share contracts gave way to fixed-rent contracts during the 1920s and 1930s. Scott also discusses the concurrent upward trend in land rents and the reduction in farm size as population density rose.

If tenants were more risk averse than landlords as Scott appears to argue, then why did they not offer to pay the landlord an even higher rental share under a share contract to avoid the risk of a fixed-rent contract? Perhaps tenants were less risk averse than landlords and, as instability increased, landlords were less willing to share risks, and the less risk-averse tenants then selected the better terms of a fixed-rent contract. Scott has overlooked the bargaining and, at least sometimes, competitive determination of the rental share and thus the opportunity for tenants to purchase some more insurance if they wanted to, and to avoid the fixed-rent contracts they chose. For a bargaining model of rental share determination that indicates that the number of landlords and tenants needed to give a competitive equilibrium is reasonably small,

see Roumasset (1979). (For models of the determination of the equilibrium rental share, see Bardhan and Srinivasan 1971; Bardhan 1977; Cheung 1968, 1969a, 1969b; Roumasset and James 1979; and Stiglitz 1974.) Even if the land market were not competitive, tenants could have agreed to pay a higher rental share than they had in the past, or would under fixed-rent contracts, in order to avoid the risk.

The discussion of the theory of share tenancy outlined above suggests other possible explanations for the trend to fixed-rent contracts. If we apply the Wright and Kunreuther (1975) argument, then, as farm size became smaller (due to population pressure) and risk increased, the safety-first farmer chose to gamble on the commercial fixed-rent contract as his best chance of survival. Acting as a risk-averse individual, he chose the fixed-rent contract; thus it may be that —though the tenant assumed more risk, as Scott argues, and economic conditions were the main reason for his choice—it was not a case of the landlords using their power to coerce tenants to change their choice of contract.

Another, even if less plausible, explanation is possible for Cochin China. Tenants lived in the area for a longer period and gained in managerial experience there; hence they had less need to share managerial inputs with landlords. Furthermore, as the frontier gave way to a more established society with courts and enforcement systems supplied by the colonial government, landlords needed share contracts less as a means to avoid breach of contract because the government would help ensure that they collected their fixed-contract rents in the event of default. These events would in part explain a trend to fixed-rent contracts.

Popkin (1979) argues that, as the size of tenant farms decreased and the number of tenants rose, the transaction and enforcement costs to landlords of supervising the larger number of share contracts became prohibitive, and thus the trend to fixed-rent contracts arose. Again, there appears to be more than one plausible explanation for this trend.

The discussion of the implications of risk aversion and economics of contract choice serve to qualify a number of arguments Scott made about peasant behavior. Some of his conclusions and inferences need to be reconsidered. Other plausible explanations can in some cases account for the same behavior in crop and contract choice. The moral economists need to furnish additional evidence to demonstrate that their interpretations specifically correspond to the facts in these cases. We also need to consider the assertion that commercialization necessarily increased risk.

The Commercialization of Agriculture and Risk

Scott argues that economic change during the colonial period systematically resulted in an increase in risk for peasant producers. He states that the conversion of tax, rental, and other compensations from payments in kind to payments in money and the penetration of local markets by imported manufactured goods exposed peasants to the risks associated with fluctuating prices and removed traditional secondary handicraft occupations that acted as cushions in times of stress. The commercialization of agriculture increased the importance of the variable-cash costs of production for purchased inputs and thus exposed peasant producers to more risk. Scott also argues that, though, in a small local market, price and output movements tended to be inversely related, prices became independent of local production with the introduction of export markets, and thus on balance the insecurities of world markets were greater. Unfortunately, Scott offers no data on the variability in prices or

real or money incomes of peasants in this period to substantiate his plausible arguments.

Although prices and output in local markets may have been inversely related, these markets are thin in that little output is traded and prices tend to be unstable. In this situation, the subsistence farmer does not benefit much from the high prices, and thin markets provide little security. Without markets where goods are readily available on a reliable basis for purchase or sale, farmers must rely on self-insurance and, in cases of substantial wealth inequality, perhaps on patron-client relations. For a discussion of these points in the context of Indian economic change, see McAlpin (1974, 1979, 1980). The colonial government in India also frequently provided public works employment and relief in an effort to reduce mortality due to famine. For the case of Vietnam, see Popkin (1979).

Self-insurance implies growing more of the subsistence crop than the farmer expects to need and storing excess production for later use. Due to spoilage and losses to pests, the costs of storage are high. Because the farmer lacks large cash reserves (in part because markets are unreliable) and credit, he will not be able to rely on purchasing grain locally, where regardless of price little grain will trade in a time of shortage; and because the local market is only tenuously linked to outside markets, the higher price will not readily draw grain in for local consumption. Because the high prices generally come only when crop output is below average, the farmer is unable to sell grain when prices are high in order to accumulate cash reserves to purchase grain when his crops fail. In this situation, the penetration of market and, in particular, the reduction of transportation costs through colonial infrastructure investments, such as canals and railroads, give the farmer new strategies to reduce the risk of disaster.[5]

Because Scott has not provided documentation that instability increased or that subsistence levels of income were threatened more often because of the variability in market prices, his conclusion that exposure to international markets increased insecurity does not follow. The increase in insecurity may well be primarily a result of the increased population pressure on the land and increased taxation by government rather than market fluctuations. Scott does, however, stress these trends as well as the market instability.

The Economics of Collective Action

Village Welfare and Insurance

Scott argues that, because peasant producers were generally risk averse, they were willing to invest in village insurance and welfare institutions to help assure subsistence for everyone. Patron-client relations represented one important form of insurance, and there was widespread social pressure for at least some redistribution

[5] McAlpin (1974, 1979, 1980) found that in India the effect of railroads and markets was to reduce variability in prices both across time and space and to provide farmers with much cheaper forms of self-insurance. With reliable markets, farmers could raise some crops in excess of their subsistence needs for sale, accumulate cash reserves, and with the improved transportation system count on being able to use the cash to purchase grain that was shipped in from other regions. McAlpin found that in the period after 1900 (when much of the transportation system was completed) insufficient rainfall and crop failure were just as common as in earlier periods, but the incidence of disease and mortality was much lower. In Thailand in the nineteenth century, the development of rice exporting and paddy markets greatly reduced regional variability in prices; see Feeny (1976, 1982a).

from the wealthy to the poor. Collective village resources, such as communal lands, were to be used in an effort to assure all village citizens of a means of survival. Taxes were levied on the village as a whole, and implicitly the better off paid taxes for the less well off.

Popkin (1979) argues, in a major challenge to the moral-economy approach, that peasants are household utility maximizers who, although they have the same safety-first goals as Scott assumes, will behave according to their self-interest rather than the village's. The basic issue is one of individual versus collective rationality and of what motivates the individual's behavior. In village welfare schemes, everyone might agree that everyone would be better off if everyone would contribute to a fund for the help of the truly needy. However, unless everyone is forced to contribute and only the truly needy can collect, it may not be individually rational to participate. Similarly, for village insurance schemes, mechanisms to prevent moral hazard and adverse selection problems will be needed.

Popkin focuses on the Vietnamese experience and argues that both the insurance and welfare schemes offered in the village were limited for three reasons: the problems associated with free-riders, moral hazard, and adverse selection. Welfare was generally not available for families with able-bodied male adults. Because it was difficult to determine whether the poverty was caused by bad luck, poor decision making, or laziness, welfare could generally be collected only by those with an easily verifiable condition, such as widows or orphans. Popkin also points out that village insurance schemes were not successful because, if they had been, individual farmers would have refrained from private diversification of landholdings by farming plots in different localities and instead would have each raised more output on larger single plots and relied on insurance in the event of personal disaster. Farmers here insured themselves at a considerable cost in productivity because the collective insurance schemes were limited.

Effective villagewide insurance was apparently not available, because its costs outweighed the benefits. Costs were high in part because villagers, each of whom was an individual maximizer and assumed that others were also, did not trust the person who would hold the insurance premiums. The trust and reciprocity that the moral economists stress were apparently not sufficient. An effective insurance program would have required an easily verifiable means to determine if an individual's crop failure was his fault or not. It would also have required compulsory participation to reduce adverse selection. This would mean that high-risk farmers were being subsidized by the low-risk ones. Given the economies of scale in insurance, risk pooling over a small group such as a village may have generated limited gains with respect to the costs of organizing the program.

Individual rather than collective activities to reduce risk tended to dominate. These included short- and long-term strategies. Peasants farmed plots in different areas surrounding the village as a means of diversification. They also invested in patron-client relations and village institutions for the security they might provide. Families large enough to assure the survival of enough offspring to support the farmer in old age were a long-term investment in security. For a model that deals with this motive for having children, see Neher (1971). Given the uncertainty and limited scope of village insurance and welfare schemes, Popkin predicts a greater reliance on individual means of risk reduction and a resulting struggle over the control of village resources.

The collective activities that did take place were mostly narrow in scope with

well-defined obligations. Groups were often small, which reduced the monitoring costs and necessary leadership skills. Examples include reciprocal labor-exchange pools in which close attention was paid to how much time individuals contributed and how much time they received to guard against free-riders. Moerman (1968) stresses the fairly strict reciprocity of labor exchanges in a Thai village. Sansom (1970) found that membership in rotating credit societies in Vietnam was limited to those with good reputations. These organizations were generally small, based on mutual advantage, and not open to everyone. Similarly, burial and wedding associations had limited goals and clear obligations. Thus, the costs of coordination and enforcement limited the degree of cooperation, because participants were likely to act in their own best interests.

The moral-economy approach views the leadership of the village as a collection of patrons who, because of social pressure and traditional values, act to distribute communal village resources to assure the survival of village citizens. Popkin provides evidence of a more collusive oligarchic group, who took advantage of their office to appropriate the use of communal lands for their own gain.[6] Taxes were generally collected per capita within the village and then remitted by the notables to the provincial government. Draft obligations fell disproportionately on the poor in the village. Notables could purchase titles that exempted them from taxes and draft calls. Some communal lands were allocated on the basis of welfare needs to widows, but most communal lands were distributed on the basis of rank in the village, thus reinforcing inequality.

That village solidarity was more an ideal than a practice can be inferred from the trends that Scott and Popkin chronicle for the colonial period in Vietnam. With the growing strength of extra-village government, notables no longer were as dependent on local acquiescence to maintain their rule. Taxes continued to be collected in regressive ways and with the heavier and more inflexible French head and land taxes, notables took advantage of delinquency by poorer villagers to foreclose on their land. Auctions of communal land for temporary use in Tonkin and Annam were often conducted in secret. When public auctions were held, the smallest unit of land that could be bid on was frequently made so large that only the elite could successfully compete to gain the use of the communal lands. An opportunity to reduce instability for the poorer villagers was apparently readily forgone.

Notables, mandarins, and French citizens used their differential access to French colonial-government offices and facility with the colonial language to manipulate land-registration documents in their favor. The imperfections in the political market and, in particular, the land-registration system underwrote a great increase in the inequality of landholdings in Vietnam. This was particularly true in Cochin China where in spite of the land-abundant frontier conditions, landholding inequality increased. Popkin (1979) notes that the population in Cochin China more than doubled between 1880 and 1930, but the number of landowners remained roughly constant. Homesteading provisions were thwarted when the peasant who had brought frontier land under cultivation discovered, on applying for a title, that the land was already registered in the name of a local official or large landowner. Again, it appears

[6] For a model that deals with the welfare implications of rent-seeking behavior, see Krueger (1974). In his important new book on the theory of institutional change, North (1981) develops a model of the state based in part on an assumption of constrained utility maximization by the ruler. He argues that rulers serve their own interest subject to constraints on their behavior created by the entry threats of potential rivals.

that the rise in inequality was more the outcome of imperfectly competitive indigenous and colonial political institutions than market forces.

The key to making village social insurance institutions and collective action work was leadership or political entrepreneurship. Because village notables consistently used their power for personal gain at the expense of the security of other villagers, the scope for successful social insurance was limited. Villagers would not trust the notables to pool insurance premiums for fear that, when the money was needed, it would have already been spent by the leaders of the village for their own purposes.

Peasant Rebellions

Leadership was needed to overcome free-rider problems as well. Popkin notes that the political and religious protest organizations in Vietnam overcame these problems and thus in part organized the subsequent rebellions in two ways. First, the austerity of the life-styles of local leaders of communist and religious organizations (such as the Catholic Church, Hoa Hao, and the Cao Dai) encouraged villagers to place trust in them. Second, the services provided by these organizations included collective-consumption goods (like revolts) as well as excludable benefits (like intervention in courts and at government offices on behalf of members). Byproducts of participation included benefits that could be withheld from nonmembers, thus providing an incentive for self-interested villagers to join, while the organization could also work for nonexcludable benefits subject to free-rider problems. These protest organizations often focused on local grievances and provided local benefits attractive to peasants, and then used the resources to further more national objectives.

Popkin's arguments stress the importance of political entrepreneurship and borrow from Mancur Olson's byproduct model of collective action; for a review of some of the relevant economic theory literature, see Mueller (1976), Runge (1981), Sandler and Tschirhart (1980), and Schotter and Schwodiauer (1980). Reid (1977b, 1978) also highlights the importance of political entrepreneurship in organizing collective action and translating economic interests into political action. Similarly, Feeny (1972, 1976, 1978, 1979a, 1982a, 1982b) stresses the role of the supply of institutional change—the costs and benefits to decision makers—in determining the nature and pace of institutional change. (See also Guttman 1980; North 1981; Roumasset 1978b; Ruttan 1981; and Russell and Nicholson 1981.)

Although leaders undertook the considerable costs of organizing political alternatives and were probably motivated by intense moral and ethical beliefs, the peasants joined because the package of benefits and costs was more attractive than the alternatives. Here we can see an interesting difference between Popkin's political-economy approach and Scott's moral-economy approach. Scott explains peasant rebellion in terms of moral outrage. Decisions were made on a normative basis. In contrast, Popkin uses a model of self-interested decision making to explain participation.

Although Popkin (1979) stresses the importance of the intensity of the commitment of the leadership needed to organize the self-interested peasants, he does not adequately explain the motives of the leaders, who do not appear to have acted solely on the basis of their own self-interest. In a recent article, Popkin (1981) recognizes motives for participation other than self-interest, including ethical motives and the belief that individual contributions will affect the contributions of others and therefore have a perceptible effect on the outcome. North (1981) stresses the role of

ideology in ensuring compliance to codes of conduct when such behavior is not necessarily individually rational. He argues that ideology is used in an attempt to overcome the ubiquitous free-rider problem. See also Cumings (1981). Scott's model may do a better job of explaining why the leaders were willing to organize protests, while Popkin better explains the behavior of the participants.

Peasant revolt is another form of investment in seeking security. A revolt can be viewed as a lottery, with large gains if it is successful. Thus, peasants with small surpluses or those who are better organized are more willing and able to gamble on success. According to Popkin, the Vietnamese evidence shows no direct short-term relationship between subsistence crises and collective action. Subsistence crises were more severe in Tonkin and Annam during the 1930s, but those areas were more peaceful (with the exception of northern Annam) than Cochin China where peasants were better off and could better afford to gamble. Popkin argues that the violent revolt in northern Annam, in Nghe An and Ha Tinh in the 1930s, was the result of the degree of previous organization by Vietnamese Communists. He points out that even more severe famines around the turn of the century in the same provinces did not result in rebellions, so subsistence crises alone are not sufficient. (It should be noted that Scott carefully qualifies his argument about the relationship between subsistence crises and rebellion to indicate that peasants will not rebel when they perceive the power of the state to be overwhelming.)

The basis for peasant decisions is, thus, not what ought to be, as the moral-economy approach states, but instead the net marginal gains from making that decision relative to the net marginal gains from alternative decisions. Subsistence crises did generate grievances, but rebellion did not necessarily follow unless peasants perceived that action to be in their best interest or were effectively led by those who offered other benefits to peasants and perceived rebellion to be in their own best interest.

Scott argues that, in his model, peasants are rational because when faced with insecurity they create social-insurance institutions based on the ethics of subsistence and reciprocity. Peasants then rebel when those ethics have been violated and the power of the government is not perceived to be overwhelming. Scott has failed to extend the logic of his model to the case of rebellion. In Scott's treatment, peasants create social institutions appropriate to their needs and environment and then act on a normative basis when the situation changes. To be consistent, Scott should instead base his model of peasant rebellion on the same self-interested rational peasant behavior from which the ethics of subsistence and reciprocity are derived. This point is made in a number of essays by Harsanyi that compare rational-choice approach models with other approaches (1976). (A critical reaction to the rational-choice approach is found in Field 1979, 1981.) Popkin's model stresses the self-interested nature of peasant responses in which the costs and benefits of participation are weighed.

Conclusions

The points discussed serve in some cases to challenge and in others to qualify the model of peasant behavior put forth by the moral-economy approach. First, Scott has failed to document trends in the numbers of peasants whose incomes were close to their disaster levels and thus who might have been expected to act in a risk-averse manner. He has also failed to document the increases in instability of peasant

incomes. In short, he has not carefully demonstrated the empirical applicability of his model.

Second, the assumption of risk aversion or safety-first behavior does not always lead to the conclusions Scott draws. Peasants acting in that manner may choose to gamble on the crop or technique that maximizes expected profits.

Third, the behavior that Scott interprets as evidence of safety-first attitudes can be explained by other factors. There are other motives for share tenancy, crop diversification, and a reliance on subsistence crops.

Fourth, the evidence does not clearly indicate that the development of markets increased the risks faced by peasants. In fact, it indicates that markets gave peasants another effective tool to use in their self-insurance plans. This, in part, explains their responsiveness to the opportunities afforded by the introduction of regular markets.

Fifth, the moral economists have underemphasized the problems of moral hazard, adverse selection, and the free rider, and overemphasized the degree of traditional village solidarity. Individual and collective rationality are not always the same. When village elites could, they appear to have routinely acted in their self-interest at the expense of village welfare. Self-interest also appears to be a model with superior explanatory power for peasant behavior. Thus, cooperative activities tended to be limited to areas where free-rider problems could be easily solved unless committed leadership was available.

Sixth, rebellions occurred where peasants were better able to weather subsistence crises or were better organized. The moral economists' model may better explain the intense commitment of political entrepreneurs, but the self-interest model better accounts for mass participation.

Finally, the cause of the deterioration of the conditions of some peasants in Southeast Asia during the colonial period appears to be due more to imperfectly competitive indigenous and colonial political institutions than to the introduction of a more market-oriented economy. This theme is repeated in Thai economic history where Thai elites failed to make productivity-increasing investments in irrigation, agricultural research, and extension services. Although these investments would have been in the social interest, they were not in the interests of the leaders of the government and thus were not undertaken (Feeny 1976, 1979a, 1979b, 1982a, 1982b).

Increases in the inequality of landholdings appear to have been more the result of differential access and skills in handling government regulations than differential economic skills. Imperfect access to credit markets by Vietnamese peasants was in part a result of their lack of land titles and registration cards, which were only granted through channels controlled by village and local government elites. Peasants learned how to handle markets but found it more difficult to overcome politically enforced oligarchy and cartels.

In sum, Scott has written an important and stimulating book that deserves careful attention, qualification, and elaboration. Continued interdisciplinary discussion of the alternative models of peasant individual and collective choice will be valuable. Rigorous empirical and, when possible, quantitative testing of hypotheses derived from these models will contribute significantly to the advancement of social-science studies of less-developed countries.

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