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By Marshall Harris*

The Institutional-Legal Face Of the Environmental Coin

I. INTRODUCTION

No man is an island unto himself; no creature is independent of its environment. The environment of all non-human creatures is limited to their habitat—where animals normally live and grow. Allocation and use of the habitat among animals is based on the tooth and nail (fang and claw) law of the jungle. The allocation and use of the habitat of human beings—of their biological and physical resources—are fundamental parts of the human environment, but not all of it. For human beings, a complex dimension is added to their habitat to make up their environment. That dimension is the social compact among men—the man-man relations—regarding how they live together in their total environment.

Relations among men regarding the allocation and use of resources may be equally important to their well-being as the quality and quantity of their biological and physical resources. The anomalous situation, "rich land, poor people," such as occurs in the Mississippi River delta, is symptomatic of man-man relations that have failed to maximize to an acceptable degree the well-being of all people earning a living from those rich, natural resources. Relations established among men regarding resources may permit their best use, yet deny an acceptable distribution among the people of the fruits of that use; distribution may be acceptable but it is an exception in modern society. Man-man relations may also prevent the best use of their environment which is typical in today's economy.

The current fanatic, almost fantastic, discussion of our environment seems to be centered on only one face of the environmental

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coin. That face encompasses all of the climatic and biotic complex that we usually speak of as the free gifts of nature—the earth including the flora and fauna. The air, the water, the soil, and the animal and plant life are foci of current attention. These things are concrete; they can be seen, smelled and touched. They represent the nature-nature side of the coin.

Probably the most significant features of our environment are the institutions and laws established by man to govern resource allocation and use, the other side of the environmental coin. All cultural conditions—social, economic, and political, such as customs, laws, religion, social patterns, economic organization, political structures, intrinsic values, legal attitudes, and goals or objectives—make up the institutional-legal face of our environmental coin. They influence the ways men use the biological and physical elements of the environment and distribute the fruits therefrom.

Thus, man's environment is made up of two distinct features: the complex of elements that determine the form and survival of an ecological community, and the totality of social and cultural conditions that determine the life and well-being of the human community. Concern with the first feature focuses on both nature-nature and man-nature relations. The second feature is that of man-man relations. The first is given, the second is man-made. The first is subject to partial control by man, the second is subject to total control by man. The first I will call the bio-physical, the second the socio-eco-political.

The central thesis of this article is that present concern about the environment should involve institutional-legal aspects (the socio-eco-political side) as well as biological and physical features (the bio-physical side) of our environmental coin. A corollary thesis is that maladjusted socio-eco-political relations are among the chief causes of the present and prospective deterioration of our environment's bio-physical attributes. Chief among the socio-eco-political features that are causing problems on farms are: (1) the widespread attitude that resources that I own are mine to do with as I please, which is associated with the fee simple absolute complex of resource ownership exemplified in the sole proprietorship, (2) the emphasis in farming on sole proprietorships, although many farms are too small to yield an acceptable level of living and to maintain and improve the natural resources of the farm, (3) the farm settlement pattern that has resulted in many farmers operating several scattered tracts, many of which are too small and remote to permit efficient use, particularly of labor and machinery, (4) the restrictive interpretations of the concept of waste and (5) the rapidly developing shifts of entrepreneurial functions to

off-farm firms. The institutional face of our environmental coin could be reviewed in its entirety, but it would seem best in this short article to focus on a particular and familiar sector—the agricultural complex. Major emphasis will be placed on the farm aspect with frequent reference to agribusiness.

II. FEE SIMPLE ABSOLUTE OWNERSHIP

During the Colonial Era, the pendulum of freedom swung as far to the left of center as feudal tenures had swung restrictions to the right. So complete, so unrestricted, and so unencumbered were American notions of land ownership that the legal concept of "fee simple absolute" became the distinguishing nomenclature. Fee simple absolute meant "an estate limited absolutely to a man and his heirs and assigns forever, without limitation or condition."¹ The word "fee" admittedly was enough to distinguish this specie of estates. The word "simple" was used to distinguish it from any kind of a conditional or limited estate. The word "absolute" was added to signify that it was the "largest estate and most extensive interest that [could] be enjoyed" by an individual.²

The tragedy was that fee simple absolute became synonymous with, "it is my own to do with as I please." Particularly in rural areas, landowners today still cling to the idea that "I have the right (or I should have the right) to do with my *own* as I please." The idea developed that the new fee simple absolute owner was not responsible, in the use of his property, to society or even to his God. A reciprocally related idea of responsibility was not developed, except use of his property, of course, could not create a nuisance—that is, interfere with another property holder's enjoyment of his property.

In actual practice, there has been substantial erosion of the idea of absoluteness, and there is surely more to come. For example, in Colonial America certain feudal dues were converted to real property taxes, and land was taken from private parties for such uses as space for mill races, for mills themselves, and for ferry landings. Standards for borderline farm fences were established; hunting on another's land was regulated; and at least a few land-use regulations were imposed in Pennsylvania—the requirement to plant mulberry trees for the production of silk, oak trees for the construction of ships, and the maintenance of one acre of timber land for each five acres of cleared land. The powers to tax, to take, and to police were soon recognized as essential characteristics of

1. BLACK'S LAW DICTIONARY 742 (Rev. 4th ed. 1968).

2. *Id.*

a sovereign state—as powers necessary for government to carry out its proper functions. Their applicability broadened and deepened as society became more complex and more integrated. Today, the bounds in the use of these powers are circumscribed chiefly by the “due process” and “just compensation” doctrines of our law.

Aside from the exceptions just enumerated, the attitude of completeness of fee simple absolute ownership, even to this day, remains almost sacrosanct. Society has been cautious in using its reserved powers, particularly in exerting controls under the police power and in taking private property for public use. The taxing power, on the other hand, has been applied with considerable freedom. Officials have presumably found that more could be accomplished in shorter time, and with less unfavorable public reaction, by buying adjustments rather than compelling them via the use of the police powers. Taxes, of course, provide the funds used in buying needed adjustments (the spending power) in the allocation and use of privately owned resources.

Looking to the future, the police power and the right of eminent domain will no doubt be used increasingly. Taxes (we have largely shifted from property to income taxes for such purposes) may continue as the chief source of funds with which to buy needed socio-economic-political adjustments. Although the power to spend may continue to be used to accomplish public purposes, the police and eminent domain powers are expected to expand rapidly, particularly if we effectively develop “partial taking,” as exemplified by securing an easement. The effectiveness of rules and regulations under the police power depends largely on a change of attitude from freedom to do with one’s property as one pleases, to a posture of responsibility in the use of one’s property.

Physical scientists may find ways to reduce exploitation and pollution much more easily, rapidly, and completely than will social scientists find ways of making effective the reserved powers of society in requiring a wise use of resources. It behooves social scientists to discover how to use these societal powers in attaining public policy objectives. So long as reaction persists against taxing as a direct means of encouraging adjustments in land use, major dependence may shift to the use of the police and eminent domain powers. This is probably where emphasis belongs, even if the public’s attitude toward taxes and the spending power were favorable.

We may need to re-examine the police power to determine the nature and extent of land-, water-, and air-use regulations designed to prevent exploitation of the environment. We may need to use more effectively the taking power in acquiring use easements for open space and scenic beauty. We may need to adjust the taxing

power to encourage specific land use.³ We may need to develop the idea of responsibility for the use and development of farm land as a countervailing power to the outmoded idea of complete freedom to use what I own as I please. These reserved powers may be more effective in preventing exploitation and in improving our environment when used in connection with the spending power.

The revolutionary idea of freedom was intended as a liberation from restrictive feudal tenures. But it became a license, almost without limitation. There is, however, not a single federal or state statute that proclaims the freedom of a landowner. Freedom derives its dominance from the warp and woof of numerous statutes, decided cases, and customary usage. An analysis is needed to understand how it attained its status and how it may, in the future, be brought into proper perspective. The same may be said regarding use of reserved powers. How may they be combined most effectively, along with the spending power, to serve the needs of individuals in general and society in particular? What kinds of legislative action would balance freedom with responsibility?

III. THE SOLE PROPRIETORSHIP

An outstanding feature of the institutional face of the farmers' environmental coin is the large number of small, single-family, sole proprietorship farms owned and operated by one person, rather than by a partnership, a corporation, a cooperative, a collective (as in Eastern Europe), or any other type of co-ownership. Sole proprietorships in farming are in sharp contrast with ownership patterns in industry and commerce. While the sole proprietorship farm has a number of strengths, it is not free of disadvantages. Chief among the disadvantages is the tendency to achieve ownership at the cost of being restricted to units too small to supply the farm family with an adequate level of living, and income sufficient to maintain and improve the farm. At the same time, the sole proprietorship structure does not prevent the development of large-scale, commercial farms—exemplified by farms that received \$100,000 or more from farm sales and produced approximately one fourth of the value of all farm products sold by commercial farms. These large-scale farms, some of which are incorporated, represent only a small proportion of all commercial farms. Farms too small to produce an adequate level of living, typically sole proprietorships, represent the vast majority of all farms. These small holdings may

3. For example, as an incentive to reforestation, the annual property tax on forest land could be replaced by a stumpage tax on the timber harvested.

continue for another decade or two as major pockets of rural poverty, despite the tendency of their owners to seek a livelihood elsewhere.

The shift from small, sole proprietorships to adequate-sized farms has been woefully slow. Despite the heavy migration from farm to city during the last three decades, too many farmers remain on too small holdings. This tendency "to hang on to the bitter end" grows out of our commitment to fee simple absolute ownership by sole proprietors, and our stance "to do with what I own as I please." Farms that are too small to yield an adequate living for the farm family are also too small to permit expenditures for proper upkeep, conservation, and development of their natural resources. Significantly, there appears to be a reluctance among authorities to require these small marginal farmers to make expenditures for the prevention of pollution and the conservation of resources.

Another debilitating feature of sole proprietorship farms is the heavy annual fixed charges on many of them vis-a-vis highly variable annual farm income.⁴ Some sole proprietors who have attained the coveted ownership status via mortgage indebtedness, whether through inheritance or outright purchase, must make heavy annual fixed payments for amortization and interest. Sole proprietorships in farming contrast sharply with industrial corporations in at least two regards: corporations generally do not amortize their capital investments and they pay dividends, which vary with annual income, rather than interest for the use of capital, which usually is a fixed annual charge.

Differences between a typical sole proprietorship and a modern corporation, based on fixed versus variable selected annual charges, are not inconsequential. To meet fixed annual charges, a heavily indebted sole proprietor farmer must, in years of low income, exploit both his farm and his family to meet his obligations. If he attains sole proprietorship of an inadequate-sized farm, he may have to exploit it, even if there is only a small mortgaged debt and even if weather and prices are favorable. Although the sole proprietorship may have served agriculture well in years of small-scale farming, it is questionable whether the structure can be maintained without massive subsidies in years to come, when the pressures may be increasingly favorable to large-scale farming. The issue is whether the costs, in terms of public subsidies and family

4. Property taxes, of course, are an important fixed charge. All forms of business enterprise pay some real property taxes directly or indirectly, but few businesses have as large a proportion of their total investment in real property as do farmers.

exploitation, outweigh the non-economic values associated with sole proprietorships.

Our sole proprietorship farming also reveals stresses and strains associated with intrafamily, intergeneration transfer processes. Although the inheritance system may have worked satisfactorily for relatively small-scale farms of the past, one may wonder whether it will be as effective for large-scale farms of the future. Arrangements that were adequate for the transfer of typical \$50,000 estates of the past may not be adequate for \$500,000 farms of the future. The cash needed to settle the estate and to pay bills and taxes may be hard to acquire without the sale of some of the farm assets. Certainly, large-scale farmers under present conditions of credit will need to maintain a comparatively high degree of liquidity if one heir is expected to take over the home farm.

Although a sole proprietorship is supposed to maximize the owner's freedom in decisionmaking, it may actually dictate unfavorable decisions in two general areas. First, in order to meet fixed annual payments of amortization and interest, the farmer may have to exploit his resources, sell his products at an unfavorable marketing time, or select only relatively stable income enterprises. Second, he may have to reduce inordinately the capital he has allocated to develop resources, abate pollution, maintain a desired level of liquidity, and attain an acceptable level of living.

Credit experts have estimated that by 1980 farm capital assets may be over \$350 billion and credit may be used to finance approximately \$125 billion.⁵ Brake predicts that many successful sole proprietors may require a minimum of a quarter to a half million dollars capital. To understand the meaning of these two data, examination must be undertaken of the agricultural industry as a whole and of a sole proprietor in particular.

It is estimated that \$65 billion of the \$125 billion credit needs will be for farm real estate. If amortized over 20 years, the annual cost would be over \$3 billion. At 8 per cent the annual interest cost would be approximately \$5 billion. The \$8 billion fixed annual charge would be particularly burdensome in years of low prices or poor production conditions. By comparison, the typical corporation

5. Melichar, *Farm Capital and Credit Projections to 1980*, 51 A.J. Ag. ECON. 1172 (1969); Brake, *Impact of Structural Changes on Capital and Credit Needs*, 48 J. FARM ECON. 1536 (1966); *Emerging and Projected Trends Likely to Influence the Structure of Midwest Agriculture, 1970-85*, MONOGRAPH No. 11 (University of Iowa College of Law, Agricultural Law Center, Brake ed. 1970); Heady & Mayer, *Food Needs and U.S. Agriculture in 1980*, 1 TECHNICAL PAPERS (Nat'l Adv. Comm. on Food and Fiber, 1967).

does not have such heavy fixed debts since it satisfies its basic capital requirement via sales of stocks to investors. On such capital it need only pay variable annual dividends according to fluctuating net earnings. New research, hopefully by economists and lawyers working together, should seek to discover, analyze, and resolve legal-economic problems that would emerge if some sole proprietor farmers were financed under conditions that required neither amortization nor a fixed annual return on "borrowed" funds.

The individual sole proprietor farmer is more vulnerable to fixed annual charges than is the farming industry as a whole, because his annual income is much more variable. If one farm heir bought out the other two heirs of a half million dollar estate and borrowed the funds to pay them their equal shares, he would typically need to give a mortgage for \$333,333. Amortization over 20 years would amount to \$16,667 annually; annual fixed interest at 8 per cent would be \$26,667—a fixed annual cost of \$43,334. If no amortization were required and "interest" varied with income, as under the corporate form, the farmer would in an average year pay only \$26,667. If prices of farm products or production conditions caused net income to decrease by half, he would pay only \$13,334, a difference in one year of \$30,000 from typical farm credit arrangements.

Looking to the future, it is anticipated that few sole proprietor farmers, under present credit conditions, will be able to attain full ownership of farms large enough to yield an acceptable level of living and to maintain and improve the farm resources. Farmers may have to combine many means—inherit, buy, mortgage, rent, contract, incorporate, form partnerships or other forms of co-ownership and co-operations, and so on—to obtain a viable farm. This may mean they will no longer be sole proprietors. Most of the relatively new devices that are now being used represent substantial departures from sole proprietorship patterns. Innovations in the socio-economic face of the environmental coin have not generally been suggested by recent research, or by the farming establishment; rather, they have been imposed by off-farm firms.

Improvements in the sole proprietorship form, however, will not automatically evolve any more than did the original sole proprietorship structure. Research is needed to float to the surface those weaknesses that are inimical to the best interests of farmers and society. How much can be borrowed from other forms of organization, the corporate device for example, and how much can be fashioned from new ideas before the sole proprietorship form is destroyed? Other questions include: Can mere modifications of present sole proprietorships fulfill the requirements? If not, perhaps what is needed is a new legal-economic form to meet the needs

of modern agriculture. If so, what would be the characteristics of the new business form?⁶

IV. FARM SETTLEMENT PATTERNS

Another observable feature of the institutional-legal face of the farmers' environmental coin is the size and shape of their farms. The rectangular survey system of laying out ownership units and the 160-acre homestead pattern, under which much of our farmland was settled, jointly have encouraged exploitive cultural practices, physical subdivision of the farm into too small ownership and operating units, and use of widely scattered tracts to make up adequate-sized operating units, all of which affect adversely the bio-physical face of our environmental coin.

The rectangular survey system was originally adopted as the sole system for laying out units for distribution of the vast public domain. (The metes and bounds system was used on some nonpublic domain lands). As a consequence, farm boundaries usually run north and south, and east and west, regardless of the physical features of the land. Farmers are often encouraged by this rectangular pattern to cultivate their farms up and down slopes, rather than on contours. Also, permission is not always granted by an adjoining landowner to empty water from terraces onto his land, which may make terracing infeasible. An example of a real issue regarding resource preservation is whether farmers should be permitted to operate as they please, or whether society should use its reserved powers to require farming on the contour, perhaps with terraces on land that exceed a minimum slope and without regard to boundaries between ownership units.

The power of the purse has not proved sufficient to attain adequate conservation and development of land resources. Perhaps the police power should be used in conjunction with the spending power. In any event, police power may become the most effective corrective measure, with spending power confined chiefly to those marginal situations where responsibility may involve the public as well as a private owner.

As to physical subdivision of farm units, the 160-acre homestead originally was not too small for a viable unit in most sections of the country. It appears to have served well, and adjustments in

6. As one keen researcher observed, "The most important inventions are not mechanical inventions, or such developments as chemotherapeutics. The most important invention of our age is very probably the corporate form." C. BARNARD, *THE ENTREPRENEUR AND FORMAL ORGANIZATION* (1949).

size have for the most part proceeded apace, particularly in recent years under the impact of modern technology. It seems, however, that farm settlement patterns are beginning to stymie adjustments in size—that the problem of gaining control over enough land for an economic unit is becoming increasingly difficult. Undersized units usually result in exploitation of either the land or the farm family, or both.

Farm settlement patterns in conjunction with the inheritance system have contributed to the difficulty of adjusting farm size to modern technology. They have encouraged, rather than discouraged, subdivision of ownership units. There seems to be a recent tendency, however, for probate courts to reduce the incidence of physically subdividing farm property, which is helpful. But the spouse's option to take a portion of the real property, in preference to the allocation designated under the will, still presents a problem in farm fragmentation. The intrafamily, intergeneration transfer event, however, is a good time to effectuate farm-size adjustments by encouraging consolidation into viable-sized farms and by discouraging, if not preventing, subdivision into uneconomic-sized units. But we cannot depend on this completely. We did not know a generation ago how large a farm should be today in order to be viable; neither do we now know how large it should be by the year 2000. Flexibility and growth are two characteristics of the land tenure system that should be kept intact.

Scattered farm tracts prove costly in two ways: (1) the additional amount of actual time required and the wear and tear on equipment and operator in getting from the farmstead to non-contiguous tracts, and (2) the extra time required in farming many small fields, rather than a few large ones. These difficulties will tend to increase as larger and larger machines become available for major farming operations. It is seldom feasible, for instance, to use twelve-row corn and bean equipment on widely scattered, small tracts. Field size ought to range up from 120 acres for the most efficient use of this equipment. The movement of small machines over heavily traveled highways and their operation in small fields may become increasingly impracticable. Specific studies are needed to determine how costly it is to travel long distances to and from scattered tracts, to operate in small rather than large fields, and to use machines smaller than those designed for large tracts.

Farming of scattered tracts and small fields has a deleterious effect on improving the environment in several ways: added costs leave less net income for conservation and development of the land resource; the tendency to plant cash crops year after year, rather than rotate the land use, increases the problems of conservation;

there is a tendency to keep and feed livestock on the home farm rather than graze them on scattered tracts that are not well suited to arable crops; and the movement of farmer and machinery over the highway, which creates a hazard of accidents.

We are probably at the point in time where some public program is needed to expedite consolidation of scattered tracts into economic-sized farms and fields. Studies on farm size and structure would be needed before recommendations could be made. Also, legal research would be needed on ways of effectuating such recommendations. Would it be advisable to prevent absolutely subdivision of viable farms at the death of the owner? If so, what would be the best legal means of accomplishing this? Would a national consolidation program also be needed to bring scattered tracts into units large enough for efficient farming? If so, what would be the characteristics of the program?

V. CONCEPT OF WASTE

One of the most relevant and firmly institutionalized features of the socio-eco-political face of the farmers' environmental coin is the concept of waste.⁷ Waste became a fundamental characteristic of the feudal land system from which we developed our systems of property rights and farm ownership. Originally, the rule against waste was designed to prevent abuse or destruction by a feudal tenant rightfully in possession of the lord's real property. Apparently, the rule against waste was never applicable to the feudal lord. Today, the law has substituted for the feudal tenant anyone in rightful possession who does not hold fee title to the property—a tenant for example; and for the feudal lord the law has substituted the holder of the fee title or the person who holds the reversion or remainder interest. So our laws today provide protection for the owner against one in rightful possession (as contrasted with a trespasser) who commits either voluntary or permissive waste, but it does not protect society against waste by the owner.⁸

In past endeavors to make ownership complete and absolute, we have followed the feudal pattern which permits the owner (who took the position of the lord) to waste the property at his whim.

7. Waste is an unreasonable or improper use, material alteration or deterioration, mismanagement or omission of duty, or abuse or destructive use in respect to real property by one in lawful possession but who does not hold the fee title or the full estate as does the owner, the heir, or him in reversion or remainder. Voluntary waste is willful, or done, or committed; permissive waste results from mere negligence, or failure to take reasonable care of the property.

8. See generally Harris, *Legal-Economic Aspects of Waste Law as it Relates to Farming*, MONOGRAPH No. 13 (University of Iowa College of Law, Agricultural Law Center, 1974).

Thus, a farm owner never legally has owed society the responsibility of preventing waste. He does not owe society that which the law requires of his tenant. It is perhaps this paradox that makes it difficult for a local jury to find that an occupier has committed waste, except in cases of flagrant abuse. Even if a life tenant, for example, is deteriorating the property severely, it is difficult to get a conviction (particularly where owner-operators in the community are doing similar things). Why should a tenant-operator be required to maintain higher standards of good husbandry than those required of an owner-operator?

In developing concepts about property rights and ownership, we may have erred in leaving the owner completely free to abuse and even destroy his land for farming. But freedom was a powerful idea at the time our land system was developing. Even so, it may be an unconscionable mistake to continue the unbridled freedom to waste, pollute, damage, or deteriorate by either the owner or a holder of a lesser estate under him. A change in attitude is necessary to change the pattern of use and abuse. Should not the owner be as responsible to society as a tenant is to his landlord? We have made some progress in controlling uses by the owner of some mineral and oil lands. Similar progress could be made in regard to farm resources. Control should be easy as to air and water, for it is generally conceded that these substances are owned by society, except for limited and special rights regarding riparian land.

We need to change attitudes about the rights conferred by ownership before we can effectively prevent exploitation of our environment. Adoption of land-use regulations may have little effect until public spirit or attitude toward waste is brought up near the level of the letter of such regulations. Future considerations of waste should distinguish between short-run waste that is relatively easy to repair and long-term damage that is difficult or costly to repair. It should also be understood that much waste is encouraged or permitted by institutions and laws external to the farm firm.

From a bio-physical viewpoint, prevention of waste can be attained almost completely. From a socio-economic viewpoint, the allocation and use of farm real estate can almost eliminate all waste. An important question is: what legal means can be used most effectively in preventing waste of farm resources and in bringing the environment up to standards established by society so that farm owners will be responsible for wasting their land and polluting the air and water? If this can be accomplished, can the holders of lesser estates be held responsible effectively for not meeting the new standards of good husbandry?

VI. ENTREPRENEURIAL SHIFTS

There seems to be general agreement among researchers that many entrepreneurial functions are being shifted from farm to off-farm firms. There is less agreement as to the impact these shifts will have on conservation, improvement, and development of farm resources.

Vertical coordination via production contracts probably presents the most crucial problem, particularly where integration is so complete that, in effect, the farmer drops his entrepreneurial robe and dons the raiment of a wage worker. The shift in entrepreneurship is complete where the off-farm firm manages the entire on-farm production process, as some large processors and suppliers are now doing.

Shifts in entrepreneurial control are manifest in other economic contacts. For example, the farm tenant does not possess as much organizational and operational control as does the full owner-operator, and the landlord may be unwilling to furnish inputs necessary to prevent erosion, exploitation, and pollution of the farm environment. A farmer, whether owner or tenant, who depends in whole or in part on custom work likewise is less independent than when he uses his own machinery and other inputs. Even the full owner may surrender some of his entrepreneurial freedom when he mortgages his property. Some credit agencies now render management and operational services, particularly to their clients who are heavily in debt or face other financial problems. There seems to be a growing tendency all along the line for decisionmaking to shift from the farmer to one or more off-farm firms. Some shifts may increase the income available for the protection and enrichment of the environment. Few entrepreneurial shifts, however, seem to be designed to reduce waste or pollution in the use of our environment. At best, many are neutral; at worst, some encourage misuse.

Shifts in entrepreneurship from farm to off-farm firms may range from a small proportion of a few farm functions to all or nearly all of many functions, or even to all functions, in which case entrepreneurship is taken over entirely by the off-farm firm. Adjustments in entrepreneurial control may be very subtle or quite obvious.⁹ No one anticipated, in the early stages of vertical co-

9. Several studies have analyzed the shifts in entrepreneurial control to off-farm firms, usually by commodities. One study has made a comprehensive analysis, covering many aspects of entrepreneurial control. Harris, *Entrepreneurship in Agriculture*, MONOGRAPH No. 12 (University of Iowa College of Law, Agricultural Law Center). See also Harris, *Entrepreneurial Control in Farming*, ERS No. 542 (Economic Research Service, United States Department of Agriculture, 1974).

ordination via production contracts, that processors or suppliers would soon take over decisionmaking for virtually the entire broiler industry, but such is rapidly becoming the case.

An analysis of the current entrepreneurial situation should be made in terms of single enterprises (commodities), and by total farm firms (possibly in selected areas). Most of the descriptive analysis to date has been on a commodity basis. Little has been done toward understanding the shifting entrepreneurial situation for a whole farm or a particular geographic area. The analysis should establish the relationships among variables, and the results of shifts in entrepreneurial control. Analysis of the entrepreneurial situation for farm firms in selected areas would give some comprehension of how shifts in entrepreneurship affect both the farm and the community as a whole. The commodity approach is too narrow to expose the situation fully, or to suggest alternative lines of remedial action. The whole entrepreneurial picture should be studied before the most effective adjustments and improvements can be formulated. Questions may include: Would it be valuable to prevent a sole proprietor farmer from shifting so much of his decision-making under production contracts to off-farm firms that he becomes legally and economically a laborer on his own land?¹⁰ What new law is needed, if any, to specify the rights and duties of each party under rapidly expanding production contracts?

A marked tendency has been observed to investigate agricultural problems in small bits and pieces. Agricultural economic research has treated institutional-legal matters under topics such as partnerships, corporations, landlord-tenant relations, farm renting, father-son farm operating agreements, estate planning, taxation, conservation, rural zoning, waste, land use regulations, retirement, labor unions, legal liabilities, special control districts, and so on. Legal research has seldom focused specifically on matters related uniquely to the farm economy. Emphasis has almost universally been on small segments, individual cases, and specific statutes covering many of the above topics. Specialization, however, should not be derided. Progress is generally made by differentiation and by bringing much effort to bear on particulars. Fragmentary analysis, however, may miss basic functioning attributes of the system as a whole.

Perhaps what is needed is a generalist to synthesize, to bring together various parts into an operative whole. A way must be found to fit together the results of past research and to undertake

10. See *Marcus v. Eastern Agricultural Ass'n, Inc.*, 58 N.J. Super 584, 157 A.2d 3 (1959), *reversed*, 32 N.J. 460, 161 A.2d 247 (1960).

new research that is concerned with broad fundamental characteristics of the functioning of agricultural institutional systems as a whole. Perhaps this could be done best by a comparative, integrated analysis of sole proprietorships, partnerships, cooperatives, corporations, and other forms of co-ownership and co-operatorship vis-a-vis each other. Perhaps what is needed is an integrated legal-economic research activity under which the disciplines of law and economics would bring to bear a hybrid vigor on problems of the compelling and intriguing matter of the organization and structure of agriculture.

The basis of the land tenure system was established during the period that the political Constitution was framed. Yet the Constitution has been made more efficacious by twenty-six amendments, while our "land tenure constitution" has not been strengthened by a major amendment. The "land tenure constitution" was not followed by a "tenure bill of rights" and later amendments. Perhaps what is needed is a bill of rights to give an advantage to sole proprietorships such as corporate law has given to corporations over the past two centuries.

VII. SUMMARY AND CONCLUSION

The current public discussion of environmental aspects of farming generally present but one face of the environmental coin, the bio-physical. The other side of the coin is the institutional-legal aspect of our environment—the socio-eco-political situation that results in the misuse of the bio-physical, which has many facets in addition to the institutional-legal face presented here.

We need to understand the institutional-legal face in order to determine the causes of deterioration of our biological and physical environment. Then we should devise alternative remedial programs and evaluate their probable consequences. The visible bio-physical face of the environment is more readily understood than the invisible socio-eco-political face. Considerably more resources are being used to study the bio-physical than the socio-eco-political, when the reverse might yield greater dividends.

Research designed to gain an understanding of the socio-eco-political face of the environmental coin appears to be woefully sparse. This lack of understanding is not due to inadequate analysis of the reserved powers to tax, to take, to police, and to spend. Scholarly studies have been made of the first three powers and experience has been gained in recent years regarding use of the spending power as a means of attaining desired objectives. Rather, there is a dearth of studies on the use of these powers in various combinations, to

show how they may be used to complement and supplement each other. Also, there are few studies that compare the effectiveness of each of the several reserved powers under various circumstances, particularly when used in combination. Such studies are sorely needed.

Perhaps "ingrained" ideas about the attributes of the sole proprietorship also need to be examined before the reserved powers can be used most effectively. For example, we may need to change the farmer's idea that ownership should and does give him complete control—all rights—in his own land from the heights of heaven to the gates of hell, to do with as he pleases, and that he is responsible to no one in how he uses that which is his own. Until the holder of property recognizes this responsibility to his neighbors and to society in the enjoyment of his property, use of the reserved powers may do little to protect the bio-physical environment. This is true because adjustments made at the expense of the public treasury will tend to diminish as soon as the subsidy is withheld. Also, adjustments imposed under the police power will be effective to some degree only so long as they are policed; when policing ceases, the adjustments will weaken. Attitudes toward property may need substantial change before sustained progress can be expected.

The reasoning presented in this article suggests a need for analysis of selected, reserved powers of society to understand more fully the nature of these powers, to comprehend their association with deterioration of our bio-physical environment, and to learn how these powers may be used individually and collectively to attain specific objectives. An understanding of the socio-eco-political side of our environmental coin, as well as the bio-physical face, is essential. Society and its leaders will be in the best possible position to act wisely when they are equally familiar with both faces of the coin.