

**THE POLITICAL ECONOMY OF LAND TENURE:
APPALACHIA AND THE SOUTHEAST**

by
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The Political Economy of Land Tenure in Appalachia and the Southeast

I. Introduction: The Centrality of Land Tenure

The political economy of the South is deeply rooted in the land. In much of the rural deep south, local economies were shaped by the cotton plantations; in the Appalachian region, by coal and mineral exploitation. Timber extraction for wood and paper, tourist development along the coasts and the highlands, tobacco and other agriculture --- all have shaped the history, culture, and most essentially, the power and politics of the region. While the love of the land and sense of place have been important in the culture of the region, "the greater cultural tradition of the south," wrote southern sociologist Howard W. Odum, "has been one of exploitation of the land and its resources." (Quoted in Goldfield, 197).

My own introduction to the importance of land ownership in the region came some 25 years ago, when as a student at Vanderbilt University, I joined two other students to conduct what now would be called a "service learning project" sponsored by the Student Health Coalition. Focussing on 5 of eastern Tennessee's coal rich counties, we were asked to pursue the question, why was there a lack of local revenues amidst for health projects amidst such coal wealth? Who owned the coal lands, and what taxes did they pay? By sifting through hundreds of courthouse records, we "discovered" what many of the residents of the coal region already understood: nine large coal corporations controlled 34% of the land and approximately 80% of the coal wealth, yet paid less than 4% of the local property taxes. (Gaventa, et. al., 1971) Most important from this exercise was what the citizens did with the information. Meeting in the basement of a local church to discuss the findings of the

research, the citizens decided to form a group to challenge the inequities. That challenge spawned the formation of Save Our Cumberland Mountains (SOCM), which for the last 25 years has continued to challenge land-based inequities in the region.

In the process of doing that first study, I also learned that one of the largest land owners in the region was a British company, by the name of the American Association. Since I was going away to Britain to graduate school, the citizens in the community asked if I would help to research who really owned this company, and help "take the word to them" about the conditions of poverty, environmental and human abuse associated with their holdings in the Valley. That question led me to spend the next several years attempting to understand the historical impact of the control corporate of land in that one Appalachian community, documented in the book Power and Powerlessness: Quiescence and Rebellion in an Appalachian Valley. (1980).

Both of these early experiences of community-based research helped to shape a perception of the centrality of land that could not have been gleaned simply from reading the literature of the region. In the midst of my research some years ago I still remember writing to the Center to request a list of their publications, because we needed some models, some literature and some assistance as we began to investigate these issues. I remember the excitement when I got the return packet, and the disappointment to me and the community folks with whom I worked when we discovered the absence of systematic work on land tenure on North America.

I tell these stories as background to say how pleased I am that the University of Wisconsin Land Tenure Center is now beginning to pursue a research program on land tenure in North America. There is much to be done and this conference represents a historic gathering of scholars and activists who have great collective history and knowledge on land issues.

This paper will not attempt to be a complete overview of land tenure in the South or the Appalachian region, for the task is too broad, and the research does not yet exist for it to be done. Rather, I will summarize some of the findings of some key studies in the region, especially drawing from the large study of the Appalachian Land Ownership Task Force. Then, I will suggest that land tenure patterns are deeply connected to the economic, human, environmental and social development of communities in Appalachia and the South, that the study of one must involve the study of the other. (While I will refer to issues across the region, most of my examples will be drawn from Appalachia and the upper South, which has been the site of most of my own research and experience.)

II. Who Owns the Land?

In the spring of 1977, heavy rainfall on the strip-mined mountains of eastern Kentucky and West Virginia led to devastating floods. Thousands of families were made homeless, driven from their house trailers and previously-owned company houses that lay along the creeks and valleys. In Mingo County, West Virginia relief trailers were sent in, yet for days set empty by the side of the road. Why? There was no available land for the trailers

to occupy, even in this rural county. Why not? Some 90% of the land was owned by several absentee coal corporations, who would not make land available for housing, even in an emergency. The crisis spawned citizens' protest throughout the region. A new coalition was formed, the Appalachian Alliance. The number one issue identified by the coalition to address was the problem of land ownership in the region.

Joining forces with researchers from local colleges and universities, and with the help of the Highlander Center, the citizens formed the Appalachian Land Ownership Task Force. Involving dozens of local civic organizations, the group set out to document land ownership and its impact in 80 counties in six states across Appalachia and the upper South - in parts of Alabama, Tennessee, North Carolina, Virginia, Kentucky and West Virginia. The resulting study, **Who Owns Appalachia?**, remains one of the largest studies conducted on land tenure in our region, and one of the few such studies across the country (Appalachian Land Ownership Task Force, 1983. For summaries of the study and follow-up, see also Gaventa, 1984 and Horton, 1993).

Sifting through property tax and other records in 80 counties the citizens gathered data on the ownership of over 20 million acres - 13 million acres of surface rights and 7 million acres of mineral rights. This included information on 55,000 parcels of property, owned by 33,000 owners. The sample represented 53% of the total land surface in these counties. (See attached map.) Since this study is now out of print, it is worth summarizing some of its findings (ALOTF, pp. 14-18):

- Only 1 percent of the local population, along with absentee holders, corporations, and government agencies, control at least 53 percent of the total land surface in the eighty counties. This means that 99 percent of the population owns, at most, 47 percent of the land. Of the 20 million acres of land and minerals owned by over 30,000 owners in the survey, 41 percent - over 8 million acres - are held by only fifty private owners and ten government agencies. (Table 1.)
- Almost 40 percent of the land in the sample, and 70 percent of the mineral rights, are corporately held. Forty-six of the top fifty private owners are corporations, among them some of the largest corporations in the country. (See Tables 5 and 6). While some 45 percent of the land in the sample is owned by individuals, well over one-half of this is owned by absentee individuals. The remaining portion of the land in the sample (16 percent) is owned by government and nonprofit bodies - ten government agencies account for 97 percent of this public ownership. (Table 1).
- Of the 13 million acres of surface sampled, 72 percent - almost three-quarters - were owned by absentee owners; 47 percent by out-of-state owners and 25 percent by owners residing out of the county of their holdings, but in the state. (Table 3).
- For many areas of Appalachia, who owns the mineral rights is just as important as who owns the surface. Despite the fact that millions of acres of mineral rights in Appalachia are simply not recorded for tax purposes, the study discovered almost 7 million mineral acres, equal to 28 percent of the total surface area of the eighty counties. Four fifths of the mineral rights in the survey are absentee owned. (Table 2).
- The ownership of land in Appalachia is highly concentrated in relatively few hands. The top 1 percent of the owners in the sample own 44 percent of the land in the sample - over 1,400 times what is owned by the bottom 1 percent of the owners in the sample. The top 5% own 62% of the land, contrasted to the bottom 5 percent who own .25 percent, or about 250 times less than what the top 5 percent own. The top half of the owners in the sample control 94 percent of the land, the bottom half control under 6 percent.
- The ownership data for minerals is less complete than the data for land. Nevertheless, the pattern of concentration remains. The top 1 percent of the recorded mineral owners control 30 percent of the mineral rights in the sample - some 15,000 times greater than what is owned by the bottom 1 percent of the mineral owners. The top 5 percent of the recorded mineral owners own 62 percent of the recorded minerals; the top 50 percent own 97 percent.

The Appalachian Land Ownership Study (ALOS) is significant for a number of reasons. First, it is important to recognize that these patterns were not only in the coalfields of Central Appalachia, which are known for their control by the coal industry, but they spanned portions of six states, including rural agricultural, timber and recreational areas as well. The concentration of ownership is similar to patterns found in some developing countries, and led the Appalachian Alliance and Appalachian scholars to dub the region as an "internal colony."

Secondly, the ALOS is significant because of its method. Using participatory research by local citizens or citizen-university teams, it demonstrates that such research can be done, and that it can contribute to local action. For the Appalachian Land Ownership Task force it was a labor-intensive process made possible by the desire of citizens to document land patterns and impacts in their regions. (Today, the computerization of property tax records and the availability of scanners and portable computers would make the process simpler.) Using investigative techniques of journalists, combined with field work and analysis of social scientists, the Task Force traced real owners and their holdings throughout the region. Though the results were controversial, and were never completely published by the Appalachian Regional Commission (who funded the study), the project helps to demonstrate the power of participatory land research led by those most affected by land issues.

Finally, though the ALOS is over a decade old, there is little evidence that the overall patterns of changed or that the concentration or absentee nature of the ownership patterns has have declined. In a number of areas, larger owners have been purchased by yet

larger multinationals. Timber holdings have risen in significance, as timber production moves from the northwest to the southeast. And, with the decline of livelihoods of rural landholders due to such trends as loss of rural jobs and decline in agricultural prices (e.g tobacco), we might expect that small land holdings have continued to be lost.

While the Appalachian Land Ownership Study and much of the other scholarship on the region assumes that the land tenure patterns were established with the industrialization of the South around the turn of the century, more recent work suggests that these patterns have deeper historical roots. In a recent study, Wilma Dunaway (1994) reviews thousands of census and other records about land in Appalachia. She found that far from being the land of the self-sufficient family farm, the pattern of inequitable land tenure was structured very early. In fact, by 1860 or so, the bottom half of the frontier population of Appalachia owned less than one percent of the land, and nearly sixty percent of all households in the region were landless - working as tenants, sharecroppers, slaves, etc. (1994:203). There has been little change in this land tenure structure or in the level of poverty in the region since. As Dunaway concludes, "Land provided the economic basis for the structuring of a polarized Appalachian society in which the wealthy landed gentry amassed a majority of the acreage while more than half the settler households remained landless" (222).

While the ALOS focussed on the issues of concentration of land by corporate and absentee owners, issues of land loss by the small owners have received more attention in other parts of the South, especially in the deeper South. Another body of scholarship has documented the loss of African-American owned land. African-America land ownership

reached its peak around 1910, with blacks owning an estimated 15 million acres of land. Since 1910, however, this acreage has steadily declined - to less than 6 million by 1969 (McGee and Boone, 1977). More recently, since the 1970's, blacks have been losing land nationwide at a rate of nearly 500,000 acres per year (Pennick, 1990). While this loss has often been explained by the migration of large numbers of blacks northward during the 1940's-60's, a closer look reveals that African Americans were often stripped of their land by a variety of means, contributing to this migration. The use of eminent domain and other acts by white land officials to take advantage of black land owners through (often illegal) foreclosures and tax delinquency seizures are now considered to be the dominant causes of black land loss in the South (see Marable, 1979; Nelson, 1978). The steep decline of African-American land ownership has serious political and social implications for the South and elsewhere. As the Black Economic Research Center reported in 1973, "In effect, land ownership ...confers on blacks a measure of independence, of security and dignity, and perhaps even of power, which is of crucial importance to the elevation of the status of the black community generally"(quoted in Beauford et al., 1984:417). At current rates, the national Rural Development Leadership Network warns, black farmers may disappear by the turn of the century (Thompson, 1993).

III. Land Tenure and Community Development

What is the relationship of land tenure to the broader development patterns of the region? Political economists often analyze the ownership and flow of capital, and its links to power, to explain development. But increasingly, sociologists, community developers, economists and others have begun to understand development not only in economic terms, but in human, environmental, and social terms as well. Recently, for instance, Cornelia and Jan Flora have argued that

Community sustainability is based in part on the resiliency of that community to respond to changes in the larger environment...Resilience depends in part on the resources available to the community. Those resources can be viewed as forms of capital, which are to be reinvested locally to produce new wealth. Capital can be thought of as any resource capable of producing new resources. Two forms of capital have conventionally been viewed as important for community development: financial and manufactured capital and human capital. When looking at community sustainability, it is also important to analyze environmental capital and social capital (Flora and Flora, 1994).

In this definition, land itself may be understood as a form of capital, a resource capable of producing new resources. Access to and ownership of land will affect the resiliency of a community. But, equally importantly, land tenure patterns contribute to and are linked with each of these other forms of capital, especially in rural areas. We can see these interrelationships in examples from Appalachia and the Southeast.

A. Land Tenure and Economic capital:

Land tenure has often been linked to economic development patterns of the region, including to patterns of financial and manufactured investment. In much of the literature, the argument goes something like this: The development of the Appalachia and the South is

related to the "colonial" nature of the region. Absentee and concentrated ownership of the land and natural resources means that wealth has been drained away from the region and its people. As the Appalachian Land Ownership task Force put it, "through control of the region's land and natural resources, these forces prevent the formation of the indigenous financial control and other requisites for economic development. For development to occur, in this view, strategies must be developed that deal with the problems of ownership and control of land and mineral resources."(p.65) Similarly, Pennick (1990) points out that the decline in black-owned land results in an estimated net annual loss of some 2.5 billion dollars to the African-American community. "The first and most important step in achieving economic independence is the ownership and control of the land" (44).

These assertions have been confirmed by a series of other studies. In a study of 100 North Carolina counties, Donald Tomaskovic-Devey and Mark Prather (1990) found that poverty and inequality both rise with increased elite landholding concentration, as well as with the proportion of minority population in a community, though "in general, land owning concentration is a better predictor of economic development patterns and the degree of poverty and inequality than the racial composition of the community." Similarly, in a study of the predominantly rural Mid-South region (around the south central stretch of the Mississippi River), Ciaramitaro et al. (1988) examined the relationship between economic development, land tenure, and rural poverty. They found a predominance of large-scale white farmers in the area, who exerted considerable economic and political power. Perhaps most interestingly, they also found these farmers to actively impede economic development in the

region, primarily because manufacturing-based economic development would tend to lower unemployment and raise wages - two developments which might threaten the profitability of large farms. Thus, the authors argue that, although the underdevelopment of the rural South is enormously complicated, an important contributor to the persistence of rural poverty and economic underdevelopment in the Mid-South is the role of large landowners.

Eban Goodstein has also pursued this relationship between landownership patterns and Appalachian and other measures of economic and social development. His results only partially confirm the Appalachian Land Ownership Task Force findings, "Empirical evidence provides support for the claim that absentee ownership is inversely associated with measures of economic and social well being. however, concentration of ownership is found to be positively related to these same measures." (1989: 510). He speculates that concentration also has to do with the other forms of investment, such as coal extraction, which may also be producing income for local residents. Goodstein's analysis, as that of the other studies, also suggest that the link between land tenure and rural poverty is not necessarily a direct one. Rather, land tenure affects the development or lack of development through other forms of investment, as well.

Understanding the link between land and investment is also critical in times of disinvestment and de-industrialization. The Southern and Appalachian rural workforce has long been associated with natural resource-based industries such as textiles, coal, chemical which came to region in part because of the raw materials (cotton, minerals, water). During the 1980's, however, many of these industries (and the capital associated with it) have left

the region or automated their production, leaving behind rural communities with massive unemployment. With the decline of these company-created communities, often comes the decline of other forms of economic infrastructure such as roads and housing, which the industries had created. In McDowell County West Virginia, for instance, when one company closed up shop it took the street lights down as well, since it had put them up when it built the community many years before (Gaventa, et.al. 1990 and Gaventa, et.al. 1992). The decline of land-based industries leaves rural people in the South in a double bind - with access neither to the land nor the jobs historically associated with it.

The loss of the many of the formal jobs associated with the land also makes important an understanding of the relationship between the informal economy and the land. People of the region have long survived in hard times, from one bust to the next boom. The ability to grow a few vegetables to eat, dig up some coal for heat, gather ginseng, raise livestock, or cut wood has been an important part of survival (Williams, 1993). For women in the region, the informal economy based on the land has been particularly important, and often unrecognized in significance . In a series of work histories of women in the south, Helen Lewis cites the life story of one family in which

the mother left the mountain farm to work in a hotel in the nearest town. After marriage she returned to farming and when her husband deserted the family, she raised the family by farming, plowing for hire and picking up coal, hauling it and selling it. The daughters grew up with farm land destroyed by strip mining but still operating in and out of the economic system. They preached, did domestic work, ran a used clothing store, cut and sold timber, worked in sewing factories, moved to the city to work and returned to rebuild their land and community...

"The work histories," Lewis notes, "make clear that many women in the rural South have been working very hard and living in poverty for a long time" (Lewis, et.al., 1986: 30).

While access to the land for survival in the informal economy is critical, holding on to the land, even for survival through informal means, is becoming increasingly difficult for poor families in the South, especially for African Americans. Pennick points out that "At a time when money is extremely tight, the black farmer finds it almost impossible to borrow enough to develop a successful operation. Where once it was too little too late, today two out of ten black farmers receive nothing at all. Primarily because of this lack of access to capital, nearly two-thirds of all black farmers went out of business during the period 1982-1987."

(43). Again, we have a double-bind : control of the land by capital limits ownership and use of the land by the rural poor; lack of access to capital by the poor adds to the loss of the land, and so the cycle of rural poverty continues.

Land and Human Capital:

The way out of pverty, many believe, is through the development of human capital.

While human capital encompasses many factors such as "individual capacity, human health, values and leadership," (Flora and Flora:2), it is most conventionally been though of in terms of education and training. What is the relationship between land tenure patterns and human capital?

A primary linkage has to do with the taxation of the land. In rural and urban communities, property taxation is a key source of local revenue, which in turn is a vital ingredient to support local educational institutions and other human services. In Appalachia,

and other parts of the south, where coal, timber and other natural resources contribute substantially to the property wealth of the region, one might expect to find substantial tax revenues from the land. In fact, of course, the Appalachian Land Ownership Study and other studies have found the opposite to be true: The substantial coal and timber wealth of the region fails to produce local revenues for schools, health care and other services necessary for the development of human capital.

The data from the Appalachian Land Ownership Study are startling: Over 75% of the mineral owners in the survey paid less than 25¢ per acre in property taxes. 86% paid less than a penny an acre. In the twelve counties in eastern Kentucky, which included some of the major coal producing properties in the region, the average tax per ton of coal was about 1/50th of a cent, amounting to a total of approximately \$1500. (p. 48). Similar patterns could be seen not only for other coal-rich lands across the region, but also for timber lands, where large companies like Weyerhaeuser or Champion owned vast tracts of forest lands yet paid the local counties only a few cents per acre.

The impact of these patterns can be seen in a place like rural Martin County, Kentucky, the place where Lyndon Johnson went to announce the War on Poverty. Martin County was one of the largest coal-producing counties in 1980, and yet 86% of the budget had to come from state and federal aid because of the inadequate property tax base. The largest company owned 55% of the county surface. It leased that land to mining companies that were projected to make money off that land at a handsome rate for the next 50 years. Yet, as Appalachian Alliance activists often pointed out, "the amount of property taxes paid

by the company on the surface land to the county wasn't enough to buy the county a school bus, and the \$76 a year received for the mineral rights wouldn't even buy replace it's blown out tire!" Meanwhile, per pupil expenditures in that county were 24% below the state average and 43% below the national average.

The link between land ownership and taxation, and taxation to human services has provoked a great deal of citizen action in our region. Groups like Save Our Cumberland Mountains and Kentuckians for the Commonwealth (originally Kentuckians for Fair Taxation) have worked hard to challenge the inequities. (See case studies in Fisher, 1994). A West Virginia Supreme court case (known as the Recht decision) found that children in communities with large corporate ownership of land did not receive an equal education, leading to a revamping of the State's school finance policies. Other cases pitting rural schools vs. the urban areas have been heard in Kentucky and Tennessee. And yet the problems continue: Only recently in Campbell County, Tennessee, where over 50% percent of the land is owned by large coal and timber companies, the county stopped running the school buses in early spring because it had run out of revenues. Children in rural areas could not get to school, let alone get an equal education once they arrived.

C. Land and Environmental Capital:

In terms of community sustainability, the role of the environmental capital is only just beginning to be understood. "Environmental capital encompasses air, water, soil, biodiversity and landscape" (Flora and Flora, 2) To explore the relationship of land tenure to environmental capital is also to explore the relationship of land tenure to land use. These

issues are deeply intertwined in our system of private ownership, and in particular, in rural areas where land owners have had the political power to basically do whatever they want to do with the land which they own.

There are numerous examples in Appalachia and the South where land tenure has affected the use of the land, in turn affecting the environmental capital available to a given area. In some cases, such as in the Smoky Mountain National Park, or the protected areas along the coast, ownership of the land in public hands has contributed, many argue, to environmental capital. But in much of the South, where more land is in private and corporate lands than in many other regions, environmental capital derived from the land has often been sacrificed for the sake of quick economic exploitation, through strip mining, clear cutting, strip development, soil erosion, toxic pollution, or scores of other examples.

Two emerging conflicts involving the relationship of land ownership, land use and the environment that are particularly important in the South today have to do with the use of timber lands and with the location of solid and hazardous wastes. These issues are often occurring in areas where land uses are changing, especially from coal or agricultural production, and where there is a lack of other forms of economic, human and social capital to balance exploitation of environmental resources.

Timber in the South: While conflicts involving environmentalists and the timber industry are perhaps well-known in the Northwest, in Appalachia and the South environmental regulations and citizen action regarding timber have not been so strong. However, about 70% of Southern Appalachian lands are still in forests, and more timber is

in private or non-governmental hands than in other parts of the nation. The combination of available timber resources, desparately poor communities, and weak social and governmental action on these issues make the region ripe for timber development. One study concludes that this area represents "the greatest potential for increased timber supply in the nation"(Bullard and Straka, 1985). The authors of this study go on to state that "the availability of adequate timber supplies, when combined with a favorable business climate towards the forest products industry, makes future expansion of the Mid-South's timber-processing industry a certainty" (Bullard and Strakas, 1985:5). With such re-investment in timber resources of the region has come an increase in concern for the environmental capital of the area as well.

One controversy is occurring in northeastern Tennessee coal fields, which traditionally have been dominated by absentee and corporate coal owners. In 1994, Champion International acquired 85,000 acres of Tennessee mountain land located in rural Anderson, Scott, and Campbell Counties for harvesting timber. The company has also applied for permits to build a chipmill in Campbell County for the purpose of chipping hardwood timber for export. Two mining firms, which had previously owned the land themselves, are working with Champion---planning to mine for coal on this same acreage using a process called "highwall mining" which almost exclusively uses robotics and computers and disturbs both the surface and underground. Concerned with Champion's disregard for the environment in a nearby North Carolina paper mill, the residents of these counties, through SOCM, are fighting both Champion's proposed clearcutting and chip milling and the mining companies'

proposals, as well as the proposed state legislation providing for extremely weak regulation of the timber industry (SOCM Sentinel, 1994).

Dumping in the South: The South, particularly the rural South, has also been a favorite location for the siting of solid and hazardous wastes, as the work by Bullard on Dumping in Dixie and others make clear. By the end of the 1970s, out of the five states in the U.S. with the largest number of incoming pollution industries, four were in the South (Bullard, 1990). Siting of hazardous and solid wastes in rural areas has been associated with environmental racism and the presence of high poverty in the region.

However, siting of wastes is also associated with the types of land use and the level of environmental capital which may be in the region. As Norris-Hall (1990) has pointed out: " Seen as poor powerless and desperate for economic development, the region has been subjected to the promise of new, higher paying jobs in exchange for the acceptance of a hazardous waste industry or landfill." In fact studies done by waste management associations on where to locate waste sites with the least resistance have concluded that "it seems to be advantageous to site a new landfill at a location where there has already been some invasion of the environment... where there has been mining activities, quarrying..".(Johnson, 1985:220). In other words, waste industries may seek areas which have already suffered a loss of environmental (as well as other forms of capital,) perceiving them to be less resistant to further environmental abuse.

Moreover, the availability of large plots of land that have been controlled in the past by mining or timber firms make parts of Appalachia and the South ideal locations for solid

and hazardous waste disposal. Studies of the region have shown that landfill siting is often done in poor, rural areas which have been mined for coal or cut for timber in previous times. (see HREC, Part III). The trend is seen, for instance, in the garbage trade, where the region has been targeted for mega-landfills, either in the deep south or in the coalfields. In eastern Kentucky, for instance, a new landfill company was started named GICO (which stands for Garbage In, Coal Out.) It proposed to lease hundreds of strip mines for out of state garbage dumps. Similarly, in West Virginia, Berwind, a large corporation which had mined coal in McDowell County since the 1800s, formed Capels Resources, Inc. in 1991 for the sole purpose of developing the mining site into a mega-landfill designed to accept out-of-state waste. The company used the promise of new jobs to pressure the impoverished community and limit local opposition to its plans. While effective citizen resistance did develop, the key in this case is that the Berwind Corporation's decision to site the mega-landfill in McDowell County was "directly related to the county's persistent poverty and Berwind's ownership of vast tracts of land in the county" (Morrissey in HREC, 1993:3-70).

The examples of the growth of the timber industry in the South and the siting of solid and hazardous waste suggest, then, that land tenure patterns and previous land uses will affect the environmental capital of the region. In fact, areas that already have been environmentally abused, as well as areas that lack economic alternatives or social and political infrastructures, may be targeted for environmentally dangerous industries.

D. Land Tenure and Social Capital.

In addition to economic, human, and environmental capital, a number of theorists of development have recently been writing about the importance of social capital and its relationship to development. The Floras refer to social capital as "the mutual reciprocity and mutual trust that exists among its citizens"(2). Robert Putnam refers to social capital as "features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit" (Putnam, 1993:36). Communities with large amounts of horizontal social capital "value solidarity, civic participation, and integrity" (36). On the other hand, communities with vertical social capital tend to be more ones of dependency, patron-client relationships, and corruption. . Horizontal social capital can strengthen participatory democracy. Vertical social capital works against it.

What is the relationship of land tenure to social capital? Here there have been some pioneering studies, but there is much more work to be done. In Latin America, Paulo Freire has written about the culture of silence and fear that exists in latifundia communities. Walter Goldschmidt documented the relationship between large absentee ownership and weak social institutions. (1947) In earlier work on power, I documented how control of land also translated to political power and a lack of civic engagement based on a sense of powerlessness as well as fear and distrust growing from the coercion of the land companies over the people (1980). Billings (1979) and others have written of the culture of paternalism and domination that was developed by the planter-industrialists of the South.

Historically, then, the corporate and political power derived from the land tenure patterns has prevented the development of horizontal social capital in many parts of the region. Company towns promoted patterns of paternalism, patronage and dependency in which skills and traditions of civic engagement did not flourish. In many communities characterized by such power, patterns of intimidation persist. Only last year when citizens from Save Our Cumberland Mountain testified regarding the siting of a waste dump near on the land near their homes, one member was attacked and beaten in the hearing room by company thugs.

On the other hand, it is important to point out equally strongly that horizontal social capital has been created through the development of alternative ownership patterns, or when the power of the dominant owner has changed. For instance, groups like the Federation of Southern Cooperatives have strengthened the social capital and civic engagement of empowerment of over 30,000 black farmers across the South, organized into dozens of cooperatives. In the midst of the Valley where I studied the power gained from corporate and absentee control of land, the Woodland Land Trust has provided a "free space" where different kinds of social relationships are constructed. In McDowell County, West Virginia, in the wake of the closure of the mining companies, democratic participatory planning has emerged in an unprecedented way. Frankie Patton, one of the leaders of the effort describes the change in norms: "Even though the leaving of the coal industry resulted in the loss of jobs, incomes and services, for the first time in my life I feel free from the control of the company. Even though the situation is bad and we have few resources, we can now make

decisions ourselves and we can organize to help ourselves without company supervision. It is a feeling of liberation, and for the first time, great hope." (Gaventa, et.al., 1992: 22).

Social capital also has developed through the growth of democratic, citizens' based organizations that have sprung up in the region around land-based issues, often in response to the dominant forms of power. Groups like Save Our Cumberland Mountains, the Kentuckians for the Commonwealth, the Federation of Southern Cooperatives, the Rural Consortium of Land-Based Training Centers, the Rural Development Leadership Network and others have provided forums for the development of community leadership, for citizen cooperation and exchange, and for effective citizen action on land issues. In many cases they have been successful both at changing the sense of powerlessness and dependency historically instilled by the dominant land owners, as well as in changing land tenure patterns. For instance, in Kentucky, in a state historically dominated by the coal industry, the Kentuckians for the Commonwealth was able not only to build a strong citizens' based organization, but to change the broad form deed law that for almost a century had allowed the mineral owners to mine coal without respect to the rights of the surface owners. (Several case studies on the rise of citizens-based organizations on land issues may be found in Steve Fisher, 1994).

To explore the relationship of land tenure to social capital, then, is not only to explore how ownership patterns have affected civic participation and reciprocity. It also requires looking at how citizen movements on land issues and social experiments with alternative forms of land tenure have also contributed to changes of attitudes, norms of participation, and empowerment. The expression of these norms may sometimes be part of

what Scott (1990) would call the "hidden transcript" of the community. They may be expressed through cultural forms, music, song, story-telling, just as strongly as they will be found in the dominant political economy. Research on land tenure and social capital therefore must also involve understanding the culture of communities affected by the relationship to the land and the indigenous knowledge that has been drawn from it. In the Appalachian Land Ownership Study, we made the mistake of focussing too much on the data and knowledge about the land drawn from the "official" records. In a later workshop at Highlander, we began to document and uncover the richness of knowledge about the land carried through the culture of the region. Only when "peoples" knowledge of the land is uncovered and valued will the full relationships of social capital and land tenure of a community be understood.

IV. Challenges for Research

The examples given above help us to understand that land tenure is intertwined with the development and revitalization of sustainable communities. Land tenure patterns contribute to, and are shaped by, the financial, human, environmental and social capital of any community or region. While there is much more research to be done to understand the interrelationship of these issues, one point should be clear: community or economic development strategies which fail to understand the centrality of land tenure will not be successful. Likewise, land tenure reforms which fail to understand the interrelationships of the land to all facets of community life will also be limited.

At the same time, the links between land and capital at the community level must also be understood in the context of global capital, in each of its forms. The movement of financial capital, in the form of investment or disinvestment, affects what happens to the land. The development, for example, of NAFTA and GATT clearly will have implications for land-based economies in this country as well as elsewhere (e.g. Chiappas.). Land affects human capital, not the least through moving human resources in the new stream of migrant workers who have been displaced from their land in Mexico or El Salvador and now seek work as agricultural workers in Florida, Georgia, and Tennessee. The uses of the land affect environmental capital not only locally but also globally, as can be seen on the impact of clearcutting on ozone depletion. Even social capital, which is perhaps most rooted in the community, is linked to global networks. For instance, experiments in social forestry or micro-lending for credit which developed in the context of developing countries are now being used as approaches for strengthening communities in this country. While it is beyond the scope of this paper to develop further, the relationship of land and capital at the community or regional level must also include analysis and understanding of the global context.

Much further research is needed for scholars and practitioners to help to deepen our understanding and action on these issues. Such research must also be useful and accessible to the communities affected by land-based issues. Research which replicates land tenure patterns -- e.g. which is concentrated in a few hands and is not accessible to the people directly affected -- will do little to alter the patterns of power and powerlessness which land

ownership patterns have helped created. The Appalachian Land Ownership Task Force helped to show that scholars and citizens can work together successfully to develop research that is both valid and empowering. The challenge for this conference and for the important new domestic land tenure program at the University of Wisconsin is not only to strengthen knowledge about land tenure, but to do so in a way that strengthens the economic, human, environmental and social capital of communities whose futures are bound to that land as well.

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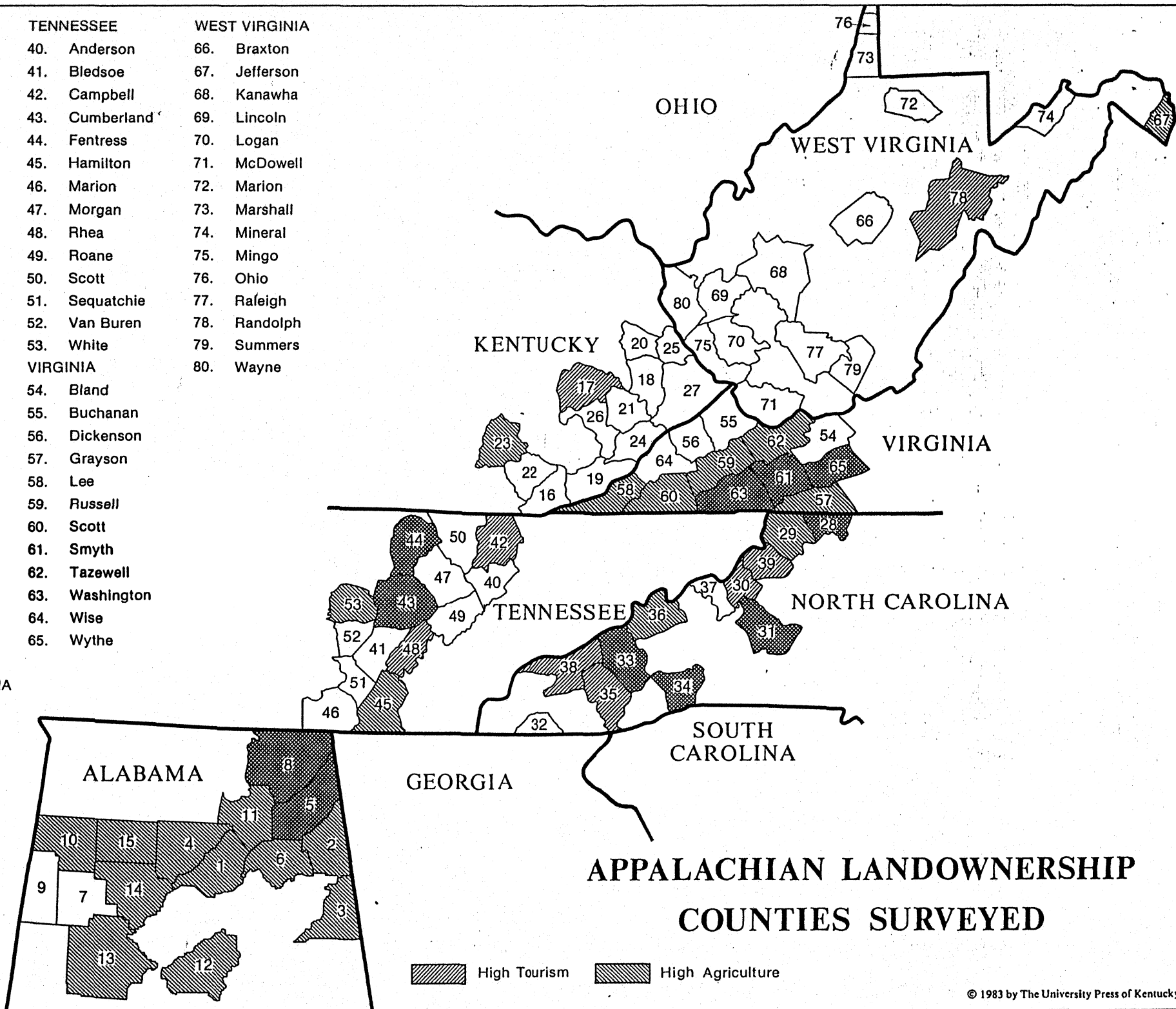
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| ALABAMA | TENNESSEE | WEST VIRGINIA |
| 1. Blount | 40. Anderson | 66. Braxton |
| 2. Cherokee | 41. Bledsoe | 67. Jefferson |
| 3. Cleburne | 42. Campbell | 68. Kanawha |
| 4. Cullman | 43. Cumberland | 69. Lincoln |
| 5. Dekalb | 44. Fentress | 70. Logan |
| 6. Etowah | 45. Hamilton | 71. McDowell |
| 7. Fayette | 46. Marion | 72. Marion |
| 8. Jackson | 47. Morgan | 73. Marshall |
| 9. Lamar | 48. Rhea | 74. Mineral |
| 10. Marion | 49. Roane | 75. Mingo |
| 11. Marshall | 50. Scott | 76. Ohio |
| 12. Shelby | 51. Sequatchie | 77. Raleigh |
| 13. Tuscaloosa | 52. Van Buren | 78. Randolph |
| 14. Walker | 53. White | 79. Summers |
| 15. Winston | VIRGINIA | 80. Wayne |

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|-----------------|----------------|
| KENTUCKY | 54. Bland |
| 16. Bell | 55. Buchanan |
| 17. Breathitt | 56. Dickenson |
| 18. Floyd | 57. Grayson |
| 19. Harlan | 58. Lee |
| 20. Johnson | 59. Russell |
| 21. Knott | 60. Scott |
| 22. Knox | 61. Smyth |
| 23. Laurel | 62. Tazewell |
| 24. Letcher | 63. Washington |
| 25. Martin | 64. Wise |
| 26. Perry | 65. Wythe |

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|-----------------------|
| NORTH CAROLINA |
| 28. Alleghany |
| 29. Ashe |
| 30. Avery |
| 31. Burke |
| 32. Clay |
| 33. Haywood |
| 34. Henderson |
| 35. Jackson |
| 36. Madison |
| 37. Mitchell |
| 38. Swain |
| 39. Watauga |



Land and Minerals

Table 1. Surface Acres, by Type of Owner

	Acres Individual	Acres Corporate	Acres Government/ Private Nonprofit	Total
Alabama	2,003,106 (56%) ^a (28%) ^b	1,260,162 (35%) (18%)	313,487 (9%) (4%)	3,576,755 (100%) (50%)
Kentucky	708,262 (45%) (23%)	665,517 (42%) (21%)	208,483 (13%) (7%)	1,582,262 (100%) (51%)
North Carolina	601,579 (41%) (21%)	267,761 (18%) (9%)	592,087 (41%) (20%)	1,461,427 (100%) (50%)
Tennessee	1,118,457 (46%) (29%)	1,041,212 (43%) (27%)	281,165 (11%) (7%)	2,440,834 (100%) (63%)
Virginia	900,581 (49%) (26%)	539,140 (30%) (15%)	389,987 (21%) (11%)	1,829,708 (100%) (52%)
West Virginia	593,485 (26%) (13%)	1,369,203 (59%) (30%)	352,659 (15%) (8%)	2,315,347 (100%) (51%)
Total	5,925,470 (45%) (24%)	5,142,995 (39%) (21%)	2,137,868 (16%) (8%)	13,206,333 (100%) (53%)

Source: Appalachian Land Ownership Study, 1980. Using 1978-79 property tax records, this survey recorded all corporate, public, and absentee owners above 20 acres and all local individual owners above 250 acres in the unincorporated portions of the county. (The survey covered 53 Percent of the total surface of the eighty counties.)

^aThe percentage of the land sampled for each state.

^bThe percentage of the total surface in the sample counties in each state.

Who Owns Appalachia

Table 2. Mineral Acres, by Type of Owner

	Acres Individual	Acres Corporate	Acres Government/ Private Nonprofit	Total
Alabama	710,839 (45%) ^a (10%) ^b	870,073 (55%) (12%)	716 (.05%) (0%)	1,582,528 (100%) (22%)
Kentucky	246,772 (40%) (8%)	357,576 (58%) (11%)	11,182 (2%) (.4%)	615,530 ^c (100%) (19%)
North Carolina	128,671 (62%) (4%)	78,659 (38%) (3%)	0 ^d 0 0	207,330 (100%) (7%)
Tennessee	202,753 (32%) (5%)	435,046 (68%) (11%)	0 0 0	637,799 (100%) (16%)
Virginia	96,180 (15%) (3%)	557,588 (85%) (16%)	0 0 0	653,768 (100%) (19%)
West Virginia	774,032 (24%) (17%)	2,458,299 (75%) (55%)	27,345 (1%) (1%)	3,259,676 (100%) (73%)
Total	2,159,247 (31%) (9%)	4,758,141 (68%) (19%)	39,243 (1%) (.2%)	6,956,631 (100%) (28%)

Table 3. Absentee Ownership of Surface and Mineral Acres, by State

	Surface Acres			Mineral Acres		
	Out-of-State Ownership	Out-of-County, In-State Ownership	Total Absentee Ownership	Out-of-State Ownership	Out-of-County, In-State Ownership	Total Absentee Ownership
Alabama	1,281,170 (36%) ^a (18%) ^b	1,147,225 (32%) (16%)	2,428,395 (68%) (34%)	605,257 (38%) (9%)	724,507 (46%) (10%)	1,329,764 (84%) (19%)
Kentucky	878,894 (56%) (28%)	363,624 (23%) (12%)	1,242,518 (79%) (40%)	342,417 (56%) (11%)	151,244 (25%) (5%)	493,661 (81%) (16%)
North Carolina	970,162 (66%) (33%)	319,338 (22%) (11%)	1,289,500 (88%) (44%)	127,705 (62%) (4%)	66,348 (32%) (2%)	194,053 (94%) (6%)
Tennessee	905,749 (37%) (23%)	788,384 (32%) (20%)	1,694,133 (69%) (43%)	329,599 (52%) (8%)	203,084 (32%) (5%)	532,683 (84%) (6%)
Virginia	991,509 (54%) (28%)	314,638 (17%) (9%)	1,306,147 (71%) (37%)	429,132 (66%) (12%)	127,483 (17%) (4%)	556,615 (83%) (16%)
West Virginia	1,206,539 (52%) (27%)	384,070 (17%) (8%)	1,590,609 (69%) (35%)	1,781,870 (55%) (40%)	632,522 (19%) (14%)	2,414,392 (74%) (54%)
Total	6,234,027 (47%) (25%)	3,317,279 (25%) (13%)	9,551,302 (72%) (38%)	3,615,980 (52%) (14%)	1,905,188 (27%) (8%)	5,521,168 (79%) (22%)

^a Percentage of surface acres in the sample for that state.

^b Percentage of total surface acres in the survey counties in that state.

Source: Appalachian Land Ownership Study, 1980.

Table 4. Counties with Greater than 50 Percent Absentee Ownership of Surface Acres

	Percentage of County Surface Absentee-Owned	Percentage of Sample Absentee-Owned	Acres Absentee-Owned
Swain, N.C.	94.0	99	315,139
Sequatchie, Tenn.	81.1	98	141,692
McDowell, W.Va.	79.3	94	270,647
Mingo, W.Va.	67.9	90	183,717
Van Buren, Tenn.	66.8	71	108,578
Clay, N.C.	63.6	97	85,048
Logan, W.Va.	63.0	71	149,891
Marion, Tenn.	62.9	85	203,864
Dickenson, Va.	60.6	92	128,845
Campbell, Tenn.	58.3	76	168,299
Shelby, Ala.	58.0	87	297,026
Knott, Ky.	57.6	82	131,195
Harlan, Ky.	57.6	78	172,757
Martin, Ky.	57.2	91	84,590
Bledsoe, Tenn.	56.8	75	146,946
Winston, Ala.	56.1	86	206,202
Morgan, Tenn.	55.9	81	192,926
Jackson, N.C.	55.3	89	173,700
Wise, Va.	54.6	85	143,723
Scott, Tenn.	52.6	70	181,217
Bland, Va.	51.4	73	123,080

Source: Appalachian Land Ownership Study, 1980.

Who Owns Appalachia

Table 5. Surface and Mineral Holdings of Top Fifty Private Owners, by Type of Business Activity

Business Activity	Surface Acres	Mineral Acres	Total Acres (Surface + Mineral)
Coal and coal lands	764,333 (25.4%) ^a (17) ^b	755,928 (24.4%) (14)	1,520,261 (24.9%) (19)
Oil, gas, other energy	294,323 (9.8%) (6)	945,375 (30.5%) (8)	1,239,698 (20.3%) (11)
Wood and timber products	898,158 (29.9%) (9)	151,562 (4.9%) (3)	1,049,720 (17.2%) (9)
Steel and other metals	444,910 (14.8%) (5)	317,531 (10.2%) (6)	762,441 (12.5%) (8)
Railroads	255,286 (8.5%) (2)	326,232 (10.5%) (4)	581,518 (9.5%) (4)
Miscellaneous corporations	227,559 (7.6%) (7)	319,162 (10.3%) (7)	546,721 (8.9%) (13)
Individuals	121,753 (4.0%) (4)	279,706 (9.0%) (8)	401,459 (6.6%) (10)
Totals	3,006,322 (100.0%) (50)	3,095,496 (99.8%) (50)	6,101,818 (99.9%) (74)

Table 6. Fifty Top Surface Owners in Eighty Appalachian Counties

Name and Headquarters	Principal Business	Type of Company	Total Surface Acres	Chief Location of Holdings
1. J. M. Huber Corp., Rumson, N.J.	diversified, timber and wood	private	226,805	Tenn., Ky.
2. Bowaters Corp. (Hiwassee Land Co.), London, Eng.	wood products	public	218,561	Tenn.
3. N&W Railroad (Pocahontas Land & Pocahontas-Ky.) ^a , Roanoke, Va.	railroad, transportation	public	178,481	W.Va., Ky., Va.
4. Koppers Co., Pittsburgh, Pa.	diversified chemicals, metals, coal gasification	public	169,796	Tenn.
5. U.S. Steel, Pittsburgh, Pa.	steel	public	168,911	Ala., Ky., Tenn., W.Va.
6. Georgia-Pacific, Atlanta, Ga.	wood products	public	139,441	W.Va., Va., Ky.
7. Pittston Corp., New York, N.Y.	coal	public	137,650	Va.
8. Tenneco, Inc. (Tennessee River, Paper and Pulp), Houston, Tex.	oil, land, packaging	public	98,751	Ala.
9. Continental Oil (Consolidated Coal), Stamford, Conn.	oil, gas, petrochemicals, coal	public	84,403	W.Va., Va., Ky.
10. Gulf States, Tuscaloosa, Ala.	paper and wood products	public	78,054	Ala.
11. Chessie System, Inc. (Western Pocahontas, C&O Railroad), Baltimore, Md.	holding company, transportation, petrochemical	public	76,805	Ky., W.Va.
12. Weyerhaeuser, Seattle, Wash.	wood products	public	65,005	Ala.
13. Coal Creek Mining & Mfg., Knoxville, Tenn.	coal lands	private	64,374	Tenn.
14. Champion International, Stamford, Conn.	building materials, paper, furniture	public	63,405	Ala., N.C.
15. Penn Virginia Corp., Philadelphia, Pa.	coal lands	public	62,893	Va.
16. Berwind Land Co. (Kentland Co.), Philadelphia, Pa.	coal and natural resources; other diversified products	private	60,881	W.Va., Ky., Va.

17. Kentucky River Coal, Lexington, Ky.	coal lands	private	56,279	Ky.
18. Bethlehem Steel, Bethlehem, Pa.	steel, steel products	public	47,132	Ky., W.Va.
19. Mead Corporation (Georgia Kraft Co.), Atlanta, Ga.	paper and wood products	public	46,765	Ala.
20. Rowland Land Co., Charleston, W.Va.	coal lands	private	44,867	W.Va.
21. Bruno Gernt Estate, Allardt, Tenn.	coal, timber	private	42,317	Tenn.
22. Union Carbide, New York, N.Y.	chemicals, carbon products	public	41,060	W.Va.
23. Brimstone Co., Dover, Del.	coal lands	private	40,261	Tenn.
24. Soterra, Inc., Delaware, Ohio	unknown	private	39,917	Ala.
25. Stearns Coal and Lumber, Stearns, Ky.	coal land, timber	private	38,934	Tenn.
26. Southern Co. (Alabama Power), Atlanta, Ga.	utility	public	38,736	Ala.
27. Plateau Properties, Crossville, Tenn.	land, mining	private	38,430	Tenn.
28. Lykes Resources, Inc. (Youngston Mine), Pittsburgh, Pa.	steel	public	38,071	W.Va., Va.
29. Alabama By-Products, Birmingham, Ala.	coal, coke, chemicals	public	34,365	Ala.
30. American Natural Resources (Virginia Iron Coal & Coke) Detroit, Mich.	gas, coal	public	33,155	Va., Ky.
31. Beaver Coal Co., Beckley, W.Va.	coal lands	private	32,994	W.Va.
32. St. Joe's Minerals (Tennessee Consolidated Coal). Jasper, Tenn.	coal, other minerals	public	32,323	Tenn.
33. Hugh D. Faust, Knoxville, Tenn.	coal lands, timber	individual	32,021	Tenn.
34. Jim Walter Corp., Birmingham, Ala.	pipe, metals, coal, building materials	public	31,721	Ala.
35. Dingess Rum Coal Co., Huntington, W.Va.	coal lands	private	31,282	W.Va.

Table 6. - Continued)

Name and Headquarters	Principal Business	Type of Company	Total Surface Acres	Chief Location of Holdings
36. Crescent Land Co., Charlotte, N.C.	land development	private	31,200	N.C.
37. Carolina Rite Co., Miami, Fla.	timber/pulp	private	30,330	N.C.
38. Mower Lumber, New York, N.Y.	timber, coal lands	private	29,792	W.Va.
39. Cole Interests, Huntington, W.Va.	coal lands	private	27,385	W.Va.
40. Albert Holman, Tuscaloosa, Ala.	coal lands	individual	26,284	Ala.
41. Kentenia Corp., Boston, Mass.	coal lands	private	25,335	Ky.
42. Cotiga Development Co., Philadelphia, Pa.	coal lands	private	25,081	W.Va.
43. Eastern Gas & Fuel Co. (Eastern Associated Coal), Boston, Mass.	coal, coke, gas	public	24,516	W.Va.
44. American Electric Power (Franklin Real Estate), New York, N.Y.	utility	public	22,775	Va., Ky.
45. Blue Diamond Coal Co., Knoxville, Tenn.	coal, land	private	22,206	Tenn.
46. Eastern Property Trading Co., Atlanta, Ga.	real estate	private	22,120	Ala.
47. Quaker State Oil (Kanawha Hocking and Valley Camp Coal), Oil City, Pa.	oil	public	21,175	W.Va.
48. Wilson Wyatt, Louisville, Tenn.	attorney	individual	21,131	Tenn.
49. Grandview Mining Co., Chattanooga, Tenn.	coal, land	private	21,116	Tenn.
50. National Steel, Pittsburgh, Pa.	steel	public	21,000	Ky.
Total			3,006,322	

Source: Appalachian Land Ownership Study, 1980.

^aMerged with Southern Railway after completion of study.

Table 7. Fifty Top Mineral Owners in Eighty Appalachian Counties

Name and Headquarters	Principal Business	Type of Company	Total Mineral Acres	Chief Location of Holdings
1. Columbia Gas System, Wilmington, Del.	natural gas, holding company	public	342,236	W.Va.
2. N&W Railroad* (Pocahontas Land & Pocahontas-Ky.), Roanoke, Va.	railroad, transportation	public	201,950	Ky., W.Va.
3. Continental Oil (Consolidation Coal), Stamford, Conn.	oil, gas, petrochemicals, coal	public	193,061	W.Va., Ky.
4. Pittston Corp., New York, N.Y.	coal	public	185,254	Va.
5. Occidental Petroleum (Island Creek Coal), Los Angeles, Ca.	gas, oil, petrochemicals, coal	public	144,741	W.Va., Ky., Va.
6. Berwind Land Co. (Kentland Co.), Philadelphia, Pa.	coal, natural resources	private	108,561	Ky.
7. American Natural Resources (Virginia Iron Coal & Coke), Detroit, Mich.	gas, coal	public	80,705	Va.
8. U.S. Steel, Pittsburgh, Pa.	steel	public	71,601	Ala., Tenn., W.Va.
9. Republic Steel, Cleveland, Ohio	steel	public	67,252	Ala.
10. Georgia-Pacific, Atlanta, Ga.	wood products	public	67,027	W.Va.
11. First National Bank of Birmingham, Birmingham, Ala.	bank, holding company	private	66,991	Ala.
12. Diamond Shamrock (Falcon Seaboard), Cleveland, Ohio	oil, gas, chemicals, coal	public	66,928	Ky.
13. Deep Water Properties (held through First National Bank of Birmingham), Birmingham, Ala.	financial trust	private	66,038	Ala.
14. Cherokee Mining, Houston, Tex.	coal	private	60,294	Ala.
15. National Steel, Pittsburgh, Pa.	steel	public	60,000	Ky.
16. Reynolds Metals (Reynolds Minerals), Richmond, Va.	ore, chemicals, aluminum	public	58,000	N.C.

Table 7. Continued

Name and Headquarters	Principal Business	Type of Company	Total Mineral Acres	Chief Location of Holdings
17. Wilson and Maryanne Wyatt, Louisville, Ky.	attorney	individual	57,614	Tenn.
18. Chessie System, Inc. (Western Pocahontas, C&O Railroad), Baltimore, Md.	holding company, transporta- tion, chemicals	public	56,830	W.Va., Ky.
19. Rowland Land Co., Charleston, W.Va.	coal lands	private	54,474	W.Va.
20. North Alabama Mineral Division Co., no address	minerals	unknown	50,141	Ala.
21. J. M. Huber, Rumson, N.J.	diversified, timber and wood products	public	47,759	Tenn.
22. Quaker State Oil (Kanawha Hocking and Valley Camp Coal) Oil City, Pa.	Oil	public	47,711	W.Va.
23. Wesley West, Houston, Tex.	coal lands	individual	46,682	Ala.
24. Beaver Coal Co., Beckley, W.Va.	coal lands	private	44,807	W.Va.
25. Plateau Properties, Crossville, Tenn.	land, mining	private	42,038	Tenn.
26. Union Carbide, New York, N.Y.	chemicals, carbon products	public	41,689	W.Va.
27. Alabama By-Products, Birmingham, Ala.	coal, coke, chemicals	public	41,001	Ala.
28. Charleston National Bank, Charleston, W.Va.	bank, holding	private	40,566	W.Va.
29. Cotiga Development Co., Philadelphia, Pa.	coal lands	private	39,648	W.Va.
30. Mower Lumber, New York, N.Y.	timber, coal lands	private	36,776	W.Va.
31. Eastern Gas & Fuel Co. (Eastern Associated Coal), Boston, Mass.	coal, coke, gas	public	35,066	W.Va.
32. Sun Oil (Shamrock Coal), Radnor, Pa.	oil company	public	34,927	W.Va.
33. Southern Railway*, Washington, D.C.	rail transport	public	34,877	Ala.

34. Coal Creek Mining & Mfg., Knoxville, Tenn.	coal lands	private	34,042	Tenn.
35. Lykes Resources, Inc. (Youngston Mine), Pittsburgh, Pa.	steel	public	33,972	W.Va.
36. L&N Railroad, Lexington, Ky.	railroad	public	32,575	Ala.
37. Penn Virginia Corp., Philadelphia, Pa.	coal lands	public	32,267	Va.
38. Dayton Hale, Tuscaloosa, Ala.	banker, real estate	individual	31,600	Ala.
39. Julius Doochin, Nashville, Tenn.	contractor, coal lands	individual	31,000	Tenn.
40. Dingess Rum Coal Co., Huntington, W.Va.	coal lands	private	30,186	W.Va.
41. Neva McMullen, Washington, N.C.	coal lands	individual	29,901	W.Va.
42. Drummond Coal Co., Jasper, Ala.	coal mining & coal lands	private	29,038	Ala.
43. W. R. Burt, Lexington, Ky.	coal, land	individual	28,701	Ala.
44. Bruno Gernt Estate, Allardt, Tenn.	coal, timber	family	28,354	Tenn.
45. Cole Interests, Huntington, W.Va.	coal lands	private	28,046	W.Va.
46. Southern Land and Exploration, Tuscaloosa, Ala.	coal lands	private	27,284	Ala.
47. Consolidated Goldfields (Goldfield Mining Corp.), London, Eng.	multinational mining interests, including South Africa	public	26,706	Tenn.
48. National Shamuts Bank of Boston, Boston, Mass.	bank, holding	private	26,453	Va.
49. Kentucky River Coal, Lexington, Ky.	coal lands	public	26,272	Ky.
50. Hagan Estate, Tazewell, Va.	coal, land	individual	25,854	Va.
Total			3,095,496	

Source: Appalachian Land Ownership Study, 1980.

*Merged with Southern Railway after completion of study.