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## David Rozman and Land-Use Planning in Massachusetts

## By

## Gerald F. Vaughn

David Rozman was a fascinating man: he possessed uncommon ability to not only study the past but also see into the future. Having fled from strife-torn Russia in 1922, Rozman came to the faculty of the University of Massachusetts in 1927 and until his retirement in 1961 conducted some of the most insightful historical and economic studies of population, industrial, and land-use changes in the Commonwealth of Massachusetts. Based on these studies, he was instrumental in helping Massachusetts citizens to think about and plan for better land-use. To correctly understand the development of Massachusetts in the twentieth century, it is instructive to review Dr. Rozman's studies, findings, and recommendations. It is equally instructive to examine his life, training, and career, which gave such a forward-looking perspective to his work.

Born in 1895 to Adolph and Esther Rozman in Eupatoria, Russia, a Black Sea port city on the west coast of the Crimean peninsula, David Rozman was educated at Eupatoria's classical gymnasium from 1910 to 1915 preparatory to entering the University of Moscow in 1915 to study economics. He completed three years of undergraduate study before social and economic turmoil in Russia, resulting from World War I and the Bolshevik Revolution of 1917, forced suspension of his studies.

Conditions had been difficult even prior to World War I. Rozman wrote: "The evils of restricted land transfer are to be seen in Russia before the war where common ownership and periodical redistribution of

land in the communes confined peasants to a miserable existence on constantly diminishing land holdings as population grew in numbers."

During the Bolshevik takeover of the Crimean peninsula soon after the war, Anna Reid indicates: "Sixty thousand Crimeans were killed in less than six months, and another 100,000 died of starvation." She refers to an emigre newspaper that described conditions in Eupatoria as follows:

Bands of gypsies live in the suburbs of the city, dying of hunger. Robberies are innumerable during the night. The soldiers of the Red Army, in rags and bare feet and dying of hunger, attack the inhabitants at nightfall and steal their clothing. The Communists are not exempt from these attacks. The lack of fuel requires that doors and windows are used for heating...

Amidst such terror and hardship, Rozman followed countless other Russians who for decades had emigrated to the United States to seek a better life.<sup>2</sup>

Nearly a decade later, having become established at Massachusetts State College, Rozman was interviewed about the current Soviet regime and said: "Russia has two roads open to it if it continues to enforce its present form of communistic government, and both of these roads lead to a common goal, namely capitalism as it is found in the other nations of the world. These roads are either a change through forceful revolution or through modification of its present economic standards." What Rozman predicted in 1931 now has come close to reality.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> David Rozman, "The 'Agricultural Ladder' in Foreign Countries," *Journal of Land and Public Utility Economics* 2 (April 1926), 252.

<sup>&</sup>lt;sup>2</sup> Anna Reid, *Borderland: A Journey Through the History of Ukraine* (London, 1997), 180-81.

<sup>&</sup>lt;sup>3</sup> Anon., "Russia is Discussed by Professor Rozman," *The Massachusetts Collegian* (MA State College student newspaper), April 23, 1931.

Rozman emigrated in 1922 to the United States and enrolled as a senior at the University of Wisconsin in Madison; in 1923 he received his bachelor's degree in economics. He married his wife Nadia in 1924 while studying at Wisconsin for the master's degree in economics, which he received in 1926. He and she eventually had one son, David S. Rozman.

While at the University of Wisconsin, Rozman became interested in the emerging new field of land economics fathered by one of the university's greatest scholars, Richard T. Ely, director of the famous Institute for Research in Land Economics and Public Utilities. In 1920 Ely founded the Institute for Research in Land Economics and Public Utilities at the University of Wisconsin, in which the study of land and public utility problems was based on knowledge of the nature, significance, evolution, and operation of economic institutions and forces. Ely understood that land problems are basic to many economic activities and, therefore, chose as the institute's motto, "Under all, the land."

To understand Rozman's intellectual development and its foundations, which facilitated his exemplary career in land economics, it is necessary to know the state of the art during his training. In 1922, the year when Rozman entered the University of Wisconsin, Ely, Mary L. Shine, and George S. Wehrwein published a three-volume work titled *Outlines of Land Economics*. Volume I dealt with *Characteristics and Classification of Land*; Vol. II, *Costs and Income in Land Utilization*; and Vol. III, *Land Policies*. In Volume I, land economics is defined as "that division of economics, theoretical and applied, which is concerned with the land as an economic concept and with the economic relations which grow out of land as property." The study of land economics focuses not on the relations of people to land, but on the relations of people to people arising from their relations to land. Land economics is a social science. *Outlines of Land Economics* represented a tremendous advance over previous literature in the field.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> Richard T. Ely, Mary L. Shine, and George S. Wehrwein, *Outlines of Land Economics*, Vol. I (Ann Arbor, 1922), 4.

In 1924 Ely and Edward W. Morehouse co-authored *Elements of Land Economics*, which was a more succinct and readable presentation of the basics of land economics. The Ely and Morehouse book was perhaps most valuable for its sharp focus on the social ends of land utilization and the principle of social control. The authors defined the social ends of land utilization as: "(1) A balanced production and distribution of wealth; (2) the conservation of natural resources; and (3) the increase of the amenities of living so far as they are dependent upon the use of land." Adjustments in land use may significantly affect balanced production and distribution of wealth, conservation, and amenities.<sup>5</sup>

The social ends of conservation of natural resources and the increase of the amenities of living are readily understood. However, balanced production and distribution of wealth is an elemental yet less easily understood concept requiring explanation. By balanced production of wealth, Ely and Morehouse mean not necessarily the largest production of each commodity and service but instead "a balanced production -- neither too much nor too little coal, wheat, houses, or any other commodity or service." That is, production and consumption are in balance, and the economy is in good health across all sectors.<sup>6</sup>

Regarding distribution of wealth, Ely and Morehouse do not mean that each person should receive an equal share of the total fund of wealth. Instead, in the ideal distribution of wealth:

First, the size of each individual's share of the national income should be sufficient to maintain an adequate standard of living. Second, the shares of this total fund of wealth should be proportioned so as to bring forth just that supply of productive effort necessary to achieve a balanced production.<sup>7</sup>

<sup>&</sup>lt;sup>5</sup> Richard T. Ely and Edward W. Morehouse, *Elements of Land Economics* (New York, 1924), 271.

<sup>&</sup>lt;sup>6</sup> Ely and Morehouse, *Elements of Land Economics*, 271.

<sup>&</sup>lt;sup>7</sup> Ely and Morehouse, *Elements of Land Economics*, 273.

Finally, as to the principle of social control, Ely and Morehouse note that land ownership carries with it political and social power. They caution that:

Consciousness of the possession of this power often leads landowners into abuses of it; and the abuses of power are often so flagrant that some control for the common welfare is essential...This tendency finds expression in what may be called the principle of social control: The more intensive the use of land, the more highly developed must be the social control.<sup>8</sup>

These two basics, the social ends of land utilization and the principle of social control, guided Rozman throughout his long career in land economics. Balanced is the key word, for Rozman sought balanced land-use.

In 1925 Ely retired from the University of Wisconsin and relocated himself and his institute to Northwestern University in Evanston and Chicago, Illinois. Rozman went along with Ely, working as a research assistant in the institute while studying as a doctoral student in Northwestern's School of Commerce where Ely and senior associates of his staff were among the professors. The institute's research library, which included Ely's private library, contained 25,000 titles and was even larger than the substantial economics and commerce departmental collections that totaled 20,000 volumes. Rozman could not have dreamed of a finer place for academic study and research, in preparation for his future career.

Rozman worked on the institute's agricultural land tenure inquiries, an excellent supplement to his doctoral study. Ely pointed with pride to the institute's research on agricultural land tenure, directed by Dr. George S. Wehrwein, as among the areas of real progress in the new field of land economics:

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<sup>&</sup>lt;sup>8</sup> Ely and Morehouse, *Elements of Land Economics*, 23.

The Institute for Research in Land Economics and Public Utilities is conducting very detailed and minute inquiries in regard to tenancy and ownership in selected areas, taking, for example, a section where there is practically no tenancy and other sections where there is a large amount of tenancy. It has also given some attention to the inheritance of farms. Instead of broad and misleading statements to the effect that tenancy is an evil, we know something about its proper place in a desirable system of land tenure and have some ideas as to what may be a desirable amount of tenancy and also as to what is good and bad tenancy.

Rozman's participation in the agricultural land tenure research resulted in three notable journal articles. They dealt with the so-called "agricultural ladder" from farm tenancy up to ownership in foreign countries, and the role of land credit in two American mid-west rural areas during the approximate period 1850-1925. 10

Ely focused on the historical development of economic society as the basis of his outlook for the future and the need for proper planning. He and his associates took an historical approach to their inquiries into economic problems. Ely had a broad social view of economics, and his thought was directed toward the goal of social solidarity. In his

<sup>&</sup>lt;sup>9</sup> Richard T. Ely, "Land Economics" in *Economic Essays Contributed in Honor of John Bates Clark*, edited by Jacob H. Hollander (New York, 1927), 132.

David Rozman, "The 'Agricultural Ladder' in Foreign Countries," *Journal of Land and Public Utility Economics* 2(April 1926), 249-53; "Land Credit in the Town of Newton, Manitowac County, Wisconsin, 1848-1926," *Journal of Land and Public Utility Economics* 3 (Nov. 1927), 371-84; and "Land Credit in Walnut Grove Township, Knox County, Illinois," *Journal of Land and Public Utility Economics* 4 (Aug. 1928), 305-12.

autobiography, quoting from his book *The Social Law of Service*, published in 1896, he said he believed that:

To upbuild human character in men you must establish for them right social relations...Social solidarity means the oneness of human interests; it signifies the dependence of man upon man...Social solidarity implies not only fellowship in interests and responsibilities, but that unity in nature which is brought before us by the expression, 'human brotherhood.'

Ely's historical approach to economic problems and broad social viewpoint proved of great value to Rozman's research during his long and distinguished career at the University of Massachusetts. Rozman's work was a blend of sociology, economics, and government.

Rozman had completed most of his Ph.D. requirements and, in December 1927, he accepted a research professorship in the department of agricultural economics of the University of Massachusetts (then Massachusetts Agricultural College). Alexander E. Cance was department chairman when Rozman was hired, and Rozman was a man after Cance's own heart. Cance himself had studied under Ely at the University of Wisconsin, where in 1908 Cance obtained his Ph.D. degree in economics with a doctoral dissertation titled "Economics of Land Tenure in Mississippi." Cance shared Ely's broad social viewpoint:

The social point of view is essential in the wise development and application of every science and the practice of almost every art...Most of the subjects of the curriculum could be used in building a foundation for the study of society if they were taught functionally, having in mind their ultimate purpose in modern life. But unfortunately we have not enough teachers who have the social viewpoint.

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<sup>&</sup>lt;sup>11</sup> Richard T. Ely, quoted in *Ground Under Our Feet* (New York, 1938), 87-88.

Cance was employed by University of Massachusetts president Kenyon L. Butterfield in 1909 to join the faculty and strengthen the social sciences. Butterfield was among the early leaders of rural progress and the American country life movement.<sup>12</sup>

Cance clearly understood the social need for research in land economics. At the 1928 annual meeting of the New England Research Council on Marketing and Food Supply, he said: "Using the ordinary economic definition of land, and making individual and social well being the end of human effort, land utilization studies may include practically the whole program of economic research, and a great part of the program of social investigation." Rozman was not hired to teach but to do land economics research. Cance and Rozman quickly identified the pressing need for a study of the accelerating trend toward part-time farming in the Commonwealth of Massachusetts and the impacts of this rapidly increasing form of land tenure and use upon agriculture and rural life. This study would have special bearing on problems of land utilization, food supply, and agricultural competition in the Commonwealth. 13

In 1928 Rozman did a survey of 197 part-time farms in the Lowell and Taunton areas, followed in 1929 by a survey of 820 part-time farms in the Holden area. He returned to Northwestern University in the

<sup>&</sup>lt;sup>12</sup> Alexander E. Cance, "Preparatory Courses for Agricultural Economics," *Journal of Farm Economics* 10 (1928), 170; regarding Butterfield's early leadership in the advance of rural progress, see Gerald F. Vaughn, "Massachusetts Gave Leadership to America's Country Life Movement: The Collaboration of Kenyon L. Butterfield and Wilbert L. Anderson," *Historical Journal of Massachusetts* 26 (Summer 1998), 124-44.

<sup>&</sup>lt;sup>13</sup> Alexander E. Cance, "Program of Research in Land Utilization," *Minutes of the Annual Meeting of the New England Research Council*, 1928 (Boston, 1928), variously paged. For a helpful review of America's land utilization movement of that era, of which Rozman's training and career were products, see Albert Z. Guttenberg, "The Land Utilization Movement of the 1920s," *Agricultural History* 50 (July 1976), 477-490.

summer of 1930 and for the 1930-31 academic year to complete his doctoral program, including writing the dissertation, a journal abstract, and a Massachusetts Agricultural Experiment Station bulletin based on his research data. He received his Ph.D. degree in commerce in 1931. 14

As reported in his Agricultural Experiment Station bulletin, Rozman's study revealed there were at least 60,000 part-time farms in Massachusetts and at least one-third of the Commonwealth's agricultural production came from part-time farms. He found that most part-time farming was done on land sub-marginal for commercial agriculture, or on land in residential areas; thus part-time farming did not actively compete with commercial agriculture for the best farmland. Further, part-time farming increased tax revenues in areas with declining commercial agriculture; part-time farming accompanied location of industrial plants in small towns and rural areas, shorter hours in industry, and better transportation facilities; part-time farming enabled more economic security and better food and housing conditions for industrial wage earners; part-time farming could be expected to continue to increase; and any agricultural program for Massachusetts must give fuller attention to the problems and needs of part-time farming.

Rozman's research helped to stimulate similar studies of part-time farming in many other states and made him somewhat the expert on this subject for several years. For example, in 1934 he gave a series of lectures on part-time farming under the auspices of the Institute of Rural Economics at Rutgers University. In 1937 he wrote a lengthy illustrated article on part-time farming for the agricultural commission of the American Bankers Association.<sup>15</sup>

<sup>&</sup>lt;sup>14</sup> David Rozman, "Part-Time Farming in Massachusetts" (Ph.D. dissertation, Northwestern University, Chicago-Evanston, 1931); "Part-Time Farming in Massachusetts," *Journal of Farm Economics* 12 (Apr. 1930), 326-328; *Part-Time Farming in Massachusetts*, Massachusetts Agricultural Experiment Station Bulletin 266 (Amherst, 1930).

<sup>&</sup>lt;sup>15</sup> David Rozman, "Part-Time Farming: An Essential Factor in the Land Utilization of New England," *Bulletin of the Agricultural Commission*, *American Bankers Association* 11, No. 1 (March 1937), 1, 4.

In addition to part-time farming as an increasing type of land use, Rozman perceived significant changes in recreational and forestry uses of land in the Commonwealth. He studied changes in agricultural land utilization from 1880 to 1930, observing that the improved acreage on farms declined by nearly two-thirds over this period. He predicted that future development of good roads would result in part-time farming, intensive recreational, and residential use of much of this idle farmland. However, he felt the major portion should be reforested for timber production, wildlife management, and the less-intensive forms of outdoor recreation. He encouraged private forestry where profitable, and public acquisition and use of other forest lands. Rozman's research on part-time farming, recreation, and forestry clearly showed the direction that rural land-use was taking in Massachusetts, and he offered recommendations toward a better balanced land-use pattern in the Commonwealth.<sup>16</sup>

Hugh P. Baker, a renowned professional forester, became president of Massachusetts State College in 1933. Rozman's studies documented the need to find better uses for the two-thirds of Massachusetts's land area that was or should be forested, and Baker understood that managing these woodlands and adjacent lands for better forestry, wildlife conservation, and outdoor recreation, offered great potential benefit to the natural resources and also to the people of the state. Baker added to the faculty in quick succession professors J. Harry Rich in forest products and utilization, Reuben E. Trippensee in wildlife management, and William G. Vinal in nature education and outdoor recreation. 17

<sup>&</sup>lt;sup>16</sup> David Rozman, Recreational and Forestry Uses of Land in Massachusetts, Massachusetts Agricultural Experiment Station Bulletin 294 (Amherst, 1933).

<sup>&</sup>lt;sup>17</sup> Harold Whiting Cary, *The University of Massachusetts: A History of One Hundred Years* (Amherst: University of Massachusetts, 1962), 159; David Rozman, *Part-time Farming in Massachusetts*, Agr. Exp. Sta. Bulletin 266 (Amherst: MA State College, 1930); David Rozman, *Recreational and Forestry Uses of Land in Massachusetts*, Agr. Exp. Sta. Bulletin 294 (Amherst: MA State College, 1933).

Meanwhile Rozman continued his revealing studies into population, industrial, and land-use changes in the Commonwealth. Dairy farming was the major agricultural land use in Massachusetts, and during the depths of the Depression one of Rozman's studies focused on the location and organization of secondary milk markets in small cities. At that time, secondary milk markets apparently were suffering far more than a primary milk market such as metropolitan Boston. Rozman studied changes in milk marketing between 1930 and 1932 in three small cities: Gardner, Attleboro, and Newburyport. He found that, under Depression conditions, an excess of farm labor, lack of other income, and low milk prices caused too many milk producers to also become distributors in nearby secondary milk markets, resulting in extreme competition with small local dealers and distributors. He showed that the most stable and satisfactory arrangement was for producers to refrain from entering the distribution field and instead sell their milk to the small local dealers and distributors.<sup>18</sup>

In 1935 Massachusetts State College established a department of economics in addition to its previous department of agricultural economics. Cance was named chairman of the economics department, and he took Rozman as part of his new department's research faculty. This broadened Rozman's studies to extend somewhat beyond agricultural and rural land problems, and he began to focus on the Commonwealth's overall economy and land-use pattern. For example, he and Ruth Sherburne co-authored a study of receipts and expenditures of state, county, and municipal governments in Massachusetts and also a study of the historical trend of Massachusetts industries from 1837 to 1933. The latter presented statistics indicating trends in population, number of manufacturing establishments, and number of employees for 142 cities and towns. <sup>19</sup>

<sup>&</sup>lt;sup>18</sup> David Rozman, *Secondary Milk Markets in Massachusetts in the Period of Falling Prices, 1930-1932*, Massachusetts Agricultural Experiment Station Bulletin 304 (Amherst, 1933).

<sup>&</sup>lt;sup>19</sup> David Rozman and Ruth Sherburne, *Analysis of Receipts and Expenditures of State, County, and Municipal Governments in Massachusetts*, Massachusetts Extension Service Special Circular No. 17

However, Rozman's most important and lasting contributions in Massachusetts occurred from 1936 to 1940 through his land classification work done as an associate consultant to the National Resources Planning Committee and Massachusetts State Planning Board under consultant Arthur C. Comey, noted Harvard University professor of city and regional planning. Exceptionally forward-looking, Rozman was ideal to assist in this new land-use planning initiative. Having fled from strife-torn Russia, he looked toward a bright future in the United States. Moreover, in the subjects of land utilization and land-use planning he had been trained by America's best land economists, Richard T. Ely, Edward W. Morehouse, George S. Wehrwein, and their associates. Furthermore, Alexander E. Cance, an outstanding economist and himself trained by Ely, was Rozman's administrator and mentor at Massachusetts State College and enthusiastically supported Rozman's work.

Rozman was responsible for overseeing the comprehensive land classification survey for all townships in the Commonwealth except Boston and the Islands (which were not mapped). Massachusetts State College granted Rozman a six-months' leave of absence during this project, which was assisted by funds from the U.S. Works Progress Administration. The National Resources Committee had called attention to Massachusetts land problems in 1934, and progress toward desirable land-use adjustments in Massachusetts was monitored in internal documents of the U.S. Resettlement Administration and its successor agency, the U.S. Farm Security Administration, over the next several years.<sup>20</sup>

(Amherst, 1936); David Rozman and Ruth E. Sherburne, *Historical Trend in Massachusetts Industries*, 1837-1933, Massachusetts Agricultural Experiment Station Bulletin 340 (Amherst, 1938).

<sup>20</sup> Massachusetts Land Planning Consultant, National Resources Committee, *Massachusetts -- Land Problem Report* (Amherst, Sept. 15, 1934); Ronald L. Mighell, *Report on Major Land Use Adjustments — LU-30*, U.S. Resettlement Administration, Office of State Land Use Planning Specialist (Amherst, April 1936); Joseph T. Elveve, *Continuation of the Study of the Extent of Desirable Major Land Use Adjustments -- LU-30*,

Fundamental to Ely's and Morehouse's approach to achieving balanced land-use, in which Rozman had been trained, was the economic classification of land according to the land's suitability for various possible uses. Ely and Morehouse asserted: "The need for classification of land is great, whether public or private purposes are under consideration." They held:

Good economic classification of land must satisfy three requirements: (1) it must divide the land into classes that are distinct, well-recognized, and measurable; (2) it must be helpful for the purpose to accomplish which the classification is made; (3) the class differences must have economic significance. Many different methods of classification may be used; the choice depends on the purpose for which classification is made.

Their strong insistence on economic land classification as basic to land-use planning was instilled in Rozman, and their training plus Rozman's own good judgment in choosing a proper land classification method proved indispensable to the effectiveness of land classification in Massachusetts.<sup>21</sup>

Impetus for a Massachusetts land economic survey actually can be traced to efforts of the Massachusetts Forest and Park Association (MFPA), beginning in 1931, to convince the state legislature to fund a statewide survey of natural resources. The MFPA contended that better scientific information on the natural resources of the state should be obtained as the basis for planning conservation and development of these resources. As a result topographic and geologic mapping of Massachusetts was soon accelerated, but this met only part of the need. To illustrate what could yet be accomplished, the 1934 Conference on Land Economic Survey of the MFPA produced a report titled

U.S. Farm Security Administration, Office of Land Use Planning Specialist (Amherst, Jan. 31, 1938).

<sup>&</sup>lt;sup>21</sup> Ely and Morehouse, *Elements of Land Economics*, 31.

Summarized Sample Survey of Natural Resources Based on the Town of Holden and Vicinity. For the town of Holden and its vicinity, this report contained a geological survey; forest survey; fish and game survey; paper on the problem of land utilization with special reference to Holden, Oakham, and New Braintree (by Clark University geographer W. Elmer Ekblaw and David Rozman); and a proposed bill for a survey of natural resources. The narrative was accompanied by maps showing the soil types, geology, and land utilization of Holden.<sup>22</sup>

The opportunity for statewide work along these lines finally came when the Commonwealth legislature established the Massachusetts State Planning Board in August 1935, as an independent agency in the executive branch of the state government. The governor appointed the Board's membership in September 1935, with Elisabeth M. Herlihy appointed as chairman. The State Planning Board was directed to prepare a master plan for the Commonwealth's physical development and participate in planning all public and private projects for which Federal funds would be expended. In preparing a master plan for the Commonwealth's physical development, the State Planning Board's first step was its comprehensive statewide survey of land-quality and land uses.

While rural land-use planning had made rapid conceptual advances, its theory and techniques still were somewhat inapplicable to rural areas experiencing substantial urban and industrial influences. Rozman noted: "In working out a balanced program of land utilization in a state like Massachusetts it is necessary to a certain extent to develop a somewhat different approach and possibly a new technique." He shared the view of Leonard A. Salter, Jr., Acting Chief of the Land Use Planning Section in Resettlement Administration Region I (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, and VT), who observed:

<sup>&</sup>lt;sup>22</sup> M. Richard Applegate, *Massachusetts Forest and Park Association, A History, 1898-1973* (Boston, 1974), 11-12, 22; Massachusetts Forest and Park Association, *Summarized Sample Survey of Natural Resources Based on the Town of Holden and Vicinity*, Conference on Land Economic Survey (Boston, 1934).

Rural land-use planning problems are complicated in the northeastern industrial region. Simple land-use description is made difficult because of the wide variety of uses which occur. Study of competing uses is extremely complex because economic use of the land is dependent primarily on other than its physical characteristics. In other parts of the country where much land-use planning work has been done, the choice between alternative uses has usually been limited to no more than farming or forestry and sometimes grazing or recreation. In an area such as the one in question, the competitive rural land uses are multiplied manyfold by urban and industrial influences. Consequently, on the basis of present knowledge, control or direction of the use of the land is nearly impossible.<sup>23</sup>

Rozman's daunting task was to be creative and make the Massachusetts land-quality and land-use survey highly applicable to the solution of pressing land problems. For every town five detailed maps were drawn at a scale of two inches to the mile, accompanied by a legend. The five maps were devoted to topography, land-utilization, soil classification, roads and waterways, and roads and buildings. The 1936 progress report of the State Planning Board showed several immediate applications. The contents of Chapter II on land began with discussions of the Commonwealth's physical characteristics, agriculture, forestry, recreation, wildlife preservation, and land-utilization problems. Next was described the land-quality and land-use survey as applied to specific communities, including Chester (forestry and recreational uses), Peru (forestry uses), Lancaster (agricultural uses), Billerica and Uxbridge

<sup>&</sup>lt;sup>23</sup> David I. Rozman, "Land Use Planning in Rural Areas," *The Planners' Journal* 4 (1938), 121; Leonard A. Salter, Jr., "Some Problems of Rural Land-Use Planning in the Northeastern Industrial Region," *Journal of Land and Public Utility Economics* 13 (1937), 32.

(part-time farming uses), and Hingham (residential and recreational uses). The chapter was illustrated by maps, charts, and photos.<sup>24</sup>

Rozman presented an updated status report on this work, with special reference to rural areas, on July 16, 1938, at a conference sponsored by the Massachusetts Federation of Planning Boards and held at the Massachusetts Institute of Technology in Cambridge in connection with a three-weeks summer course on planning. It was subsequently printed in *A Planning Forum* (the State Planning Board's publication) and reprinted in *The Planner's Journal* (the American Institute of Planners' publication). Once again, Rozman made it forcefully clear that the forest lands occupying nearly two-thirds of the Commonwealth land area were the key to improved land-utilization:

In general, the State Planning Board bases its activities in the realm of land utilization on the fact that the forestry areas give the greatest promise of attaining the most effective improvement in land utilization at the present time...If some gain is made in putting this land on a better productive basis, a great deal will be accomplished in the field of conservation of natural resources of Massachusetts and in eliminating some of the land use maladjustments existing in the rural areas.

Rozman's emphasis on opportunities in forestry and his influence can be read into Cance's subsequent review of R. W. Marquis' *Economics of Private Forestry*. <sup>25</sup>

In the 1930s little correlation of wildlife management and forestry in wise multiple-use of land had been achieved anywhere, and there was almost no experience to draw on. Leading researchers in the Northeast

<sup>&</sup>lt;sup>24</sup> Massachusetts State Planning Board, *Progress Report on State Planning for Massachusetts* (Boston, 1936), 9-38.

<sup>&</sup>lt;sup>25</sup> Rozman, "Land Use Planning in Rural Areas," 123; Alexander E. Cance, review of R. W. Marquis' *Economics of Private Forestry*, in *American Economic Review* 30 (June 1940), 389.

such as Reuben E. Trippensee and James D. Curtis, of the Department of Forestry and Wildlife Management of Massachusetts State College, saw the need to develop a plan of correlated timber and wildlife management. However, not until 1937 were they able to launch a research project. State-owned forests, the researchers opined, "provide a remarkable opportunity for demonstrating the practicability of a correlated program of forestry and wildlife management" because such forests "are controlled by public agencies and can be operated for the greatest benefit to the public regardless of whether the service is the production and use of timber or wildlife" and "so operated they can set an example or pattern for the management of private lands in the same locality and also for state forest administration in neighboring states."

An exceptionally innovative example of the usefulness of the State Planning Board maps of land quality and land uses comes from experimental land-use planning initiated in 1936-37 in Worcester County. John D. Black of Harvard University and George W. Westcott, in Rural Planning of One County: Worcester County, Massachusetts, indicate that Worcester County "was chosen for this undertaking because of its location and because it is about median for southern New England in land types, in agriculture and forestry, in balance of systems of farming, and in balance of rural and urban." A group from Harvard University got together with a group from [then] Massachusetts State College and discussed the Worcester County setting for an independent experiment in improving future land use, with other agencies to become involved as soon as practicable. Black and Westcott note that basic to these efforts, "the Massachusetts State Planning Board in a Works Progress Administration project had mapped the land use and cover in detail for all the towns in Worcester County and classified the land according to its suitability for agriculture. Professor David Rozman of

<sup>&</sup>lt;sup>26</sup> Reuben E. Trippensee, "The Development and Use of State Forests in New England in Relation to Wildlife," *Journal of Forestry* 35, 4 (1937), 403-408; James D. Curtis and Reuben E. Trippensee, "A Proposed Study of Timber and Wildlife Production in Central New England," *Journal of Forestry* 35, 12 (1937), 1111-1115.

the Massachusetts State College played a major role in the execution of this project."<sup>27</sup>

Field work was completed, analysis was well underway, and the Massachusetts State Planning Board had issued a Worcester County Tentative Plan in 1940. Then war was declared in December 1941, and the planning experiment was put on hold. After the war, it was decided to await the results of the 1950 population and agriculture censuses before resuming the Worcester County study and planning effort, which was completed in 1953. It also was decided to focus more sharply on one particular Worcester County town, Petersham, by which to illustrate most clearly the possibilities for improving future land use. The detailed analyses and well thought-out recommendations are beyond the scope of this article, but interested readers should consult Black's and Westcott's *Rural Planning of One County*, previously cited, and also Black's and Ayers Brinser's *Planning One Town: Petersham, A Hill Town in Massachusetts*. <sup>28</sup>

The Massachusetts State Planning Board's statewide land-quality and land-use survey in the late 1930s fortuitously also served defense purposes. As America entered World War II, the Commonwealth's Planning Board chairman Elisabeth M. Herlihy wrote: "The land-use maps which we have prepared over the last five years will be fully useful at the present time, not only to the State Planning Board in these regional studies, but to the defense authorities in their program for civilian protection. We have a set of five maps for each town in the State on a

<sup>&</sup>lt;sup>27</sup> John Donald Black and George William Westcott, *Rural Planning of One County: Worcester County, Massachusetts* (Cambridge, 1959), v, 10

<sup>&</sup>lt;sup>28</sup> Massachusetts State Planning Board, *Worcester County Tentative Plan* (Boston, 1940); John D. Black and Ayers Brinser, *Planning One Town: Petersham, A Hill Town in Massachusetts* (Cambridge, 1952).

scale of 2 inches to one mile, showing topography, roads and buildings, waterways, soil classification and existing land use and cover."<sup>29</sup>

Though Rozman's land classification was not mapped in the city of Boston, mapping was done for the surrounding countryside and Arthur C. Comey attests that the Massachusetts State Planning Board's work contributed to regional planning around metropolitan Boston for many years to come. The nucleus of Boston's outlying industrial, commercial, and residential development was somewhat star-shaped, and between the arms of the star remained much open land. In 1950 Comey wrote: "Planning will continue this pattern and will indicate where the urban arms may advantageously be extended. It will also indicate the range of part-time farming coupled with other activities, the very limited areas suitable for commercial agriculture, and the more extensive areas that should be devoted to forestry." 30

In conducting the statewide land-quality and land-use survey as a basis for land-use planning, Rozman became the leading expert on Massachusetts land utilization and especially regarding the complex interrelationships between population distribution, urban and rural land uses, and institutions affecting them. He observed that urban land-use planning and rural land-use planning had been done with very little integration. He argued: "Because of the complexity of land utilization and the interrelationship of the heterogeneous factors affecting its pattern in the State, a broader point of view is of primary importance." He was constantly seeking better balanced land-use.<sup>31</sup>

<sup>&</sup>lt;sup>29</sup> Elisabeth M. Herlihy, "State Planning Boards and Defense: Massachusetts," in Harlean James, ed., *American Planning and Civic Annual*, 1941 (Washington, D.C., 1942), 141.

<sup>&</sup>lt;sup>30</sup> Arthur C. Comey, "Planning the Metropolitan Boston Region," in Harlean James, ed., *American Planning and Civic Annual*, 1950 (Washington, D.C. 1951), 107.

<sup>&</sup>lt;sup>31</sup> Rozman, "Land Use Planning in Rural Areas," 121.

To a large degree Rozman helped rural social scientists in New England to realize that land utilization involved much more than land economics alone. As reflected by Harry C. Woodworth of the University of New Hampshire: "In New England, the term 'land economics' is not in common use. A committee of the New England Research Council reporting on land utilization research interpreted it as a broad field consisting of many complex problems. It considered that many of these problems involved directly at least three disciplines: sociology, economics, and government."<sup>32</sup>

Upon resuming his full-time academic duties Rozman authored a research bulletin analyzing the Commonwealth's rural land-use change between 1880 and 1940, dramatically illustrating the complex interrelationships among forces causing rural land-use change in rapidly urbanizing and industrializing Massachusetts. Classified on the basis of soil and topography, half of the state's land area was suitable for farming. Rozman showed that, in 1880, 41 percent of the state's land area was improved farmland but, by 1940, this proportion had fallen to only 15 percent. Changing types and systems of farming, and soil erosion and deterioration, were partly responsible for the abandonment of improved farmland. Increase in non-resident landownership, disappearance of certain town industries, and growth in residential, recreational, commercial, and other intensive uses of land, also were responsible. Again he pointed out that nearly two-thirds of the Commonwealth land area was forested, ranging from slightly more than half in some counties up to nearly three-fourths in others, reinforcing his contention that forest lands were the key to improved land utilization.<sup>33</sup>

Rozman's crusade for more attention to the Commonwealth forest lands presumably helped bring passage of a new forest tax law, adopted

<sup>&</sup>lt;sup>32</sup> Harry C. Woodworth, discussion of Leonard A. Salter, Jr., "The Content of Land Economics and Research Methods Adapted to its Needs," *Journal of Farm Economics* 24, No. 1(February 1942), 252.

<sup>&</sup>lt;sup>33</sup> David Rozman, *Interrelationship of Land Uses in Rural Massachusetts*, Massachusetts Agricultural Experiment Station Bulletin 387 (Amherst, 1941).

at the end of 1941, to make forest taxation more equitable and promote better forestry practices. He was a member of the Massachusetts Forest and Park Association, which sponsored the bill's introduction. While the law has been modified over the years, Gary Douglas Kronrad's doctoral dissertation (completed in 1982) analyzed the effectiveness of Massachusetts forest taxation and concluded the approach remains viable if not perfect.<sup>34</sup>

Rozman knew that implementation of a wise forest policy would be a slow process. Nonetheless, in a book review a decade later Rozman lamented that "large areas of land in New England, especially forest areas, are not now in operating units; and the units for some other types of land use, particularly in the field of recreation, are rather vague and do not lend themselves to a very definite analysis."

During World War II, Rozman headed the Wartime Agricultural Production Program at the college. His studies turned toward postwar readjustments that would be essential in Massachusetts agriculture, to both correct prewar maladjustments and meet changing conditions after the war. He determined that more than half of the commercial farms in Massachusetts would yield substandard levels of living under postwar conditions. Taking fuller advantage of land resources was the paramount need. With emerging technological developments in power machinery, such as bulldozers, power shovels, and bog harrows, he foresaw new possibilities for improving farmland by removal of stones and stone walls, clearing of trees and brush, and drainage of fields. Simultaneously he recommended the rebuilding of neglected land resources, notably farm woodlands, pasture, and hay lands. Combining the most efficient use of land resources, employment of labor, use of machinery, and

<sup>&</sup>lt;sup>34</sup> David Rozman, "Massachusetts Forest Tax Law," *Journal of Land and Public Utility Economics* 18 (1942), 363-65; Gary Douglas Kronrad, "An Economic Analysis of the Forest Taxation Law in Massachusetts" (Ph.D. dissertation, University of Massachusetts, Amherst, 1982).

<sup>&</sup>lt;sup>35</sup> David Rozman, review of John Donald Black's *The Rural Economy of New England*, in *Journal of Farm Economics* 33 (1951), 423.

marketing offered the best opportunity for successful reconstruction of Massachusetts agriculture following the war.<sup>36</sup>

Throughout the 1940s, Rozman kept track of changes of rural land ownership and land utilization. He sought to determine the effect of increased transfer of rural land ownership, during and following the war, on organization of agricultural production and reconstruction of land resources. He and Ruth Sherburne analyzed 267 farmland transactions in Massachusetts between 1940 and 1948, of which 55 involved sale of the farms for nonagricultural uses including recreation, timber production, and residential development, accounting for 15 percent of the total farmland sold.<sup>37</sup>

Rozman continued to emphasize research on land economics and land-use shifts in Massachusetts rural areas. In view of the importance of dairy farming as a land use, in 1954 he and Sherburne co-authored a study of major trends in the cow population in Massachusetts. Administrative reorganization returned Rozman to the University of Massachusetts Department of Agricultural Economics in 1955. 38

By the mid-1950s, the further urbanization and industrialization of Massachusetts had led to increasing public ownership and use of land in good agricultural areas. Rozman and Sherburne studied the extent of public ownership and cautioned against extensive penetrations of public land ownership in areas of present or potential value to agriculture. To replace good farmland so converted, the authors suggested additional

<sup>&</sup>lt;sup>36</sup> David Rozman, *Postwar Readjustments in Massachusetts Agriculture*, Massachusetts Agricultural Experiment Station Bulletin
430 (Amherst, 1946).

<sup>&</sup>lt;sup>37</sup> David Rozman and Ruth Sherburne, *Transfer of Ownership in Rural Areas and Its Effect on Land Utilization*, Massachusetts Agricultural Experiment Station Bulletin 458 (Amherst, 1950).

<sup>&</sup>lt;sup>38</sup> David Rozman and Ruth E. Sherburne, *Major Trends in Cow Population in Massachusetts*, Massachusetts Agricultural Experiment Station Bulletin 474 (Amherst, 1954).

possibilities for returning abandoned farmland to agriculture as made technologically feasible after World War II.<sup>39</sup>

Population was being redistributed in Massachusetts, and Rozman and Sherburne made sure to analyze it. They found three major trends influencing population redistribution during the fifty years from 1900 to 1950: migration caused by growth or decline of industries; suburban expansion in metropolitan areas; and shifts in the agricultural population from the hilly western sections to better farming areas. Interestingly, with decentralization of industry there was at that time an apparent resurgence of purely rural towns. Rozman and Sherburne published a subsequent study on migration in Massachusetts on a state and local basis, which included as an appendix some historical statistics on migration to and from the state for the period 1870 to 1950. These studies being rather sociological in nature, Rozman increasingly interacted with rural sociologists in the Northeast during the last five years prior to his retirement.<sup>40</sup>

Not unrelated to Massachusetts population trends, distribution, and characteristics was America's continuing flow of immigrants. An immigrant himself, Rozman retained his lively interest in immigration, witness his review of E. P. Hutchinson's *Immigrants and Their Children*, 1850-1950. Rozman noted: "Considering the fact that immigration has played such an important part in the development of this country, the

<sup>&</sup>lt;sup>39</sup> David Rozman and Ruth E. Sherburne, *Public Landownership in Rural Areas of Massachusetts*, Massachusetts Agricultural Experiment Station Bulletin 489 (Amherst, 1955).

<sup>&</sup>lt;sup>40</sup> David Rozman and Ruth E. Sherburne, *Population in Massachusetts: Trends, Distribution, Characteristics, 1900-1950,* Massachusetts Agricultural Experiment Station Bulletin 496 (Amherst, 1957); *Migration in Massachusetts on a State and Local Basis,* Massachusetts Agricultural Experiment Station Bulletin 512 (Amherst, 1959).

subject matter of this study will be of interest to any student in the field of social studies."<sup>41</sup>

Rozman retired as professor emeritus in 1961, and upon reflection he commented: "There has been considerable change in Massachusetts agriculture as well as the rest of the country. These changes are evident in technological developments, especially the organization of farm units and the development of better programs of land-use and conservation." Always an advocate of education, he had held: "What is actually needed is a greater educational effort toward developing better appreciation of the importance of natural resources in their relation to the welfare of the nation."

Still residing in Amherst in retirement, David Rozman died in 1977 at the age of 81. Today he is well remembered as a naturalized American citizen whose life, distinguished career as a forward-looking land economist, and superb scholarship contributed importantly to the historical record of population, industrial, and land-use changes in twentieth century Massachusetts. In the process he was instrumental, most notably via the lasting impact of the Massachusetts State Planning Board land-quality and land-use survey of the late 1930s, in helping the people of the Commonwealth to plan a better balanced land-use pattern.<sup>43</sup>

<sup>&</sup>lt;sup>41</sup> David Rozman, review of E. P. Hutchinson's *Immigrants and Their Children, 1850-1950*, in *Agricultural Economics Research* 9 (July 1957), 116.

<sup>&</sup>lt;sup>42</sup> "David Rozman, Agricultural Economist, Retires April 1," news release March 31, 1961, Communications Department, College of Agriculture, University of Massachusetts, in possession of Special Collections and Archives, University of Massachusetts; review of Barrow Lyons' Tomorrow's Birthright -- A Political and Economic Interpretation of Our Natural Resources, in American Economic Review 46 (Sept. 1956), 743.

<sup>&</sup>lt;sup>43</sup> For special assistance, the author expresses deep appreciation to Mike Milewski, Senior Archives Assistant, University of Massachusetts Library.