

Circular 64

EVOLUTION OF VALUES IN NEW MEXICO

CONSTRUCTION OF A REGIONAL COMPARABLE

**by William E. Bertholf II
Resource Economist**

Presented Before the Socorro Conference

of the

New Mexico Real Estate Commission

Friday, April 13, 1962

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

E. J. Workman, President

STATE BUREAU OF MINES AND MINERAL RESOURCES

A. J. Thompson, Director

CIRCULAR 64

EVOLUTION OF VALUES IN NEW MEXICO
CONSTRUCTION OF A REGIONAL COMPARABLE

by William E. Bertholf II
Resource Economist

Presented Before the Socorro Conference
of the

New Mexico Real Estate Commission

Friday, April 13, 1962

1962

STATE BUREAU OF MINES AND MINERAL RESOURCES NEW
MEXICO INSTITUTE OF MINING AND TECHNOLOGY
CAMPUS STATION SOCORRO, NEW MEXICO

NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY
E. J. Workman, President

STATE BUREAU OF MINES & MINERAL RESOURCES
Alvin J. Thompson, Director

THE REGENTS

MEMBERS EX OFFICIO

The Honorable Edwin L. Mechem . . . Governor of New Mexico
Tom Wiley Superintendent of Public Instruction

APPOINTED MEMBERS

William G. Abbott Hobbs
Holm O. Bursum, Jr. Socorro
Thomas M. Cramer Carlsbad
Frank C. DiLuzio Albuquerque
Eva M. Larrazolo (Mrs. Paul F.) Albuquerque

For sale by the New Mexico Bureau of Mines and Mineral Resources
Campus Station, Socorro, New Mexico Price \$0. 10

Prologue

The problem herein is to appraise the evolution of value ideas of a region; namely, New Mexico. Such appraisals are of the "special purpose" type in the sense that a region develops in response to particular needs of the first settlers and users, who tend to be few or transitory. Further, regulations promulgated in response to momentary and local needs tend to clog the socioeconomic machinery used to cure obsolescence and develop the highest and best utility of a region. Hence, it is not uncommon to observe that early formed regional values evolve in a "boom and bust" atmosphere rather than through comprehensive and orderly progression.

The "property" to be appraised is more than a site. It is a socioeconomic environment that comprehends the need- and want-satisfying activities of the human inhabitants in their efforts to attain high-consumption standards of living. Functional and livability data should include the (1) mineral resource potential, (2) climate trends, (3) psychosocial trends, and (4) population potential. To simplify discussion, the mineral resource data are assumed to indicate potential energy, chemical, and structural mineral resources to satisfy reasonable long-run demands. Further, the climate is assumed to range from hot and dry to cold and wet.

The nature of the interest to be appraised is not a fee simple absolute. Rather, it is the movement of thought concerning the bundle of expectations that tend to form property values. Such thoughts range from objective to subjective.

The extent of the purpose of the appraisal is not limited to fair market price of property as of a given date. Rather, it encompasses evolution of the "need-satisfying activities" of that "reasonable man" called the "willing buyer."

The appraisal of a region has analogues in the appraisal of a site and its improvements. George L. Schmutz ("The Appraisal Process," 1953) stated that an appraisal is undertaken to answer a question concerning value, cost, damage, taxation, or other purposes. Further, all analytical appraisals involve the use of one or more of three methods that are called approaches to the value estimate; to wit, (1) cost or summation, (2) capitalization or income, and (3) comparative or sales or market. These three "ever-loving" approaches primarily are used to estimate the relation of economic price and socioeconomic value for a parcel of land and its improvements in a present and local situation. The three approaches contain the movement of valuation standards from the 19th century bricks-and-mortar ideas to the more subjective ideas of the 20th century market place.

The cost or summation approach has been used in limited regional situations, such as preliminary studies of valuation practice in the taxation field, and so-called "national balance sheets." The capitalization or income approach has been applied to particular regional mineral industries. In the past, there have been sales of regions at prices set by treaty. Application of all such special purpose valuation data requires substantial correction and adjustment to bring the historical environments into comparability with present and future environments.

Time measures for regional values tend to be psychosocial or correlative rather than biological. Sir Julian Huxley observed that man's evolution is not biological but is psychosocial. Major progress is achieved by breakthroughs to new dominant patterns of mental organization of knowledge, ideas, and beliefs.

The tendency to associate "highest and best use" with the relatively short-run progression of events at the neighborhood level suggests that at the regional level it would be desirable to substitute the concept that all sovereigns have a duty to manage values efficiently. In support of such a suggestion it should be recalled that conventional economic theory uses a short-run arbitrage market definition of price; to wit, "the price of a commodity during a period in which its supply is fixed."

Near the close of the 19th century, corporate ideas began to displace individualistic ideas in the management of values. The agrarian population was alarmed; the United States Congress passed the Sherman Act (act of July 2, 1890; 15 U. S. C. 1) in an effort to support the competitive market and the socioeconomic efficiencies of a freely variable price and supply.

The result of a line of law cases in the latter part of the 1800's was to confirm socioeconomic value as the standard for analytical appraising.

In the early days of railroading, the industry had valuation problems that frequently were regional in character. In one such, Mr. Justice Brewer delivered an opinion of the United States Supreme Court that established use as a value standard; to wit:

'... The value of land depends largely upon the use to which it can be put... And when the statute provides that ... property shall be assessed at its 'true cash value' it means to require that it shall be assessed at the value which it has, ... by reason of its use...'
 " Pittsburgh, Cincinnati, Chicago and St. Louis Ry. Co. v. Backus, 154 U.S. 421, 429, 430 (1893) dec. May 26, 1894; Columbus Southern Railway v. Wright, 151 U.S. 470, 479; Franklin County v. Nashville, et al. Ry., 12 Lea 521, 539 (Supreme Court of Tennessee).

Subsequently, Mr. Justice Brewer expanded on the above as follows:

"... the value of property results from the use to which it is put and varies with the profitableness of that use, present and prospective, actual and anticipated. There is no pecuniary value outside of that which results from such use..., never was it held that the cost of a thing is the test of its value..." Cleveland, Cincinnati, Chicago and St. Louis Ry. Co. v. Backus, 154 U.S. 439, 445, 446 (1893) dec. May 26, 1894.

The cognizance or management of value as embodied in the jurisprudence of the United States of America will be examined first. Second, an ancient socioeconomic environment will be reviewed. The latent and patent coefficient of value—obsolescence, will be noted. Finally, the creation and evolution of value in New Mexico will be examined.

Values and Rights

PHILOSOPHICAL ASSUMPTIONS

- A. Men are, by their inherent nature, moral (equality, justice) and social beings. Social activity brings into being values and property that need to be acknowledged and protected.

Naturally acquisitive, men will lay claim to useful values and property. The progression of ideas from (1) a claim to (2) a well-founded claim leads to the concept of a right.

But before protection of a claim accrues, the claim must be acknowledged by a de facto sovereign.

And for an acknowledged claim to have value, the probability of protection (private, public) must exist.

So, "of the people, by the people, and for the people" epitomizes the composition and purpose of ultimate sovereign authority.

And rights are acknowledged claims of moral beings upon one another.

- B. The just management of rights takes account of the proportion assigned to persons, values, and things.

- C. The proportion (order of preference) among classes of rights is as follows:

1. Human Rights, or the claims upon fellow beings and upon society resulting from humanity itself ("of necessity").
2. Inherent or Inalienable Rights, or claims that inhere in the nature of man himself ("of nature").
3. Sovereign Rights, or the claim to use the authority inherent in the people for the government of the people ("of the people").

As between 2. and 3. the order of preference depends on prevailing "astral" philosophy

4. Equitable Expectancy, or a claim acknowledged in Equity ("long run").
5. Legal Right, or a claim acknowledged at Law ("short run").

- D. The primary purpose of the social organization of rights is to acknow-

ledge and protect basic communication ideas, such as, creation, survival (protection and prevention), production, and exchange. Such ideas constitute the broad concept of general welfare ("of necessity").

The social organization of rights tends to induce a prevalent mode of socioeconomic conduct.

The mode of conduct will be different

- (1) for individuals as compared with couples and groups, and
- (2) for rural as compared with suburban and metropolitan communities.

- E. Where long continued, a mode of socioeconomic conduct ripens into custom and value.

MANAGEMENT OF RIGHTS

- A. In the midst of plenty, rights are not generally the subject of controversy. But cf. "surplus."

It is in the context of scarcity that a right to own and use a value or thing is most often claimed. Cf. the rights of production, substitution, and exchange.

When management must examine a claim, custom is sought to aid in formulating an acknowledgment or rejection of the claim.

If acknowledged, the resulting right will be phrased in terms of current management policy.

If no custom is evident, principles of reasoning may be resorted to as an aid in arriving at an opinion.

If the customs on the subject are obsolescent, equitable principles are invoked to pronounce an appropriate mode of social conduct.

So, when a claim is being examined to pronounce acknowledgment and protection, three key questions must be decided:

- 1. What are the relevant and material facts among all facts present?
- 2. Does a custom exist relative to the finding of fact?
- 3. Does existing custom tend to be well founded relative to present and future conditions?

- B. When rights begin to show signs of obsolescence, the holders of such rights will argue that their rights are vested, and therefore no new and different custom can be pronounced with respect to their original claim.

Technically a vested estate or right denotes a right of immediate possession and use, or a present fixed right of future use. To be vested the right cannot be subject to being divested by a condition precedent. However, the right may be subject to being divested by a condition subsequent or a power and still be termed a vested estate. Golladay v. Knock 235 Ill. 418.

So, the vested-right holder is saying that possession is nine points of the law and the tenth does not count, and furthermore, someone is arguing a condition precedent to the claim and acknowledgment.

But a condition precedent is one which must happen or be performed before an estate can vest or be enlarged. Black's Law Dict. 3d ed.

And further, the doctrine of vested estates was not acknowledged in the law to place a rights holder in permanent possession, but was devised to identify the person who was entitled to possession of the estate and therefore subject to pay feudal dues or taxes.

- C. Faced with the problem of obsolescence, or inefficient use of resources, management has certain devices that can be employed to reallocate the use of the resources.

The sale of the right to the resource for a socioeconomically more efficient use is the most direct solution.

If for some reason the inefficient user will not sell his right, one of the following may result:

1. Negotiation and education.
2. A court action based on a public nuisance theory.
3. Condemnation where applicable statutes exist.
4. Invocation of management's police power in the interest of the general welfare.

Court actions to adjudicate classes (or groups) of rights are costly, time consuming, and may constitute bad public relations.

Where time is of the essence, the police power may furnish the only practical solution to the problem of obsolete rights and refusal of rights holders either to use the rights efficiently or to sell the rights in the interest of the general welfare.

Social philosophy of the organization based on of rights	Authority is based on	Authority is developed by	Acknowledgement is based on	Acknowledgment is in terms of	Psychosocial justification
Cooperation	Equitable principles	Group study of complex issues	Understanding arrived at by continuously shared decision making	"... as the situation is presently understood..."	A substantial part of the society is capable of understanding complex concepts
Competition	Legal rules	Finding the rules in custom; and logical reasoning from case to case: the rules and exceptions often are collected into Codes of Laws	Majestic or vicarious pronouncement supported by Stare Decisis, persuasion, and reinforced by formalized procedure	"yes or no"	A substantial part of the society has time to acquire values and goods other than food—much as enlightened self-interest
Dominance	Command	Inducing managers from the experience of being accepted and rejected. Long-continued manners became codified into ethics and custom	Divine pronouncement supported by coercion, aversion, and severe physical compulsion.	"yes"	Hunger or fear are the highest concerns of a substantial part of the society.

Socioeconomic Ideas in Perspective

Among others, Piaget concluded from his studies of children's games, that a specific object can (and does) create similar ideas of procedure when the specific object is distributed among communities not otherwise in communication.

The rate of communication of ideas (and persons) has ever been as rapid as sailing. For example, a ship contains all elements of the know-how that constructed it. So, the persistence (or lack of same) of ideas and procedures must be sought in some quarter other than mere transport speed.

It has been observed that among the natural and common ways of life the "familiar gods" can be redressed but not removed. Rapid change produces a by-product of resistance through fear of the unknown and the unassimilated. Resistance tends to be proportional to rate of change. Cataclysmic resistance is viewed in retrospect as revolution. Cf. The parable of Genesis.

Conventional economics developed the idea of a "rational economic man"—the perfect model of intellectual individualism. This man was developed to live in an environment where price is defined in terms of a fixed supply of the subject commodity. Economic man is programmed, to maximize the highest and best ends in the context of scarce means, based on price, his income, and maximum benefits

Modern conditions produced a new idea on the demand side; namely, "socioeconomic woman." This newcomer is a socioeconomic Brigitte Bardot. She operates in the market place equipped with the latest socioeconomic sensors:

1. sensation
2. perception
3. expectations
4. love
5. strife
6. good manners
7. law

And she comes equipped also with a credit rating and card.

ANCIENT SOCIOECONOMIC ENVIRONMENT

An ancient Semitic king described value as the cash equivalent without which the spiritual values perish. Further, if the sovereign purchased land for his private use, he paid the "fair market price." So we know that at least four thousand years ago the concept of value was in existence and evolving.

The past tends to contain analogues of the present. If the pre-Khammurabj. empire were re-created in detail it would exhibit many of the socioeconomic conditions that are part of the history of New Mexico.

The people lived in groups or communities associated with a temple. In general the community depended on irrigation to raise crops. A substantial metropolitan area developed in the middle reaches of the river basin. Water was scarce and was administered for the use and benefit of the community.

The fundamental features of Khammurabian law were in force as local law circa 3500 B. C. The communication and reports of the law probably were the work of the E-Zida temple scholars at Borsippa on the Euphrates River. Although our knowledge is not complete, it is known that judicial decisions were extensively reported. The same is true of administrative law decisions. A complete appellate system functioned to over see the Khammurabic government.

The law system contained all the features of common law including family solidarity, ordeal, lex talionis, and a district court system. Executive pardon was based on private appeasement of the wrong. Land tenure based on use value was the basis of administration. Registration of property was practiced. The sovereign land title was held in trust by "god (local?) and the king." Contracts were usually witnessed. Sealed stipulations to arbitrate disputes were common.

Socioeconomic divisions of the community were the patrician (amelu), middle class (muskinu), and slave. It would seem that these classes had a learned basis because the patrician class contained the officials, professions, and craftsmen who had offices in the temple.

The middle class (muskinu—beggar) was free and might even be rich. However, he was not held to so high a standard of knowledge and service as the patrician class; and further, the middle class had to accept monetary compensation for corporal injuries. Restitution and specific performance tended to be available only to the learned class. Here is evidence that contract theory contained elements of the doctrine of competency.

The slave was chattel property.

The women were not chattel per se and enjoyed property rights.

The god of the city was the original owner of the land that encircled it. The fields were arranged as an inner ring of irrigated arable land and an outer fringe of pasture. The citizens were tenants. The god and his vice-regent, (the king) had long ceased to disturb tenancy and were content with fixed dues in naturalia.

If the king acquired land, he had to pay a fair market price for same.

Land armies were the rule as early as the eighth century B.C. Bowmen, pikemen, and horsemen were furnished by the "land" annually, and the periods of service per person were limited in number.

The temple administered the archives, learning, and community life. Originally, each head of a patrician (amelu) family had a right to share in the ministry and benefits of the temple. It was the financial institution for the community, as well as holding land and tithes to its own use.

The modern law of rural lands was established in its entirety by 2250 B. C. Wages, prices, and rents were fixed by statute. The only difference from today was the subordination of personal and property rights to the absolute

necessity of getting the crops out of the field when ripe. Warehousing of crop loans remains unchanged.

Agency remains unchanged. Inland water traffic was regulated, and the captain was responsible for the ship and the freight and had to replace all loss.

Tavern-keepers (generally a female monopoly) were regulated not unlike communication facilities today.

Bills and notes are essentially the same, including escalated interest rates after the due date. Commercial interest rates of up to thirty percent were not unknown.

Family law policy encouraged the rearing of children. Marriage was a contract. Monogamy was the rule, but an additional female companion was common if the first wife did not produce children. The marriage contract was drafted to provide starting capital for the new family unit. The married couple formed a socioeconomic unit responsible to the world—especially for debt. In general, the rights and obligations of the family unit to those who partook of it formed a reasoned and workable socioeconomic system.

NEW MEXICO VALUES

The materials presented above are interesting, but what comparability could they have with New Mexico?

Prior to 2200 B. C. , fundamental learning in law, theology, medicine, physics, chemistry, and communicative arts was developed. From circa 2200 to 500 B. C. , patrician learning (as taught in the metropolitan centers of the eastern Mediterranean world) was stabilized by the predominance of the astral philosophy. The essential feature of astral philosophy is the theory that a close relation between the movements of the heavenly bodies and natural phenomena on earth tends to occur. On the day-to-day side of life, the middle class and slaves could not take time from food and material production to study the heavenly values. Theirs was earthy knowledge: the values that grow from a natural fertility philosophy. Knowledge of atoms was of no use to tillers of the soil. The triad of learning—supreme law; earthly matter, and elemental force—got a man (or woman) through the day and put food on the table. The triad was symbolized by the gods Anu (heaven), Bel (air and earth), Ea, or Ae (water), Shamash (sun), Sin (moon), and Ishtar (life-giving powers). The substantive and procedural values associated with these symbols evolved from local learning. A special word about Ea who was the patron deity of Eridu, a city at the juncture of the Euphrates Valley and the Persian Gulf. It was one of the oldest settlements in the Euphrates Valley. Ea was a water deity and is figured as a man covered with the body of a fish. In myths he is regarded as the creator, teacher, and protector of mankind and civilization. His temples were E-saggila and E-apsu, The Apsu was figured as an ocean encircling the earth. The gathering place of the dead was situated near the confines of the Apsu. The Sidonians (of Eridu?) migrated from the Persian Gulf to the seaboard of Syria where they became known as the Phoinix (red men) or Phoenicians

(Tyre founded circa 2756 B.C.). They were essentially a seafaring nation. Excellent navigators, they sailed seas where others feared to go. They carefully guarded the secrets of their trade routes and their knowledge of winds and currents. Herodotus is authority for the information that, circa 600 B.C., a large fleet of Phoenician ships circumnavigated Africa. A ship is a mobile resource development base. Sea captains carry commercial and engineering valuation standards to every part of the world.

On land, military operations influence the spread of valuation standards. Under emergency conditions only the most efficient managers of resources survive. By 500 B. C. the accumulated obsolescence in the Babylonian culture rendered its survival in its original surroundings precarious. The Greek conquests of 331 B.C. were the final blow. The old centers of learning were fragmented or were confiscated. Chaldaean wisdom was forced to move out and develop new centers of knowledge. One path of movement in the direction of New Mexico was by way of the Phoinix, Berbers, and Iberians; the movement reached Spain, Britain, and the Baltic generally. Later by way of the Greeks and Jews, Chaldaean wisdom reached Rome and finally Europe. There followed a period during which world tensions accumulated in preparation for the Crusades and movement back in the direction of Palestine. Then, an era of space travel would start—the movement to the Americas.

The Crusades were accompanied by developments in international banking and communication that directly influenced the evolution of values in New Mexico. The influence acted through the three great military orders of knights founded in the 12th century A. D. One in particular—the Poor Knights of Christ and of the Temple of Solomon—became an important agency in the transmission of valuation procedures. The organizational form of the order was (1) knights, (2) chaplains, (3) serjeants or esquires, and (4) craftsmen and menials. The vow of the order was learned in character. The order acted as a communication line between Europe and the Eastern Mediterranean countries. The order was the chief international banker, factor, appraiser, broker, supercargo, and surveyor.

Circa 1138 A. D. , an Anglican Province of the "... Temple of Solomon" was established at London, England on the Thames. It prospered and became a center of learning, law, banking, and court. By 22 March 1312, only the serjeants remained of the original four divisions of the Poor Knights of Christ and of the Temple of Solomon. The serjeants had inherited the Temple and the Great Inns of Court built therearound. By 1500, the Inns of Court had become the greatest center of learning in the western world. In that institution, ideas were being debated that would have a major influence on the form of the Constitution of the United States of America, Ideas of proportionate equality, property, due process of law, and just compensation are the foundations of value. Magna Carta had settled on the sovereign the duty to manage values efficiently. The problems of value standards and valuation procedures were left to the courts to decide.

On 13 September 1788, the Continental Congress of the United States passed a resolution to activate the new Constitution. By adopting the Constitution, the colonial states placed in operation an enormous common market. In an enterprise of such size, shape, and diversity, uniformity of value and the

appraisal process would be a central problem. Such a problem was certain to exist because value is the stuff of which policy is built, and value is the basis for interpretation of policy, be it private or public.

What was the socioeconomic environment in 1788?

The accumulated obsolescence and unsatisfied needs in Europe created great mobility among peoples. A cumulative direction of movement was west across the Atlantic space.

About this time Chaldaean wisdom staged a psychosocial comeback and pulled the atom out of retirement. The alchemist redecorated his laboratory, restocked his library, and changed his name to scientist. Atomic elements that responded to mechanistic laws began to compete with the old natural fertility cycle elements—air, earth, water, fire, hunger, and emotion. The old values of the status quo were put under pressure by the new values of research for development. Under the natural fertility philosophy, the old was venerated, obsolescence was abolished, and the rate of change was held to a minimum. Under the research for development philosophy, the laboratory receives no recognition and support if it fails to produce new ideas, applications, and products.

Were the winds of change felt in the New Mexico of 1788? Probably not. The Rico—Paisano—Peon society was developing in the presence of an indigenous Indian culture.

In an agricultural community that is operating at a subsistence level the paramount things of value are land and water. Under climatic and socioeconomic conditions in New Mexico, the application of water to use was dependent on the weather and supply of muscle energy needed to construct and operate the irrigation works.

The supply of land was very large relative to the supply of water for irrigation. This relationship predetermined the evolution of values as long as a natural fertility cycle philosophy defined values. Land was generally much less valuable than water. But such a general statement is subject to the administration of the law of interests that run with the land.

At an early date, local government took over the management of irrigation water because it was a necessity for the subsistence of the community. Values were marginal and tended to be determined by the supply of water; and socioeconomic conditions for irrigated agriculture remained relatively unchanged for more than a hundred years. Land and water came on the market only when a line of users died out.

Grazing was on a natural fertility cycle basis and its values were determined entirely by the supply of natural grasses and development of transportation.

No major change in the creation of values in New Mexico appeared until the mid 1930's. At that time a great many new people and ideas began to appear in New Mexico. By the 1930's it was generally known that large reserves of mineral fuels awaited development in New Mexico. Copper mining was well developed. The very important chemical mineral potash was coming into production and large reserves were estimated. Urban centers were beginning to grow from the inflow of new people who created new needs and wants. In 1940 the population was evenly divided among rural, rural nonfarm, and urban.

Recently the Bureau of Business Research of the University of New Mexico made the following population projection:

<u>Year</u>	<u>Population</u>
1975	1,560,000
1990	2,460,000
2015	4,340,000

The Bureau stated further that if the Federal Government should successfully promote equal development of all parts of the nation, New Mexico would have a population of at least 10 million people by the year 2000. By 1970 at least 30 percent of the State's population will be living in the Albuquerque Metropolitan Area, 40 percent by 1980, and in 2000, 60 percent will live in the Albuquerque area, 12 percent in other urban areas, and 28 percent in rural and rural nonfarm areas.

The Bureau of Business Research stated in a February 1962 release that developments seem to indicate that economic activity in New Mexico may be beginning to follow national patterns more closely. Looking at the nation's economy for volume ratios, it is seen that approximately 35 percent of the total production is accounted for by output of factories, mines, and electric and gas utilities. Another 25 percent is involved in the distribution of industrial products and their use in the construction industry. And from 1947 to the present, the revised industrial production index showed an average annual rate of increase of approximately four percent (Clayton Gehman).

Translating national average rates of increase in the industrial production index, the U. S. Department of Commerce studied twelve widely separated communities in 1959 and reported that 100 new industrial pay checks of \$88 each would result in the following:

1. An increase of 172 employed persons.
2. A total of 338 new citizens.
3. 117 new households.
4. Business to support three new retail stores.
5. 165 new automobile registrations.
6. \$457,000 in new retail sales distributed in the business community as follows:

a. service stations	6 percent
b. grocers	19 percent
c. cafes and bars	8 percent
d. auto dealers	14 percent
e. department stores	13 percent
f. clothing stores	7 percent
g. lumber yards	4 percent
h. miscellaneous	29 percent

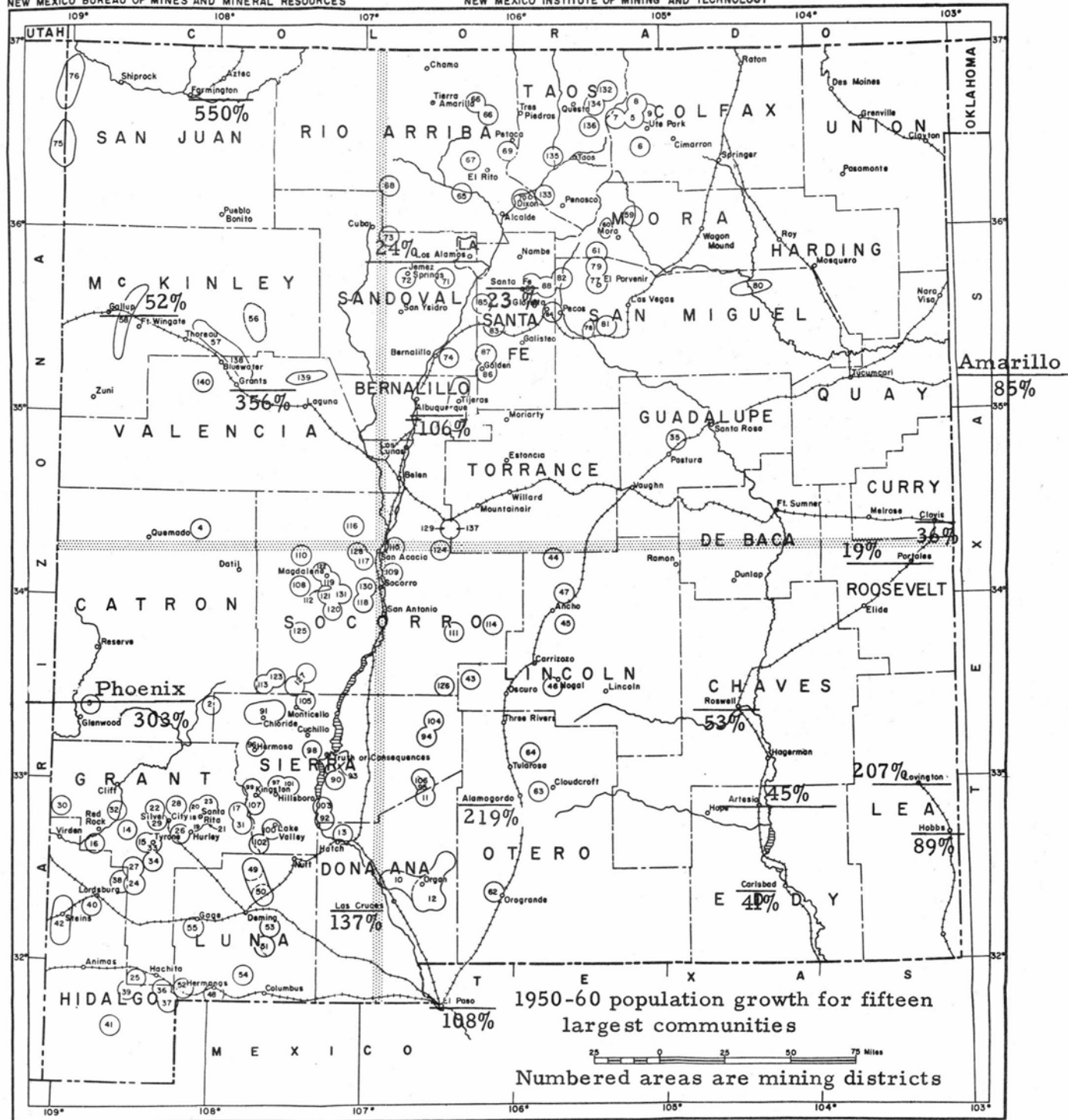
To summarize, competing philosophies of value in New Mexico exhibit the following characteristics:

1. The values associated with natural fertility cycle enterprise are limited by climate, weather, and land factors.
2. The values associated with technologically organized enterprise are limited only by conditions that are self-imposed.

Applying the above to basic need-satisfying enterprise, the following stages of evolution tend to accommodate population growth and value formation:

1. Minerals: prospector - quarrying - underground - mechanized bulk mining - liquid phase extraction - gaseous phase extraction.
2. Grazing: natural stock - herding - feeding and packing - food processing and by-products.
3. Farming: natural plants - natural cycle field production - nutrient and water added field production - contract farming - factory grown and packaged - food processing, and by-products
4. Manufacturing: shaping, sizing, and heating natural materials - synthesizing intermediate and end products from basic chemical materials.
5. Construction: dwellings - dwelling with work center - factory work centers and supporting bedroom community - integrated technological parks - modular cities.
6. Communications: intrapersonal - voice wireless - voice wire - video-memory systems - programmed decision making systems.
7. People: indigenous natural equilibrium groups - psychosocial mobility, tenements and economic man - socioeconomic woman - temple groups and tenants.

An efficiently managed mature environment in New Mexico will tend to accommodate ten million people.



City	1960 Popu- lation	% In- crease	City	1960 Popu- lation	% In- crease	City	1960 Popu- lation	% In- crease
1. Albuquerque	198,711	106	6. Carlsbad	25,396	41	11. Los Alamos	12,993	24
2. Roswell	39,477	53	7. Farmington	23,658	550	12. Artesia	11,939	45
3. Santa Fe	34,351	23	8. Clovis	23,527	36	13. Grants	10,226	356
4. Las Cruces	28,991	137	9. Alamogordo	21,624	219	14. Portales	9,675	19
5. Hobbs	26,173	89	10. Gallup	13,918	52	15. Lovington	9,619	207