

THE LAW AND THE FUTURE OF SALINE WATER CONVERSION

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Mr. Chairman, Mr. Moderator, Members of the Conference and Guests:

As a lawyer and law professor on this program which is devoted mainly to technical and technological matters, I feel somewhat like Congressman Chenowitz of Colorado did at the dedication ceremony this morning--except that I am not a Republican. In any case, I assume that I am here as a representative of the social sciences of which the law is the oldest. And, since law is concerned with human beings rather than spiritless matter, I shall emphasize the responsibilities of human conduct.

We have heard much (the past day) about the promise that saline water conversion--and science and technology generally--hold for New Mexico and the semiarid Southwest. We are all impressed with the role science and technology are playing in the development of this new source of useable water supply. And, no doubt science and technology will eventually find a way to make it economically feasible to convert large quantities of briny water. But, it is important to remember that saline water conversion--as in other matters involving the use of natural resources--does not depend entirely, or even primarily, on science or technology. On the contrary, the dependency is just the other way around; science and technology have produced the marvels they have in our society because of the free institutions and the range of choices that we have encouraged. Science and technology do not make a free society, but a society that encourages inquiry and criticism advances science and technology. And such inquiry must not be limited, as is the case in some countries of the world, to problems of the physical world only. Galileo's discoveries about the physical universe had some of their greatest impact on the institutions of his day. We should be reminded here that our future rests as much upon our institutions and upon the inquiring nature of the human mind as upon science and technology.

I suppose the obvious example I can cite for this proposition is the prolonged and frustrating efforts we are making as a nation to get a treaty, or agreement of some kind, that will limit danger from nuclear war, or perhaps ban it, or perhaps require some kind of partial disarmament. Such an effort will, we all

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hope, end in the development of some form of institution to handle critical international situations. Such an institution will be just as much an institution as is the Pecos River Compact or the Rio Grande Compact or the Colorado River Compact.

By institution I mean no more than a man-made social, political, economic, or legal, or other device, by which groups of people solve, or perhaps only resolve, problems. (You may say that some of these institutions have not been notably successful or felicitous and you might cite the "institution of marriage" or chattel slavery which Robert E. Lee always called the "peculiar institution.")

Now some people think, and no one here is in that group I am sure, that our institutions are perfect, or nearly so, or that there is really little ground for improvement. Unfortunately, these same people often think the same way about law and particularly about water law. Some of them are still crying loudly that prior appropriation, the law of capture, the law of first in time first in right, is the West's unique and perfect contribution to jurisprudence--some of them are asserting this in spite of the fact that the crude law of capture was greatly modified in New Mexico in 1907 and has been changed still more in the past 30 years especially with respect to ground water; changed so much in fact that prior appropriation is not in fact the same institution in the Lea County or Roswell ground-water basins as it was on the Rio Grande and the Pecos 75 years ago.

New Mexico ground-water law offers a fine example of the development and also the modification of institutions.

Some of you know the history of this valley. Maybe some of you don't know that in the 1920's the entire valley was in a bankrupt state. There were many causes that contributed to the conditions but one of the principal remedies that saved this valley was an institution: the 1927 ground-water law. This law, more than any other factor, has made this fine valley what it is. And, what did this law do? In summary, it offered a new and combined approach to the practice of prior appropriation. It combined scientific inquiry, administrative fact finding and efficiency, and concern for the public good, all within the judicial framework of fairness and judicial review and the tested methods of the adversary process. Public management of ground-water supplies provided in the 1927 legislature thus became a new institution.

The interstate river compacts previously referred to are also institutions for the development, use and protection of a valuable

resource. The recent decision of the United States Supreme Court in Arizona v. California will no doubt produce new institutions for the fair management of the supplies of the Lower Colorado over which the lower basin states have not, up to this time, been able to agree. Happily, the upper basin states devised an institution in 1948 called the Upper Colorado Compact which is making possible development of the upper areas of the stream including the San Juan-Chama diversion.

Laws and the institutions they embody or contemplate are only tentative answers of rational minds to community problems that may be only dimly and incompletely seen. I say "tentative" because no law, and indeed no human institution, is perfect because all are the product of the imperfect human intelligence. The same is true of ground water law. The validity of this statement will be readily apparent when one realizes the number and nature of amendments and revisions made in the ground-water law of New Mexico. Saline water conversion, when it becomes commercially feasible, will require a further and careful look at the same ground-water law. For example, what provision should be made, if any, for administrative control over withdrawals of large quantities of briny ground water? The same controls which now exist over fresh water? As I understand the present arrangements for this plant, withdrawals are being made under the City of Roswell's water right. And, of course, the City is benefited by the potable supply that reaches its mains. But, is the City's water right--if it is a right to a fresh supply--really involved at all? And, suppose it become financially possible for a large private firm to convert saline water, would the firm be entitled to the amount it could purify? As more and more public and private funds are encouraged in this effort, there will be more and more problems of the nature I have indicated. It is clear that the present law does not anticipate these developments and therefore will have to be re-examined and at the same time some principles of reuse and of ownership rights in the conversion process, itself now a monopoly of the government, etc., all will need examination.

Of course, all I am doing is pointing out that the law must be adaptable, and also clear and, above all, fair. These are matters that cannot be decided by slide rules or computers. They involve human judgment and human choices. And, they involve all the other intellectual forces that must be brought to bear which may be divided roughly into three kinds:

1. Physical, scientific and technical approaches--

e.g., the conversion processes themselves, the hydrology of supply, etc.

2. The economic alternatives and goals that are available--

e.g., is it better in New Mexico to grow price-supported cotton on warm, lower reaches of streams, or better to grow Texas (and other) tourists on the cool, upper reaches? Some still believe here in a mystical, and also iron, law of the market place to resolve this problem of choice, although it is quite clear such a "law" had nothing to do with establishing the Saline Water Conversion Plant in Roswell. Some think only private investment should be allowed to develop such supplies (except of course when a large public investment will benefit them).

3. The institutional and social forces, including the law, and their interplay with the other forces--

e.g., the 160-acre water right limitation, the family farm institution that is written into the Reclamation Law. The political and legal choices--ground-water law or not, public management or not. Should government have a large or small share in development? What about control of pollution? Atomic waste pollution? These are the factors that Committees of Congress consider. H.R. No. 71, 1961, 87th Congress, on Research Needs for Salt Water Conversion says, "Vested interests, legal barriers, financial limitations, political considerations, etc., will retard if not block many of the desirable reforms (in water management)." These are considerations that are before Committees of Congress that are investigating pollution of water supplies, including atomic waste pollution. These are the kinds of inquiries that are contemplated in Senator Anderson's Water Research Institute Legislation S.2 now before Congress. Research in all the disciplines is contemplated.

All of these inquiries encompass human conduct and the human will, and all need study. Here I suppose I could say that the future of saline water conversion in the Southwest offers a chance for basic research in law and human institutions just as readily, and perhaps more necessarily, than in scientific fields. Why not? Men live by their beliefs and a consensus of belief is the essence of an institution. This matter of beliefs and the divergence of views are covered by two poems I will read:

A Conservationist's Lament

The world is finite, resources are scarce,
Things are bad and will get worse.
Coal is burned and gas exploded,
Forests cut and soils eroded.
Wells are dry and air's polluted,
Dust is blowing, trees uprooted.

Oil is going, ores depleted,
Drains receive what is excreted.
Land is sinking, seas are rising,
Man is far too enterprising.
Fire will rage with Man to fan it,
Soon we'll have a plundered planet.
People breed like fertile rabbits,
People have disgusting habits.
Moral:

The evolutionary plan
Went astray by evolving Man.

by Professor Kenneth Boulding
University of Michigan

The Technologist's Reply

Man's potential is quite terrific,
You can't go back to the Neolithic.
The cream is there for us to skim it,
Knowledge is power, and the sky's the limit.
Every mouth has hands to feed it,
Food is found when the people need it.
All we need is found in granite,
Once we have the man to plan it.
Yeast and algae give us meat,
Soil is almost obsolete.
Men can grow to pastures greener,
Till all the earth is Pasadena.
Moral:

Man's a nuisance, Man's a crackpot,
But only Man can hit the jackpot.

by Professor Kenneth Boulding
University of Michigan

Reprinted from Man's Role in Changing the Face of the Earth
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Boulding's poems appear on page 1087.