

## Daniel Jeremy Silver Collection Digitization Project

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## MS-4850: Daniel Jeremy Silver Papers, 1972-1993.

Series III: The Temple Tifereth-Israel, 1946-1993, undated. Sub-series B: Sermons, 1950-1989, undated.

Reel Box Folder 59 19 1170

Energy, 1979.

The concept of damages is treated in rabbinic law under a number of general categories, each of which was given a shorthand label which indicated the particular law in the Torah on the basis of which all subsequent decisions within this category were published. There are five such categories: shen, the tooth; regel, the foot; keren, a horn; bor, a pit; esch, fire.

The category, shen, tooth, deals with damages which result when property which belongs to another is consumed. The Biblical case describes a flock that break through a fence which another man has built around his fiend, enters and grazes.

Regel, the foot, involves the rule of trespass. The Torah text deals with an ox who gets into a neighbor's field and tramples the standing corn underneath his feet.

Keren, the horn, deals with the general category of physical injury. The Biblical law concerns an ox which gores another ox.

The concept of <u>bor</u> is the basis of the rule of negligence. It involves a man who digs a pit and appropriately fails to cover the pit so that an animal stumbles into it and is harmed.

Esch, fire, deals with damage caused without direct contact. The Biblical law reads: "When a fire is started and spreads to thorns, so that the stacked, standing or growing corn is consumed, he who started the fire must make restitution."

When the sages elaborated on this theme of each they spoke of the concept of damage carried by the winds. The image, of course, is that of a fire whose embers are caught up and travel in the wind currents until they fall on a field or roof and start a fire.

As you well know, the human mind is a strange and mysterious instrument. When I heard of the events on Three Mile Island my first thought was personal. Would I listen to the reassuring noises coming from the public relations office of the utility or put my family in the car and visit our home in Cleveland? I decided that whatever else Cleveland might be, a visit here would have been advisable, an ounce of prevention and all that. Then my mind went back to lessons learned long since having to do with harm carried by the

wind. I thought of radioactivity. I thought of the spread of radioactivity by Pennsylvania winds and its potential for harm. And as I ran down this old rabbinic concept of damages I found that it helped me clear up my mind on the issue of nuclear power.

What problems do the events at Three Mile Island force us to face? What issues ought we to be debating? What issues require the decision of citizens as opposed to the calculation of professionals?

Permit me to be a <u>melamed</u> for a moment and to discuss some concepts of rabbinic law. The law which deals with harm carried by the winds distinguishes between seasonal winds and unexpected winds. If you build a nuclear plant near Harrisburg and you know that there will be some radioactive emissions, you must assume that when they escape the day will not be completely still. There are always normal air currents. When a man builds a fire he must build it sufficiently far from his neighbor's property so that the normal daily winds will not carry embers onto his neighbor's land.

The engineers who built the Three Mile Island reactor knew that emissions would be carried from the plant site. Why else had the Nuclear Regulatory Commission ordered that devices which measure radioactivity be placed miles away from the site itself? Cb-viously, to measure escaped emission.

Rabbinic law makes a good deal of the issue of foresight. You are held responsible from that which you can foresee under normal conditions. You can foresee normal winds. You cannot foresee an unseasonal tornado which might pick a roof from your house and throw it against the house of your neighbor. The rabbis made another distinction. An infant, a retarded person, someone who is senile, cannot be held legally culpable for failing to foresee the consequences of most of their actions. They lack the ability to do so. Conversely, an expert has a higher degree of culpability than the amateru because his training increases his ability to foresee the consequences of an act. Here, again, the Nuclear Regulatory Commission and the Utility would seem to be culpable. Certainly, the consequences of nuclear fallout have been well publicized and there have been all manner of tests and calculations which indicate that though a plant may have a high degree of safety

there is no such thing as absolute safety. But, but. . .

Before we simply declare the utility's culpability and liability, we must consider one defense which rabbinic law allows against a claim of damages for harm carried by the winds and other kinds of harm. If the agent performs his act under orders of the court he is not liable. The Biblical law is that if a court orders a criminal flogged, the man who carries out that order cannot be sued by the prisoner for harm to his body. As the agent of the court the sheriff simply carried out public policy. I am afraid that a good case can be made by the utility that in building the nuclear generator it was simply carrying out public policy. The design had been approved by various governmental agencies. A Federal license had been granted to build the plant and another to operate the plant. Several Presidents had described the development of nuclear energy as a national priority. Over the last twenty years our government has spent billions of tax dollars for research and development in nuclear energy. Under these conditions, barring proof of criminal negligence, the utility could make an acceptable claim that it was carrying out public policy and, therefore, not liable.

Having come to that point, I came to understand that the issue which we non-scientists and non-engineers face is not whether there was human error, or whether a particular reactor design was unsound, or whether the backup cooling system was properly positioned, or whether there was proper quality control in the manufacture of reactor components, or whether a field decision to do this or that once the accident occurred was wise, or whether sufficient training had been given to plant managers, or whether there should have been a Federal supervisor on duty at the plant. These questions, and others of the same type will be investigated by many committees and their conclusions will be important to any further use of the plants; but these are essentially administrative questions and our concerns should go to the public policy issue. Such investigations assume that we ought to continue to operate the seventy-one nuclear reactors that are now on the line and to complete building the hundred and more generators now being constructed. Simply put, the issue we must decide is whether energy is necessary to the nation's well-being and an essential element in the s-lution to the energy crisis. On this issue every citizen must

have an informed opinion. All other questions we can leave to the scientists, indeed, we have no other alternative.

Why did we get into nuclear energy in the first place? The answer is simply that there was an energy crisis. Our nation depends upon energy. Our way of life requires energy. Our prosperity requires energy. Without sufficient energy our standard of living would fall and all our political structures would be threatened. We have been massive users of energy, not simply because we are self-indulgent, but because the freedoms which we take for granted depend on the production of sufficient goods to satisfy most people. Production rests on energy. A primitive country uses little energy. An advanced country substitutes energy for muscle power. You can judge how far a nation has emerged into modern life by measuring the amount of energy it uses.

Unfortunately, the readily available energy resources are limited. In the century and a half since the Industrial Revolution began we have tapped and abused the earth's most available energy resources. The use of nuclear energy became a matter of public policy because there was a decreasing amount of gas and oil ready to tap. Nuclear energy became a matter of public urgency because of the price hikes imposed by the OPEC energy consortium. Nuclear energy, not public policy, indicated that the use of gas and oil had a number of deletorious ecological consequences. When you burn any fossil fuel, pollutants are extruded into the air and these are "harms carried by the winds" that ultimately fall far off with often serious health and ecological consequences. Smog is the most visible consequence and within the smog there are pollutants which affect our breathing, our eyes and our survival.

As a matter of public policy it was decided to free ourselves as much as we can from dependence upon gas and oil as the major fuel for the creation of electricity. For these reasons, and because oil was urgently needed for transportation, many turned to coal as the next best generating fuel. America has vast coal deposits — enough to last us for hundreds of years. But coal presented its own set of problems. It is well today when we are concerned with the human cost of nuclear energy to remember that we moved away from the coal solution because of its human and ecological cost. Every year hundreds of miners are killed or injured at work. Every year hundreds of miners come down with black

lung disease which cripples their breathing and shortens their lives. When we burn coal we extrude some vicious pollutants into the air. Coal fires are one of the reasons houses have to be repainted and buildings sandblasted. The burning of coal increases the amount of carcogenic material in the air; and catalyzes what scientists call the greenhouse effect, a warming of the atmosphere which can have serious climatological effect. If we had continued to burn coal in the degree that we were and in the manner we were, the glaciers would have melted, sea levels would have risen and major erosion involving hundreds of square miles of land would have occurred along shorelines.

We came to nuclear energy because we depend on energy and there were major drawbacks to the gas, oil and coal solutions. The government thought that nuclear energy represented a readily available source of clean, cheap and safe energy. The nuclear reaction which creates the power takes place in a shielded vessel. Presumedly, there are no open emissions as in the case of coal or gas and oil. There was the danger of accidental emissions, but we were told that there would be careful safeguards and the likelihood of accidental discharges was claimed to be minimal. Moreover, uranium supplies were available to us and freed us of dependence on unreliable sources. We were told that nuclear energy could be produced more cheaply than other conventional forms of energy. Yes, there was a readily-acknowledged danger from radioactive emissions to life, genetic survival, ecology, but we were told whatever discharge we received accidentally from these generators would be a minute fraction of the radioactivity received from the natural background. The plants would be so safe that the possibility of an accident was less than one accident per billion years of on-line activity. In fact, the accident of Three Mile Island took place after only 440 years of generator activity.

Unfortunately, most of the claims which our government bought and dispersed have proven not to be true. Nuclear energy is not cheap energy. Nuclear energy has

proven to be more costly than energy produced by coal or gas or oil even at today's inflated oil prices. They thought that they could produce a nuclear generator for a hundred or two hundred million dollars. Today's nuclear generators require an expenditure of a billion to a billion and a half dollars, and this does not include the tens of billions of dollars the government invested in research and development, whatever plants were built and studying those already built.

Nuclear energy has not proven to be clean energy. There have been a goodly number of accidents and unexpected emissions. Moreover, lit turns out scientists do not know yet how, is fact, to store successions and nuclear active waste. The waste remains radioactive for thousands of years and must be shielded and buried in some way and there are no guarantees that these shields be leeched out or in some other way break open during that very long period of time. It turns out new that after a given number of years a nuclear generating plant must be mothballed. Its shell has become radioactive and scientists are not sure how a plant can be put into mothballs in such a way as to guarantee absclute safety to the people who live in the nearby areas and to the land which is adjacent to it.

Nuclear energy proved not to be cheap. It proved not to be clean energy.

Troud to thouse unities, policy, policy, have not been totally honest about the safety programs of their operations. Not counting the accident which took place two weeks ago, in the last four years alone eight major accidents took place with little public comment.

In March of 1975 there was a fire in the control room at the Browns Ferry Nuclear Power Plant near Athens, Alabama which forced the shutdown of the one reactor in operation.

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In April of 1978 two workers at the Trojan nuclear plant near Rainer, Oregon were exposed to high doses of radiation. The Government found six safety violations and fined the Portland General Electric Company \$20,500.

Such a safety record does not give us great confidence that the government and the utilities have not been as eager to make much of the dangers associated with nuclear. They were careful to broadcast the presumed safety of these generators but said little about the increasing evidence of danger. They describe these accidents as minor. They make much of the fact that few actual fatalaties are involved. They compare the three or four deaths and four or five people who suffered excessive radiation to nearly twenty thousand killed on our country roads lest year.

The danger, of course, is not simply that a few workers at these power plants may be exposed but that after a meltdown an area of many square miles can be devastated and that those who live in the exposed area may suffer latent harm to their bodies which will bring them to an early death, or affect genetically their children and grandchildren.

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Beyond this it must be said, precious little is known about the consequences of low level radiation.

when This debate was First Former What then? I suspect that if most of us knew then what we know now we would CUNNON have tried to divert the government thirty years ago from embarking on the massive and CANSTU Telluri expensive nuclear energy generator program. There were other solutions. There are ways The VITONTIAL to harness the tides and the rivers. We are now beginning to explore the development of solar energy. I always remember a photograph taken during the New York blackout of 1977. Everything is pitch black, but when you looked at the poor tenements of the East Side you see one or two buildings with lights on. The people in these buildings were too poor to ON The AUUF buy electricity from Consolidated Edison, so they had built little windmills and there was enough wind that night to generate light for those epartments. Surely, if this technologically talented nation had invested billions of dollars and a corresponding number of scientists in a program to develop alternative sources of energy and other questions had been asked of the scientists, we would have come to non-nuclear sclutions. But we took this route and there is no point in saying it should have been otherwise. The question is, what now?

which now produce about thirteen percent of our energy? Should we demand that all work be abandoned on the hundred and some odd plants under construction? Can our society withstand the cost of allowing two and hundred fifty billion dollars' worth of investment to go down the drain? I am not sure that we could. I would suggest that the economic shock of such a decision would be greater than the tripling of oil prices which has taken place since the formation of OPEC.

This is an issue where there are no truly desirable options. If the antinuclear groups have their way and we close down all the nuclear energy generating stations
in the United States we will not have made a major contribution to the nation's health and
safety. We would have no alternative but to revert to the burning of coal: more miners'
lives, more black lung disease, more carcogenic substances in the air. God knows there has
been deceit among the defenders of nuclear energy but I wonder whether those who are opposed
to all forms of nuclear energy are not a bit selective in their human concerns. If coal

miners die and coal country is stripmined it is alright, but if our suburban homes may suffer emissions it is not right. In theory energy should be produced harmlessly, but in reality it is not a black and white issue. Does the concern of those involved in nuclear energy show a lack of concern for miners, the people in West Virginia, the people who live or will live near the coal-burning plants? Moral folk must face such questions.

safety involved in the decision by a public utility licensed by the government and by a Federal regulatory agency to bring a plant like Three Island on line one day before a new year before it is fully tried and tested simply to qualify for a tax deduction. What of the much vaunted licensing procedures designed to protect us from such greed? Why must safety issues be rated behind profit motives?One of our problems is that nuclear development was turned over to the utilities and those who run public utilities are not sufficiently trained or necessarily the best judges of the complex operational issues involved in this highly sophisticated form of generation. In the last six months I have had enough to do with the management of the Cleveland Electric Illuminating Co. to know that I do not want them making the decisions which involve Davis-Besse and the safety of my family. They are fiscal experts, not nuclear experts. Certainly, the way in which the Pennsylvania utility handled itself that first day of the accident must make us realize that their primary concern had more to do with law suits which might arise six months later than the immediate threat to the lives of those in the neighborhood of the plant.

The public policy question we face, unfortunately, yields no clear moral answer. Ideally, we ought to abandon nuclear energy. The risks are too high. No system can be engineered which precludes all human error. Clearly, there will be accidents, but, at the same time, can the country survive without energy? Can we throw an investment of this magnitude out the window? We can, but at what cost to the economy and to our freedoms?

In one sense the issue of nuclear energy seems to be taking care of itself.

If the materials I have been reading are accurate only one new plant has been begun this past year. Purely on economic ground, companies have found that nuclear energy no

longer makes sense. So we seem to be in a position where once the present plants are constructed that will be it.

Given the amount of concern already expressed over the safety issue, it would seem plausible that the plants are fairly safe and becoming safer. The government, at a cost of half a billion dollars, built a plant in the far reaches of Idaho for no other purpose than to test out the safety of nuclear energy generators.

I wish I could say that all right is on the side of those who argue for the cessation of all nuclear energy. It is hard to preach prudence. It seems clear to me that we ought to halt any further construction and redirect our research and development dollars into alternative forms of energy; but we need energy. We need electricity, so the question is: what is an acceptable risk? Do I like the fact that we live downwind from the Davis Besse plant; and that this plant is constructed on the same model as the plant at Three Mile Island? No, I do not like that fact.

At the same time, though the danger might not be as immediately dangerous to Mo

in my family, I would not like to see another three or four coal burning electrical generators along the lakefront. They are dirty. We have had them. We fought against them. Why turn back the clock?

I find little encouraging in all of this, but I am encouraged that right along some scientists have forced a marked upgrading of plant safety. Clarly, there needs to be far better supervision by the Nuclear Regulatory Commission which has been tolerant of the industry it is designed to regulate.

I listened the other night to the testimony of the head of the Nuclear Regulatory Commission before Senator Kennedy's committee on health concerns. He spoke with pride of a plan the N.R.C. had developed to put a senior representative of the committee in each of the plants now operating. And One of the senators there, I think it was Senator Kennedy, it may have been someone else, said to him, "well, how long has this program been in the planning stages? Why didn't you have somebody at Harrisburg?" The answer startled me: "We have been working on it for four years." Four years and, yet, no one was in

place at Three Mile Island. Such dilatory activity does not encourage confidence. Incredibly, it took the N.R.C. three days to mount a health team to send in to Harrisburg.

I hope and pray that our lawmakers will require that farmer rigid standards The name of the same time, you and I must learn to accept something about our lives. As you know, I a m not a messianist. As I have tried to say to you often, most of life's problems have no solution. All we can do is to make the best of the options available to us. There is no simple, clean and safe way to solve the energy crisis. It worries me that so many of my friends who are involved in the anti-nuclear energy program feel that there is only one answer and that all right is on their side. It is not. There is no energy option which is clean and safe and cheap and will guarantee the public safety.

Will there wever be a nuclear accident? There have been eight in the last year. Probably there will be others. Is the truth about Harrisburg that there was an accident of major proportions which threatened the public safety, or that there was an accident of major proportions which ended by not threatening our lives? Is the glass half-full or half-empty. The accident was serious, but it did not lead to the explosion.

Some scientists say that explosion is impossible. Apparently, there has been some scientific study in Germany which indicates that. I do not know. I am not a scientist.

But I know this, that to live is to risk and the risks that we must take require difficult choices between realistic options. We do not have the luxury any treer of living in a world where there is one way to go, a way which sees no deaths, no explosions, no black lung disease, no pollutants, no the live ffect. We do not live in the best of all possible worlds, you and I. We live in this world and in this world to live is to risk.

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