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SPEECH NOTES
FOR
COMMISSIONER BOYER
IN ADDRESSING THE THEME:
THE MORAL IMPLICATIONS OF
THREE MILE ISLAND:
THE CHALLENGE TO EDUCATION

PREPARED BY THE
ENERGY AND EDUCATION ACTION
CENTER STAFF
APRIL 20, 1979

A. BACKGROUND

ON APRIL 5 PRESIDENT CARTER SAID AGAIN THAT "THE ENERGY CRISIS IS REAL" AND "TIME IS RUNNING SHORT."

HE ADDED "WHILE THE SITUATION AT THREE MILE ISLAND IS IMPROVING AND WE HAVE TAKEN EVERY PRECAUTION TO PROTECT THE PEOPLE OF THE AREA, THIS NUCLEAR ACCIDENT OBVIOUSLY CAUSES ALL OF US CONCERN. YOU DESERVE A FULL ACCOUNTING, AND YOU WILL GET IT.

ON APRIL 10 AT A PRESS CONFERENCE THE PRESIDENT SAID IN DEFENSE OF HIS NEW WINDFALL TAX POLICY THE PRESIDENT STATED THAT PART OF THE PROCEEDS WOULD BE USED TO "GREATLY EXPAND RESEARCH AND DEVELOPMENT OF ALTERNATIVE FUTURE SOURCES OF ENERGY WITH THE SAME SCIENTIFIC EFFORT THAT PUT A MAN ON THE MOON."

IN SUMMARY THE PRESIDENT NOTED: "OUR NATION'S ENERGY PROBLEM IS SERIOUS - AND ITS GETTING WORSE. "WE ARE WASTING TOO MUCH ENERGY, WE ARE BUYING FAR TOO MUCH OIL FROM FOREIGN COUNTRIES AND WE ARE NOT PRODUCING ENOUGH OIL, GAS, OR COAL IN THE UNITED STATES. TO CONTROL ENERGY PRICE, PRODUCTION AND DISTRIBUTION, THE FEDERAL BUREAUCRACY AND RED TAPE HAVE BECOME SO COMPLICATED, IT'S ALMOST UNBELIEVABLE. ENERGY PRICES ARE HIGH AND GOING HIGHER, NO MATTER WHAT WE DO. THE USE OF COAL AND SOLAR ENERGY, WHICH ARE IN PLENTIFUL SUPPLY, IS LAGGING FAR BEHIND THEIR GREAT POTENTIAL. THE RECENT ACCIDENT AT THE THREE MILE ISLAND NUCLEAR POWER PLANT IN PENNSYLVANIA HAS DEMONSTRATED DRAMATICALLY THAT WE HAVE OTHER ENERGY PROBLEMS.

WHAT CAN WE DO? WE CAN SOLVE THESE PROBLEMS TOGETHER.

AS COMMISSIONER OF EDUCATION I WILL LIMIT MY RECOMMENDATION TO WHAT EDUCATION MAY BE ABLE TO DO HELPING SOLVE THESE PROBLEMS TOGETHER. "IN FOUR GENERAL AREAS

- I. PUBLIC AWARENESS
- II. CONSERVATION
- III. TRAINING
- IV. CURRICULUM CHANGE

WITHIN A MORAL CONTEXT.

B. THE EDUCATIONAL CHALLENGES OF THE ENERGY CRISIS

I. PUBLIC AWARENESS - THAT THERE IS A CRISIS.

CONSIDER THE SHOCKING RESULTS OF A RECENT NATIONAL ASSESSMENT OF ENERGY AWARENESS AMONG YOUNG ADULTS:

0 HALF OF AMERICA'S YOUNG ADULTS MISTAKENLY BELIEVED THAT IMPROVED TECHNOLOGY WILL EVENTUALLY MAKE IT POSSIBLE TO CONVERT TO USEFUL WORK ALL OF THE ENERGY RELEASED BY BURNING A FUEL.

0 LESS THAN HALF (49%) OF THE YOUNG ADULTS KNEW THAT COAL IS THE LARGEST FOSSIL FUEL RESERVE IN THE UNITED STATES.

0 ONLY 14% OF THE YOUNG ADULTS KNEW THAT COAL IS THE PRIMARY ENERGY SOURCE USED TO PRODUCE THE LARGEST PORTION OF THE NATION'S ELECTRICAL ENERGY.

- O ONLY 16% OF THE YOUNG ADULTS KNEW THAT COAL, AS WELL AS PETROLEUM, CAN BE CONVERTED TO GASOLINE.
- O LESS THAN HALF (46%) OF AMERICA'S YOUNG ADULTS KNEW THAT PETROLEUM (CRUDE OIL) PROVIDES THE LARGEST PERCENTAGE OF ENERGY CONSUMED IN THE UNITED STATES.
- O HALF OF THE YOUNG ADULTS KNEW THAT FROM 30 TO 60% OF THE OIL CONSUMED BY AMERICANS IS IMPORTED FROM FOREIGN COUNTRIES;
- O SEVENTY PERCENT OF THE YOUNG ADULTS KNEW THAT THE UNITED STATES IS LIKELY TO RUN OUT OF PETROLEUM BEFORE IT RUNS OUT OF COAL.

THE ENERGY SHOCKS OF THE LAST SEVEN YEARS HAVE DEMONSTRATED THAT WE NEED A MIX OF ENERGY SOURCES FOR THE FUTURE:

- O THE 1973-74 ARAB OIL EMBARGO;
- O THE MIDWEST'S NATURAL-GAS SHORTAGE IN THE WINTER OF 1976;
- O THE 1977 DROUGHT WHICH REDUCED HYDROELECTRIC POWER IN THE NORTHWEST;
- O THE PROTRACTED COAL STRIKE LAST YEAR;
- O THE IRANIAN REVOLUTION;
- O THE OPEC OIL PRICE INCREASE OF 1979 AND OF COURSE
- O THE NUCLEAR ACCIDENT AT THREE MILE ISLAND IN MIDDLETON, PENNSYLVANIA.

BUT BEYOND PUBLIC AWARENESS WHICH IS CRUCIAL/VITAL IN A DEMOCRATIC SOCIETY THERE ARE OTHER KEY FUNCTIONS FOR THE EDUCATIONAL SYSTEM.

II. TWO YEARS AGO - RIGHT AFTER PRESIDENT CARTER'S FIRST MAJOR ENERGY POLICY SPEECH I HAD THE GOOD FORTUNE TO BE ABLE TO ADDRESS A NATIONAL CONFERENCE IN ENERGY EDUCATION AND I ADDRESSED THE MAJOR EDUCATIONAL TASKS OF CONSERVATION, TRAINING AND CURRICULUM CHANGE.

HERE'S MY POINT. THE ENERGY CRISIS WE NOW FACE WILL REQUIRE NOT ONLY NEW TECHNOLOGY, BUT NEW VALUES AND NEW ATTITUDES AS WELL. WE MUST CHANGE OUR HABITS OF CONSUMPTION. WE MUST APPROACH SELF INDULGENCE WITH A NEW PERSPECTIVE -- AN UNDERSTANDING THAT WE ARE MEMBERS OF A HUMAN COMMUNITY, WITH A COMMON PLIGHT AND A COMMON FATE. AND ALL OF THIS IS CLOSELY TIED TO OUR NATION'S SCHOOLS AND COLLEGES.

SPECIFICALLY, I BELIEVE ENERGY, ENVIRONMENT AND EDUCATION ARE LINKED TOGETHER IN THREE FUNDAMENTAL WAYS.

FIRST, THIS NATION'S SCHOOLS AND COLLEGES ARE MAJOR CONSUMERS OF ENERGY. THEY, LIKE THE REST OF SOCIETY, MUST LEARN TO CUT BACK ON CONSUMPTION.

SECOND, EDUCATION MUST TRAIN INDIVIDUALS WITH THE TECHNICAL KNOW-HOW TO LEAD US TOWARD A CONSERVING SOCIETY. NEW CAREERS REQUIRE NEW EDUCATIONAL PREPARATION.

THIRD -- AND PERHAPS MOST IMPORTANT -- WE MUST EMBARK ON A REVOLUTION IN VALUES. OUR SCHOOLS AND COLLEGES MUST CONFRONT TODAY THE REALITIES OF THE 21ST CENTURY, AND BEGIN TO FOCUS ON THE PERSPECTIVES AND ATTITUDES THAT WILL BE CRITICAL IN ENSURING OUR GLOBAL SURVIVAL IN THAT ERA.

OF THESE TASKS -- CONSERVATION, TRAINING, AND CURRICULAR -- REPRESENTS A MAJOR CHALLENGE TO OUR EDUCATIONAL SYSTEM. I BELIEVE WE CAN SUCCEED.

AN EFFECT OF CRISES IN A DEMOCRATIC SOCIETY

ACCORDING TO RENÉ DUBOS THERE IS A NEW WILLINGNESS IN THE MODERN WORLD TO TRY TO HUMANIZE TECHNOLOGY TO PROTECT THE ECO-SYSTEM OF PLANET EARTH AND ITS LIFE SUPPORT SYSTEMS FROM BEING IRREPARABLY DAMAGED:

- LIMITING INDUSTRIAL GROWTH AND ATMOSPHERIC CONTAMINATION;
- REDUCING BLACK SMOKE STACKS, POLLUTION OF STREAMS AND RIVERS;
- THE PARTIAL BANNING OF PESTICIDES TO PRESERVE LAND AND WILDLIFE; AND
- BAN OF FLUOROCARBONS TO SAVE OZONE LAYER.

THERE IS NOW A HEALTHY READINESS AFTER THE THREE MILE ISLAND ACCIDENT TO QUESTION CERTAIN NUCLEAR POLICIES WHICH ARE TECHNOLOGICALLY POSSIBLE AND ECONOMICALLY PROFITABLE BUT SOCIALLY OBJECTIONABLE. DR. DUBOS NOTES THAT "THE SYMBOLIC IMPORTANCE OF SUCH REVERSALS IS THAT THEY ARE CAUSED, NOT BY POLITICAL UPHEAVALS, BUT BY PUBLIC AWARENESS OF ENVIRONMENTAL CONSEQUENCES. GRASS ROOTS MOVEMENTS OF CONCERNED CITIZENS ARE INCREASINGLY ACTIVE IN THE POLICY PROCESS.

EDUCATION'S ROLE IS TO MAKE THE DISCUSSION AND DIALOGUE AS HONEST AND UNBIASED AND AS REPRESENTATIVE AS POSSIBLE.

NEVER WAS AN EDUCATIONAL EFFORT MORE NECESSARY THAN IN THE NATIONAL DEBATE OVER AN ENERGY POLICY FOR THE UNITED STATES (1979-2000). THERE IS A MORAL DIMENSION WHICH CANNOT BE OVERLOOKED OR IGNORED.

A MORAL IMPLICATION

IN BEGINNING TO EDUCATE CHILDREN ABOUT ENERGY, SCHOOLS WILL FACE A MORAL DILEMMA: SHOULD OR WILL THEY ATTEMPT TO DEVELOP IN STUDENTS THE ABILITY TO MAKE CHOICES OR SHOULD OR WILL THEY SIMPLY SOCIALIZE THEM TO GO ALONG WITH SOLUTIONS DETERMINED BY OTHERS?:

DEVELOPING THE ABILITIES FO STUDENTS TO MAKE INTELLIGENT CHOICES ABOUT THE ENERGY CRISIS POSES A PROBLEM WHICH EXTENDS FAR BEYOND THE CRISIS ITSELF. IT IMPLIES A FUNDAMENTAL REORIENTATION OF EDUCATIONAL GOALS FOR THE ENTIRE SCHOOL SYSTEM. IN ADDITION TO STRESSING KNOWLEDGE GOALS, SCHOOLS MUST LEARN TO FACILITATE THE DEVELOPMENT OF THOSE HIGHER STAGES OF COGNITIVE THOUGHT, SOCIAL PERSPECTIVE, AND MORAL OR CIVIC CONSCIOUSNESS WHICH MAKE THE ENERGY CRISIS TRULY COMPREHENSIBLE. THIS REORIENTATION IS DECADES AWAY IF, INDEED, IT EVER TAKES PLACE. BUT THE ENERGY CRISIS WON'T WAIT. IT HAS ALREADY ARRIVED AND IT WILL BECOME MORE PRESSING WITH EACH DECADE. IF WE DO NOT SOCIALIZE THE PUBLIC TO ACCEPT REASONABLE ENERGY POLICIES, WE WILL HASTEN THE ARRIVAL OF THE CRISIS AND MAKE ITS IMPACT FAR MORE SERIOUS. WOULD THAT COURSE OF ACTION CONSTITUTE A MORAL POLICY FOR AMERICAN EDUCATORS? I, FOR ONE, DO NOT THINK SO."

EDWIN FENTON. "THE MORAL DILEMMA OF ENERGY EDUCATION." FROM PROCEEDINGS OF THE SIXTH ANNUAL CONFERENCE COUNCIL FOR EDUCATIONAL DEVELOPMENT AND RESEARCH, WASHINGTON, D.C. JUNE 22-24, 1977. PP. 55-6.

ENERGY CONSERVATION AS A MORAL-PHILOSOPHICAL PROBLEM AS WELL AS A TECHNICAL ECONOMIC ONE.

ENERGY CONSERVATION, THEN, IS A MORAL-PHILOSOPHICAL PROBLEM AS WELL AS A TECHNICAL-ECONOMIC ONE. WHEN IT COMES TO SHARING ENERGY RESOURCES, WHAT ARE THE RIGHTS OF INDIVIDUALS? AS WE PRICE ENERGY, WHAT ARE OUR OBLIGATIONS TO THE POOR? TO "THIRD WORLD PEOPLES?" WHAT ECONOMIC FACTOR SHOULD HAVE PRIORITY IN CONSUMING SCARCE NATURAL RESOURCES? WHEN MUST WE—OUT OF A SENSE OF OBLIGATION OR BECAUSE WE RECOGNIZE THE RIGHTS OF OTHERS—SACRIFICE OUR SELF-INTERESTS? PERSONAL DECISIONS ON THESE QUESTIONS AND SOCIETAL DECISIONS ON PUBLIC ENERGY POLICY DEMAND REFLECTION UPON THESE KINDS OF CONSIDERATIONS:

1. PRUDENTIAL RULES: SELF-INTEREST OR PERSONAL CONSIDERATIONS REFLECTING ONE'S FEELINGS, NEEDS, INTERESTS, BELIEFS, VALUES, AND DESIRES (SHORT-TERM AND LONG-TERM). ("WHY AND HOW WILL TAKE CARE OF MYSELF?")
2. PERSONAL AND SOCIAL RULES: PERSONAL AND GROUP FEELINGS, BELIEFS, INTERESTS, AND VALUES FOR CHARITY AND SHARING ("WHEN AND FOR WHAT REASON WOULD I SACRIFICE SELF-INTEREST FOR THE WELFARE OF OTHERS?")
3. HUMAN OBLIGATIONS:
 - A. MORAL DUTIES SPRING FROM OUR COMMITMENT TO SUCH IDEAS AS FAIRNESS AND/OR TO ULTIMATE CONCERNS SUCH AS LOVE, HAPPINESS, AND JUSTICE;

B. HUMAN RIGHTS SPRING FROM OUR SENSE OF WHAT IT MEANS TO BE A PERSON, SUCH AS RIGHTS TO LIFE, HEALTH, ETC., AND RIGHTS TO PERSONAL FREEDOM AND DIGNITY.

IN THIS MODEL BOTH A AND B ARE PRESCRIPTIVE, APPLY TO ALL PERSONS, AND OVERRIDE CONSIDERATIONS IN NUMBERS 1 AND 2.

ALLEN, LAHART, DAWSON, DEE PATTERSON. "TOWARD GOALS FOR MULTIDISCIPLINARY ENERGY EDUCATION" IN JOURNAL OF ENVIRONMENTAL EDUCATION 8(4): 8-17.

AN IMMORAL APPROACH TO NUCLEAR FALLOUT AND RADIATION

24 YEARS AGO IT HAS NOW BEEN REVEALED AN ATOMIC ENERGY COMMISSION (AEC) MEETINGS DISCUSSED THE "FUROR" RAISED BY A NUCLEAR TEST AT THE NEVADA TEST SITE,

AEC COMMISSIONER WILLARD LIBBY SAID:

"PEOPLE HAVE TO LEARN TO LIVE WITH THE FACTS OF LIFE, AND PART OF THE FACTS OF LIFE ARE FALLOUT."

CHAIRMAN LEWIS STRAUSS REPLIED

"IT IS CERTAINLY ALL RIGHT, THEY SAY, IF YOU DON'T LIVE NEXT DOOR TO IT."

A MORAL APPROACH

IN WEST GERMANY RECENTLY PROTESTERS AGAINST A NEW NUCLEAR POWER PLANT HAD A LARGE SIGN WHICH SEEMS TO ME TO SYMBOLIZE THE GREAT TRUTH OF OUR TIME:

"WE ALL LIVE IN PENNSYLVANIA"

"WE ALL LIVE NEXT DOOR"

AND IT IS UP TO THE EDUCATIONAL SYSTEM TO SPELL OUT THE IMPLICATIONS TO ALL OUR CITIZENS OF THIS LATE 20TH CENTURY NEWLY DISCOVERED TRUTH.

THE GREAT INDIAN CHIEF

SEATTLE OF THE DUWAMPS TRIBE IN DECEMBER 1854 ADDRESSED GOVERNOR ISAAC STEVENS, COMMISSIONER OF INDIAN AFFAIRS FOR THE TERRITORY OF WASHINGTON WITH THESE PROPHETIC WORDS

"BUT WHY SHOULD I MOURN AT THE UNTIMELY FATE OF MY PEOPLE? TRIBE FOLLOWS TRIBE, NATION FOLLOWS NATION, LIKE THE WAVES OF THE SEA, IT IS THE ORDER OF NATURE, AND RIGHT IS USELESS. YOUR TIME OF DECAY MAY BE DISTANT, BUT IT WILL SURELY COME, FOR EVEN THE WHITE MAN WHOSE GOD WALKED AND TALKED WITH HIM AS A FRIEND WITH FRIEND, CANNOT BE EXEMPT FROM THE COMMON DESTINY. WE MAY BE BROTHERS AFTER ALL, WE WILL SEE."

SPACESHIP EARTH

ALL MEN ARE INDEED BROTHERS AND ENTITLED TO SHARE THE KNOWLEDGE OF SURVIVAL.

THE CHALLENGE TO EDUCATION IS:

- 0 TO KEEP ALL THE SPACESHIP'S SYSTEMS IN GOOD WORKING ORDER;
- 0 TO HARNESS THE ENERGY TO KEEP IT RUNNING;
- 0 TO HAVE THE WISDOM TO KEEP THE SYSTEM IN "PRODUCTIVE HARMONY";
- 0 TO KEEP THE CREW FROM KILLING EACH OTHER;
- 0 TO KEEP THE PASSENGERS NURISHED AND HEALTHY; AND,
- 0 TO GIVE THE CREW AND PASSENGERS A HIGH QUALITY LIFE.

APPROACHES

EDUCATORS SHOULD STRESSES THERE IS NO SIMPLE SOLUTION BUT RATHER THREE GENERAL APPROACHES TO THE ENERGY CRISIS:

- I. EFFICIENT AND SAFE USE OF EXISTING FOSSILE AND NUCLEAR TECHNOLOGY;
- II. ENGAGE IN ENERGY CONSERVATION;
- III. SEARCH AND DEVELOP RENEWABLE ENERGY SOURCES.

CONCLUSION

- I. LET US PROFIT AS A SOCIETY FROM THE THREE MILE NUCLEAR ACCIDENT;
- II. TO USE THE FULL RESOURCES OF OUR EDUCATIONAL SYSTEM TO HELP OUR SOCIETY COME UP WITH ECOLOGICALLY, ENVIRONMENTALLY, ECONOMICALLY, SOCIALLY ACCEPTABLE SOLUTIONS TO THE EDUCATION CRISIS. EDUCATION RESPONDED TO:
 - O THE MANHATTAN PROJECT
 - O THE APPOLLO MOON SHOT
 - O THE SPUTNIK

EDUCATION MUST ACT NOW.