

CHALLENGES REMAIN - THE NAKED APE
IS FAR FROM FINISHED

PRESIDENT THOMAS, DISTINGUISHED MEMBERS OF THE FACULTY, MEMBERS OF THE BOARD OF REGENTS, MEMBERS OF THE GRADUATING CLASS, PARENTS, LADIES AND GENTLEMEN:

IT WAS WITH GREAT PLEASURE THAT I ACCEPTED AN INVITATION MORE THAN A YEAR AGO TO ADDRESS THE 1973 GRADUATING CLASS OF THIS GREAT UNIVERSITY. WHAT SEEMS EASY TO ACCEPT AT SOME DISTANT FUTURE DATE HAS MATURED EARLIER THAN I THOUGHT POSSIBLE. INSTEAD OF PREPARING MY ADDRESS SEVERAL MONTHS IN ADVANCE, AS I HAD ORIGINALLY PLANNED, I HAVE FOUND MYSELF ENGAGED IN A DELAYED "CRASH" PROGRAM TO DEVELOP A SUITABLE THEME---SO YOU SEE THINGS IN LIFE BEYOND COMPLETION OF YOUR FORMAL EDUCATION IS ALL TOO OFTEN LITTLE DIFFERENT THAN THE "CRAMMING" STUDY SESSION THAT MOST OF YOU HAVE ENGAGED IN AT ONE TIME OR ANOTHER IN PREPARATION FOR A FINAL EXAMINATION. I HOPE THAT MOST OF YOU WHO ARE GRADUATING TONIGHT WILL NOT FOLLOW MY BAD EXAMPLE IN LATER LIFE.

CASTING ABOUT FOR A SUITABLE TOPIC FOR THIS OCCASION, MY THOUGHTS HAVE TURNED TO THE QUESTION OF CHALLENGE. ONE HEARS MANY YOUNG PEOPLE TODAY BEMOANING THE FACT THAT CHALLENGES NO LONGER EXIST. OR IF THEY DO EXIST, THAT THE INDIVIDUALS ARE ALL TOO OFTEN FRUSTRATED BY THE COMPLEXITIES OF THE PROBLEMS, AND THEIR FEAR OF BEING UNABLE TO DO ANYTHING ABOUT SOLVING THEM. NEVERTHELESS, IF WE GLANCE AT THE PROBLEMS CONFRONTING THE FUTURE OF CIVILIZATION AND MANKIND, BOTH IN THE U.S.A. AND IN THE WORLD TODAY, WE SEE THAT THE OBSTACLES TO

FURTHER HUMAN PROGRESS ARE SIMILAR TO THOSE OF YESTER-YEARS. THEY INCLUDE COPING WITH PROVIDING ADEQUATELY FOR: FOOD, HOUSING, CLOTHING, MEDICAL CARE, EMPLOYMENT OPPORTUNITIES, EDUCATION, TRANSPORT, COMMUNICATION, ENERGY, NON-RENEWABLE RESOURCES, AND RECREATION FOR A RAPIDLY EXPANDING WORLD POPULATION, WHILE AT THE SAME TIME PREVENTING UNDUE ABUSE OF THE ENVIRONMENT AND FURTHERING SOCIAL JUSTICE AND POLITICAL STABILITY. THE MAIN DIFFERENCES IN CONFRONTING THESE PROBLEMS TODAY, CONTRASTED TO THE TIME OF YOUR GRANDPARENTS AND GREAT-GRANDPARENTS, IS THE RESULT OF IMPROVEMENTS IN TRANSPORTATION, RESULTING IN A CORRESPONDING SHRINKAGE IN DISTANCE AND SPACE, AND BY THE GREATER POPULATION PRESSURE AND CONTINUING INCREASE IN HUMAN NUMBERS.

AND YET, LOOKING AT THE WORLD TODAY, WHERE PEOPLE GO TO THE MOON, AND NEW AND EXCITING DISCOVERIES ARE BEING MADE ON THE PHYSICAL AND BIOLOGICAL FRONTS EVERYDAY, I CANNOT FEEL THAT THE NAKED APE HAS RUN OUT OF CHALLENGES, NOR THAT HE IS FINISHED AS A SPECIES.

YOU YOUNG PEOPLE WHO ARE TONIGHT FINISHING YOUR FORMAL EDUCATION, AS WELL AS THOSE OF YOU WHO EXPECT TO GO ON FOR GRADUATE STUDY, HAVE AN EXCITING AND STIMULATING PROSPECT AHEAD FOR A PRODUCTIVE AND ENJOYABLE LIFE; IF YOU ARE PREPARED TO GRASP THE OPPORTUNITY.

IT IS TRUE THAT IN THE DAYS OF OUR GRANDPARENTS AND GREAT GRANDPARENTS THE PHYSICAL HORIZON SEEMED UNLIMITED. THEY WERE VISIONARY PIONEERS WHO MUSTERED THEIR COURAGE TO SEEK THEIR FUTURE IN THESE VAST OPEN SPACES. MANY OF YOU ARE DESCENDANTS OF THE ORIGINAL AMERICANS OR OF THE FIRST SPANISH-AMERICAN SETTLERS WHO ESTABLISHED THE CULTURAL AND HISTORICAL BASE UPON WHICH THIS STATE WAS FOUNDED. THE PRE-SPANISH PUEBLO CIVILIZATION AND SANTA FE ITSELF, LOOMS LARGE IN THE EARLY HISTORY OF THE ENTIRE SOUTHWEST. ALL OF THE EARLY PEOPLES WHO SETTLED AND BUILT THIS STATE ACCEPTED THE CHALLENGES OF THEIR DAY;

BRAVING THE HARDSHIP OF A HOSTILE ENVIRONMENT TO MAKE POSSIBLE THE RELATIVE EASE OF TODAY.

THEIR HORIZONS, AS FAR AS LAND WAS CONCERNED, SEEM TO US TO HAVE BEEN UNLIMITED. BUT IN ANOTHER SENSE COMPARE THE BREADTH OF THEIR HORIZONS WITH WHAT WE HAVE TODAY. NOW WE THINK NOTHING OF FLYING TO OTHER COUNTRIES OR OTHER CONTINENTS IN A FEW HOURS. THEY WERE LUCKY TO TRAVEL 15 TO 20 MILES BY OX TEAM OR 50 MILES BY SADDLE HORSE IN THEIR DAY. TODAY WE HAVE IMMEDIATE KNOWLEDGE OF THE HAPPENINGS IN ANY PART OF THE WORLD, OR FOR THAT MATTER ON THE MOON - AS SOON AS IT OCCURS. IN THEIR DAY WARS IN THE AMERICAS CONTINUED TO BE WAGED EVEN AFTER PEACE TREATIES HAD BEEN SIGNED FAR AWAY ON OTHER CONTINENTS.

FOR THE EARLY SETTLERS, EDUCATION IN MOST CASES WAS LIMITED TO A FEW YEARS IN GRADE SCHOOL. NOW A VERY LARGE PERCENTAGE OF YOUNG PEOPLE ARE ENABLED TO SPEND THE FIRST 21 OR 22 YEARS OF THEIR LIVES PURSUING AN EDUCATION UP THROUGH THE UNIVERSITY LEVEL, AS YOU HAVE DONE. I HOPE THAT YOU HAVE ENJOYED AND REFLECTED ON THE PRIVILEGES OF THESE YEARS OF EDUCATION. EDUCATION IS MORE THAN A PAINFUL ACCUMULATION OF FACTS, DATES AND IDEAS. IT HAS BEEN MORE THAN THE NECESSARY PREPARATION AND TRAINING TO PERMIT YOU TO EARN A GOOD LIVING IN THE YEARS AHEAD. FOR ABOVE ALL, THE ESTABLISHMENT OF THE CURRENT SYSTEM OF EDUCATION BY OUR FOREFATHERS IS A VEHICLE THROUGH WHICH CIVILIZATION IS TRANSMITTED TO THE NEXT GENERATION; IT IS THE TRANSMISSION OF OUR MENTAL, MORAL, TECHNICAL AND AESTHETIC HERITAGE AS FULLY AS POSSIBLE TO AS MANY PEOPLE AS POSSIBLE SO AS TO INCREASE OUR

DESCENDANTS UNDERSTANDING AND ENJOYMENT OF LIFE. I WOULD URGE ALL OF YOU, ESPECIALLY IN THE NEXT FIVE YEARS, BEFORE YOU BECOME TOO DEEPLY INVOLVED IN YOUR LIVES WORK, TO BROADEN YOUR EDUCATION BY READING VORACIOUSLY ACROSS AS MANY DIFFERENT DISCIPLINES AS POSSIBLE. THIS WILL BROADEN YOUR HORIZONS AND ASSIST YOU IN DECIDING ON A CAREER THAT CHALLENGES YOUR IMAGINATION AND DEVELOPS YOUR INTEREST. IF PURSUED VIGOROUSLY, IT WILL EVOLVE INTO A GRATIFYING CAREER. THE TIME TO DO THIS IS NOW, WHEN YOU HAVE FREE TIME, LESS RESPONSIBILITY, AND WHEN YOUR POWERS OF RETENTION ARE STILL GREAT. REMEMBER THAT WHEN YOU REACH MY AGE EVEN THOUGH YOU CONTINUE TO READ VOLUMINOUSLY, THE "MENTAL MAGNETIC TAPE" IS SCRATCHED AND WORN AND THE POWERS OF RETENTION ARE MINIMAL.

THESE EDUCATIONAL OPPORTUNITIES OF TODAY AND MANY OTHER CHANGES HAVE BROADENED YOUR AND MY HORIZONS ON A SCALE NEVER BEFORE SEEN. MASS MEDIA - NEWSPAPERS, MAGAZINES, BOOKS, TELEVISION AND RADIO - MAKE COMMONPLACE THE DISCUSSION OF SCIENTIFIC AND PHILOSOPHICAL SUBJECTS IN A WAY LARGELY UNKNOWN EVEN IN YOUR PARENTS DAYS. PUT TO PROFIT MOST FROM THESE REPORTS AND PROGRAMS YOU MUST LEARN TO READ AND LISTEN TO BOTH SIDES OF THE COMPLEX, INTERRELATED ISSUES BEING PRESENTED, SUCH AS FOOD PRODUCTION, POLLUTION OF THE ENVIRONMENT, THE ENERGY CRISIS, HEALTH HAZARDS AND THE POPULATION PROBLEMS. MOREOVER, WE MUST NEVER FORGET THAT THE MASS MEDIA PRESENTATIONS - EVEN IN A SO-CALLED FREE SOCIETY WITH FREEDOM OF THE PRESS, RADIO AND TELEVISION - ARE TODAY ORIENTED AND CONTROLLED BY A RELATIVELY SMALL NUMBER OF INDIVIDUALS. THEY, LIKE EACH OF US, HAVE FOIBLES, AND ALL TOO OFTEN THEY ARE GUILTY OF PERSONAL BIAS AND ONE-SIDED OR LOP-SIDED, AND OFTEN INACCURATE, SUPERFICIAL PRESENTATIONS ON MANY

ISSUES THAT ARE OF FUNDAMENTAL IMPORTANCE TO HUMAN PROGRESS. OFTEN FACTS AND DATA ARE DOWN-GRADED AT THE EXPENSE OF SENSATIONALISM, AS HAS OFTEN BEEN THE CASE IN THE LAST SEVERAL YEARS, IN ISSUES SUCH AS ARTICLES CONDEMNING THE USE OF CHEMICALS, AND ADVOCATING A BACK-TO-NATURE ORGANIC APPROACH TO SOLVING ENVIRONMENTAL POLLUTION, FOOD PRODUCTION AND HEALTH PROBLEMS. IT BEHOVES ALL OF US TO LEARN TO SEPARATE FACTS FROM FANCY AND THEREBY ASSIST THE PUBLIC IN MAKING THE RIGHT DECISIONS ON MANY OF THE ISSUES VITAL TO FURTHERING HUMAN PROGRESS. IT APPEARS TO ME THAT ONE OF THE GREAT NEEDS OF OUR TIMES IS FOR THE DEVELOPMENT OF A NEW CORPS OF CREATIVE SCIENCE WRITERS AND COMMENTATORS WHO ARE WELL INFORMED ACROSS MANY SCIENTIFIC DISCIPLINES, AND HAVE THE ABILITY TO ACCURATELY AND IMAGINATIVELY CONVEY TO THE PUBLIC THE CONTRIBUTIONS, LIMITATIONS AND DANGERS OF SCIENCE AND TECHNOLOGY TOWARD SOLVING PROBLEMS VITAL TO THE FURTHER ADVANCEMENT OF MANKIND. I HOPE THAT THERE ARE SEVERAL INDIVIDUALS AMONG THIS GRADUATING CLASS WHO WILL SEE THIS AS A WORTHWHILE CHALLENGE. THE WORLD NEEDS SUCH TALENT AND SERVICE.

I SUBMIT THAT YOU - THE MEMBERS OF THE 1973 GRADUATING CLASS - ARE BETTER EQUIPPED TO MEET THE CHALLENGES OF THE FUTURE THAN ANY GENERATION BEFORE YOUR TIME. THIS IS HOW IT SHOULD BE AND IS THE BEST EXAMPLE I CAN GIVE OF THE ABILITY OF MAN TO MOVE SOCIETY AND CIVILIZATION FORWARD AND UPWARD.

DID THESE ADVANCES COME FROM PEOPLE WHO SAID, "LIFE IS TOO HARD; THERE ARE NO CHALLENGES; I CAN NOT FACE THE WORLD AND ITS PROBLEMS; I WILL 'DROP-OUT' FROM SOCIETY AND OWE NOTHING TO ANYONE." OR FROM

THOSE WHO SAID, "SOCIETY IS BAD AND CORRUPT, WE MUST DESTROY IT AND BUILD ANEW FROM SCRATCH." NO! IT CAME FROM THOSE WHO WERE WILLING TO SHOULDER THEIR BURDENS IN THE NAME OF HUMANITY, TO PERSEVERE AND FINALLY SUCCEED IN OVERCOMING OBSTACLES ON THE PATH TO SUCCESS, AND IN THE PROCESS, LEAVE A BETTER WORLD FOR THOSE OF US WHO WERE PRIVILEGED TO FOLLOW THEM IN THE NEXT GENERATION.

AS A BOY, I REMEMBER TOO WELL THE DOOMSAYERS OF THAT DAY. I REMEMBER THE TERROR I FELT AS A SMALL BOY WHEN A GROUP PROPHESED THAT THE END OF THE WORLD WOULD COME AT 4:01 P.M. ON FRIDAY THE 13TH OF JUNE. I VISUALIZED THE CATASTROPHIES THAT WOULD ENGULF THE WORLD. FRIDAY THE 13TH CAME, AND 4:01 CAME AND STILL THE WORLD CONTINUED ITS PROGRESS. I BREATHED A SIGH OF RELIEF. I REMEMBER VAGUELY THE FEAR, PANIC AND DEATH OF THE INFLUENZA EPIDEMIC OF 1918 AND 1919, WHEN AGAIN THERE WAS TALK BY THE DOOMSAYERS OF THE EXTERMINATION OF THE HUMAN RACE. TODAY IS A HEY-DAY FOR A MODERN GENERATION OF DOOM-SAYERS WHO HAVE DONE AN EXCELLENT JOB OF BRAIN-WASHING THE PUBLIC INTO BELIEVING THEY ARE ALL ON THE VERGE OF PERISHING FROM CHEMICAL POISONING EVEN THOUGH THE PRESENT GENERATION HAS THE LONGEST LONGEVITY IN HISTORY. WHEN I REFLECT ON THESE EVENTS I CAN WELL IMAGINE THE MAGNITUDE OF DOOMSAYING AND FEARS THAT MUST HAVE BEEN GENERATED THROUGHOUT EUROPEAN SOCIETY IN THE MID-1800'S, WHEN THE DISCOVERY OF THE INFECTIOUS NATURE OF HUMAN BACTERIAL AND VIRUS DISEASES WAS UNFOLDING. HOWEVER, AT THAT TIME THE PEOPLE WERE SPARED THE WIDESPREAD DISSEMINATION OF PANIC PRODUCING DAILY NEWSPAPERS AND BEST SELLING

PAPER-BACKS BECAUSE OF THE STILL INFANT STAGE OF DEVELOPMENT OF THE NEWS MEDIA.

ALTHOUGH HISTORY MUST HAVE ABOUNDED WITH SUCH PESSIMISTIC DOOMSAYER ACCOUNTS, NONE-THE-LESS, THE BULK OF THE PEOPLE OF THAT TIME HAD FAITH; THEY RAISED THEIR CHILDREN, PROVIDED FOR STRENGTHENING SOCIETY, AND MANKIND ADVANCED.

TODAY WE HAVE OUR NEW GENERATION OF PROPHETS OF GLOOM AND DOOM. IN THE WORK OF MY COLLEAGUES AND I IN THE FIELD OF AGRICULTURE WE ARE ENDEAVORING TO ASSIST IN A MODEST WAY IN INCREASING WORLD FOOD PRODUCTION. THE GREEN REVOLUTION, A TERM COINED BY THE POPULAR PRESS, REPRESENTS A CONSIDERABLE INCREASE IN FOOD PRODUCTION WITHIN THE PAST FIVE YEARS, PARTICULARLY IN COUNTRIES OF THE LESSER DEVELOPED WORLD. WE HAVE NEVER MAINTAINED THAT WE WERE SOLVING ALL PROBLEMS, BUT ON THE CONTRARY, SIMPLY ASSISTING VARIOUS GOVERNMENTS TO HARNESS THEIR RESOURCES SO AS TO PROVIDE MORE FOOD FOR ITS HUNGRY PEOPLE. WHAT DO WE HEAR ABOUT THIS FROM SOME OF THE CRITICS AND DOOMSAYERS IN THE AFFLUENT COUNTRIES - SUCH AS THE U.S.A. AND SWEDEN? "YOU ARE CREATING MORE PROBLEMS THAN YOU ARE SOLVING, YOU ARE MAKING THE RICH RICHER AND THE POOR POORER. YOU MUST KNOW MALTHUS WAS RIGHT, YOU ARE DESTROYING THE ENVIRONMENT. YOU ARE ADVOCATING THE USE OF HIGH YIELDING VARIETIES THAT ARE MORE SUSCEPTIBLE TO DISEASE AND INSECT EPIDEMICS. YOU ARE BUILDING TOWARD DISASTER. YOU ARE CONTRIBUTING TO MAKING THE PLANET EARTH UNINHABITABLE FOR ALL FORMS OF LIFE." IT WOULD SEEM THAT THESE OMNISCIENT ENVIRONMENTALISTS AND IDEALISTIC SOCIO-ECONOMISTS, WHO ARE APPARENTLY CONVINCED THAT FOOD CROPS AND ANIMAL PRODUCTS GROW IN THE SUPERMARKETS, AND NOT ON THE FARMS AND RANCHES, ARE TRYING TO PERSUADE OTHER LESS FORTUNATE NATIONS TO QUIETLY STARVE TO DEATH, WHILE WITH A FULL STOMACH, THEY CONTINUE

TO DEBATE THE BROADER PHILOSOPHICAL, SOCIOLOGICAL, AND POLITICAL ISSUES THAT CONFRONT MANKIND. THESE VOCIFEROUS EXTREMISTS SEEM TO HAVE ASSUMED THE RESPONSIBILITY FOR ASSURING THE SURVIVAL OF MANKIND AS WELL AS ALL OTHER LOWER LIFE FORMS THROUGHOUT THE WORLD, AND THEY ARE AGGRESSIVE IN IMPOSING THEIR WILL TOWARD THIS END. IN THEIR OWN MINDS THEIR DECISIONS AND POLICIES ARE INFALLIBLE ON THE MANY BROAD ISSUES THAT AFFECT MANKIND. COLUMNIST HOLMES ALEXANDER RECENTLY HAD THIS TO SAY ABOUT THEIR ACTIVITIES AND POLICIES AS THEY RELATE TO OBSTRUCTION OF PLANS TO EASE THE ENERGY CRISIS: "THERE ARE WOBBLY-LEGGED PLANS (TO SOLVE THE ENERGY CRISIS) BY THE PRESIDENT, THE CONGRESSIONAL LEADERS, THE UNITED MINE WORKERS, BY LARGE AND SMALL OIL COMPANIES, BY MIDEAST DIPLOMATS AND OF COURSE - BY THE ENVIRONMENTALIST, THESE LAST BEING THE MOST OBNOXIOUS OF ALL SOCIAL PESTS, THE KIND WHO ARE ALWAYS RIGHT, ---LYING ACROSS THE ROAD TO PROGRESS, CHAINED TO EVERY DOORWAY OF DEVELOPMENT, ARE THE ENVIRONMENTALISTS."

THESE EXTREMIST GROUPS APPEAR TO FEEL THAT THEY HAVE THE SELF-ASSIGNED RESPONSIBILITY AND AUTHORITY TO DECIDE INFALLIBLY ON WHAT IS BEST FOR THE WORLD ON MANY BROAD ISSUES AFFECTING VAST SECTORS OF THE WORLD POPULATION. NO ONE, TO MY KNOWLEDGE, IN EITHER THE DEVELOPING NATIONS OR IN THE UNDER-PRIVILEGED SECTORS OF THE AFFLUENT NATIONS IS PREPARED TO LIE DOWN AND DIE IN ORDER TO REMOVE HIMSELF AS A PROBLEM FOR THE WORLD SO THAT OTHER MORE PRIVILEGED INDIVIDUALS AND GROUPS WILL FIND SOLACE IN AN IMPROVEMENT IN THE ENVIRONMENT.

IT SEEMS SIGNIFICANT, THEREFORE, THAT THE LESS DEVELOPED AND LESS FAVORED COUNTRIES CONTINUE TO REQUEST OUR TECHNICAL ASSISTANCE, DESPITE THE NEGATIVE AND DERROGATORY LOBBYING OF THE ENVIRONMENTALISTS.

WHY? THEY KNOW THAT THEY MUST GROW MORE FOOD OR STARVE. THEY KNOW THAT THE FIRST STEP TOWARD IMPROVING THE STANDARD OF THEIR MISERABLE MASSES IS TO INCREASE FOOD PRODUCTION. THEY RECOGNIZE THAT INCREASING FOOD PRODUCTION IS A PREREQUISITE TO INDUSTRIAL DEVELOPMENT

DURING THE PAST FIVE YEARS A NUMBER OF THE MOST POPULOUS COUNTRIES IN ASIA, WITH WHOM WE HAVE BEEN PRIVILEGED TO WORK, HAVE MADE EXCELLENT PROGRESS IN EXPANDING THEIR CEREAL GRAIN PRODUCTION, ESPECIALLY WHEAT. FOR EXAMPLE, INDIA DURING 1972 HARVESTED 26 ½ MILLION METRIC TONS OF WHEAT, MAKING IT THE THIRD LARGEST PRODUCER IN THE WORLD (EXCEEDED ONLY BY THE USSR AND THE USA) CONTRASTED TO A HARVEST OF 12 ½ MILLION TONS IN 1965. I DREAD TO THINK OF WHAT THE PLIGHT OF INDIA WOULD HAVE BEEN DURING THE PAST YEAR IF IT HAD BEEN FORCED TO IMPORT 12 MILLION TONS OF WHEAT IN COMPETITION WITH THE USSR ON THE GRAIN-SHORT, PRICE-INFLATED INTERNATIONAL MARKET. DESPITE THIS EXCELLENT PROGRESS, INDIA AND A NUMBER OF OTHER DEVELOPING NATIONS WHO HAVE BEEN UNDERGOING A GREEN REVOLUTION, ARE BEING CRITICIZED BY SOME FOR THEIR ACTION AND PROGRESS.

IT IS MY BELIEF THAT FOOD IS THE MORAL RIGHT FOR ALL WHO ARE BORN INTO THIS WORLD. THE QUESTION OF HOW MANY SHOULD BE BORN INTO THIS WORLD IS ANOTHER ISSUE. WITHOUT FOOD, ALL OTHER COMPONENTS OF SOCIAL JUSTICE ARE MEANINGLESS. I AM ALSO CONVINCED THAT WORLD ORDER AND PEACE CAN NOT BE BUILT NOR MAINTAINED ON EMPTY BELLIES AND ABJECT POVERTY. THIS SHOULD BE READILY APPARENT TO EVEN POLITICAL IDEOLOGISTS AND TO ADVOCATES OF UTOPIAN ENVIRONMENTS.

THE CONTINUED SUCCESS OF THE GREEN REVOLUTION WILL HINGE, HOWEVER, UPON WHETHER AGRICULTURE WILL BE PERMITTED TO CONTINUE TO USE THE INPUTS OF AGRICULTURAL CHEMICALS, INCLUDING CHEMICAL FERTILIZERS AND PESTICIDES WHICH ARE ABSOLUTELY NECESSARY TO COPE WITH HUNGER. IF WORLD AGRICULTURE IS DENIED THE USE OF THESE CHEMICALS BECAUSE OF THE ADOPTION OF UNWISE LEGISLATION IN THE AFFLUENT NATIONS, WHERE SUCH LEGISLATION HAS BEEN AND CONTINUES TO BE BY POWERFUL LOBBY GROUPS, WHO SUBSEQUENTLY INDIRECTLY ATTEMPT TO IMPOSE THEIR WILLS ON THE DEVELOPING NATIONS BY POLITICAL PRESSURES, THEN CROP PRODUCTION WILL AGAIN STAGNATE AND SOCIAL AND POLITICAL UPHEAVALS WILL BE SURE TO FOLLOW. PRIME MINISTER INDIRA GHANDI SUCCINCTLY STATED THE POSITION OF INDIA - AND OTHER COUNTRIES OF THE DEVELOPING WORLD - AT THE 1972 STOCKHOLM UNITED NATIONS CONFERENCE ON THE ENVIRONMENT WHEN SHE SAID, "IS IT MORALLY RIGHT FOR THE AFFLUENT NATIONS TO DENY THE DEVELOPING NATIONS THE USE OF SCIENCE AND TECHNOLOGY, WHICH IS ABSOLUTELY ESSENTIAL TO IMPROVING THE STANDARD OF LIVING OF ITS PEOPLE, EVEN IF IT PRODUCES SOME MINOR ADVERSE EFFECTS ON THE ENVIRONMENT?" I CONCUR COMPLETELY WITH THIS POINT OF VIEW.

IT MUST BE REMEMBERED THAT THE NEW GENERATION OF EXTREME ENVIRONMENTALISTS ADVOCATING IMMEDIATE LEGISLATION TO PRODUCE THE UTOPIAN ENVIRONMENT ARE PART OF A PRIVILEGED CLASS IN ^{AN} AFFLUENT SOCIETY AND COUNTRY. THEY HAVE NEVER BEEN HUNGRY. THEY TAKE AN ABUNDANCE OF FOOD FOR GRANTED. THEY WISH TO PRESERVE THE COUNTRYSIDE FROM RUIN. THEY WANT TO PROTECT THE FARMER FROM HIMSELF. SINCE THEY ARE CONVINCED IT COSTS LITTLE TO PRODUCE FOOD THEY ARE CERTAIN THAT THE FARMER AND

RANCHER CAN CONTINUE TO PRODUCE FOOD AT THE SAME PRICE AS 30 YEARS AGO. MOREOVER, HE SHOULD DO THIS WHILE THE ENVIRONMENTALISTS TAKE AWAY HIS TOOLS AND INPUTS AND THE PRICE OF ALL HIS SUPPLIES RISES. THAT THEIR STRATEGY HAS BEEN SUCCESSFUL, EVEN THOUGH SHORTSIGHTED, AND IN THE LONG RUN RUINOUS TO BOTH CONSUMER AND PRODUCER, UNLESS CORRECTED, IS EVIDENCED BY THE CURRENT CONSUMER OUTCRY AGAINST SOARING FOOD PRICES. TODAY BEEF PRICES STAND AT AN ALL-TIME HIGH - BUT SO DOES CONSUMPTION. HOW MANY OF US EVER STOP TO THINK THAT THE GRATUITY OR TIP LEFT FOR THE WAITER AFTER A STEAK DINNER IN ONE OF THE BETTER RESTAURANTS, IS MORE THAN THE FARMER OR RANCHER GETS FOR THE SAME STEAK? THE FARMER AND RANCHERS ARE BEING CHALLENGED TO TRY TO SURVIVE, BUT HE HAS BEEN GIVEN AN UNFAIR BASIS FROM WHICH TO WORK. THE RESULT HAS BEEN A DISPLACEMENT OF PEOPLE FROM THE SMALL FARMS TO THE CITIES IN SEARCH OF A BETTER AND EASIER LIFE. MANY HAVE ENDED UP INSTEAD AS RESIDENTS IN THE URBAN SLUMS. TODAY 4 1/2 PERCENT OF THE TOTAL U.S. POPULATION PRODUCE ENOUGH FOOD FOR THE 205 MILLION INHABITANTS, PLUS AN AGRICULTURAL EXPORT VALUED AT MORE THAN 10 BILLION DOLLARS, WHEREAS FORTY YEARS AGO 33% OF THE POPULATION WAS ENGAGED IN PRODUCING OUR FOOD.

THERE IS NO QUESTION BUT WHAT AGRICULTURE IS ONE OF THE USA'S MOST EFFICIENT AND PRODUCTIVE ENTERPRISES, REGARDLESS OF THE YARDSTICK USED TO MEASURE THE ACCOMPLISHMENTS - YET IT HAS RECEIVED MORE THAN A FAIR SHARE OF CRITICISM FROM THE ENVIRONMENTALISTS AND ILL-INFORMED GENERAL PUBLIC DURING THE PAST FIVE YEARS. SOME OF YOU IN THE CLASS OF 1973 WILL FIND YOUR CHALLENGE IN AGRICULTURE, OR ANIMAL PRODUCTION. I URGE YOU TO DO ALL YOU CAN TO FURTHER INCREASE THE PRODUCTIVITY AND EFFICIENCY OF FOOD PRODUCTION. MORE AND MORE FOOD WILL BE NEEDED TO MEET U.S. NEEDS, AS WELL AS FOR EXPORT TO FOOD DEFICIENT COUNTRIES

OF THE WORLD DURING THE NEXT TWO DECADES. IT IS MY CONTENTION THAT WE ON THE AGRICULTURAL FRONT MUST STAVE OFF WORLD FAMINE FOR THE NEXT TWO DECADES BY RAPIDLY EXPANDING CEREAL GRAIN PRODUCTION AND THEREBY PROVIDE TIME FOR OTHERS WORKING ON THE POPULATION FRONT TO COME TO GRIPS WITH THE POPULATION MONSTER. IN ORDER TO STAY AHEAD OF THE SPECTER OF FAMINE WE WILL NEED MANY WELL TRAINED, VISIONARY, SOCIALLY MOTIVATED SCIENTISTS AND MILLIONS OF SKILLFUL FARMERS AND RANCHERS. PERHAPS THE SOARING FOOD PRICES WILL PROVOKE SOME SERIOUS THOUGHTS ABOUT THE TRUE VALUE OF FOOD AMONG THE MASSES IN THE METROPOLITAN AREAS OF THE AFFLUENT NATIONS. AGRICULTURE AND ANIMAL INDUSTRY THROUGHOUT THE WORLD HAS ALWAYS OCCUPIED THE LOWEST RUNG ON THE SOCIAL-ECONOMIC LADDER. DOES IT MERIT SOMETHING BETTER? UNLESS IT IS TREATED WITH DUE REGARD IN OUR ECONOMIC PLANNING AND LEGISLATION, WE MAY SEE OUR AGRICULTURAL PRODUCTION PLUMMET, TO THE DETRIMENT OF ALL SEGMENTS OF OUR SOCIETY. DR. JOHN CAREW, PROFESSOR AT MICHIGAN STATE UNIVERSITY IN 1970, PUBLISHED A POEM WHICH I QUOTE BELOW, WHICH EXPRESSES HIS CONCERN FOR AGRICULTURE AND FOOD PRODUCTION.

" IN BALANCE WITH NATURE "

IN THE BEGINNING
THERE WAS EARTH: BEAUTIFUL AND WILD;
AND THEN MAN CAME TO DWELL
AT FIRST, HE LIVED LIKE OTHER ANIMALS
FEEDING HIMSELF ON CREATURES AND PLANTS AROUND HIM,
AND THIS WAS CALLED IN BALANCE WITH NATURE
SOON MAN MULTIPLIED.

HE GREW TIRED OF CEASELESSLY HUNTING FOR FOOD:
HE BUILT HOMES AND VILLAGES.
WILD PLANTS AND ANIMALS WERE DOMESTICATED
SOME MEN BECAME FARMERS SO THAT OTHERS MIGHT
BECOME INDUSTRIALISTS, FACTORY WORKERS MERCHANTS,
ARTISTS, OR DOCTORS.

AND THIS WAS CALLED SOCIETY.

MAN AND SOCIETY PROGRESSED

WITH HIS GOD-GIVEN INGENUITY, MAN LEARNED
TO FEED, CLOTHE, PROTECT, AND TRANSPORT HIMSELF
MORE EFFICIENTLY SO HE MIGHT ENJOY LIFE.

HE BUILT CARS, HOUSES ON TOP OF EACH OTHER, AND
NYLON.

AND LIFE WAS MORE ENJOYABLE.

THE MEN CALLED FARMERS BECAME EFFICIENT.

A SINGLE FARMER GREW FOOD FOR 41 INDUSTRIALISTS
ARTISTS, MERCHANTS, DOCTORS, LAWYERS AND JUDGES
AND WRITERS, ENGINEERS, TEACHERS, AND LABORERS
AS WELL.

TO PROTECT HIS CROPS AND ANIMALS THE FARMER
PRODUCED SUBSTANCES TO REPEL OR DESTROY
INSECTS, DISEASES AND WEEDS

THESE WERE CALLED PESTICIDES

SIMILAR SUBSTANCES WERE MADE BY DOCTORS
TO PROTECT HUMANS.

THESE WERE CALLED MEDICINE

THE AGE OF SCIENCE HAD ARRIVED AND WITH IT
CAME BETTER DIET AND LONGER, HAPPIER
LIVES FOR MORE MEMBERS OF SOCIETY

SOON IT CAME TO PASS

THAT CERTAIN WELL-FED MEMBERS OF SOCIETY
DISAPPROVED OF THE FARMER USING SCIENCE

THEY SPOKE HARSHLY OF HIS TECHNIQUES FOR
FEEDING, PROTECTING AND PRESERVING PLANTS
AND ANIMALS.

THEY DEPLORED HIS UPSETTING THE BALANCE OF NATURE;
THEY LONGED FOR THE GOOD OLD DAYS.

AND THIS HAD EMOTIONAL APPEAL TO THE REST OF SOCIETY

BY THIS TIME THE FARMERS HAD BECOME SO EFFICIENT

SOCIETY GAVE THEM A NEW TITLE: UNIMPORTANT MINORITY.
BECAUSE SOCIETY COULD NOT EVER IMAGINE A
SHORTAGE OF FOOD

LAWS WERE PASSED ABOLISHING PESTICIDES,
FERTILIZERS AND FOOD PRESERVATIVES
INSECTS, DISEASES, AND WEEDS FLOURISHED.

CROPS AND ANIMALS DIED

FOOD BECAME SCARCE

TO SURVIVE INDUSTRIALISTS, ARTISTS, DOCTORS, UNION
LEADERS, BUREAUCRATS, POLITICIANS, LAWYERS AND
ENVIRONMENTALISTS WERE FORCED TO GROW THEIR OWN FOOD

THEY WERE NOT VERY EFFICIENT

PEOPLE AND GOVERNMENTS FOUGHT WARS TO

GAIN MORE AGRICULTURAL LAND.

MILLIONS OF PEOPLE WERE EXTERMINATED.
THE REMAINING FEW LIVED LIKE ANIMALS,
FEEDING THEMSELVES ON CREATURES AND
PLANTS AROUND THEM
AND THIS WAS CALLED IN BALANCE
WITH NATURE

THERE ARE CHALLENGES ON ALL SIDES. WE READ OF SHORTAGES OF ENERGY. WE ARE RUNNING OUT OF WHAT I CALL "DINOSAUR JUICE," WHICH IS MORE APPROPRIATELY KNOWN AS FOSSIL FUEL, YET EVERYONE WANTS TO BE A 2 - 3 CAR FAMILY. DIESEL OIL TO HEAT OUR HOMES, AND POWER OUR TRAINS, TRUCKS, BUSES IS IN SHORT SUPPLY. MANY COUNTRIES ARE RUNNING OUT OF POWER SOURCES OF ALL KINDS. WHAT WILL WE DO ABOUT IT? CAN WE IMPROVE OUR METHODS TO MAKE ATOMIC ENERGY BOTH CHEAPER AND SAFER? CAN WE DEVELOP EFFICIENT SYSTEMS FOR UTILIZING GEO-THERMAL, SOLAR ENERGY AND OIL SHALES?

WE ARE RUNNING OUT OF ADEQUATE SUPPLIES OF FRESH WATER FOR MANY OF OUR MAJOR CITIES. WE ALSO NEED MORE WATER FOR IRRIGATING THE DESERTS. MANY LARGE CITIES ARE DROWNING IN THEIR OWN SEWAGE AND GARBAGE AND CHOKING ON THEIR OWN SMOG. THESE AND DOZENS OF OTHER IMPORTANT NEEDS CHALLENGE THE ENGINEERS. WE ARE RUNNING OUT OF MANY OF OUR MINERAL RESOURCES. HOW DO WE FIND NEW SOURCES OR DEVELOP METHODS TO ECONOMICALLY RECOVER MINERALS FROM LOW GRADE ORES, OR RECOVER THEM BY RECYCLING WASTES? WHAT NEW ELECTRONIC WONDERS WILL WE SEE IN OUR LIFETIME? AGAIN THESE ARE CHALLENGES FOR YOUNG ENGINEERS. WITH THE DEPLETION OF MANY NON-

RENEWABLE RESOURCES WILL SOME OF YOU GRADUATING CHEMISTS RESPOND TO THE CHALLENGE AND FIND SATISFACTORY SUBSTITUTES OR EVEN BETTER YET IMPROVED REPLACEMENTS?

UNDOUBTEDLY SOME AMONG YOU WILL FIND YOUR CHALLENGE BY JOINING A BUREAUCRACY. I HAVE FOR THE PAST FIVE YEARS BEEN FASCINATED BY THE POSSIBILITIES OF EXPANDING THE HORIZONS AND BENEFITS FROM BUREAUCRACIES BEYOND THEIR NORMAL FUNCTION OF PRODUCING MOUNTAINS OF PAPER IN THE FORM OF DIRECTIVES, MEMORANDA, REPORTS AND FILLING UP FILES AND ARCHIVES WITH 14 COPIES OF EACH DOCUMENT. SEVERAL YEARS AGO I RECOMMENDED THAT A FUNDAMENTAL RESEARCH PROJECT SHOULD BE INITIATED BY A COMPETENT MUTATION GENETICIST TO DEVELOP A STRAIN OF THE NAKED APE WITH THE PROPER DIGESTING ENZYME CELLULOSE IN HIS GUT SO THAT HE COULD EAT, DIGEST AND GROW FAT ON THE MILLIONS OF TONS OF PAPER THAT ARE NOW BEING PILED, AND OFTEN STAMPED CONFIDENTIAL, AND TOP SECRET BEFORE BEING FILED AWAY IN NUMEROUS ARCHIVES BY THE WORLD BUREAUCRACIES AND THEREBY TEMPT ITCHY FINGERED POLITICIANS SUBVERSIVES AND COLUMNISTS. UNFORTUNATELY UP TO NOW IT HAS BEEN IMPOSSIBLE TO IDENTIFY AND ISOLATE ANY SUCH MUTANT STRAIN OF MAN. HOWEVER, WITHIN THE PAST THREE OR FOUR YEARS A BREAK-THROUGH HAS BEEN ACHIEVED BY ANIMAL NUTRITIONISTS WHO HAVE DEMONSTRATED THAT PAPER CAN BE USED EFFECTIVELY TO CONSTITUTE 70% OF THE RATION FOR THE PRODUCTION OF BEEF-STEAK. THIS BREAKTHROUGH OPENS NEW HORIZONS TO PRODUCING AN AVALANCHE OF BENEFITS FROM THE PRINTED PAGES ON BOTH THE BUREAUCRACY AND FOOD PRODUCTION FRONTS. NEW SPECIALISTS ARE NOW NEEDED TO ROUND OUT THIS PROJECT AND THEREBY PRODUCE AN EFFICIENT SELF-CONTAINED SYSTEM. THIS WILL REQUIRE

FORESTERS TO PRODUCE MORE PAPER AND TOP LEVEL ENVIRONMENTALISTS AND TEACHERS WHO WILL TEACH THE POLITICIANS, BUREAUCRATS AND NEWSPAPER WRITERS TO REMOVE THE VERBAL VENOM AND POISONS FROM THE TYPEWRITER RIBBONS AND PRINTERS INK, SO THAT THIS WILL NOT POLLUTE THE PAPER, WHICH IN TURN WILL PRODUCE DISCOMFORT - IF NOT CANCER - IN THE CATTLE WHICH ARE BEING FATTENED ON IT. WHILE WE ARE SEARCHING FOR WORTHY NEW FUNDAMENTAL RESEARCH PROJECTS, IT MIGHT BE ADVISABLE TO ALSO STUDY THE FEASIBILITY OF HAVING MUTATION GENETICISTS, ORNITHOLOGISTS, AND ENTOMOLOGISTS JOIN HANDS IN DEVELOPING STRAINS OF BROWN PELICANS AND OTHER BIRDS WITH RESISTANCE TO LAYING THIN-SHELLED EGGS WHEN BEING FED LAVISH QUANTITIES OF CHLORINATED HYDROCARBON INSECTICIDES, AND ESPECIALLY DDT. HOWEVER, I FEEL THAT WE MAY HAVE BEEN LATE IN LAUNCHING SUCH RESEARCH, FOR WE ALREADY SEEM TO HAVE EVOLVED A STRAIN OF BROWN PELICAN IN SONORA, WHICH DESPITE BEING SUBJECTED TO THE POLLUTION AND POISONING FROM DDT, HAS FLOURISHED AND PROSPERED TO THE POINT THAT IT IS BECOMING MORE DIFFICULT THAN EVER TO SURF CAST FOR YELLOW-TAIL FISH AND NOT COME UP WITH A PELICAN ON THE FISH HOOK.

BUT NOW IN A MORE SERIOUS VEIN. WILL MEDICAL SCIENTISTS, WITH THE ASSISTANCE OF PHYSIOLOGISTS, BIOCHEMISTS, BACTERIOLOGISTS AND VIROLOGISTS FIND ANSWERS FOR THE CURE OF CANCER, ARTHRITIS AND HEART DISEASES? IF THEY DO, WILL IT SIMPLY PROLONG LIFE FOR ADDITIONAL YEARS OF "EXISTENCE", OR CAN THE WANING YEARS ALSO BE MADE ENJOYABLE? IF NOT, WHO WILL DISCOVER THE PROVERBIAL "FOUNTAIN OF YOUTH," AND UNLOCK THE MYSTERIES OF AGEING? IF IT'S DONE SOON, I WANT TO APPLY FOR A NEW CARTRIDGE, EQUIPPED WITH A NEW MENTAL TAPE.

WHENEVER WE TALK ABOUT THE WORLD FOOD PROBLEM, THE DEPLETION OF NATURAL RESOURCES, OR THE DETERIORATION OF THE ENVIRONMENT, WE CANNOT SPEAK ABOUT ANY OF THEM AS ISOLATED PROBLEMS. THEY ARE ALL INTER-RELATED AND INTERTWINED WITH THE WORLD POPULATION PROBLEM. NO MATTER WHAT WE DO TOWARD CORRECTING THE ABUSES OF THE ENVIRONMENT, IN SLOWING THE DEPLETION OF NON-RENEWABLE RESOURCES, IN DEVELOPING SUBSTITUTES AND IN EXPANDING FOOD PRODUCTION, WORLD CIVILIZATION WILL, NONETHELESS, BE DOOMED UNLESS WE TAME THE POPULATION MONSTER. I AM OF THE FIRM BELIEF THAT MORE RESEARCH ON HUMAN REPRODUCTIVE BIOLOGY, WHICH COULD LEAD TO THE DEVELOPMENT OF A MORE EFFECTIVE HUMANE BIRTH CONTROL TECHNIQUE, WHETHER CHEMICAL OR NON-CHEMICAL, IS THE ANSWER. SUCH A CONTROL MUST BE EQUALLY EFFECTIVE, ACCEPTABLE AND SAFE FROM A HEALTH STANDPOINT IN PRIVILEGED SUBURBIA AND IN THE SLUMS OF THE DEVELOPED NATIONS, AND IN THE BACK VILLAGES OF THE DEVELOPING COUNTRIES. ONCE SUCH A TECHNIQUE OR METHOD IS AVAILABLE, AND IS COMBINED WITH A WORLDWIDE EDUCATIONAL PROGRAM, WHILE SIMULTANEOUSLY MUFFLING THE VOICES OF THE LOUD "ANTI-CHEMICAL EXTREMISTS", I AM CONVINCED THAT THE PEASANT FAMILIES WILL RESPOND POSITIVELY TO REDUCING THEIR FAMILY SIZE. I WITNESSED, FIRST HAND, THE DESTRUCTION OF THE MYTH OF THE NON-RECEPTIVITY OF THE ILLITERATE PEASANT FARMER TO CHANGES IN AGRICULTURAL METHODS AND NEW TECHNOLOGY AND SAW IT GIVE RISE TO THE SO-CALLED GREEN REVOLUTION IN FOOD PRODUCTION. I LOOK FORWARD TO SEEING, IN MY LIFETIME, A CHANGE IN ATTITUDES THAT WILL TAME THE POPULATION MONSTER AND GIVE RISE TO A REVOLUTION IN HUMAN DIGNITY.

DESPITE THE DREARY PICTURE OF THE FUTURE OF MANKIND AS CONCEIVED AND PORTRAYED BY MANY MODERN DOOMSAYERS, I HAVE FAITH IN THE NAKED APE. HE HAS COME A LONG WAY SINCE HE DISCOVERED AGRICULTURE AND DOMESTICATED ANIMALS A SCANT TEN TO TWELVE THOUSAND YEARS AGO, AND HE WILL ACHIEVE EVEN GREATER HEIGHTS UNLESS WE DESTROY HIM WITH NEGATIVISM AND PESSIMISM. I AM CONVINCED THAT THE MANY SERIOUS PROBLEMS THAT MANKIND IS CONFRONTED WITH TODAY, BUT WHICH I AM CONVINCED WILL BE MASTERED, WOULD NOT HAVE EVOLVED HAD THE NAKED APE BEEN A PESSIMIST. ONLY OPTAMISM SAVED MAN - THE MARGINAL SPECIES THAT HE WAS, AND ESPECIALLY WITH THE BALANCE OF NATURE STACKED AGAINST HIM - FROM EXTINCTION DURING THE LONG, PRECARIOUS TWO MILLION YEARS WHEN HIS SURVIVAL DEPENDED UPON OUT-RUNNING OR "OUT-SMARTING" WILD ANIMALS, WHILE ARMED ONLY WITH A ROCK IN ONE HAND AND A CLUB IN THE OTHER. I DOUBT SERIOUSLY THAT OUR MOST SUCCESSFUL DOOMSAYING AUTHORS OF BOTH HARD-BACKED AND PAPER-BACKED BEST SELLERS, AND OUR BEST ENVIRONMENTALISTS, WOULD HAVE SURVIVED EVEN THIRTY DAYS OF SUCH CHALLENGE.

IN MY EARLY YEARS I WAS AN ATHELETE, LATER I COACHED VARIOUS SPORTS, WHICH INVOLVED INDIVIDUALS OF ALL AGES, FROM LITTLE LEAGUE BASEBALL PLAYERS TO UNIVERSITY ATHLETES. FROM THESE GAMES AND EXPERIENCES I LEARNED THAT AN OPTIMISTIC, POSITIVE ATTITUDE IS IMPORTANT IN BUILDING A WINNING TEAM. I HAVE FOUND THE SAME INGREDIENTS ARE NECESSARY FOR BUILDING A TOP FLIGHT TEAM OF SCIENTISTS. IT MOST CERTAINLY FOLLOWS , THEN, THAT IN THE MOST IMPORTANT GAME OF ALL- THE GAME OF LIFE - OPTIMISM, POSITIVISM AND PERSEVERANCE PLAY AN

IMPORTANT ROLE IN DEVELOPING A SUCCESSFUL AND GRATIFYING CAREER.

TO ILLUSTRATE MY POINT I WILL LET YOU IN ON A PREVIOUSLY WELL KEPT SECRET. WHEN I FIRST ATTEMPTED TO ENROLL IN THE UNIVERSITY OF MINNESOTA, MY ALMA MATER, I WAS TOLD BY THE DIRECTOR OF APTITUDE TESTING SERVICE, A PSYCHOLOGIST, THAT I HAD NEITHER THE "MENTAL TOOLS" NOR PREPARATION TO SUCCEED AS A STUDENT. I FINALLY GAINED ADMISSION AND PERSEVERANCE, POSITIVISM AND MOTIVATION CARRIED ME THROUGH THOSE AND MANY OTHER DIFFICULT YEARS. SEVERAL YEARS AGO WHEN MY MEXICAN BORN SON APPLIED FOR ADMISSION TO THE SAME UNIVERSITY HISTORY REPEATED ITSELF. I ON THAT OCCASION REVISITED THE SAME APTITUDE TESTING AGENCY, NOW EMBELLISHED WITH A FANCY NAME AND EQUIPPED WITH ALL SORTS OF MODERN TESTING GADGETRY, INCLUDING COMPUTERS. TO THEIR EMBARRASSMENT AND MY DISMAY, I FOUND THE PROFESSOR IN CHARGE OF TESTING HAD NEVER STUDIED A SINGLE COURSE IN GENETICS, BUT KNEW ALL ABOUT EFFECTS OF ENVIRONMENT ON HUMAN DEVELOPMENT. I SHOULD INFORM YOU THAT MY SON ENROLLED ELSEWHERE AND GRADUATED WITH A GOOD ACADEMIC RECORD.

I WOULD LIKE TO CLOSE WITH A FINAL THOUGHT ABOUT THE NEED FOR CONTINUING YOUR EDUCATION BEYOND YOUR GRADUATION TONIGHT AND TO INDICATE THAT THERE HAS ALWAYS BEEN A GENERATION GAP. TO DO SO I WILL CLOSE WITH A FAVORITE QUOTE FROM WILL DURANT, THE WORLD RENOWNED HISTORIAN AND PHILOSOPHER, WHICH WAS WRITTEN IN HIS 79TH YEAR AND PUBLISHED IN THE AUGUST 13, 1965 ISSUE OF TIME MAGAZINE. "IN MY YOUTH I STRESSED FREEDOM AND IN MY OLD AGE I STRESS ORDER. I HAVE MADE THE GREAT DISCOVERY THAT LIBERTY (FREEDOM) IS A PRODUCT OF ORDER.

SIXTY YEARS AGO (AT AGE OF 19) I KNEW EVERYTHING; NOW I KNOW NOTHING. EDUCATION IS A PROGRESSIVE DISCOVERY OF OUR OWN IGNORANCE."

THANK YOU FOR GIVING ME THIS OPPORTUNITY TO BE WITH YOU TONIGHT.

COMMENCEMENT ADDRESS BY DR. NORMAN E. BORLAUG
PRESENTED AT NEW MEXICO STATE UNIVERSITY
MAY 12, 1973