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ABSTRACT

The objectives of this research report are to gain insight into the main problems of the future and to ascertain the attitudes that the general population has toward the treatment of these problems. In the first section of this report the future is explored socially, psychologically, and environmentally. The second section describes the techniques used to survey a random sample of 32 people concerning their attitudes toward problems of population, transportation, pollution, conservation, and social responsibility. A copy of the 15-item survey accompanies the report and analysis of the survey results. The author infers that respondents show a good attitude toward reconciliation of the population problems generally, but hesitate to give up specific privileges to solve environmental problems, especially those in the realm of traffic conditions. (DT)

FUTURISM

by

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1973

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PREFACE

The objective of this research report is to gain insight into the main problems of the future and ascertain the attitudes that the general population has toward the treatment of these problems. Armed with such information plans can better be made to enlighten and motivate the citizens of the United States. Such knowledge is especially helpful to educators and governmental officials who deal with problems affecting United States security and worldwide protection.

The future is explored socially, psychologically, and environmentally. Although the report is based on fact only predictions can, of course, be made about the future.

Sources of quotations are designated in parentheses adjacent to the quoted material. There are two numbers in each parenthetical set; the first being the chronological number of the quote and the secondnnumber corresponding numerically to the source of the quotation located in the bibliographical section.

I wish to thank the Bradley Memorial Library in Columbus, Ga. and the Ft. Benning Main Post Library for the use of their facilities in addition to the subjects taking kpart in the survey for their kind attention and assitance.

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INTRODUCTION

ANALYSIS OF RELATED STUDIES

In his book, Future Shock, Alvin Toffler is as much concerned with adaptivity and rate of change as change itself. This is the crux of the problem with which we will find ourselves confronted in the future. We will be beset with a thing called "future shock" defined as the "dizzying disorientation brought on by the premature arrival of the future". (1:16)

We are in an age of super-industrialism characterized by mostly white collar workers. Now in the 800th lifetime of earthly generations, we have severed ourselves from the past ways of thinking, feeling, and adapting. The forces of transience and acceleration confront us with potential "future shock" which will occur when the three factors of novelty, transience, and diversity converge.

Organizational Life

Our business organizations have gone to a horizontal rather than a vertical chain of command and will continue to do so in the future. It will increasingly become evident that in an age of rapid change the old bureaucratic style of leadership will be ineffectual. Too many rapid decisions will be required to wait for solutions to come vertically from the top.

People will become more intellectually committed to their jobs, which will require more involvement, participation, and autonomy. Some will even find that their professions are the only true roots that they have.

Peer groups will set the norms and values; and jobs changed frequent-

ly. More work specialization will be called for with the need for cross-specialization in different fields. It will not be uncommon to find that one has to return to college for additional training every ten years in order to keep up with developments in his profession.

Business will generally find that it need concern itself with the social good more rather than merely the idea of production to make money. Beautification and responsibility for ecology will be private instead of governmental.

Warren G. Bennis and Philip E. Slater in their book, The Temporary Society, state that large corporations have found that democratic leadership is preferable to the old style bureaucracy due to the creation of a better system of values. These values are enumerated as follows; "full and free communication, reliance on consensus, an atmosphere encouraging human emotions, a human bias which mediates the conflict between the organization and the individual, and emphasis of influence on knowledge and competent ability rather than power or personal whims." (2:2)

The authors further believe that due to the rapid technological change and diversity, our future environment will be less competitive, consisting of more partnerships between business and government. Mr. Toffler even feels that innovations in business technology will increase at such a rapid pace that governmental control will be required. Screening of innovations should be instigated in order to ascertain their effect upon society, for example, the pollution effect.

Education

Contrary to the opinions of some, Mr. Toffler feels that the people of the future will be more individualistic, bringing about a less uniform

society. Education will be less standardized as computerized information retrieval systems, tapes and video units, individual study corals, and language laboratories create freedom of the classroom system.

Although television has served as a source of standardization, future programs will be held for special audiences, as is now done with radio. Publications will become even more specialized. Improved technology will provide choices in almost every type of item leading to further individualism.

According to James Loerner in his article,"Educational Technology; Does it have a future in the classroom",such things as video tapes, hard ware, soft ware, computers and television have offered little toward the classroom effectiveness. His summary was that the"effort needs to be applied not merely to the gadgets but to human learning and the way it interacts with the gadgets as well as to the further question of whether any kind of fruitful interaction might not require a wholly reconstructed system of education". (3:10)

By the year 2000, the traditional task of imparting a common culture to our progeny will be difficult due to the specialization and special interests to which students will be subjected. The liberal arts colleges will be the candidates for this as they claim to cultivate people of character rather than narrow intellectuals".

Special studies such as high-energy physics, arid-zone agriculture, African ethnography, Finno-Ugric languages, etc. will be needed in some parts of the country; but should not be offered on all campuses. An exchange of professors and a high degree of cooperation will be required among colleges and universities t o meet the demands of the future.

Dr. Margaret S. Gordon in her recent report, "College Graduates and Jobs" offered the following information. Students are shifting away from teaching, engineering, and other overcrowded fields to such areas as agriculture, forestry, architecture, city planning, medicine, and health services. Medicine and the health services constitute the only areas for which there is any immediate shortage.

According to the Bureau of Labor Statistics only 20 percent of the job openings in the 1970s will require a college degree. In spite of this, increased technology will eventually call for more jobs for college graduates, even with advanced degrees to fill future jobs.

Although public school enrollment will be down, teachers will still be able to find employment in head start programs, handicapped training, vocational skills programs and similar areas.

Women will provide more job competition, especially in law and medicine.

Self-employment is a current trend among college graduates who no longer choose to persue the jobs for which they were prepared. Selling sandals to Berkley students on the sidewalks is an example. Others are selling leather handicrafts at rodeos and macrame' at art shows.

We can look forward to a better educated society here in the U. S. Mr. Warren Bennis and Philip Slater state that in 15 years 2/3 of our population in urban areas will have attended college.

Mr. Bennis and Mr. Slater advocate the idea of education for humanity which is cognizant of this world while attempting to change it. Interpersonal competencies such as abilities to develop and break human relationships easily and quickly, learning what roles are satisfying and how to obtain them, being able to better cope with ambiguity, learning

to understand a new culture system while distinguishing it from other cultures, and learning to develop one's own identity are further advised.

Marriage and Family Life

Mr. Toffler's predictions about marriage include plural marriages, homosexual marriages, and communal living. Most people will marry several times.... once in their early twenties, after the children are grown, and in their old age.

The idea of marriage based on love and mutual growth is highly improbable since divergent lives seldom contribute to equal growth for marriage partners. Children will be raised by professional parents whose aptitude and training make them especially competent.

American family life has always been democratic. The parents have tended to live for their children, who were better able to adapt to future change. The wilderness of the frontier caused the children growing up there to better handle their environment than the foreign born parents. The Puritan ideology and the wave of immigration into the U. S. further promulgated the child centered democratic family. Lastly, technology which made prior knowledge irrelevant had a supreme effect on democratization of the family.

Today's family is still extremely child centered as illustrated by the movement to the suburbs for the sake of the children. However, these children are having to undergo considerable strain due to the necessity of making many adaptations to changes in homes, places, schools, relationships, etc.

Basically, it is these very changes and diversities that are causing marriage to take on a deeper role. Contrary to Mr. Toffler's views, others believe love will tend to play a more important part in future marriage. People will marry for emotional security, which in the past they have received from their closely knit families, communities, and friends. No longer will marriage be for social or practical reasons, but primarily for love, friendship, reassurance, and a sense of personal value, according to Morton M. Hunt in his article, "Forsaking All Others; Is Fidelity Out of Style". In a climate of constant moves, changes in job locations, and urban settings as well as temporary friendships, marriage will serve as a psychologically sustaining force.

Over-population

Dr. Paul R. Ehrlich in his book, The Population Bomb, gave the follow- statistics regarding the world's population. In 6,000 B. C. there were five million people taking perhaps one million years to accumulate from two and one half million. Eight thousand years later, about 1650 A. D., the population was five hundred million. It doubled about every 1,000 years. In 1850, it reached one billion, doubling in around two hundred years. The next doubling occured in about eighty years when the population rose two billion in 1930. Now with a population of over three billion, it seems the doubling time is about thirty-seven years.

At the advent of the "agricultural revolution" about eight thousand years ago, the death risk diminished somewhat. Since 1800 the developed countries have discovered many methods of controlling death more easily. Increased industrialization plus medical science intervened to cause this lowering of the death rate. The spread of immunizational vaccines a-

against contagious diseases such as malaria, small pox, yellow fever, cholera, and other infectious diseases plus insecticides such as DDT have added to world wide death control.

For example, Ceylon at one time had about an equal birth-death rate. The United Nations sprayed the country to rid them of mosquitoes carrying malaria. Prior to this a mother could expect two in ten births to live. Subsequently, the mortality decreased and the birth rate increased until Ceylon was overcome with a real population problem.

Dr. Ehrlich considers the world in a real crisis and that we must make either one of two decisions, either a birth rate solution or a death rate solution which would lead to population control in nine years. This figure was used because of famine; the world is running out of food.

In 1966 everyone on earth had 2 per cent less to eat. Only ten countries grew more food than they consumed, Canada, United States, Austrailia, Argentina, France, New Zealand, Burma, Thailand, Rumania, and South Africa. The United States produced more than half the surplus with Canada and Austrailia contributing the balance. In this year the United States shipped one fourth of its wheat crop, nine million tons, to India. In effect, this changed the latter's population distribution, causing the people to drift to the port cities. In the opinion of some, this hindered India's agricultural development.

India's population is growing at the rate of fourteen to eighteen million people per year. Dr. R. Ewell assumes that India will have two hundred million more people in the next thirteen years. He feels that India will be unable to produce enough grain to feed itself.

Peru doubled in twenty three years. Other Latin American countries are outstripping their food production. Columbia now doubles every twenty-two years while medical science keeps undernourished children alive. The frantic native mother goes the gamet from contraceptives, quake abortion, and infanticide often to frigidity and suicide.

Pesticide pollution is a problem. DDT has been found in the fat deposits of Eskimos, Anartic penguins, and seals. The insects become immune to pesticides causing their prey to die from eating them. Pesticides are cancer producing. They break down soil content, dangerously killing small plant and animal micro-organisms.

We are causing self-disaster by pouring toxins into the ocean, which in turn poison the wildlife there. The planktonic diatoms which produce seventy per cent or more of the total oxygen through photosynthesis occurring in the ocean are being destroyed, according to Professor Cole.

Air pollution causes emphesema, kills plants, and interferes with the sun's radiation, producing weather problems. The inbalance of temperature which occurs when not enough sun's heat reaches the earth's surface and is radiated back into space effects the changes in the atmosphere or weather. Lead poisoning from gasoline in the air is predicted. Air transportation leaves trails and impurities that counteract the sun's radiation.

Soil in most of the tropical areas is poor and when exposed to sun light it laterizes and becomes infertile. Laterite is a rock-like substance. Therefore the tropics are no source of food. Most of the other soil unused for farming cannot be used for it.

Population should be controlled here in the United States to set an example for other nations. Incentives could be offered for not having having children. Dr. Ehrlich suggests that taxes be increased for parents by adding $600 to the taxable income for the first two children and $1200 for each child, thereafter. He feels that grants should be offered to couples who marry after reaching age twenty-five, and responsibility prices awarded to couples with five years of childless marriage and to each man with a vasectomy. There is a need for more research on human sex determination as this could help solve the population problem.

Industry should clean up its own wastes, not have tax payers do it. River pollution is a good example of industrial negligence. Reusuable containers are a must. Research done on pest control programs that save the plants or animals being attacked by pests and promote fewer generations of pests are reccommended. Hydroelectric power should be considered in the light of natural river flow and ecology.

In developing countries, experimental agricultural stations should be set up for developing better quality foods. There is need for a demographic world wide plan to handle such things as supplying medical aid to India for vasectomies.

Dr. Ehrlich states that our problem is "how to bring the population under control, reduce its size to that general range and create the atmosphere in which necessary changes, investigations, and planning can take place". (4:4) He believes that in the past such organizations as family planning have actually promoted more births because of their tone and treatment. People should not plan families; they should plan not to

have children.

People can help and Dr. Ehrlich invokes us to set an example in the United States by having only two children per family. Also, we should actively engage in promoting population control through such things as writing our state and federal legislators pointing out that the population is far outstripping food production, more than one half of the world is hungry, and that population growth must come to an end.

Another suggestion is to support and join an organization called Zero Population Growth, Inc., formed to bring the issues of over-population to the attention of the general public and federal and state legislators. The ultimate goal of ZPG is to form a lobby group to press for legislation to implement far-reaching birth control programs, repeal of archaic legislation that runs counter to these objectives, and to press allocation of funds for more research into better methods of contaception and other population problems. Also, ZPG will press for tax laws emphasizing the need for population control instead of offering incentives for having more children.

HUMAN ENVIRONMENT

A desirable human environment requires that social groups and individuals be able to choose and develop their ways of life and surroundings. Diversity should be encouraged as man maintains his individuality. However, world loyalty to our planet should be generated simultaneously.

Currently, man finds himself converging in urban areas, continously

wishing to use more energy and materials while concentrating his demands, consumptions, movements, noises, wastes, and effluents.

Predictably we will have a world population of seven billion in twenty nine years with energy use thirty times greater than in 1900. More people will live in urban areas than in rural. The under developed countries may require a larger percentage of energy and effluents making this figure modest indeed. Today, the two-thirds of the world's population who live in developing lands consume only one-eight as much energy as people in richer lands.

The pollution problem is caused by the spaces taken up, power use, and wastes given by the machines, which are slaves. Lakes and inland seas, the Baltic and Mediterranean, are under threat from untreated wastes, many of which can feed bacteria and algae; these in turn exhaust the world's oxygen and threaten other forms of life. Fossil fuel burning creates uncertain kinds of future earth climate and atmosphere. Dust and particles may alter the temperature. Even the oceans which cover seventy per cent of the earth are vulnerable to too many poisons and insecticides which destroy fish.

As a strategy to solve the problems, the world's nations should band together cooperatively to research the natural system and how it is affected by man's activities. This implies monitoring, research, and study on an unprecedented scale. In addition we must try to prevent further damage to the earth's surface.

The threats to be considered would be disease spread among undernourished children, protein deficiency maiming the intelligence of millions, spreading illiteracy, rising numbers of unemployed intellectuals,

rural landless workers infiltrating the ci 'es and vast employment. Strategies, as suggested, would include the non-violent settlement of disputes with legal, arbitral, and policing procedures on an international basis, the transfer of wealth from rich to poor through progressive world sharing, world plans for health and education, world investment in progressive farming, world strategy for better cities, and world action for pollution control and enhanced environment.

Mr. Toffler, in his book, Future Shock, suggests that as a remedy to future problems we should have a Council of Social Advisers on both a national and city wide basis. The council would influence planning, generally, making it more sensitive to social costs and benefits, less coldly technocratic and econocentric. Society should be imbued with planning and concern for the future.

To solve the problem of what future goals should be and the preferability of them, we should encourage citizenwide participation. No longer can we depend upon decisions made at the top of a vertically hierachical bureaucracy. Imagination for solv- our social, economic, and other problems should be utilized at all levels of society. Through communication which negates the necessity of physical assemblage of people such as the television, telephone, and radio, we can achieve this democratic participation.

Finally, Mr. Toffler believes that we must "master evolution" not become the victims of it. We need new social services, a future-facing educational system, new ways to regulate technology, and a strategy for capturing control of change. The key to the whole thing is diagnosis of the problem.

STUDY UNDERLYING THE HYPOTHESIS

If, as the preceeding section so delineates, we do indeed have an overpopulation, ecological, and human environmental problem, will people be able to conservatively eliminate wastes and discipline themselves effectively? It would seem that the answer is negative, as the trend toward greater consumption of goods and services, even among the lower income producing groups, is prevalent according to the following information taken from the article, "The Outlook; Appraisal of Current Trends in Business and Finance", in the May, 1973, issue of the Wall Street Journal.

Since 1962, our population has risen 12%, beef production, 45%, and broiler production, 68%.

(Table 1)

MILLIONS OF POUNDS

Year	Beef Output	Broiler Output	Population (Millions)
1962	15,324	6,907	186.5
1964	18,456	7,523	191.8
1966	19,726	8,993	196.5
1968	20,880	9,332	200.7
1972	22,200	11,500	208.8

Cars and People

Year	Cars	People
1947	30,718,852	144,126,000
1953	46,422,443	160.184.000
1959	59,561,726	177,330,000
1965	75,400,000	194,303,000
1972	96,397,000	208,873,000

People population up 45%
Car population up 214%

The following table shows the rise in living costs and wages from 1947 through March of 1973. Weekly earnings is the Labor Depart-

ment's average for all non-supervisory employees in the private economy. "All L-C Items" is the official (1967-100) Labor Department consumer price index. Following it are pride indices on some categories that make up the big index.

(Table 2.)

Living Costs and Weekly Earnings

All L-C (Living -Cost) Items	66.9	120.8	94%
Food	70.6	134.5	91%
Meat, Poultry, Fish	76.3	152.7	100%
Dairy Products	73.2	121.5	66%
Fruits, Vegetables	67.2	136.8	104%
Durable Goods	80.3	120.2	50%
Apparel and Upkeep	78.2	124.8	60%
All Services	51.1	136.6	167%
Medical Care	48.1	135.8	182%
Weekly Earnings	$45.58	$140.23	208%

From the above figures, one can see that the standard of living in the U. S. has taken a jump in the past few years. Although prices are not outstripped by wages, people are complaining about the high cost of living. This is due to evidence that American people consume much more than they have in the past. Many things such television sets, dishwashers, clothing washers, garbage disposals, ten speed bicycles, motor boats, freezers, closets full of sporting equipment, extensive vacation travel, summer homes, and camping outfits are considered necessities. Vast spending abounds not only on hard goods but soft goods such as food, beer, wine, cosmetics, and beauty shops. The latter of which averages 3.5 billion a year.

John O'Riley, the author of the above article, believes that prices will not remain fixed under these circumstances and it is unthinkable to preach such expectations to the uninformed.

With the present fuel shortage, we may experience a food shortage if farmers are unable to harvest their crops this fall, according to farm organizations. Suggested remedies for the fuel shortage are curtailing of state police cruising and use of car air conditioners, making sure motorists burn the proper octane in their tanks, and urging Americans to start buying smaller cars that use less fuel. Small cars can get an average of 22 miles per gallon as compared to an average of 14 miles per gallon of all cars, according to Chairman Russel E. Train, advisor to the president. Production planning for industry and highway construction will be interfered with in the face of unavailability of fuel supplies.

The Environmental Protection Agency in Washington and officials in major U.S. cities have refined some details designed to fulfill the requirements of the Federal Clean Air Act passed in 1960. This included a series of anti-pollution measures and traffic controls which will change the habits and life styles of millions of city dwellers.

Administrator of EPA, Robert Fri, stated the results could be a ban on private automobiles in some cities, a $5-a-day tax on off-street parking in Boston, strict limitations on gasoline sales in some areas, and much use of car pooling and mass transportation.

Other measures include mandatory inspection of all vehicles to see whether or not their emmission-control systems are working effectively, cutting down of taxi cruising, imposition of tolls on all bridges going into Manhattan, the establishment of bus lanes of major streets and highways, restrictions on the hours when deliveries can be made to businesses and stores, pressures to stagger business working hours.

In all of these plans to make it more difficult for the individual to drive and park his car nothing is said about the teenager and his driving privileges.

The following statistics obtained from the Muscogee County Police Department indicate the number of accidents caused by automobile drivers under twenty years of age for the first five months of this year, 1973.

Table 3

1973

Month	Total Accidents	Teen Accidents
January	549	181
February	497	196
March	614	182
April	530	202
May	581	203

It is appalling to note the high percentage of accidents caused by teenage drivers from the above table.

The next topic for consideration is the Skylab and its use. Spacemen Charles Conrad Jr., Dr. J.P. Kerwin, and P. J. Weitz returned to earth on June 22, 1973, after cleaning up and getting the Skylab in order for the second crew who will use it for 56 days starting in July. It is hoped that the photographs which they took scrutinizing corn fields in Nebraska, strip mining in Kentucky, effects of the Mississippi River flooding, and land use in urban areas will result in important environmental improvements. It may be difficult, however, for the taxpayer to grasp the importnace of this research.

STATEMENT OF THE PROBLEM

By the end of our century, the world's population may more than double. Even if our growth rate were reduced thirty per cent, in three hundred years each square mile of earth will contain fifteen hundred people; only one hundred years later five thousand people will be crowded into the same space. According to Mr. Theodore J. Gordon in his book entitled, The Future , three hundred years from now the world will contain two billion people if the present trend goes unchecked.

He and other authors indicated that problems of schooling, waste disposal, smog, unemployment, transportation, and currency difficulties will accompany over-population.

Loss of identity and rapid changes in the following; life styles, cultures, organizational life, education, marriage, family life, employment, and human relationships will further complicate the future. These changes plus constant movement from town to town and the alienation that this imposes will cause disorientation and a sense of rootlessness. The ultimate problem will be famine.

Man's need to adapt himself to the changing conditions that the future will bring is, therefore, apparent. New ways of thinking and behaving will be required. Will we be able to meet the challenge?

For example, will we be willing to support research to squelch the energy crisis? As Dean Rush mentioned in a recent telecast, new ways

of producing energy could be found through thermo-nuclear fission, solar rays, heat beneath the earth's surface, among other sources. All of which will require more research.

To present an entirely different question will we be willing to go along with automobile legislation, although it may keep some of us from driving? Many families are vehemently opposed to keeping their children from owning much less driving an automobile.

The above are two among many questions which lead to my null hypothesis, which is both attitudinal and general in scope.

HYPOTHESIS

THE PEOPLE OF THE UNITED STATES WILL NOT WILLINGLY SUPPORT PROGRAMS AND LEGISLATION TO OVERCOME THE PROBLEMS OF THE FUTURE AS PREVIOUSLY DELINEATED.

DEDUCED CONSEQUENCES

If the attitude is negative the consequences could, indeed, be grave. World wide chaos could occur with people rescinding into a catatonic state, starving to death, and murdering each other.

The future problems will need to be solved individually as well as through legislation, collectively. If the individual is not compliant with approved legislation and solutions, anarchy could easily occur.

Since attitude precludes action, this study gives us important information regarding the present viability of plans to irradicate, measurably, future problems.

II. METHOD OF ATTACK

The procedure used for measuring these attitudes was a survey in the form of a fifteen question paper. The questions involved matters concerning human environment, ecology, and overpopulation. Some were specific in nature while others were general.

The population sample for the study was selected from as many different occupations as possible due to the time element and lack of resources available for an extended study. The attempt was made to gather opinions from people of a representative number of total walks of life in this country. People from the Columbus, Ft. Benning, and Atlanta areas were given the inquiry. Although this seems rather localized, the majority of these people were from other parts of the United States, having been in this area from a few months to three years. The sample consisted of thirty-two surveyees, randomly selected. The majority of them were between the ages of twenty-five and forty-five. The sample consisted of seventeen men and fifteen women which included one black male and one black female. Due to the fact that the blacks represent only a small percentage of the population of the United States, the ratio was generally appropriate.

The mortality rate was one to thirty-three as one participant completed only 3½ of the questions on the form, causing his questionaire to be disqualified.

Thirty-three people were surveyed, three over the normal minimum for this type of research. Although this paper, of course, is not experimental but descriptive research, I felt the population sample to be appropriate within the framework of the constraints of time and finances, imposed.

The method of contact was face to face presentation in all except one case, in which one of the participants had her daughter, a student, mail the form to me. This face to face contact method was beneficial as it allowed the surveyees to ask questions, if they did not understand parts of the questionnaire. In addition the participants were encouraged to make comments when they felt the urge to qualify their answers. I was the only surveyer.

Although there was no title beyond the word Survey written at the top of the questionnaire, it was explained to each of the participants that data was being gathered for a research paper as part of my master's degree requirements. Also, they were informed that this survey regarded the topic of futurism as it pretains to the expected problems of the future. The participants were instructed to complete the survey by placing their yes or no answers on a separate sheet of notebook paper, which was provided. Some of the subjects spent only ten minutes on completing the questionnaire, while others pondered over it for over thirty minutes; only one subject declining to participate.

The occupations of the males represented in the survey were

as follows: a real estate broker, policeman, officer in the United States Army, architectural draftsman, insurance agent, aerodynamics engineer, attorney, bond salesman, doctor of internal medicine, assistant student counselor, two undergraduate college students (one majoring in history and the other in political science), business manager of a private school, bus ticket agent, psychiatrist, army enlisted soldier, and artist. The following were the occupations of the female subjects: real estate saleswoman, three housewives, nurse, teacher, two students, librarian, secretary, assistant librarian, Army Reserve Officer, xray technologist, and two social workers.

A weakness of the sampling consists in the inability to gather enough people from a lower socio-economic level. The inadequacy of such a person to read and interpret the form did present a problem here; and an illiterate person may not be well enough informed to have an opinion regarding these matters.

Care was taken not to influence the subjects' answers to the questions. For this reason information and discussion which might lead to bias was curtailed. The subjects were very interested in the topic and most cooperative in completing the questionnaire.

On the following page is a copy of the survey as presented to the subjects.

SURVEY

1. Do you believe that the United States should strive for 0 population growth?

2. Do you believe over-population is a problem to be solved cooperatively through the United Nations or a World Council of Nations?

3. Do you honestly feel that businessmen should seek personal gain while ignoring the social good? (For example, the evil business produces when industry pollutes our rivers and streams)

4. Do you feel that teenagers should continue to be allowed to drive autos, although recklessly?

5. Do you think that the world's people will be able to curb wastes to conserve our dwindling natural resources?

6. Do you believe that a Council of Advisors should be set up to allow citizenwide participation for solving problems that concern the general welfare?

7. Do you believe that providing incentives through tax breaks for single people and married couples with no children would be fair and help toward the solution of the over-population problem?

8. Would you object to driving a bicycle to work if many others did?

9. Would you object to extending the minimum age for obtaining a driver's license to eighteen?

10. Do you believe in birth control?

11. Do you feel we have an over-population problem in the U. S.?

12. Are you willing to help disseminate information regarding over-population?

13. Would you willingly support taxation for research to curb problems of over-population, ecology, and the betterment of the human environment?

14. Are you a willing tax payer for research through the shylab?

15. Do you believe in further legislation to control and limit the traffic and consequent hazardous driving conditions?

III. DATA ANALYSIS AND INTERPRETATION

The charts below indicate the yes and no answers of the male and female respondents in the research study, corresponding to the question numbers on the questionnaire.

(Table 4.)

Male

Question Number	Yes	No
1	12	5
2	14	3
3	2	15
4	10	7
5	10	7
6	10	7
7	9	8
8	7	10
9	11	6
10	16	1
11	9	8
12	11	6
13	12	5
14	13	4
15	14	3

Female

Question Number	Yes	No
1	8	7
2	13	2
3	2	13
4	8	7
5	10	5
6	15	0
7	9	6
8	1	14
9	8	9
10	15	0
11	12	3
12	14	1
13	13	2
14	9	6
15	12	3

From the chart we can tell the areas of most or least agreement with the correct answers on the questionnaire. For both males and females the most correct answers were on question number ten, "Do you believe in birth control?". Sixteen males and fifteen females, constituting the total number of females surveyed, answered correctly. The question answered incorrectly by the most males and females was number nine, "Would you object to extending the minimum age for obtaining a driver's license to eighteen?". Eleven males and nine females answered incorrectly. For both questions the correct response is yes. It is interesting to note the consensus in the areas of agreement and disagreement. A good proportion of agreement between both males and females coincided with the correct answers on questions numbered 1,2,5,6,10,12,13,14,and 15.

The inference is that there is a good attitude toward reconciliation of the population problem, generally; but hesitation in giving up specific privileges to solve the environmental problems. In particular, reference is made to the traffic conditions.

The following data, grouped by sex and arranged as nearly as possible on a hierarchal employment and socio-economic status scale, represents the subjects' answers and incidences of comments. In the case of the housewives and the students, socio-economic status is considered above occupational status.

(Table 5.)

Individual Questionnaire Report

Males

1. Medical doctor - internal medicine. Answered 14 questions correctly, no comments.
2. Medical doctor - psychiatrist. Answered 6 questions correctly. Commented that the questions were slanted.
3. Attorney. Answered 12 questions correctly. Due to poor hand writing, I was unable to read his comment.
4. Real estate broker. Answered 7 questions correctly. Made comments for questions numbered 5,6,10, and 15.
5. Aerodynamics engineer. Answered 14 correctly commenting on questions 3,4,11,12,13,14, and 15.
6. Business manager. Answered 9 correctly, no comment.
7. Bondsalesman. Answered 8 correctly, no comment.
8. Insurance agent. Answered 9 correctly , commenting on # 4.
9. Officer-U.S. Army. Answered 12 correctly, commenting on numbers 6,12, and 13.
10. Architectural draftsman. Answered 8 correctly, commenting on 7,8,10, and 11.
11. Counsellor and graduate student. Answered 13 correctly, commenting on all.
12. College student-political science major. Answered 9 correctly, commenting on one.

13. College student, history major. Answered 14 correctly, commenting on #s 4,5,8, and 11.
14. Artist. Answered 10 correctly, commenting on 4,8,11,7,&12.
15. Bus ticket agent. Answered 14 correctly, commenting on 2&14.
16. Policeman. Answered 10 correctly, commented on #4.
17. Gardener, U.S.Army. Answered 13 correctly, commented on #14.

Females

1. Housewife. Answered 11 correctly, commenting on #2.
2. Housewife. Answered 10 correctly, commenting on #2,3,4,5 &13.
3. Housewife. Answered 10 correctly, commenting on 4,7,13,&15.
4. Real estate saleswoman. Answered 13 correctly, no comment.
5. Librarian. Answered 14 correctly, no comment.
6. Social worker. Answered 10 correctly, no comment.
7. Social worker. Answered 12 correctly, commenting on 2, 4,5, 6, 7, & 11.
8. Teacher. Answered 14 correctly, commenting on one.
9. Nurse. Answered 12 correctly, commenting on 1,2,4,6,7,& 8.
10. Secretary. Answered 9 correctly, commenting on 1,4,6,11 & 12.
11. Officer-U.S.Army Reserves. Answered 12 correctly, commenting on 2 and 14.
12. X-ray technologist. Answered 12 correctly, commenting on #2.
13. Asst. librarian. Answered 12 correctly, commenting on none.
14. Student, university. Answered 9 correctly, commenting on 1,2,4, & 14.
15. Student, college,. Answered 12 correctly, commenting on 2,4,5, and 7.

The correct answers for the questions used on the survey are on the table below.

(Table 6.)

Correct Questionnaire Answers

Question #	Answer	Question #	Answer
1	yes	8	no
2	yes	9	no
3	no	10	yes
4	no	11	yes
5	yes	12	yes
6	yes	13	yes
7	yes	14	yes
		15	yes

The definition of the term"correct" refers to those answers which which would reflect the best attitude toward alleviation of the future problems as indicated in the body of this report. Actually, there are no correct or incorrect answers in the usual sense of the word; but only the opinions of the subjects.

The average mean score of the males in the survey was 10.35 and the average mean score of the females was 11.46; in round figures 10 and 11 respectively. The inference is, therefore, that in two-thirds of the items the men expressed cooperative attitudes; while in eleven fifteenths of the items the women expressed cooperative attitudes.

Weaknesses of a survey of the type described are as follows. The subjects may not have given considerable thought to the questions involved in order to form an opinion. Since the intensity and depth of these opinions is hard to measure, the attitude may not be significant. To be more accurate, of course, the survey should be much larger, incorporating thousands of people at nearly every socio-economic

and occupational level. Every region, rural, and large metropolitan area should be surveyed to get a more absolute picture.

IV. SUMMARY AND CONCLUSIONS

BRIEF RESTATEMENT OF PROBLEMS AND PROCEDURES

Novelty, transience, and diversity will bring about a disorientation known as future shock. Organizations will increasingly discover the need for horizonal rather than vertical chains of command. With such rapid technological changes taking place, the future environment will be less competitive and more of a partnership between business and government. Due to the diversity of goods, services, educational methods, publications, and other communications' media, individuality will emerge more profusely than in the past. Job competition will be keen due to increased education and numbers of qualified workers entering the job market.

Human relationships will be easily developed and broken, jobs and homes changed frequently, and marriages on a temporary basis. For others, marriage will provide the psychological stability in an otherwise rootless existence.

Our world population is doubling every 37 years or less. Better living conditions due to improved technology, the increased food supply, giant advances in medical science decreasing the mortality rate, and the increased birth rate are largely responsible for the great population growth.

The balance of nature is being dangerously tampered with by the various forms of pollution. Air, earth, and bodies of water are diversely affected by waste emission, pesticides, excessive building, transportation effects, soil erosion and other means. Very little of the land not now being used for farming can be farmed, inexpensively enough even with the most sophisticated methods. Costs prohibit desalting the ocean water to provide irrigation, etc. Aside from the ambiguous future technological developments to overcome pollution effects and food shortages, earth space for moveability, privacy, and a good social and psychological environment make over-population undesirable. In diagnosing the problem, we need new social services, a future-facing educational system, and a strategy for capturing chance control.

Even with spiraling inflation, presently, the trend is toward an increased consumption rate of goods and services. Increased government controls have been suggested. It is unlikely that the U. S. population will be altogether happy about the new regulations set forth by the Environmental Protection Agency to offset fuel shortages.

Much world wide cooperation will be needed to diagnose and remedy the over-population problem.

FINDINGS AND CONCLUSIONS

My null hypothesis stating that the people of the United will not willingly support programs and legislation to overcome the problems of the future as previously delineated in this report was measured by means of a survey. The fifteen questions on the survey were of the attitudinal type, to be answered yes

or no. The thirty-two randomly selected subjects were asked to write comments whenever they wished on the questionnaire in order to qualify or clarify their answers.

In round figures the average mean score of the males was ten and the average mean score of the females eleven, indicating my null hypothesis to be in-valid since over two-thirds of both sexes exhibited good attitudes. The best attitudes were found in the more general areas of over-population control, while poorer attitudes were indicated in areas dealing with specific regulations, causing changes in some of the established customs and freedoms.

Due to the smallness of the survey and difficulty in determining real feelings through a questionnaire, further research is indicated.

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