IMPLEMENTING LEGISLATIVE MANDATE:

PROTECTING MIGRANT AND SEASONAL FARMWORKERS

FROM OCCUPATIONAL PESTICIDE EXPOSURE

by

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ABSTRACT

The use of chemicals in U.S. agriculture began with the trend toward intensive farming in the mid-19th century; the history of the farmworker in contrast, is more deeply entrenched in the very roots of this nation.

While the introduction of these chemicals in agriculture can be viewed from various perspectives, this study recognizes that the institutional mechanisms set up to protect migrant and other seasonal farmworkers from exposure to pesticides, are reflective of the political and economic priorities of our society.

The purpose of this thesis is to reveal how the participants in a "system" that is charged with protecting the health and safety of those who are occupationally exposed to pesticides--"implement" legislative mandate, and in doing so, continue to formulate "public policy" long after a bill becomes a law. The major contention of this thesis is that farmworkers have "fallen through the cracks" of the protection afforded by this system.

Chapter 1 presents a conceptual analysis of occupational health and safety. In particular, the issue is discussed in terms of the context of agricultural fieldworkers occupational exposure to pesticides. Chapter 2 "maps-out" some of the key actors, agencies, and legislation that have been involved in the issue of farmworkers' occupational pesticide exposure. Chapter 3 attempts to identify the political, sociological, and economic factors that must be considered if change is to be brought about in the system.

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My philoshophical base: "Lo que siembras recojes".

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"The question of public policy with respect to the general environment as compared to the work environment is complicated by differences in the degree and selectivity of the risk posed. Chemicals that degenerate in the general environment or are used in diluted form may present low risks to the general population and confer important benefits (e.g., certain pesticides)...In such cases, the general risk may be low and almost randomly distributed, and there is thus a certain equity in the use of these substances that give us comfort. But if selected groups of chemical, agricultural...workers are exposed to severe health risks, there is a strong argument that these situations are not equitable, even if more lives are saved than are lost by the continued use of these materials. The nonrandom selection of those who bear these extra risks deserves special attention by both public and private decision-makers."

-Nicholas Ashford, Crisis in the Workplace

(emphasis added)

CHAPTER I.

OCCUPATIONAL HEALTH AND SAFETY

"...in the Universal Declaration of the Rights of Man it is stated that all humans have a right to an adequate standard of living, that assures him and his family of health and well-being,...It is thus understood that health is not only an aspect of medical assistance, but it also has a social meaning...

Thus, the quest for health is a powerful social force that firmly impels the elevation of the standard of living, that demands the improvement of nutrition, housing, working conditions, education and promotes the development of necessary resources on which this progress depends."

-Dr. Andres G. DeWit Greene
Deputy Medical Director of ISSSTE

1.1 INTRODUCTION

The concept of occupational health and safety has been an evolving concept--from the very narrow definition of the elimination of disease and injury related to the work environment, to a concept that considers the prevention of disease and injury and the promotion of mental well-being and job satisfaction.[1] From the latter perspective, occupational health can be defined as a state of mental and physical well-being (health) related to the physical and social conditions of the workplace (the occupational setting). Encompassed within the concept of occupational health is the concern for occupational safety. Occupational safety specifically related the broader context of "safety" to the conditions of the workplace; "safety", as a concept encompasses:[2]

- The conditions of being safe: freedom from exposure to danger: exposure exemption from hurt, injury, or loss
- The quality or state of not presenting risks: safeness
- knowledge or skill in methods of avoiding accident or disease

Thus, from this broader perspective, one could recognize that the concern for occupational health and safety involves:

- knowledge or skill of preventing occupational disease and injury--this information being possessed by the worker, the employer, the health and occupational health care professional. Implicit is that this knowledge or skill is derived from some form of educational training, either worker or employer-initiated.
- promotion of mental and physical well-being as provided by the physical and social conditions within the work environment.

The focus of these concerns can be further delieneated:[3] Occupational health is concerned with the preservation of workers' health both in the course of doing work as well as in the period of time after leaving the work environment, either for the day or retirement; occupational safety primarily focuses on the actions and conditions encountered during the time the worker is actually working.

Concurring with the broader conceptualization of occupational health and safety, a joint committee of members of the International Labor Organization and the World Health Organization (ILO-WHO) has defined, more broadly, the objectives of occupational health:[4]

> . "the promotion and maintenance of the highest degree of physical, mental, and social well-being of workers in all occupations; the prevention among workers of departures from health caused by their working conditions: the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological condition."

This concept of occupational health and safety presents an "ideal" which is tempered by the realities of economics and politcs. What makes occupational health and safety different in concept from the concern for general health and well-being is that, as an adult, the individual usually assumes full responsibility for their health and safety; the context of this responsibility appears to shift--the responsibility becoming one of joint responsibility for health and safety by the employee and the employer, as it is the employer who provides the conditions of the workplace. Consequently, this shift is responsibility from that of the employee to that of a joint responsibility shared by the employee and the employer, introduces a political and an economic dimension to the conceptualization of

what it might "mean" to have or what it might entail to achieve occupational health and safety. These politcal and economic dimensions become apparent in the array of interactions between various actors, different levels of organization, and other variables involved in occupational health and safety issues:

- The individual worker relating to an individual employer
- the individual worker relating to a representative of an individual employer, e.g., supervisory personnel such as a foreman or crew leader
- the individual worker relating to an employer representing many "owners" such as a corporation
- the individual worker relating to a representative of an employer within a corporation
- a group of workers relating to an individual employer
- a group of workers relating to an employer representing many "owners" such as a corporation
- a group of workers relating to a representative of an employer within a corporation
- a group of workers relating to employers in a particular industry
- a single employer relating to government and the rules and regulations imposed by government
- a group of employers relating to government and the rules and regulations imposed by government
- an industry relating to government and the rules and regulations imposed by government
- ability and willingness of a government regulatory agency to adequately regulate industry and implement and enforce the law

The variation of "power" among these actors and some of the interactions they engage in are considered below:

workers--the level of organization of the workers and their ability to bargain for what they demand or seek; the level of protection afforded to employees from employer retaliation in the event that a worker files a complaint regarding the safety and health conditions of the working environment; the degree to which workers value health and safety issues--the willingness not to trade off health and safety issues off for other issues such as wages; willingness to comply with health and safety regulations and procedures.

employers--

the size of the employers' firm/establishement and its financial resources; the type of industry and the degree to which it is regulated; the degree to which the employer holds worker health and safety as a priority; employer willingness to address workers concerns regarding the work environment; willingness to meet or "bargain" with a group of workers; willingness to comply with health and safety regulations.

government regulatory agencies--

. ability to regulate a particular issues; adequacy of resources:

- budgetary authorizations and appropriations
- manpower availability, training, and expertise
- enabling statues/legislation and their provisions, amendments to the legislation
- interaction and coordination with other government agencies
- content and management of agency programs, effectiveness of program guidelines, procedures and plans (e.g. implementation and enforcement programs)

. willingness to "vigorously" regulate a particular issue:

- priority-setting and its' rationale
- ability to "absorb the impact" of political repercussions of a regulatory decision

Due to the complexity of the occupational health and safety issue--which involves issues of science, differences in perceptions of "what is fair", legal issues and economic considerations, etc., the courts have played a vital role in "redefining the "intent", meaning, and scope of public policy by their ruling on issues of occupational health and safety. In effect, the courts act as "mediators" in the controversies that can not be effectively addressed at other policy levels, e.g. "mediating" between interest groups in the promulgation of policy and actions at the administrative level, etc. I use the term "mediate" to describe the impact of the court decision regarding occupational health and safety issues rather than a term such as "resolve" or "settle" because infact, the court decisions have not successfully resolved the complex economic, scientific, political, and social factors inherent in this issue.

The concern for occupational health and safety however, is not a new issue in American Society. General awareness of the need for legislation protecting health and safety of the worker first arose in the United States during the rapid increase of industrial expansion in the latter third of the nineteenth century.[5] Massachusetts was the first state to enact a worker safety law in 1887, and by 1900 most of the heavily industrialized states had some minimal form of legislation requiring employers to reduce or eliminate certain workplace hazards.[6]

A renewed interest in the issue of occupational health and safety has risen in response to several factors:[7]

- the increase in the reported injury rate in industry.

- the new and newly acknowledge evidence for the occupational origin of much disease, which for the most part, is not reflected in the injury statistics.

- the rapid rate of technological change that has ushered in an increasing rate of new chemicals, new production processes, and new forms of occupational stress.

- the environmental movement of the 1960's and the 1970's alerted the public to the effect of toxic agents in the environment--concern for the effects of industrial pollution became focused on the general environment, which then led to an increased awareness of the impact on the health of people working with toxic chemicals in their work environment.

- the changing character of the workforce--increased educational levels of the labor force, rise in wages, and consequently the shift in worker demands have placed job safety and health higher in the priorities of workers and their representatives. On the management side, efforts have been made to better understand worker needs and demands as an attempt to deal with the relative decrease American industrial productivity.

Several of these factors are especially relevant to agricultural work because:

- Since 1978, agriculture has been the second most hazardous industry in terms of occupationally-related deaths. Prior to 1978, job illness and injury rate in agriculture was exceed only by those in mining and construction. Between 1975 and 1979, 14 to 16% of the occupational deaths and 7 to 9% of the disabling injuries have occured in agriculture. (Author's calculations are included in the Appendix, as well as the occupational injury and death rates in agriculture, reported per state.)

- The mutagenic, teratogenic (causing birth defects), carcinogenic (cancer-causing) effects of pesticides on humans are becoming more widely-recognized. It is also recognized is that there may be a latency period e.g., in the case of cancer, 20-30 years may elapse before a disease begins to manifest itself.

- Pesticide use in California's San Joaquin Valley alone was reported to be atleast 250 million pounds in 1977.[8] 1970 Senate Subcommittee hearings revealed that one billion pounds of pesticides are produced each year in the

U.S.; 50,000 pounds of organophate pesticides are used annually; Federal spending for pesticide research was $100 million in comparison to only 160,000 invested in pesticide safety.[9] U.S. farmers and foresters spend 2.25 billion dollars per year on pesticides, although insect resistance to pesticides is accelerating.[10]

- Concern for farmworkers' occupational exposure to pesticides is an issue where environmental, labor, health care, and energy issues merge. The fact that the farmworkers' "workplace" is the general environment complicates the attempts to provide them with a safe and healthy workplace. Farmworkers' depend on the migrant clinics to correctly diagnose pesticide-related illness--these clincs are often said to be understaffed and limited in the scope or in their service capacity. Organic pesticides are petrochemical (oil) derivatives. Some states (and local efforts) are trying to reduce the dependence on high-cost, non-renewable energy use in agriculture--e.g., the use of petro-based pesticides and fertilizers. For this reason, and the fact that there is an accelerated insect resistence to pesticides, and most importantly, the effects of pesticides on human health, especially that of the farmworkers, alternatives to pesticides must be found.

- Health and safety is one of the United Farmworkers' biggest organizing issue.[12] In September 1960 Cesar Chavez, head of the UFW, testified before a U.S. Senate committee stating. "The issue of the health and safety of farmworkers in California and throughout the United States is the single most important issue facing the United Farm Workers Organizing Committee"[13] Chavez produced statistics which suggested that approximately 80 percent of the farmworkers experience some effects from pesticides during the year. The United Farm Workers Union prefers to write health and safety clauses into its contracts, rather than rely on government agency enforcement of health and safety standards.[14]

Although the meaning of occupational health and safety has evolved from its narrow definition of the <u>elimination</u> of disease and injury in the workplace, to a conceptualization that considers the <u>prevention</u> of disease and injury and the promotion of mental well-being and job satisfaction--it is evident that this "evolution" in the meaninf of occoupational health and safety, is far from the "reality" of the "work environment" with which the farmworker is faced. Here, the conditions of labor are still at a state that in addition to being devastatingly harsh, also

encompass an extraordinarily high incidence of occupationally related injury and disease.

In fact, machinery accidents and pesticide exposure are the most widely publicized health and safety problems of agricultural workers. The more immediately observable effects of injury and trauma resulting from accidents involving farm machinery is said to be the "largest occupational health problem facing the agricultural workers".[15] Yet one could argue that since the full impact of the seemingly "mild" effects of some incidents of pesticide exposure, and the less tangible long-term effects of chronic exposure are not clearly known, this presents an insidious problem that may be overlooked by the casual observer.

The problem, simply stated, is that farmworkers are still getting sick despite the existing institutional mechanisms to "prevent" such incidents, such as the law governing the use of pesticides, the Federal Environmental Pesticide Control Act, etc. The next section discusses why the issue of farmworkers deserves special attention, and some of the factors complicating the attempts to realize safe and healthful work conditions for farmworkers, free from hazardous exposure to pesticides.

1.2 WHY A CONCERN ABOUT MIGRANT AND OTHER SEASONAL FARMWORKERS AND PESTICIDE EXPOSURE?

(a) Pesticide Use In Agriculture: The Pesticide Dilemma

Farmworkers' occupational exposure to pesticides could be said to be part of the larger "Pesticide Dilemma". In an article by that same title, it is stated that one of the most hotly debated topics of public policy is "whether in poisoning the pests that each year destroy crops worth billions of dollars,...are we also unwittingly poisoning ourselves?"[16] Other parts of the "pesticide dilemma" can be summarized below:

- two-thirds of the agriculatural pesticides are applied by aircraft and consequently 15-55% of the spray misses the target.[17]
- nature's response to the large increase in sythetic pesticide use has been an increase to resistance of pest to some of these poisons.
- pesticides help ensure bountiful harvests and malaria-free populations, and thus they have saved millions of lives.
- the federal government has the responsibility of permitting on the market, only those pesticides whose "benefits" outweight the "risks," and
- scientists often debate among themselves the efficacy and reliability of the tests used in determining the risks and the benefits of marketing certain pesticides.
- some contend that with a steadily expanding population and a decrease in arable land, the world must use pesticides to maintain high crop yields and affordable food--considering that at the moment there is no other way to farm on the scale required.
- uncertainties in accessing the environmental dangers of pesticides.
- the task of obtaining sensible regulation of pesticides, as well as diligent enforcement of pesticide policy.

Acknowledging that there are both positive and negative aspects of pesticide use in economic terms, what can be said about their safety and effect of human health?

Chemical companies state that pesticides are safe if used properly; federal regulatory agencies wonder about the safety of these agents even when they are used properly.[18] Consider the following points:[19]

- Chemical companies typically spend ten million dollars over an average of ten years in attempts to put a new pesticide on the market; one fourth of that time and money is spent on meeting federal environmental and toxicological testing requirements.

- Dr. Frank Duffy of the Harvard School of Medicine, states that exposure to even tiny quantities of certain insecticides similar to those found in the home can alter brain activity for more than a year, and cause irritability, insomnia, loss of libido, and reduced powers of recall and concentration.

- Dr. Jack D. Early, president of the National Chemical Association has stated that"...Portraying occasional (pesticide) misuse as reflecting a widespread problem is a disservice to hardworking scientist, farmers, and government regulators--and, ultimately, to the American public, which benefits from these products."

- Douglas M. Costle, Administrator of the Environmental Protection Agency has stated: "In the past we willingly accepted claims that pesticides have no long-term effect on humans. Neither EPA nor industry is in a position to make such reassurances honestly."

Considering these diverse views, the next step of inquiry would be to ask what exactly are the hazards that pesticides pose to human health? This is considered in the section below.

(b) The Hazards of Pesticides and Human Health

Definition

The term "pesticide" is a general term for chemicals that erradicate "target" pests: unwanted plant or animal life. The range of these chemicals include target pest categories such as: rodenticides (eliminates rodents), insecticides, fungicides (fungus), herbicides (weeds and other unwanted plant life), nematocides (microscopic worms), molluscicides (molluscs), etc. The meaning of the term pesticide in this paper will imply the use of insecticides, fungicides, and herbicides, as they are the agents to which farmworkers in the fields are most commonly exposed. Another classification of pesticides includes generic classification by chemical composition and structure. The three main generic groups of pesticides used in agriculture are: 1) chorinated hydrocarbons, 2) organophosphates, and 3) carbamates. These synthetic organic pesticides are used as insecticides. Within these broad classifications, there is a great deal of variation in the toxic effects on various animal species. In addition, among these groups there is a great deal of variation in their ability to persist and degrade in the environment.[20]

All three of the insecticide groups have one definite thing in common: they will by disrupting the transmission of nerve impulses in their target via enzyme inhibition of acetyl cholinesterase, (ACHE).[21] In humans, the result of the inhibition of this vital enzyme results in tremors of the involuntary muscle system, convulsion, ultimately leading to death.[22] Chlorinated hydrocarbons also attack the nervous system, although their precise mode of action is not fully understood.[23]

The damage to health that can be incurred by occupational exposure to pesticides can be quite severe and at times irreversible.[24] Pesticides have been shown to cause or are strongly implicated in incidents of sterility (DBCP), neurological disorders (Kepone, Lepthos), miscarriages (2,4,5,-T), and cancer (DDT).[25]

Another characteristic of pesticides is their ability to decompose or persist in the environment. Pesticides are usually classified as persistent or non-persistent. Non-persistent pesticides (such as organophosphates and carbamates) may remain in the environment for one to twelve weeks, while persistent pesticides (such as chlorinated hydrocarons) may remain in the environment for two years or longer.[26] For example, TEPP (one of the most toxic chemicals registered as a pesticide) can be used on crops twenty-four hours before it is harvested without leaving any "detectable" residue.[27] At the other extreme, DDT is far less toxic, but remains in the environment for many years.[28] DDT recognized as persistent, possessing the ability to bio-concentrate up the ecological food chain, as well as being able to accumulate in body fat tissues, was banned in 1974.[29] Despite EPA's ban on DDT, it is still applied to sweetpotatoes in storage, green peppers and onions.[30] The average amount of DDT present in human tissues was estimated to be 5-10 ppm (parts per million) during 1976.[31] Concentrations of up to 600 ppm have been reported to produce no "gross functional disorders" in exposed agricultural workers.[32] This suggests that agricultural workers may be exposed to 60 to 120 times the pesticides exposure to the "general population".

Because of the known persistence of chlorinated hydrocarbons, these insecticides are being replaced by organophosphates, which are

less environmentally persistent but have been found to be more toxic. Note that less persistence does not imply non-persistence. Even with safe handling, pesticide persistence in the environment allows natural processes (winddrift, rain, leaching into soil) to spread them from target to non-target areas.[33]

For example, DBCP, an organophoshate shown to cause sterility in males, was found in dangerously high levels in a well used by farmworkers in Fresno, California.[34] Even after this discovery, workers still drank from the well. One farmworker, Lupe Arrendondo, shrugged off the information replying: "You have to drink water." I suspect his comment may be typical of many other farmworkers. After DBCP was found in well in Arizona and Hawaii, EPA suspended its use and a temporary ban has been imposed in all states except Hawaii.[35] This case seems to be a classical example of how pesticides can end-up in non-target areas and where hazardous exposure to them may or may not be acknowledge.

After considering the context of the "pesticide" dilemma", the hazards to human health, and some of the "characteristics" of pesticides the next section presents a brief discussion of the incidence of pesticide exposure and illness among farmworkers.

(c) Pesticide Illness and Poisonings among Farmworkers

To what extent are agricultural workers actually harmed by pesticides? The estimate cited by an HEW official during the Senate Hearings on Migratory Labor, was an approximate 800 deaths and 80,000 injuries from an imporper use of pesticides.[36] This figure was criticized as possibly being too large, as it was said to be an extrapolation from one county in Florida. A 1976 California state report attibuted 1,452

occupational diseases to pesticides.[37] This number was said to be an under-estimate of the actual number of pesticide poisonings. In a sample of 400 farmworkers in rural Florida, 48.5% stated that "at least once in their careers they had been sprayed directly with pesticides while they were harvesting crops, and 52% of the respondents became noticeably ill after the spraying incident.[38] A recent survey conducted in south Texas by the National Association of Farmworkers Organizations revealed in the preliminary analysis of 260 interviews, that 53% of the workers had been in the fields during the application of pesticides; of this 53%, only 21% of these workers were asked to leave the field; 61% of the workers complained of routinely being sprayed by pesticide drift.[39]

There are two occupational groups in agriculture that have an extensive degree of exposure to pesticides: field harvestors that come in contact with residues in the soil and on plant foliage, and pesticide applicators. Exposure to pesticides may occur through dermal contact and/or absorption, absorption through the mucous membranes, and inhalation. Applicators, especially the "mix-loaders" have direct contact with the toxicants, which are often in a concentrated form. These workers are said to have the highest rate of overt pesticide-related illness.[40] Fieldworkers however, compose a much larger portion of the workforce, comparatively numbering in the hundreds of thousands in contrast to the thousands of applicators.[41] Fieldworkers tend to be sociologically distinct from other sectors of the workforce in terms of culture, language, etc. In addition, a large number of these workers are migratory or semi-migratory workers, that is, a farm laborer whose principal income is derived from temporary farm labor

in which he/she must move several times per year. A large number of fieldworkers are "illegal aliens", although no one has been able to "document" exactly how many are presently in the country. These characteristics listed above are said to be shared by farmworkers on the West Coast, Texas, the Midwest, Florida, and the East Coast.[42] Together, these characteristics fuel the great uncertainty about how many workers are affected by pesticide illness or poisoning.

The Environmental Protection Agency (EPA) has established a computerized information storage system to aid in documenting poisonings and illness due to pesticide exposure. The caveat however, is that this Pesticide Incidence Monitoring System (PIMS) is based on a voluntary submitting of data; no one government or private agency is required to report these incidents.[43] Thus many of the pesticide poisoning cases are said to remain unreported and under reported. It is estimated that of all the pesticide poisoning incidents reported in California, (the only state to have adopted a manditory pesticides poisoning information system), these reported cases actually comprise no more than 1% of the actual poisonings.[44] Nonetheless, the California Department of Health reports that 15% of all California farmworkers are poisoned in some form by pesticides each year, and the National Share Croppers Fund reports that approximately 75,000 farm workers suffer acute pesticide poisonings each year.[45] Thus, it is apparent that due to the non-existence of reporting systems in most states, and reliance on voluntary information, the actual incidence of pesticide poisoning is at best an approximation.

Further some health professionals and farmworker advocates would contend that the following issues may deter the diagnosis and

thus the reporting or occupational disease due to pesticides.[46]

1. Most doctors know nothing about job-related disease. Today, less than half of all medical schools in the U.S. have any requirements for medical students to be taught occupational health (and much less clinical pesticide toxiocology).

2. Diseases can show up in a place far-removed from where a substances enters the body.

3. Disease often take a long time to appear. This quality is known as the latency or "lag time". Cancer for example, often takes 10-30 years to develop after exposure to a cancer-causing substance.

4. Manifestations of disease--acute and chronic. Acute disease usually results from a massave one-time exposure. This disease usually regress or can result in death of the person exposed to the toxicicant. Chronic disease result from low-dose exposure over a long period. Although the initial symptoms are not especially noticable, the patient becomes progressively ill. In cases of mild organophosphate poisonings, the symptoms closely resemble those of a severe influenza: dizziness, nausea, headache, fatigue, excessive sweating, excessive salivation, diarrhea, and blurred vision.[47]

Some of the ways in which field workers can be exposed to pesticides is through contact with residues on crop leaves (foliar residues) which can be transferred from the hands and arms onto the mouth, nose, and eyes, and pesticide drift from spraying operations.[48] In the course of their work, fieldworkers may inhale foliar residues or drifting pesticide spray. Organophosphate and carbamate pesticides have been shown to have profound effects on the body's immunological system, which may account for the high incidence of respiratory disease among farmworkers.[49] In addition, dermal exposure to foliar residues commonly result in dermatitis, skin allergies and eye problems. In harvesting table grapes and raisins for example, the use of gloves greatly inhibits the hand-harvesting of these crops and are not worn.[50] If hands are contaminated and are rubbed onto the mouth, ingestion poisoning may result. Most cases of farmworkers exposure to pesticides in the state of California have resulted in skin disease,

but there have also been mass systemic poisonings.[51]

(d) Effects On Health: The Relationship between the Migrant Diet and Pesticide Toxicity

The diet of the migrant worker and especially migrant children, is said to be deficient in proteins and vitamin A.[52] Vitamin A deficiency disorders include interference with growth, reduced resistence to infections, night blindness, etc.[53] A survey of migrant health conditions in Hildago County, Texas showed that nutritional deficiencies among migrant workers generated many kinds of disease--particulary protein and caloric malnutrition, kwashiorkor (disease attributable to deficient protein intake), marasmus (infantile emancipation attritutable to deficient caloric intake), anemia, ariboflavinosis (a condition arising from vitamin B deficiency), scurvy, and rickets; there is no evidence that migrant health conditions in Hildago County are worse than any other largely migrant populated areas.[54]

Aside from the obvious and not so obvious effects of these dietary deficiencies--such as susceptibility to infections, interference with physical growth, and development, impact on learning capacity, etc., vitamin and protein deficiency has been implicated in exacerbating pesticide toxicity.[55] Consequently, the migrant workers' dietary protein and vitamin deficiences may have a definite impact in compounding the health effects from their greater than the "general public" exposure to pesticides vis-a-vis their work environment.

Since the children of migrant workers often also engage in field-

work such as the harvesting of short season crops, the relation of a nutrient deficient diet should be especially noted--the higher metabolic and growth rate of children make them generally more susceptible to toxins--this toxicity principle has been well-documented in cases involving lead poisoning and radiation-related illness.[56]

Results of one experiment conducted on laboratory rats has shown an augmentation of susceptibility to pesticide toxicity in both chronic (long-term) and acute (short-term) oral dose studies: the degree of augmentation varied markedly from pesticide to pesticide.[57] One might question the correlation of experimental results obtained from laboratory test animals to the anticipated effects in humans; this is generally an issue of great controversy, as in the extrapolation of dosages and experimental procedures used in animal tests to set a standard for ensuring human safety. The principle investigator in this particular toxicity study, notes:[58]

> "...the practical conclusion is that when marked augmentation of toxicity has been demonstrated in tests on laboratory animals, clinical toxicity trials in man should follow for confirmation or rejection of the conclusions in animals."

The Department of Agriculture's Report on Environmental Assessment of Pesticide Regulatory Programs presents one side of this "correlation between animal test results and man" controversy, stating that the correlation between animal (rodent) and human health hazards may actually understate the dangers to humans.[59] In the chart provided below, information on pesticide dosage from a 1972 National Academy of

Science article illustrates how animal studies can actually be conservative indicators of potential human health hazards:[60]

Chemical (Pesticide)	Smallest single oral dose producing serious effects mg/kg body weight	
	Rat	Human
Diazinon	200	2.2 dermal
Parathion	3	2.2 (adult)
		0.1 (child)
Malathion	750	71.0

Finally, the principle investigator in the study relating dietary protein deficiency and pesticide toxicity states:[61]

> "The results have obvious implications to the toxicity of pesticides in countries where the diet is normally low protein and in persons of other countries who eat similar low-protein diets."
>
> (emphasis added)

Although one could argue that perhaps the level of protein deficiency and poor nutrition among U.S. farmworkers is perhaps not as devastating as the conditions of some impoverished peoples in developing nations, the conditions found in the heavily migrant worker-populated Hildago County for example, would not strongly dispute that the prevalence of poor health conditions is aggravated by the low protein and vitamin deficient diets; other explanations for the migrants' poor health include: lack of access to medical facilities, inadequate, if

existent field sanitation, etc. Compounded by the farmworkers' greater than "general public" exposure to pesticides, it is not unreasonable to assume that their poor nutrition augments the toxicity of the pesticides encountered in their work environment, subsequently exacerbating their general poor health conditions.

(e) Pesticide Diagnosis and the Migrant Health Care System

Considering the close contact with pesticides that farmworkers experience during the course of work, whether these workers are pesticides applicators or fieldworkers, an "institutional analysis" of that part of the "system" that deals most directly with the health issues of the farmworkers would seem appropriate. One such analysis, conducted on a small scale was undertaken by the Florida Legal Services, Inc. In a field survey of four out of eight hospitals in two Florida counties, only ten cases of pesticide poisonings had been diagnosed, three of which had been reported to EPA's voluntary Pesticide Incident Monitoring System (PIMS).[62] In the survey, the interviewers attempted to speak to several private physicians who would be likely to treat farmworker patients. The interviewers noted that the physicians were "second only to pesticide merchants in hostility to their questions" regarding poisonings, and no interviews were granted. In part of the summary report, the Florida Legal Services Interviewers concluded:

> "Migrant clinics have, since their inception, taken a passive role in affecting farmworker health. Given the lack of personnel, the lack of specially trained staff, the unavailability of health statistics and the absence of a reporting procedure, it is highly unlikely that farmworkers would seek, much less obtain, treatment for the slightly debilitating symptoms of a mild organophosphate or carbamate poisoning."[63]

> "The pattern that emerged from our interviews with hospital personnel and health department officials was one of apathy to farmworker health problems generally and of faith in the migrant clinics to take care of all but the most serious health problems. Officials saw the roles of their various institutions as helping farmworkers only in extreme emergencies when the clinics could not provide adequate care. On the basis of our investigation of the migrant clinics, it is clear the officials' and the public's faith in the clinics is sadly misplaced."[64]

Further, a 1973 report by the General Accounting Office on the impact of federal programs on the living conditions of migrant and other seasonal farmworkers also noted the limited scope and service capacity of the migrant clinics.[65] The agricultural areas covered by the study include California, Florida, Michigan, New York, Texas, and Washington. GAO's assessment of the Department of Health, Education and Welfare (HEW)-funded health care projects in each area stated that the projects provided services these workers would not otherwise receive. It was noted that some of the services were limited in scope or in their service capacity. The agency suggested that in order to meet the criteria of the Migrant Health Act of 1962, greater efforts have to be made to provide comprehensive family health care and continuity of services.[66]

In fact, the estimated 1971 dollar obligation to provide farmworkers with: full-time and part-time comprehensive health service projects, medical service projects, direct health service projects coordinated by the states and other health service projects,--amounted to 13.8 million dollars.[67] This figure does not include education, housing and other programs. Yet, in 1973 there was only an estimated total 5 million dollars are available in relation to the total needs

of this target population.[68] It is clear that for projected health needs alone, their already exists a deficit of 8,8 million dollars. GAO stated that although the funding of the program to benefit migrant and seasonal farmworkers has increased over the years"...and larger amounts are expected to be made available...bugetary constraints will almost certainly continue to limit progress, in meeting these farmworkers' needs".[69]

1.3 Observations

The problem of farmworkers' occupational exposure to pesticides is one that needs to be addressed, not only for the health and safety aspects of the problem, but also because the working conditions of migrant and other seasonal farmworkers are reflective of many of the injustices afforded to this group in our society.

Although the incidence of occupational injuries and deaths in agriculture is extraordinarily high, only fourteen states in the nation provide farmworkers with workman's compensation.[70] The wages of the farmworker are extraordinarily low; it is shocking to learn that an individual in 1979 could be employed in farm labor every day of the year and bring home an annual income of $3,000 or less.[71]

Further, because farmworkers are excluded from the rights and provisions of major federal labor legislation such as : The National Labor Relations Act of 1935 (The Wagner Act), the Fair Labor Standards Act of 1938, the Taft-Hartly Act of 1947. I decided to investigate

the legislation cited, to determine the exact language of "exclusion" and its rationale. These specific citings are listed in the appendix. What was the rationale for farmworker exclusion from most of the major legislation? Answer: "administrative reasons".

The "story" of one farmworker-- Andres Murillo, is included in the Appendix. In addition, a categorization of some of the most recent literature on pesticide exposure is presented.

CHAPTER I

NOTES

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CHAPTER II.

FARMWORKERS AND THE "ANATOMY" OF THE OCCUPATIONAL PESTICIDE EXPOSURE "SYSTEM"

(1971-1975)

2.1 Introduction

Thomas Dye in Understanding Public Policy notes that "public policy" includes all actions of government; public policy is whatever action government chooses or does not choose to do, and government inaction can have as great an impact on society as government action.[1]

The unfolding of the story presented in this chapter illustrates how various interest groups, legislators, the courts and government agencies such as EPA and OSHA, have as a whole, contributed to making "policy" regarding the issue of farmworkers' occupational exposure to pesticides. What happens to the interest of migrant and other seasonal farmworkers", when proposed legislation which potentially provides remedy to an aspect of their harsh working conditions, is enacted into law? How does legislative intent get carried out or "implemented" toward relization?

During the 1970's the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) became the key agencies involved with the health and safety issues surrounding farmworkers' occupational pesticide exposure. The EPA and the OSHA were both created in 1970 during the Nixion Administration. When EPA was created pursuant to Nixon's Reorganization Plan #3 in December of 1970, one of the agency's prime areas of jurisdiction was the regulation of pesticides. Prior to this time, it was the Department of Agriculture that had prime jurisdiction of pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947.

FIFRA required pre-market testing of pesticides and labelling requirements specifying appropriate the use of the product and its possible health hazards.[2] In 1972, the Federal Environmental Pesticide Control Act (FEPCA) was enacted, and essentially rewrote FIFRA--housing most of the regulatory responsibility for pesticides in EPA rather than USDA.[3] FEPCA's enactment was the first attempt at controlling the use of pesticides; the legislation was designed to prevent overuse and misuse of pesticides.[4]

The Occupational Safety and Health Act (OSHAct) of 1970 created the Occupational Safety and Health Administration, which was housed in the Department of Labor. As noted earlier, the major federal labor legislation has excluded farmworkers from its provisions. It is said that the OSHAct of 1970 was "the first major federal legislation that included the farmworkers on an equal basis with other workers".[5] This legislation was enacted to:[6]

> "...assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources."

Consequently, the OSHAct of 1970 and the FEPCAct of 1972 were the statutes used by the OSHA and EPA respectively, to promulgate the field re-entry standards sought by the farmworker advocates (thereafter, the Farmworkers) as described in this chapter. At face value, these statutes appeared to offer farmworkers legislative protection against hazardour pesticide exposure. As noted in the discussion of Organized Migrants in Community Action, Inc., (OMICA) v. Brennan in

the latter part of this chapter, the issue of the agencies' enforcement authority under their respective legislation, later surfaced as a major concern of the Farmworkers.

During the "pre-implementation" stage or the "policy adoption stage" of both statutes, the hazards of pesticide exposure on farmworkers health was specifically mentioned during the Congressional consideration of these bills: Senators Harrison A. Williams Jr. (D-N.J.) and Gaylord Nelson (D-Wis.) introduced supporting on the occupational hazards of the misuse of pesticides in the consideration of the OSHA bill,[7] and Senator Adlai Stevenson (D.-Ill) introduced an amendment (Amendment 1017) to the 1972 FEPCA bill that would ensure that the health of farmworkers, farmers, and other who may come incontact with pesticides and pesticide residues, would be fully considered by the EPA Administrator in regulating and classifying pesticides;[8] this amendment was defeated.

The legislative intent of these statutes and the degree of concern for farmworkers' occupational health and safety were argued by the Farmworkers' in the appeal to OMICA v. Brennan in 1975 in seeking the Secretary of OSHA, and not the Administrator of EPA to promulgate the permanent field re-entry standard. The major events of the jurisdictional battle that arose between the EPA and OSHA over the authority to promulgate occupational standards for farmworkers' exposure to pesticides are outlined in the following chronology. Following this chronology, a discussion of the role of the courts in "mediating" the issues and controversies that continue today (atleast from the perspective of farmworker advocates) is presented.

CHRONOLOGY:

FARMWORKERS AND

THE "ANATOMY" OF THE OCCUPATIONAL PESTICIDE EXPOSURE "SYSTEM"

1971 - 1975

CHRONOLOGY:

1971 - 1975

FALL 1971:	An interagency task force, the Task Group on Occupational Exposure to Pesticides (hereinafter, The Task Group) was established under the aegis of the Council of Environment exposure to pesticide residues.
JUNE 1972:	The Secretary of Labor appoints a Standards Advisory Committee on Agriculture (hereinafter, the Agriculture Advisory Committee), to assist in standard-setting. The Agriculture Advisory Committee appoints a Subcommittee on Pesticides to study the occupational hazards of pesticides. Several meetings--open to the public, are held between the Committee and the Subcommittee.
SEPTEMBER 1972	The Farmworkers present exposure and hazard data on pesticides to the Secretary of Labor, seeking the promulgation of an emergency occupational pesticide exposure standard.
OCTOBER 10, 1972:	The Secretary of Labor rejects the Farmworkers' request for an emergency pesticide standard on the basis of a "lack of reliable data on which to base re-entry standards"; The Secretary noted however that, the issuance of an emergency standard would not be precluded in the event that more definative information became available.
NOVEMBER 1972:	The Task Group submits a preliminary report to OSHA recommending strict control of organophosphate pesticides and the establishment of field re-entry standards to protect farmwokers.
DECEMBER 1972:	The Task Group report is withdrawn for ammendments in mid-December. OSHA's Agricultural Advisory Committee and Pesticide Subcommittee unaminously concluded that neither a justification or an emergency situation existed to merit the promulgation of the emergency occupational pesticide standards sought by the farmworkers.

FEBRUARY 1973:	The interagency Task Group withdraws its original stance stated in its November preliminary report due to "inadequate data available to reach scientifically justifyable judgements on uniform national re-entry standards.
MARCH 15, 1973:	The Secretary of Labor requests that the Agriculture Advisory Committee produce a recommended standard; the Agricultural Committee complies with this request only upon assurance from OSHA's Director of the Division of Standards that the proposed standard would not be effective immediately, and that it would be subject to modifications as a result of feedback from interested parties.
	Farmworker Advocates file a court action for injunction and declaratory relief in Thomas v. Brennan, Civ. Act. No. 502-73, D.D.C.; the farmworkers sought judicial review of the Secretary's failure to issue an emergency temporary standard protecting agricultural workers from the occupational hazards of pesticides.
APRIL 15, 1973:	OSHA's Assistant Secretary of Labor signs the original version of the field re-entry standard entitled "Emergency Temporary Standards for Exposure to Organophosphorus Pesticides".
MAY 1, 1873:	OSHA issues a temporary emergency standard for 21 pesticides under this threat of being sued. OSHA issued this temporary emergency standard against the recommendations of the Pesticides Subcommittee. The standard which was to become effective on June 18, 1973, contained re-entry schedules were much more strigent than those suggested by the Subcommittee and the Advisory Committee.
JUNE, 1973:	Dr. Frank Arant, Chairman of the Subcommittee on Pesticides, resigns in protest against OSHA's temporary standards.
	The Taskforce issued a report which agreed with the basic contentions argued by Arant: 1) insufficient scientific data existed to justify the adoption of permanent re-entry standards, 2) regional standards were

strongly advocated over national standards to account for regional variations in rainfall and other meterorological conditions that might affect the validity of the re-entry standards.

Taskforce member Keith Long, felt that scientific analytical techniques used in measuring pesticide exposure, such as measuring residue concentrations on leaf surfaces, had not yet been sufficiently developed.

Also during this time, ammendments were drafted in both houses of Congress that would essentially strip OSHA of its power to regulate pesticide exposure. Groups such as Ralph Nadar's Health Research Group and the Steelworkers Union supported the emergency pesticide standard.

JUNE 15, 1973: OSHA suspended the emergency standard stating that it would publish a new pesticide standard.

JUNE 19, 1973: A temporary restraining order to prevent the suspension of the emergency standard was filed by the Migrant Legal Action program Inc., and the National Health Law Program, in the U.S. District Court for the District of Columbia.

JUNE 29, 1973: OSHA revised the emergency standard to exclude 9 of the 21 pesticides originally listed, and had reduced re-entry times for certain crop areas. This revised standard was to become effective on Luly 13, 1973.

JULY 6, 1973: The Farmworkers petitioned the U.S. 5th District Court for review of the Secretary's dilution of the original emergency temporary standard.

JULY 10, 1973: The fifth U.S. Court of Appeals ordered a stay of the effective date of the standard (in a case which was not related to this EPA jurisdictional issue) on procedural grounds, and not on the substantive issue. Thus, the emergency standard was never enforced.

JULY 24, 1973:	Representatives of the Office of Management and Budget (OMB), EPA, OSHA, and the Department of Agriculture (USDA) and the Domestic Council met to resolve the jurisdictional debate. After this meeting, both the EPA and the Department of Labor (DOL) drafted memorandums of agreement which outlined their respective degree of control in pesticide regulation.
JANUARY 9, 1974:	The U.S. Court of Appeals overruled OSHA's temporary emergency pesticide standards in Florids Peach Growers Association, Inc. v. Secretary of Labor. The appellate found no substantial evidence proving the existence of "grave danger" which is the test required for the promulgation of emergency standards under Section 6 (c) of the Act. The court held that the presence of pesticide residues in treated fields does not represent a grave danger as the only effects that could be documented were incidents of headaches, fatigue, and vertigo resulting from pesticide exposure.
JANUARY 11, 1974:	Organized Migrants in Community Action, Inc. The Raza Association of Spanish Surnamed Americans, and a farmworker from Florida field suit against OSHA seeking the promulgation of a permanent pesticide standard in OMICA v. Brennan. EPA begins to hold public hearings on its proposed pesticide standard.
MARCH 11, 1974:	EPA publishes its proposed pesticide standard.
MAY 10, 1974:	EPA issues its final pesticide standard.
OCTOBER 1974:	Organized Migrants in Community Action, Inc. (OMICA) v. Brennan was decided against the Farmworkers. U.S. Circuit Judge George C. Hart, Jr., ruled in favor of the Department of Labor, supporting EPA's standard-setting authority for occupational exposure to pesticides.
POST - 1974:	EPA remains the principal federal agency responsible for overall regulations of pesticides: registration, indirect control of production through regulation of pesticide manufacturing plant effluents, and research. NIOSH, HEW, and FDA also control aspects of pesticide regulation and research activities.

FEBRUARY 26, 1975: OMICA v. Brennan is argued in U.S. Court of Appeals, 5th Circuit; the court must determine whether jurisdiction to regulate farmworkers' exposure to pesticides is vested in OSHA within the Department of Labor, or in the EPA.

OCTOBER 9, 1975: The decision in the appeal of OMICA v. Brennan upholds the District Court decision stating that EPA has the authority to promulgate rules regulating farmworker exposure to pesticides and therefore pre-empts the Secretary of Labor from acting.

SOURCE:

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2.2 Farmworkers, Occupational Pesticide Exposure, Occupational Health and Safety: The Role of the Courts

The policy process is a dynamic system in which the controversies that surfaced during policy design and adoption do not simply "disappear" once a bill is enacted into law. The courts have traditionally played a vital role in "refining" the intent, meaning and scope of public policy and law. In effect, the courts act as "mediators" in the controversies that can not be effectively addressed at other policy levels, such as mediating between interest groups in the promulgation of policy and actions at the administrative level, etc.

Over the last decade, the courts have been called in several times to "mediate" conflicts around the issues of occupational health and safety and to rule on both the policy "actions" and "inactions" promulgated by the Occupational Safety and Health Administration (OSHA).

I use the term "mediate" to describe the impact of the court decisions regarding occupational health and safety issues rather than a term such as "resolve" or "settle" because in fact, the court decisions have not successfully resolved the complex economic, scientific, political, and social factors inherent in such an issue, as presented by various in-erest groups.

Because of the "nature" of the agricultural workplace--being part of the general environment as well as a place of employment, the issue of fieldworkers' occupational pesticide exposure has involved both the Environmental Protection Agency (EPA) as well as the Occupational Safety and Health Administration (OSHA). Since the

inception of both of these agencies in 1970, their actions as regulative agencies on this particular issue, as well as others, have been severely criticized by both industry and labor.

The dissatisfaction with Administrative rules and regulations has filtered down to the courts; the courts, using either the case precedents of common law or in interpreting the legislative intent of statutory law, have attempted to address this complex issue. Often faced with contradictory scientific evidence, and perhaps not equipped to rules substantively on such evidence, the courts have appropriately used other criteria, rationales, and logic upon which to base its decisions.

Implicit in court decisions has been some value judgement about risks and benefits to one group over another--the manner in which the courts have used precedent or the manner in which they have interpreted legislative intent has either "reinforced" the status quo or has either overruled past decisions."Reinforcing" the status quo, in itself, is not necessarily undesirable, but the implicit assumptions and values which underlie the status quo of a particular issue must be examined, and then must be explicitly stated to reveal the nature of such assumptions and values. Once this confrontation has taken place, the "core" of such issues may be more readily observable to the public--such action once again allows the issue to re-emerge from the "policy-making" arena of a few key actors or groups, into the larger context of "public policy-making"; the general public is thereby allowed some choice as to whether they as individuals or as part of the larger society will lobby for some alternative action or

otherwise "legitimize" different values or priorities than those that have been expressed in the past.

On the particular issue of farmworker occupational health and safety, the courts have moved rather incrementaly and combined with continued dissatisfaction by various groups over the courts' ruling, occupational health and safety standard-setting and enforcement issues keep coming back to the courts for further "refinement" of what it might "mean" to achieve the OSHA policy mandate.

Between 1970 and 1975, the courts were confronted with atleast, the following cases involving the standard of review under OSHA: Dry Color Mf's. Ass'n. v. Department of Labor (3rd Cir. 1973), Associated indus. of New York State Inc. v. U.S. Department of Labor (2nd Cir., 1973), Florida Peach Growers Association, Inc., v. U.S. Department of Labor (5th Cir., 1974), Organized Migrants in Community Action, Inc., (OMICA) v. Brennan (5th Cir., 1974).

The latter two cases, OMICA v. Brennan and Florida Peach Growers Association, Inc., v. DOL, directly and significantly impacted the occupational health and safety issues related to farmworkers' occupational exposure to pesticides. On face value, both cases presented some controversey over OSHA's standard-setting authority; as this section reveals, several other issues relevant to policy analysis and design can be extracted. A brief summary of the major points in these two cases are noted below:

When OMICA v. Brennan was first filed in 1974, the farmworker advocates sought action directing the Secretary of Labor to issue a permanent pesticide field re-entry standard that would ensure farmworkers a safe working environment. Prior to this case, the Secretary

had issued a temporary emergency standard for 21 pesticides, but later issued a revised version--in several aspects, a much more lenient standard was established. In particular, the number of pesticides to be covered under the standard was reduced to include only 12 of the original 21 pesticides.

In 1973, prior to the filing of OMICA v. Brennan, several controversies around the 'science' in the setting of the field re-entry standard were heatedly debated within OSHA and between the agency and an outside interagency task force. Supposedly, it was the 'science issue' that prompted the Secretary's more lenient version of the original temporary emergency standard (aside from the fact that during this time, ammendments were simultaneously being drafted in both houses of Congress that would essentially strip OSHA of its power to regulate pesticide exposure)[1] This issue was complicated by the fact that two months after the Secretary issued the original temporary emergency standard, EPA entered the scene formally expressing an intent to regulate farmworker exposure to pesticides.[2] The Farmworkers then amended their complaint to include the Administrator of EPA, arguing that the proposed transfer of this issue to EPA was in violation of the OSHAct. Circuit Judge Hart for the District of Columbia granted the defendent's motion to dismiss.

The Farmworkers appealed the case in 1975; on appeal, the court was to determine whether jurisdiction to regulate farmworkers' exposure to pesticides was vested in the Occupational Safety and Health Administration within DOL, or in the Environmental Protection Agency. From a reading of the court's opinion, another issue, atleast on the agenda of the Farmworkers, later surfaced as the real impetus

for the court suit initiated by the Farmworkers against the Secretary of the Department of Labor (DOL), Peter Brennan.

Amidst this controversy over issues of "science", several other agenda's tinged with political and economic overtones appeared to lie below the surface of the promulgation of the temporary emergency field-re-entry standard.

One month after the Chairman of the Pesticide Subcommittee resigned in protest of the Secretary's issuance of the temporary emergency standard, representatives of food growers (hereinafter, the Growers) petitioned OSHA in June of 1973 to reconsider and repeal the emergency temporary standard. The Growers' strategy for questioning the need and immediacy of such a standard shifted institutional focus--from that of petitioning the administrative agency as a group, to raising the issue in the courts; Florida Peach Growers Association, Inc. and the Florida Citrus Production Managers Association filed petitions with the 5th Cir. Court of Appeals to review the standard. Several other growers organizations followed suit and petitioned other circuits for a review of the standard; subsequently, all the various petitions were transferred to and docketed in the 5th Circuit Court of Appeals. Eight months later, the Court of Appeals overruled OSHA's temporary emergency field re-entry standard in Florida Peach Growers Association, Inc. v. DOL.

In the Florida Peach Growers' case, the one of the two main issues of controversey that were to be reviewed by the courts were: 1) the necessity of an emergency temporary standard designed to protect farmworkers from exposure to pesticide residues on crop foilage.[3] Two days before the farmworker advocates filed OMICA v. Brennan in

U.S. 5th District Court, (and unbeknownst to the farmworker advocates), the Fifth Circuit vacated the temporary emergency standard argued in Florida Peach Growers v. the DOL on the ground that no substantial evidence supported the Secretary's determination that an "emergency", as defined within the meaning of the OSHAct, existed on this particular issue.[4]

Although the court's ruling in Florida Peach Growers Association v. DOL did not change the thrust of the farmworker advocates argument seeking a permanent field re-entry standard in OMICA v. Brennan, the case is significant in that it reveals "how" the court decided that "no great danger" has existed in the "non-misuse" of pesticides in the field; that an "emergency" temporary standard is not necessary to protect framworkers from exposure to pesticide residues on treated crops.

In its' decision, the courts have in effect, contributed to making "policy" regarding the occupational health and safety of farmworkers; consequently, they have contributed to the "implementation" of the OSHA policy. But what does it mean to "implement" policy?

In discussing the meaning of the "implementation" of policies and programs, Pressman and Wildavsky in their classic work Implementation note that policies imply theories and hypotheses.[5] These theories and hypotheses about "how things work" are operationalized when they are converted into government. action.

Eugene Bardach in the "Implementation Game", speaks of both the implementation of policy or programs as an "implementation process" which occurs in the "post-adoption period after a bill becomes a law.

In Bardach's approach the "implementation process" is a process of: 1) assembling numerous and diverse elements to produce a particular outcome, and 2) key actors utilizing "implementation politics" to playout a number of loosely interrelated political "games".[6] In this context, the "implementation process" is distinct and unique from the policy adoption process by virtue that the "politics" of those involved in the "assembly process" are influenced by the existence of a defined policy mandate.[7] This process is also one in which the key actors seem more concerned with what they might lose, rather than what they might win.[8]

Rein and Rabinowitz in "Implementation" A Theoretical Perspective" note like Bardach, that the "implementation"/"implementation process" is not a unified, "linear" or "sequential" process, rather, one characterized by "circularity or looping behavior".[9]

In referring to environmental policy, Walter Rosenbaum in The Politics of Environmental Concern, suggests four possible "stumbling blocks" to successful policy implementation: 1) lack of accountability by administrators, 2) exertion of legislative pressures by various interest groups, 3) vague policy goals, 4) lack of effective support for decisions favoring strong regulatory measures.[10]

Finally, Paul Sabatier and Daniel Mazmanian note that no statute, no matter how well it structures implementation, <u>in itself</u>, is not sufficient enough a condition for assuring target group compliance with its objectives.[11] (See Appendix for an Overview)

From some of these authors' conceptualizations of what it might "mean" to implement policy, one can draw a few analogies to the situation of farmworkers' occupational exposure to pesticides:

- that there are some ideas or "hypothesis" about the risk or "grave danger" of some effects of pesticides that are not immediately observable, or atleast if these symptoms or effects are observable, they are not deemed as serious or do not take the "lag time" or latency period" in which disease or illness manifests itself;

- that because farmworkers have been excluded from the rights and provisions of major legislation, the OSHAct, that atleast face value, assures farmworkers with the same occupational health and safety rights and protections as other workers in the nation--such a protection, is especially critical for these workers, and in arguing these cases in court, the real concern would be "what they might lose" (the protection from occupational exposure to pesticides under the OSHAct) rather than"what they might win"(being covered under the general environmental provisions of the environmental legislation, the FEPCAct--administered by an agency concerned with the protection of the environment.)[3]

- due to the complexity of the issue of occupational exposure to toxins such as pesticides, the occupational health and safety standard-setting and enforcement issues keep coming back to the courts for further "refinement" of what it might "mean" to achieve the OSHA policy mandate--the "circularity" described by Rein and Rabinowitz;[4]

- that the aspects of the lack of accountability by administrators, the exertion of legislative pressures by various interest groups, and that no statute in itself is sufficient for assuring target group compliance with its objectives--are especially important in light of the political and economic disadvantage, and the sociological isolation of the farmworker.

With these points in mind, let us consider "Who are the farmworkers?"

WHO ARE THE FARMWORKERS?

"How issues slide in and out of fashion...
...society's capacity to maintain its concern
is limited. Like an infant, a society has a
short attention span and low frustration threshold

You remember...when Caesar Chavez finally got
onto the covers...You just had to have sympathy.
After all, it was important; it was on the
cover.

In any event, the public attention that attached
itself to that issue has come and gone. The
boycott lingers on..."

-Donald A. Schon in
The Stable State

2.3 WHO ARE THE FARMWORKERS?

A. Historical Context

The need for farmworkers--men, women, and children hired to perform some aspect of farm labor in return for a wage, in this country has evolved at different rates during various historical time periods and geographical regions. For example, the history of agricultural workers in the South and the Southwest can both be traced back to colonial times--though the historical legacy of the laborers in these two different geographical regions vary greatly. In contrast, to the plantation and hacienda systems noted above, the farming system in the Midwest has from the onset been based on smaller family-worked and owned units.[12] In this "classic" larger family farms, usually one or two hired-hands were sufficient to supplement labor needed during the planting and harvesting seasons. The pattern of family-worked and owned farms over the entire nation was drastically impacted by the Great Depression and the prolonged drought that precipiated the Dust Bowl conditions in the south central United States; major portions of this land fell into the hands of banks and mortage companies when families could no longer make a living off the land and were forced to sell their farms--former land owners were pushed into tenancy, sharecropping, or forced migrancy.[13]

Thus it appears that the legacy of the farmworker in the United States has been one of either never having previously owned land in this country, such as the Slave and various foreign immigrant farm laborers, or those who possessed the land originally such as the American Indian, but who were then forced to work for "new owners"

of the land, or one of having once owned land but then was subsequently displaced from the land as a result of the economic and ecological conditions of the 1930's and 1940's.

The sub-standard and often devastating living and working conditions of U.S. agricultural laborers, especially migrant workers, have been documented through several decades by many contemporary authors. (See Appendix) Among these authors, Ernesto Galarza, Truman E. Moore, Robert Cole, etc., relate in depth the historical contributions of several groups of laborers in U.S. agriculture. The black slave, the sharecropper, the American Indian, the poor white, and several legal and illegal foreign immigrant laborers are the forebearers of the present-day farmworker.

According to Edward Higbee in Farms and Farmers in an Urban Age, the first seasonal farm laborers were the captured and enslaved American Indian; it was Christopher Columbus who instituted that encomienda system in America for the development of the Spanish land grants (the hacienda).[14]

Equally controversial, are the explanations of the factors and conditions that precipitated the development of the migrant labor "system". One explanation approaches the issue from that of a "scientific and technical response" which significantly augmented the change from the farm-ownership and labor pattern prior to WWII to the larger and often corporate-owned farms--thus ushering in the need for migrant laborers to work these large land tracts. This explanation takes into account the increase in scientific research and experimentation which led to the development of high-yielding, disease resistant crop hybrids, and subsequently an increase in the production and

use of fertilizer and pesticides which were respectively the off-shoots of the war-time munitions and increased production in the petro chemical industry; these factors allowed an increase in agricultural production which might necessitated the use of a large migrant and seasonal agricultural labor force, although an equally plausible response could be a that a move toward more capital-intensive farming methods, e.g. tractors, mechanical harvestors displaces farm laborers.

Another perpective presents a dicotomous explanation of the development of the migrant labour "system": either it developed as a response to the corporate farm or the corporate farm developed to utilize the increasing labor pool of unemployed workers.[15]

Alternate explanations of the development of the migrant and seasonal farm labor system in this country probably exist; it is not the purpose of this author to either prove or disprove these allegations, but rather to illustrate that more so than in any other industry, the conditions of labour are intimately tied to the land ownership, tenure, and distribution patterns--that this land "factor", is extremely critical in understanding the complex economic, political, and social elements pervasive the agricultural industry. Consequently, the current conditions of the present-day farmworker, especially those of the migrant and seasonal farmworker, must be similarly viewed from a historical perspective--their conditions are deep-rooted in our society and its agricultural system.

B. Labor Force Characteristics

1. Classification of Farm Labor

The definition of the term "farmworker" or "farmlaborer" varies its meaning among several government agencies. The character of farm "work" is such that it is seasonal in nature--the various tasks involved in and between the planting and harvesting of crops. Consequently, the terms "migrant" and "seasonal" farmworkers are often not mutually exclusive. Some classifications of farm laborers refer to terms such as: "migrant and other seasonal farmworkers", "migrant and non-migrant" laborers.

For example, the Department of Agriculture defines migrant farm laborers as "workers who cross county lines overnight to perform farm wage work with the expectation of eventually returning home."[16] Migrant farmworkers are workers whose jobs in agriculture are seasonal and temporary in nature--these workers travel following the growing seasons.

Non-migrant farmworkers have been categorized in either one of two classifications:[17]

- workers who find agricultural jobs on a more or less permanent basis
- day-haul laborers who are hired only at peak planting or harvesting seasons--these job opportunities usually exist on a day-to-day basis, seldom lasting for more than a few week for any crop. Housewives, students, the temporarily unemployed, transients, and derelicts usually work as day-haul laborers.

Another source has classified the farmworkers labor force into categories such as "regular" farmworkers--who perform 150 or more

days of farm worker per year and "seasonal" farmworkers which includes migrant farm workers.[18]

2. The Size of the Farmworker Labor Force: Migrant and Seasonal Farmworkers

It is not precisely known how many migrant and seasonal farmworkers exist in the United States; statistical approximations vary in both the reporting of the general magnitude of the agricultural workforce as well as in the approximate percentage comprised by migrant and seasonal farmworkers.

Over the last decade the National Safety Council, in report-in accidental injury and mortality data, has estimated the agricultural labor force to be between 3.4-3.6 million workers. Testimony presented in 1970 before the Senate Subcommittee on Migratory Labor estimated that between 3 and 3.5 million persons received payment for performing some farm labor during the course of year; one-fifth of these workers were classified as "regular" farmworkers--as they performed more than 150 days of farmwork per year; the remaining four-fifths of this workforce was classified as "seasonal" workers--the number of migrant farmworkers was estimated at being between 400,000-450,000 or approximately one-sixth of that seasonal workforce.[19] However, as compared to the 3.5 million figure quoted above, the Department of Agriculture testified before the Subcommittee on Migratory Labor in 1970 that there were approximately 2.5 million farm wage workers in the U.S.--the Department of Agriculture did not however, defend the statistical reliability of that data.[20] L.W. Knapp Jr., Director of the Institute

of Agricultural Medicine at the University of Iowa, presented another set of statistics derrived from an extrapolation of the 1970 census data, stating that of the approximate 4.5 million workers employed in agricultural, only 172,000 or 16% of "hired" workers were migrant laborers.[21]

The vast range in the 1970 estimates of the size of the agricultural workforce and its labor composition is still present in some of the more recently quoted statistics, and in general, points to the fact that no reliable reporting system has yet been developed. Some explanations that have been offered to explain the disparities in the agricultural labor figures, as well as argue that the figures represent an under-estimate of the true farmworker populace include: employers reporting only those employees on the payroll at the time the statistics are being gathered, the overlap or labor "classifications" or categories, the number of illegal aliens, the non-reporting for tax advantage, and the prevalence of family teams, which are sometimes tabulated as one migrant.[22]

The most recent estimates by farmworker advocates include the Migrant Legal Service's estimate of a total 5 million agricultural workers and Rural America's estimate of a total 4.8 million agricultural workers; the National Association of Farmworkers Organizations (NAFO) estimates that there are approximately 5.8 million migrant and seasonal farmworkers.[23]

3. Travel Patterns in Agricultural Work & Origin and the Ethnicity of Workers

A. Non-migrant Seasonal Workers:

As noted earlier, this categorization of workers includes: a) workers who find jobs on a more permanent basis in comparison to the migrant worker, and b) the day-haul laborers who are hired on a day-to-day basis during the peak planting and harvesting seasons. In the later case, those recruited for this work are the "local" folks" which include students, housewives, etc. in the major farming regions of the West, Southwest Midwest, East, and Southeast, as well as the temporary unemployed, transients, and derelicts.

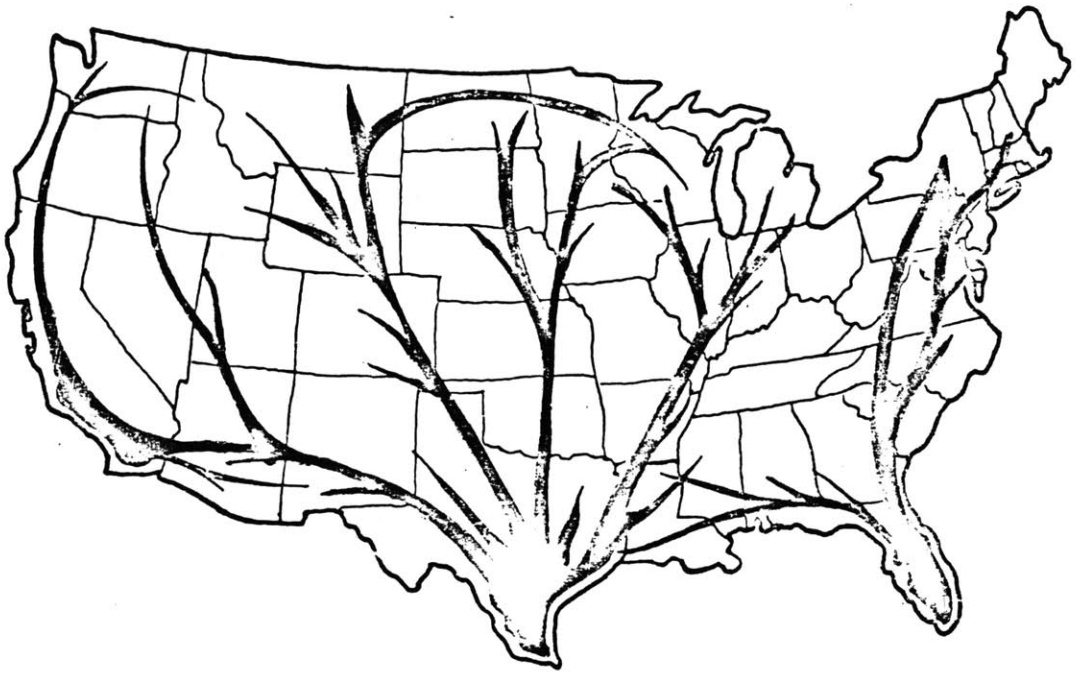
B. Migrant Workers

The term migrant "stream" describes the travel path of migrant workers from one region to another. There are three main migrant streams, originating in Southern California, Texas, and Florida, as well many minor routes (See map next page). The ethnic composition of the workers varies from region to region. There is some conflicting opinion over the relative proportion of certain ethnic and racial groups represented in the total migrant worker labor force; one course states that the majority of migratory farmworkers are pirmarily Mexican-Americans and Blacks,[24] another source states that contrary to popular opinion, the majority of migrants are Whites--Mixican-Americans are said to comprise only about 25% of the migrant stream (although 46% of rural Mexican-Americans are employed in farmwork).

On the east coast, Black Americans, Puerto Ricans, imported Haitian, Jamaican,and other Carribean workers, harvest a variety of fruits and vegetables. In New England they primarily harvest apples, cranberries, and shade-growing tobacco. The migrant stream that originates in the Florida citrus region moving toward Appalacia and

THE NATIONAL MIGRANT FARMWORKER STREAM

Travel Patterns of Seasonal Migratory Agricultural Workers



(Map courtesy of the National Migrant Information Clearinghouse,
Juarez-Lincoln Center, Austin, Texas)

SOURCE: Bissell, Kathryn A., The Migrant Farmworker, Washington, D.C.: The Institute for Multidisciplinary Graduate Research, Catholic University, April, 1976.

New England is largely composed of Blacks and Whites, fewer Mexican nationals and Mexican-Americans, and the Carribean workers noted above.[26] The migrant stream that originates in Southern California consist mostly of Mexican and Mexican-American workers, with a large component of Whites, Black, and some Asians. The migrant stream originating in Texas is comprised mostly of a larger proportion of Mexicans and Mexican-Americans, fewer Asians and more Native Americans.

For further information on the characteristics of migrant and other seasonal farmworkers, the reader is referred to the recent and background literature listed in the Appendix.

What happens to the interest of a geographically diverse, economically and politically disadvantaged people when a bill that in theory will improve their conditions, becomes a law? As noted in the discussion presented thus far, the courts have played a significant role in moulding the policy with which farmworkers are protected (as well as the extent to which they are not protected) against occupational exosure to pesticides. This next section examines the role of the courts in "re-establishing"policy and "mediating" the controversies permeating the issue of farmworkers' occupational pesticide exposure. An examination of OMICA v. Brennan in Section I., and Florida Peach Growers Association, Inc., v. DOL in Section II. is presented below:

I. Organized Migrants in Community Action, Inc., v. Brennan

The OMICA v. Brennan decision as appealed in 1975, provided a landmark decision regarding government agency jurisdiction in regulating farmworkers' occupational exposure to pesticides. The court was to determine whether the jurisdiction to regulate this occupational exposure to pesticides was vested in the Occupational Safety and Health Administration (OSHA) within the Department of Labor or the Envrionmental Protection Agency (EPA). Another issue, at least on the agenda of the Farmworker advocates (thereafter, the Farmworkers) later surfaced as the reason the court suit was initiated by the Farmworkers against the Secretary of Labor, Peter Brennan.

When the case was first filed in the U.S. District Court for the District of Columbia on January 11, 1974, the plantiffs--two farmworker advocate organizations individual farmworker sought action to compel the Secretary to issue a permanent pesticide exposure standard that would ensure farmworkers a safe working environment. The exposure standards which the Farmworkers sought to be promulgated were field re-entry standards which establish a period of time that must elapse before fieldworkers and other farmworkers can safely re-enter pesticide-treated fields. The major events surrounding the issues and controversies of the case are noted below:

Prior to this litigation, on May 1, 1973, the Secretary issued a temporary emergency standard for 21 pesticides. Due to dissent, both within and outside of the agency, regarding then the "need" of such standards, and the "state of the art for determining the necessary scientific criteria[1], the Secretary issued a revised version of the standard-- in several aspects, establishing a much more lenient standard. For example, the revised standard reduced the number of pesticides to be covered under the standard to include only 12 of the original 21 pesticides.

According to section 655(c) of the Act, the Secretary must promulgate a permanent standard within 6 months after issuing an emergency temporary standard. However, two months after the Secretary issued these standards, and announced its intent to regulate farmworker exposure to pesticides. EPA declared that the Agency's final standards would be based on records by both EPA and OSHA.

The farmworkers amended the lawsuit against the Secretary, to include the Administrator of EPA when it was discovered that the agencies had drafted a memorandum of agreement which established that the EPA would have primary responsibility for promulgating occupational health and safety standards with respect to pesticides.

On March 11, 1974 EPA published its own standards for field re-entry times. This prompted several arguments in

litigation as to whether or not the Secretary was pre-empted from issuing regulations on farmworkers' occupational exposure to pesticides. When the Secretary moved for a summary judgement on the case, with both the Secretary and the Administrator of EPA agreeing that jurisdiction belonged to EPA, District Judge Hart granted the Administrator's motion to dismiss, and the farmworker advocates appealed the case.

On appeal, the appellants, OMICA Inc. argued that the Secretary of Labor's authority in protecting farmworkers from exposure to pesticides via the promulgation of pesticide regulations should not be pre-empted by EPA because:

1) EPA did not have statutory authority to issue such to primarily protect workers' safety and health and therefore, EPA should not pre-empt the Secretary of Labor from issuing the field re-entry standards, and
2) Congress did not intend to pre-empt OSHA jurisdiction over this issue by enacting the FEPCAct of 1972.[2]

The court dismissed these charges stating that the farmworker advocates were unpersuasive in arguing that the statutory language of FEPCA was not written to regulate employee health and safety, and that the claim was reinforced by the legislative history of the Act. Citing certain sections of the legislative history, the court used the following arguments to disclaim the farmworkers'

allegations:[3]

Claim 1 a) Congress meant to give EPA authority to regulate farmworker exposure to pesticieds; even though the Senate Commerce Committee initially proposed during the Congressional consideration of FEPCAct that farmworkers be explicitly stated in the 'protective language' of the Act, 'it was forced to admit that...(it)...agrees with the Environmental Protection Agency and the Committee on Agriculture and Forestry that the health of the farmworkers will be considered without ammending language...(Senate Rep. No. 970, supra at 27).'

Further, in the opinion of the court filed by Circuit Judge Tamm, the reader is referred to the following passages to illustrate the logic behind its interpretations of the legislative history:[4]

> "...that by specifically mentioning particular areas protected by the general provisions, there might be some suggestions that the general provisions might be construed to cover less than actually intended.
>
> "The farmer and the farmwoker are the persons most likely to be adversely and immediately affected by pesticides and they are the most obvious object of the bill's protection."

It should be noted that the passages cited above by the court are statements by the Committee on Agriculture which rejected the Commerce Committe's amendment to

specifically state farmers and farmworkers as beneficiaries of the Act.[5]

b) Judge Tamm noted that although OSHA's enforcement powers under the OSHAct were quite broad, EPA's Administrator also has "comprehensive" authority to ensure that pesticides are proerly used:[6]

.authority to investigate potential violations.....7 U.S.C. § 136b

.authority to issue stop-use orders..id.. § 136k(a)

.initiate seizure proceedings.....id. § 136k(b)

.institute civil and criminal proceedings.....id. § 1361

.established a pesticide hotline to receive reports of misuse (the hotline was abandoned by the time this case came to trial)

c) The intent to require field re-entry limitations for many pesticides pre-dated the enactment of FEPCA; EPA and its predecesor agencies had construed that field re-entry times were to be included in FIFRA's pesticide labeling provisions; however, FEPCA made the label provisions a legally enforcable document regarding pesticide use, rather than merely being a statement of the pesticide products' efficacy and purity of contents as had been the case under FIFRA.

d) Farmworkers Occupational Health and Safety could be ensured through FEPCA's enforcement provisions: civil and criminal remedies could be sought for actions involving pesticide misuse, and the registration and labeling require-

ments provided measures to regulate the use of pesticides.

c) The apparent environmental focus of the legislation, notably, "unreasonable adverse effects on the environment" (7 U.S.C. s 136a (c) (5)" also includes the concern for the health of man (and therefore the health of the farmworker) as this phrase is defined in the Act as:

> "Any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide."(7 U.S.C. S136 (bb)) (emphasis added)

Claim 2 b) The farmwokers claimed that "even if EPA had statutatory authority to set field re-entry standards, section 4(b) (1) of the OSHAct should not be construed to prohibit the Secretary from issuing and enforcing its own standard"; The farmworkers argues that in comparing the legislative history of the FEPCAct and the OSHAct, farmworker protection was one of the OSHAct's primary concerns in contrast to the legislative history of the FEPCAct characterized as envincing "no more than incidental interest in protecting farmworkers from exposure to pesticides."[7]

The court did not respond directly to this claim; instead, it referred to the "pre-emption" clause of the OSHAct, Section 4 (b) (1), to re-enforce the concept that "the Secretary has no standards for particular employee working

conditions where another federal agency is exercising statutory authority over those conditions." Consequently, the court referred to the legislative history of the Act; the court noted that Congress recognized that the Secretary's broad authority under the OSHAct might conflict with other regulatory agencies that regulate occupational health and safety, and therefore enacted section 4 (b) (1) of the OSHAct, 29 U.S.C. S653 (b) (1), which states:[8]

> "Nothing in this (Act) shall apply to working conditions of employees with respect to which other federal agencies...excercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health."

The court closed its comments on this issue stating that the appellants "would have us look beyond the plain meaning of this language to discern a contrary legislative intent."[9]

As noted above, the court dismissed the claims of the farmworkers using its reading and interpretation of the legislative history of both FEPCAct and the OSHAct as well as its reference to the "preemption clause" Section 4 (b) (1) of the OSHAct. Using the same logic in addition to the fact that in District Court both the Secretary of Labor and the Administrator of EPA had claimed that since EPA had already issued field re-entry standards for farm-workers pursuant to FEPCA of 1972, EPA had properly ex-cercised its jurisdictional authority in promulgating such regulations. The court re-affirmed the ruling of District Judge Hart, stating:

> "We agree and hold that EPA has the authority to promulgate rules regulating farmworker exposure to pesticides and by so doing has pre-empted the Secretary of Labor from doing so."

Circuit Judge Tamm, filed the opinion of the appellate court stating:[10]

> "We are cognizant that exposure to pesticides presents a serious health hazard to the nations farmworkers and believe that they are entitled to the full measure ofprotection. We do not hold today that farmworkers are without protection from the hazards posed by pesticide exposure, but rather that Congress, by passing the Federal Environmental Pesticide Control Act, endowed the EPA with the authority to provide that protection. Once the (EPA) Administrator excercised EPA's authority, the (OSHA) Secretary could not duplicate his efforts.
>
> ...If in the future, the enforcemrnt provisions of FEPCA are found to be inadequate, we are confident that Congress stands ready to rectify the situation, However, the decisions to be made are legislative rather than judicial, and properly remain the Congress' province.

Finally in filing the court opinion of this case tne court noted that at oral arguments, the farmworkers responded affirmatively when the court asked them if they had brought this case to court because they believed that EPA's enforcement authority was not sufficient when compared to the Secretary's authority under the OSHAct.[11]

Observations and Comments

Several issues surfaced in this court case that transcended the jurisdiction issue determined by the court:

a) As noted above, at least on the agenda of the farmworkers, a very real issue ofconcern was the enforcement provisions and authority under EPA as compared to OSHA. OSHA at least attempted to comply with the farm-

workers' petitions for a pesticide exposure standard--even if OSHA complied under the threat of litigation. EPA on the other hand, could not have actively enforced the re-entry limitations on many of the pesticide labels, since as the court notes"...the labeling provisions of FIFRA... were merely informational until FEPCA made them enforceable." (OMICA, p. 1166): as noted earlier, the OSHAct was enacted in 1970 and the FEPCAct was enacted in 1972; further while the farmworkers began petitioning the Secretary of Labor for an emergency standard in September 1972 and the Secretary subsequently considering the merits of the promulgation of such a standard, it was not until July of 1973 that EPA entered the scene, meeting with representatives of OMB, OSHA, USDA, and the Domestic Council to reosolve the "jurisdictional debate".

b) The court notes that the EPA Administrator has comparatively "comprehensive" authority compared to OSHA's enforcement powers to ensure that pesticides are properly used; as stated earlier these enforcement provisions include; authority to investigate potential violations, authority to issue stop-use orders, initiate siezure proceedings, institute civil and criminal proceedings. These should be the criteria for assessing EPA's enforcement efforts as well as the circumstances that surround this issue. The enforcement and implementation fo the FEPCAct as related to farmworkers' occupational exposure to pesticides will be considered in a later section of this paper.

C) Although the emergency temporary standard sought by the farmworkers in Florida Peach Growers Association V. Dol was eventually vacated by the Court, the strategy of first seeking an emergency vacated ty the Court, the strategy of first seeking an emergency temporary standard as opposed to first seeking a permanent standard under the OSHAct almost ensured that some protective standard could be obtained, as the procedures for promulgating an emergency temporary standard would be less susceptible to Growers' lobbying against a pesticide exposure standard. The court notes that the Secretary may promulgate standards in either of two ways, as an emergency standard or as an occupational safety and health standard, the so-called 'permanent standard":[13]

> a. an emergency temporary standard may be issued without regard to the notice, public comment and hearing privisions of the Administrative Procedure Act.
>
> b. by contrast, a permanent standard issued under OSHA requires proceudres similar to informal rulemaking under the Administrative Procedures Act which includes: publishing the proposed standard in the Federal Register, followed by a 30-day comment period open to the public in which written data, comments, or objections

> may be filed as well as request for a public hearing on the proposed standard. If a hearing isrequested, the Secretary must publish a notice in the Federal Register specifying the time and place of the hearing; within sixty days of the comment filing period or within sixty days of the public hearing, if requested, the Secretary may either issue a rule promulgating an occupational safety standard, or determine that no such rule shoudl be issued.

d) The court uses the arguments of the Agriculture and Forestry Committee, the "winner" of the Congressional debate between the Agriculture Committee and the Senate Commerce Committee in considering whether to include specific language in the FEPCAct indicating that farmworkers were protected. The court notes that the Commerce Committee "was forced to admit" that it would agree with the EPA and the Agriculture Committee that the health of farmworkers would be considered without the amending language.[14] Further the Senate Report noted that in adopting the amendment, other than specifically naming the farmworkers in the Act, the amendment would provide that a pesticide be deemed "misbranded" if it did not adequately protect the health fo "farmers, farmworkers and other."[15]

The court does not, however, review or note that during this congressional debate the Subcommittee on the Environ-

ment "heard substantial testimony that the health of farmworkers might indeed not be fully protected under existing law." [16] The assumption then, was that it indeed was necessary to specifically name the farmworkers in FEPCA, the revised version of the Federal Insecticide, Fungicide, and Rodenticide Act of 1947; the Commerce Committee stated: "In adopting the proposed amendment, the committee intends to stressthe health of farmworkers as a vital criterion in the actions of EPA under this Act."[17]

One of the individuals presenting testimony during the Subcommittee hearings was Mr. A. V. Krebs, representing the Agribusiness Accountability Project, presented data which documented the substantial health problems among California farmworkers from the use of theorganophosphe pesticides Guthion and Ethion: Krebs charged that the label instructions on these pesticides (at that time) insufficiently took into account the health of migrant and farm laborers.

The court in solely quoting the Agriculture Committee view which states that the law might be "construed to cover less than actually intended..."[18] if specific areas of the general provisions were mentioned in particular (such as specifically naming the farmworkers in the Act), illustrates somewhat of a reluctance to deviate from the side that "won"-- even though testimony was presented from another side that testified that farmworkers do indeed merit special menttion under the pesticide law.

The law appears to change rather incrementally -- deiviating little from the status quo -- moulded by those who have power to influence it from the very onset and throughout its development.

A related issue --- how specific or rather how vague must a law be in order to protect those who especially need such protection under the law? If a law is broad in addressing an issue, some societial need or problem, who does it really benefit in the longrun -- those who have the institutional, political, economic, social resources to "mould" (or continue to mould) the law to the benefit? What is the "power" and the "limitations" of specifically naming people to be benefitted by the provisions of the law? Consider the impetus behind the enactment of the civil rights legislation during the late 1950's and 60's. How does access to certain information or resources enhance one's ability to "negotiate" the system -- how might "farmworkers" and "farmers" differ in ability and in approach to seeking protection under the pestiside laws? What I would like to suggest from the court's actions noted in this section is that they may serve to illustrate the acknowledgement of two implicit "beliefs" in our society:

> . recognition of a belief in a stable state -- a belief in an unchangeability, a certain constancy in the central aspects of our lives; serving primarily to protect us from apprehension of the threats inherent in change.[19] I would contend that in the

interpretation of laws or in their amendment, their belief in or acknowledgement of the value of a stable state on the part of the courts manifests itself in the "incrementalism" of its actions.

- an acknowledgement of the power of "naming" in this instance, the impact of specifically naming the farmworkers as beneficiaries of the Act is seen as "narrowing" the protective nature of the law. By specifically naming something/someone we acknowledge its existance, its special qualities that distinguish it from others; the part of the environment; this quality of "naming" is therefore a very powerful instrument -- it can be used to "acknowledge something/someone.

In Summary, this section illustrated how the courts re-established" the pesticide jurisdictional issue between OSHA and EPA and how it "mediated" the controversies argued by the farmworkers -- surfacing their concern over enforcement of the pesticide laws. The next section describes the criteria, assumptions, and the logic with which the court inferred that a "no grave danger" situation exists for fieldworkers from exposure to organophoshorus residues on treated plants -- subsequently not necessitating the need for an emergency temporary standard.

II. Florida Peach Growers Association, Inc. V. DOL

This case came to the 5th Circuit Court of Appeals as petitions by various food growers seeking to set aside the emergency temporary pesticide standard for organophosphorus pesticides issued by the Secretary of Labor pursuant to the OSHAct. The original version of this standard was issued on May 1, 1973 and was later amended by the Secretary on June 29, 1973.

The Farmworkers petitioned the court (No. 73-2690) to set aside the amendment to the original standards on the ground that statutory procedures were not followed. The major changes effected by the amendments were: 1) reduction in the number of pesticides covered under the standard from 21 reduced to 12; 2) the limitation of protective measures required of workers having substantial contact with pesticide-treated foilage; 3) the sole authorization of oral warnings (bilingual if necessary)in lieu of signs and oral notice; 4) the "narrowing" of the definition of "wet areas" (for which re-entry intervals for most pesticides still covered under the standard.[1] Various other petitions, all filed by representatives of food growers (hereinafter the growers) sought to set aside the standard, both in its original form and as amended, on the ground that "there is no substantial evidence to support the promulgation of an emergency standard."[2]

Essentially, the controversies presented in this case revolved around procedural issues as well as questioning the merits of the argument claiming the need and immediacy of an emergency temporary standard. As noted earlier, Judge Roney for the 5th Circuit Court of Appeals granted the petitions to set aside the emergency temporary standard; the court held that:[3]

1) emergency temporary standards may be amended in the same manner and under the same criteria as when they were first issued.

2) a review of a temporary emergency standard by the Court of Appeals must basically determine whether the Secretary of Labor carried out "his essentially legislative task in a manner reasonable under the state of the record before him", and

3) no substantial evidence in the record considered as a whole, supported the Secretary's determination that an emergency temporary standard was neccessary within the demands of the Act.

In considering this case, the court stated:[4]

> "OSHA is a new act and the Occupational Safety and Health Administration in the Department is a new agency. The consequent dearth of definitive decisions which might guide the Act's application, requires us to do more than merely review the challenged standard."

In essence, from the court's perspective, this "broader mission" consisted of determining:

1) the procedures by which an emergency standard could be amended under the OSHAct

2) the standard by which the court could review the secretary's actions

3) the merits of the argument seeking that the standard be set aside.

Since the last point above involves many of the same statistics and "evidence" quoted today by farmworker advocates, the court's review of these/components of the administrative record will comprise the remaining portion of this section.

THE COURT'S REVIEW OF THE "MERITS" OF THE FARMWORKERS EVIDENCE ON THE HAZARDS OF OCCUPATIONAL PESTICIDE EXPOSURE AND THE INCIDENCE OF RELATED PESTICIDE ILLNESS IN RELATION TO PROMULGATING A TEMPORARY EMERGENCY FIELD STANDARD

One area of difficulty facing the court was reviewing the substantive "scientific" evidence as well as statistics on pesticide exposure in order to determine whether the Secretary had carried out his duty in a manner reasonable under the state of the record before him.

The court commenting on the sheer volume and vast diversity of the record (often with non-comparable components) remarked:[5]

> "The state of the record is one of the difficulties besetting our review function. The administrative record is comprised of some 238 documents occupying approximately two and one half feet of shelf space."

The court noted that the administrative record included items such as: letters between government officials, volumes of transcribed Agricultural Advisory Committee and Pesticide Committee hearings, the Farmworkers' petition in Thomas v. Brennan, case reports of pesticide poisoning, full-length texts on the pharmacology of organophosphate pesticides, public health reports, etc.; the court observed that the most common items in the record were copies of articles published in scientific journals:[6]

> "These run the gamut from descriptions of the symptioms notice in outbreaks of pesticide poisoning among farmworkers, to investigations of the factors influencing the decay of the organophosphtes after application, to case reports of children who swallowed pesticides, to studies of various clinical effects of the organophophates on mammalian species. A large group of articles is made up of contributions to the advancement of research methodology and measurement technology."

Admist this diversity of "evidence", the Secretary published the following reasons for promulgating the emergency temporary standards to protect fieldworkers from hazardous exposure to pesticides:[7]

> (1) The pesticides listed in the standard below are highly toxic; (2) that premature exposure to them would pose a grave danger: (3) that farmworkers have in the past growing seasons, are now, and are expected to be in the near future exposed to these pesticides: and (4) that the standard set out below, based on the recommendations of the Standards Advisory Committee on Agriculture and suggested field Protection Agency, is necessary to regulate such exposure so as to protect the workers from the danger.
>
> 38 Fed. Reg. 10716 (1973)

In response to the first point noted above, the Court dismissed the Secretary's argument that there was an alleged "grave danger" posed to agricultural employees from exposure to organophosphates--that the Secretary relied on the toxicity per se of organophosphates, as well as citing evidence of misuse of these pesticides rathern than exposure to pesticide residues and "proper use" of the pesticides; the Court remarked.[8]

> "In the published standards the Secretary seems to rely on the Senate report 'that an estimated 800 persons are killed each year as a result of improper use of pesticides, and another 80,000 injured.' This report refers to improper use, and encompasses all pesticides."
>
> "The Growers concede the high toxicity of these pesticides in the laboratory, but assert that it has little bearing on the hazard to which the emergency standard is addressed...that there is a significant difference in the toxicity per se of an organophosphorus pesticide and that of any of its residues that may remain on sprayed foilage, because the organophosphates start to decompose rapidly immediately upon application."

The Court also used the arguments presented by the Growers to distinguish the difference between the symptoms exhibited in primary exposure to these pesticides. For example, as experienced by a pesticide applicator or mixer, and those symptoms experienced by field workers in contact with pesticide residues; the Court in reviewing the Growers

argument stated:

> "They...challenge the Secretary's citation of sources cataloging the symptoms of severe organophosphate poisoning, because they describe the afflictions of persons having primary contact with pure or active organophosphates. They refer us instead to record documents detailing the generally mild nature of the relatively few cases of illness reported by crop workers exposed solely to residues. The studies of the occasional outbreaks of organophosphate poisoning among farmworkers exposed to residues indicate the nature and degree of danger."

Elaborating on the definition of "outbreak" of poisonings and characteristic symptoms exhibited among farmworkers exposed to organophosphate residues, the court noted that the term "outbreak" varied greatly in the administrative record; in one instance, the term referred to the poisoning of 94 workers, many of whom required hospitalization for a day or two, and another report where 10 workers consulted physicians for treatment of nausea, vomiting, and diarrhea.[9] Further, the court described the "progression" of the symptoms of pesticide poisoning as: nausea, excessive salivation and perspiration, blurred vision, abdominal cramps, vomiting, diarrhea.

Next, the Court acknowledged that there was substantial evidence in the record that farmworkers occupationally exposed to organophosphate residues on foilage may experience headache, fatigue, and vertigo; in response, the Court commented:[10]

> "These are not grave illnesses, however, and do not support a determination of a grave danger. A relatively small number of workers experience these difficulties, and it has been going on during the last several years thus failing to qualify for emergency measures."

Then, addressing the issue of correlating occupational mortality in agriculture with exposure to pesticide residues, the Court stated:[11]

> "No deaths have been conslusively attributed to exposure to residues. The Subcommittee on Pesticides reported it was unable to find a single authentic record of a fatality resulting from a person entering or working in a field treated with a pesticide. The Secretary has pointed to no evidence to the contrary."

In addition, the Court addressed the problematic presentation of statistics on occupational deaths and injuries in agriculture caused by pesticides:

> "The Secretary points to statistics on deaths and injuries caused by pesticides, the statistics cited include deaths of all kinds, accidental ingestion by children, industrial accidents, accidents involving spraymen and their helpers, and suicides."

Analyzing the "information content" of the statistics on pesticides poisoning, the Court considered the figures representing "acute" or severe poisonings:[12]

> "When toxicologists speak of poisoning...a person is 'poisoned' if any of his body functions has been impaired through introduction of a foreign substance into his system. This definition says nothing about the degree of impairment. Thus episodes of "acute organophosphate poisoning" cover a considerable gamut, from cases in which symptoms no more distressing than those of a common cold to ...death...A severe case of organophosphate poisoning may result in tremors, paroxysmal tachycardia (abrupt attacts of excessively rapid heart action), respiratory difficulty, convulsions pinpoint pupils, pulmonary edema (effusion of serious fluid into the lungs), collapse, and coma."

Further, the Court stated:[13]

> "Statistics of 'acute poisonings' of agricultural workers fail to distinguish between farmworkers exposed only to residues and persons responsible for applying the pesticides. Further, the statistics do not meaningfully breakdown of injuries by type of pesticides. Thus, the Secretary would support his finding of danger with statistics of deaths and injuries due to causes which the standard be promulgated will not correct."

Finally, the Court addressed the Secretary's claim that there existed a serious under-reporting of the actual incidents of pesticide poisonings. According to the Secretary, one cross-section study in the record suggests that California workmen's compensation statistics on pesticide poisonings of agricultural workers reflect only 1/50 to 1/100 of actual poisoning incidents.[14]

Referring to the Secretary, the Court noted:[15] "he argues that the statistics he used are the best available. Granting that it is so, little is proven." Subsequently, in addressing the Secretary's claim, the Court cited the Growers' reading of the evidence to support the view that the mild "nature" of the fieldworkers symptoms accounted for the under-reportin of incidents. According to the Court's reasoning, this reinforced the view that a "no grave danger" situation existed for field workers exposed to pesticide residues; the Court added:[16]

> "Similarly, the suggestions that physicians may fail to diagnose pesticide poisoning as such because it mimics the flue is not persuasive of any grave danger.
>
> We reject any suggestion that deaths must occur befor health and safety standards may be adopted. Neverthelesss, the danger of incurable, permanent, or fatal consequences to workers, becomes important in the consideration of the necessity for emergency measures to meet a grave danger."

Ultimately, the Court held the Emergency Temporary Standard promulgated by the Secretary of Labor to be invalid; the Standard was vacated on the ground that in considering the record as a whole, the Secretary had not shown that the substantial evidence supported a "grave danger" situation confronting farmworkers' field-exposure to organophosphorus pesticide residues on treated crops. The closing

comments of the Court opinion, delivered by Circuit Judge Roney for for the U.S. Court of Apppeals, 5th Circuit, emphasized that in vacating the case it had not made any determination of the "adequacy" of the standard to afford protection to the workers or that implied any judgement on the propriety of a permanent standard.

Comments:

In light of the events and interactions described in these two cases and in the material presented in the previous sections of this thesis, I present some recommendations in Chapter 3. These reccomendations are meant to be a first step in solving the complex issue of farmworkers' occupational exposure to pesticides.

CHAPTER II

NOTES

2.1

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3. Ibid., p.15

4. Ibid.

5. National Association of Farmworker Ortanizations, "A Statement of the National Association of Farmworker Organizations Concerning a Bill to Amend the Occupational Safety and Health Act of 1970 before the Senate Committee on Labor and Human Resources, 1980, p.1

6. Ibid.

7. OMICA v. Brennan, 520 F. 2nd 1161 (1975) at 1167.

8. U.S. Congress, Senate Committee On Commerce, 92nd Congress, 2nd Session, Federal Environmental Pesticide Control Act of 1972, Report No. 92-70, July 19, 1972 (Washington: Government Pringing Office, 1970), p.10.

2.2

1. Ashford, Nicholas, Crisis in the Workplace: Occupational Disease and Injury, Cambridge, MA: MIT Press, 1976

2. OMICA v. Brennan, 520 F. 2nd 1161 (1975) at 1164

3. The other issue that was debated was the Secretary of Labor's power to amend an emergency temporary standard without compliance to procudures for promulgating a permanent standard.

4. Footnote t, in OMICA v. Brennan, op.cit., p.1161. In addition, the court ruled that the emergency temporary standards could be amended in the same manner and with the same criteria, as when they were initially promulgated by the Secretary.

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6. Bardach, Eugene, The Implementation Game: What Happens After a Bill Becomes a Law, Cambridge,MA: MIT Press, 1977, pp. 57 - 58

7. Ibid., p. 37

8. Ibid., pp. 42 - 43

9. Rein, Martin and Francine F. Rabinowitz, "Implementation: A Theoretical Perspective" Working Paper No. 43, Joint Center for Urban Studies of MIT and Harvard University, March, 1977, p. 39

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11. Sabatier, Paul and Mazmanian, Daniel, "The Conditions of Effective Implementation: A Guide to Accomplishing Policy Objectives",n Policy Analysis, Vol. 5, No. 4, Fall 1979, p.494

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13. Ibid.

14. Moore, Truman E., The Slaves We Rent, New York; Random House 1965, p. 76

15. Ibid.

16. Ashford, op.cit., p. 521

17. Bissell, op.cit., p. 2 - 1

18. Ashford, op.cit., p. 521

19. Ibid.

20. Bissell, op.cit., p. 2 - 1

21. Ashford, op.cit., p. 521

22. Bissell, op.cit., p. 2 - 1

23. National Association of Farmwroker Organizations, op.cit., p. 1

24. Comptroller General of the United States, Report to the Congress, Impact of Federal Programs To Improve The Living Conditions of Migrant and Other Seasonal Farmworkers, February 6, 1973

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26. Ibid.

2.3

I. Organized Migrants in Community Action, Inc., (OMICA) v. Brennan.

1. Ashford, Nicholas, Crisis in the Workplace: Occupational Disease and Injury, Cambridge, MA: MIT Press, 1976.

2. OMICA v. Brennan, 520 F.2d 1161,(1975), at 1164.

3. Ibid., p. 1168.

4. U.S. Code, Congressional and Administrative News, 1972, p. 4063

5. OMICA v. Brennan, pp.1168-1169

6. Ibid., p. 1169.

7. Ibid., p. 1166.

8. See: University of Pennsylvania Law Review, vol.128, No.6, June 1980.

9. OMICA v. Brennan, p. 1166.

10. Ibid., pp. 1169-70.

11. Ibid., p. 1169.

12. Ibid., p. 1166.

13. Florida Peach Growers Association, Inc., v. U.S. Department of Labor, 489 F. 2d 120 (1974), at 24.

14. OMICA v. Brennan, p. 1168.

15. U.S. Senate Report, Senate, 92nd Congress, 2nd Session, Federal Environmental Pesticide Control Act of 1972, Report No.92-970, Washington, D.C.: Government Printing Offfice, July 19, 1972, p. 27.

16. Ibid.

17. Ibid.

2.3

II. Florida Peach Growers Association Inc., v. U.S. Department of Labor

1. Florida Peach Growers Association, Inc., v. U.S. Department of Labor, 489 F. 2d 120 (1974), p. 122.
2. Ibid.
3. Ibid., p. 120,
4. Ibid., p.122.
5. Ibid., p. 129.
6. Ibid.
7. Ibid., p.130.
8. Ibid., p. 131.
9. Ibid., Footnote 18.
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12. Ibid., Footnote 19.
13. Ibid., pp. 131-132.
14. Ibid., p. 132, Footnote 20.
15. Ibid.
16. Ibid.

CHAPTER III.

CONCLUSION

" We can no longer claim ignorance of the urgent problems faced by migrant workers, ...legislation is not the whole solution; it is only the first step. Protective legislation is worthless without effective means of enforcing it..."

-Senator Walter F. Mondale
(Foreword in Migrant, 1971)

CONCLUSION

First, I wish to re-emphasize in a brief overview, the issues encompassed in this thesis. Following this overview, the major policy implications that have emerged from this analysis will be discussed. In overview it is evident that:

- people "at the periphery" of our society -- substandard economic base and living and working conditions, if not well represented during policy adoption process will consequently not be well-represented during the "implementation" of the policy.

  Borrowing from Eugene Bardach's term, one may observe that there are too few "fixers"... That is to say, too few of the advocate legislators or executive officials whose interests and various available resources enable him/her to closely monitor the "implementation process" of policy -- some aspects which include protecting the budget, legal authority of the implementation agencies, etc. Who are the "fixers" in the cause of the farm-workers?

- a law or statute in itself, devoid of other institutional support mechanisms, is limited in its ability to actually bring about the desired social change. If we are to be concerned about the occupational health and safety conditions of the farmworkers in relation to pesticide exposure, we must look at other institutional mechanisms beyond the law. The purpose of this would be to leverage better health and safety conditions, e.g. more funding for migrant clinics, and to establish a mandatory reporting system for cases of pesticide illness or poisoning.

- science at its best is ambiguous, and in itself is an insufficient criteria to decide policy considerations such as: Who has the most to lose/win from this policy? What are the long-term and short-term impacts of the policy?

- when the courts enter in to "mediate" the controversies of an issue, they move incrementally, and as this story illustrates, they have ruled along narrow grounds.

- in reality, the conditions that face the farmworkers in the course of their work, appear to be inconsistent with the provisions of the law, FEPCA, that provides for registration, labeling, and enforcement of criminal and civil penalties as a means to protect the farmworkers. The fieldworkers rarely see the label warnings on a pesticide container. Two thirds of all agricultural pesticides are applied by spraying, and 15-25% of the spray misses the target. Such cases of misuse are rarely prosecuted. EPA's enforcement record has been poor, and is exacerbated by the fact that as a result of the 1975 and 1978 amendments to FEPCA, most states have primary responsibility for enforcing the pesticide law. This makes enforcement more suceptible to local agricultural interests. In fact, many states authorize their Department of Agriculture to enforce the law. It is clear that this defeats the purpose of the transfer of pesticide jurisdiction to EPA in 1970, from the USDA which encourages the use of pesticides.

I would contend that the points listed above have had an impact on the implementation of policy that would protect farmworkers from pesticide exposure. As a result, the farmworkers have "fallen through the cracks" of the protective provisions of the OSHAct and the FEPCAct. The problem is exacerbated by the agency relations and coordination between OSHA and EPA. This thesis is illustrated by the events that took place during the jurisdictional debate between the two agencies over the authority to promulgate occupational health and safety standards for agricultural workers' exposure to pesticides. OSHA, pre-empted from promulgating such standards in OMICA v. Brennan, has not yer signed the Memorandum of Understanding with EPA. The Memorandum states that the EPA and the Dapartment of Labor will co-operate in the transfer of information concerning violations and

investigations that possibly fall within each others jurisdiction. While EPA has signed two versions of these memos of understanding, OSHA has not. It has been argued that while OSHA has been preempted from primary resonsibility for establishing pesticide standards, it is nonetheless authorized and responsible for pesticide enforcement.[1] Nicholas Ashford in Crisis in the Workplace, notes that while the OSHAct's "general duty requirement" could be used to protect the farmworkers, OSHA has chosen not to "upset any political baskets by utilizing it."[2]

EPA's enforcement of the FEPCAct has also been criticized by those sympathetic to the plight of the farmworkers. One source notes that the enforcement of the pesticide law has been given little attention. EPA's Office of Enforcement must ensure that all of EPA's regulations are being enforced: air, water, radiation, hazardous wastes, etc. Consequently, as one EPA official noted: "Pesticides consistently get the next-to-the-smallest piece of the pie in the Office of Enforcement."[3]

There are two important issues. One of these is that of whether an under-represented group of workers, that is both economically and politically at a disadvantage due to several institutional forces, deserves to be protected to the same degree as other workers in our society. For example, farmworkers are not covered by the pesticide exposure limits to the extent to which chemical plant workers are covered.[4]

The problems revealed in the jurisdictional debate between EPA and OSHA must be viewed within the broader context of the economic,

sociological, and political realities facing the farmworkers. The unfolding of the story presented in this thesis illustrates how various key "actors": legislators, the courts, and the government agencies (OSHA and EPA), have as a "system" contributed to making "policy" by their actions and their inactions on the issue of regulating pesticide use to insure safe and healthful work environments for farmworkers. As an analogy, I refer the reader again to Thomas Dye's definition of "public policy" as: whatever action government chooses or does not choose to do, and that government inaction can have as great an impact on society as government action.

The second issue is whether the farmworker will ever adequately be protected from occupational hazards. Especially with respect to pesticide exposure, the chronic effects of which are not immediately detected, it is an issue that desperately needs to be brought to the attention of the public.

The major policy implications on this issue, as I perceive them, is that the system developed to protect the interests of industrial workers, has not taken into account the major sociological, political, and economic differences of agricultural workers, and how this might affect their ability to benefit from the provisions afforded to industrial workers.

In order to effectively address the issues of occupational health and safety for agricultural workers, and thus "implement" policy mandates, the perception of the agricultural workplace must be changed from one of "the general environment" to a perception of a workplace with the issues of employer-employee responsibilities clearly delineated

to emphasize the differences in "power" to control the work situation. This is especially vital for farmworkers considering that although they comprise 4.4% of the total workforce, only 1% of the 4.4% are unionized.[5]

For these reasons above and noted below, special significance should be given to the issues of occupational health and safety for farmworkers, not only as a health and safety issue, but also because it is a reflection of the continued injustices afforded to these people. These injustices include:

- the continued exclusion from the right to unionize for collective bargaining purposes afforded under the major labor legislation for industrial workers. (the exception is California's state Labor Relation's Act which includes agricultural workers).

- the opposing political and economic interest lobbies of agribusiness and other farm interests, and the chemical industry lobbies.

- the lack of interest and administrative agency coordination and cooperation in this issue.

- the composition and characteristics of the agricultural workforce: sociologically isolated, economically and politically disadvantaged, geografically diverse, the workforce poulated by an unknown number of illegal alliens that hinder the unionizing efforts, many members who understand or speak little or no English, and the transient nature of the migrant workers -- all complicate the issue.

In light of the context noted above, the following recommendations are meant to be the first step in an attempt to solve the complex issue of farmworker exposure to pesticides.

Recommendations

1. Government officials and legislators should be made to recognize the issues of racism and classism that pervade and perpetuate a cycle where these workers provide cheap labor and are denied the rights and protections afforded to other members in society, and where the migratory nature of the lifestyles of many of these workers engender little concern for any real accountability on the part of the legislators and the government officials.

2. The plight of the farmworker in general and especially the issue of occupational health and safety and pesticide exposure needs to be resurfaced on the public agenda and in the public consciousness:

- Lobbying efforts to diminish dependency on chemical pesticides (many being petrochemical derrivatives) should continue and strengthen between environmentalists, health professionals, energy conservationists, and farmworker advocates. Further such an "umbrella" group can be instrumental to publicizing the issue to the general public.

3. Increase and encourage university and other independent research facilities' efforts in developing alternative approaches to pest control.

- that alternative pest control techniques be actively pursued, especially in light that, by their very nature pesticides are poisons, and that their effects of long term exposure are not fully known;

- that they present a greater health risk, one that is not equally and randomly shared by the society, to farm-workers than to the general public;

- that there has been an accelerated resistence by many insects to pesticides;

- that petrochemical-based (oil) organic pesticides are a waste of a scarce and high-cost resource especially in light that other alternatives exist to the exclusive use of a chemical pesticide.

While integrated pest management -- pest control strategy that uses minimal pesticides along with alternative farming techniques such as mixed crop planting, biological controls, etc., presently serves as an alternative to exclusive pesticide use, researchers must continue to develop pest control strategies that will ensure the maximum health and safety for farmworkers who bear a greater risk of harm from exposure to toxic chemicals than the "general public."

4. Educate the farmer about alternative pest control strategies and their benefits and encourage them to use these alternative strategies. Integrated pest management (IPM) for example, at the present time seem especially appealing since entomologists are finding out that many insects have developed and immunity to certain pesticides used today. Robert van den Bosch of UCLA, Berkeley, Division of Biological Control has noted that existing IPM programs are equally effective and no more costly than conventional chemical control programs.[6]

Thus IPM could be one facet of an overall strategy to help farmworkers if the employers, the farmers, will not implement these pest-control strategies. Planners can help design a strategy to to encourage the acceptance and wide use of non-chemical pest-control techniques.

5. Provide farmwokers with occupational health and safety training administered by farmworker organizations. In proposing this recommendation, I do not mean to imply a "blaming the victim approach" to shifting the responsibility of providing a safe and healthful workplace from the employer. Instead, this approach advocates that farmworkers learn to recognize the symptoms of pesticide illness and poisoning so that they can seek immediate medical assitance.

In addition, farmworkers should be taught their legal rights and reporting procedures in the event that: they are made ill by pesticide exposure;field re-entry standards are violated; or if they are the victims of pesticide drift or other forms of pesticide misuse. By advocating a non-chemical approach to pesticide control, the two scenarios noted above will hopefully never have to occur.

6. Farmworkers must unionize to a dramatic extent. Unionization would help organize the farmworker workforce and enable them to deal effectively with their employers as a collective force rather than as isolated individuals. Farmworker unions can protect the farmworkers' economic interests, negotiate health and safety clauses in their contracts, and ensure that farmworkers are represented by those who possess a genuine and grass-roots interest in imporving their living and working conditions.

7. Migrant clinic health professionals must be trained to a greater extent than in the past, in order to diagnose and treat pesticide poisoning. In general, more funding for migrant clinics is necessary

to provide adequate health care for migrants, especially considering their devastating living and working conditions.

8. Government agencies must demonstrate more than a "symbolic" concern for the occupational health and safety issues that face the farmworkers. They should be lobbied by the public and their acts scrutinized by Congress. Specifically, that the farmworkers' occupational exposure to pesticides be recognized for what it is--- a workers' health and safety issue rather than an environmental issue, is essential in improving the farmworkers' health and safety...therefore, jurisdictional authority over farmworkers' occupational exposure to pesticides should be returned to OSHA.

9. Federal labor legislation must be amended to include agricultural workers. All states must include agricultural workers in their workmen's compensation laws and provide these workers with comparable type of coverage offered to other workers. The minimum wage in agriculture must be raised to a markedly higher level, and present accompanying restrictions must be eliminated. The realization of these rights and protections for farmworkers will be crucial in imporving their living and working conditions.

In addition, the excellent recommendations made by the National Association of Farmworker Organization, listed on the next page, should be strongly considered.

RECOMMENDATIONS BY THE

NATIONAL ASSOCIATION OF FARMWORKER ORGANIZATIONS

1. That a mandatory reporting system be developed by EPA for the reporting of pesticide poisoning incidents on a nationwide basis.

2. That the implementation of a reporting system include an investigation of every reported pesticide exposure incident within 10 days following receipt of such report.

3. That workers be able to file anonymous complaints as FIFRA does not guarantee protection against any retaliatory action by the employer. And, that these anonymous complaints will be thoroughly investigated.

4. That EPA will coordinate with OSHA to jointly inspect work practices. That this inspections are to be conducted unannounced and are to document the use of protective equipment and adherence to instructions on the label.

5. That the deliberate spraying of workers with pesticides will be pubishable. And, that these punitive actions may be civil in nature as well as criminal prosecution of the offender.

6. That in order to insure enforcement of worker protection codes, the Environmental Protection Agency and the Federal Aviation Administration will enter into a cooperative agreement. This agreement is to result in revocation of applicator license if an infraction has been committed more than once.

7. That posting of fields sprayed will be required as well as posting of re-entry periods. That this be mandatory, not advisory or voluntary.

8. That misinforming of employees or the public will be punishable.

9. That buffer zones be established to prevent the workers who live in the vicinity of the fields as well as the community at large, from being exposed to pesticides through drift.

10. That extensive support be given for all efforts to implement integrated pest management programs.

11. That the agency will stop issuing label warnings which may result in discrimination of a sex and thereby violate the Equal Employment Opportunity Act.

12. That when a chemical is found to pose a significant risk (reproductive or otherwise), it will be suspended immediately. And, that a risk (cost) - benefit analysis will be donw afterwards.*

13. That because the record of enforcement of pesticide misuse is poor, EPA will no longer delegate this authority to the states Department of Agriculture. That the OMICA v. Brennan decision was based on active enforcement of worker protection codes, and that since EPA has not met its responsibility, it should transfer jurisdiction over protection of workers exposed to pesticides to the Occupational Safety and Health Administration.

* Presently the risk-benefit analysis is conducted first leaving workers and the public unnecessarily exposed.

Source:

National Association of Farmworker Organizations "A National Perspective on Farm Labor Issues", In Conjunction with: The Farmworker Consultation, September 29, 1980, pp. 21-22.

CONCLUSION

FOOTNOTES

1. National Association Farmworker's Organizations, An Analysis Of The Department Of Labor's Services For Farmworkers, Labor Project, Washington, D.C., May 1978, pp. 54-55.

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3. Feldman, Jay and Dana Alston, "Pesticides and You" Rural America, Washington, D.C., May 1980, p. 3.

4. "The Pesticide Dilemma", National Geographic, Vol. 57, No. 2, February 1980, p. 166.

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6. "Pest Control Strategies and Problems" Speech given at the Society for Occupational and Environmental Health's Conference on Pesticide's and Human Health, Robert van den Bosch, Division of Biological Control, University of California, Berkely, December 11, 1978, p. 6.

APPENDIX

PAGE

DEATH RATES AND DISABLING INJURY RATES IN AGRICULTURE AS COMPARED TO THE AVERAGE RATES OF DEATH AND DISABLING INJURIES IN THE TOP 8 INDUSTRIES*

YEAR	DEATH RATE IN AGRICULTURE	AVERAGE DEATH RATE IN THE TOP 8 INDUSTRIES	DISABLING INJURY RATE IN AGRICULTURE	AVERAGE RATE OF DISABLING INJURY IN THE TOP 8 INDU.
1970	67	18	5,556	(unavailable)
1975	63	15	5,556	2,573
1976	63	14	5,429	2,506
1977	63	14	5,294	2,530
1978	63	14	5,429	2,321
1979	56	13	5,429	2,347

Source: Authors Calculations; Raw data obtained from the National Safety Council, "Work Accidents" sheets, Statistic Department, Chicago, Illinois

Death Rates: Deaths/100,000 workers, Injury Rates = Disabling Injuries/100,000 workers

*Includes: Trades, Manufacturing, Service, Government, Transportation and Public Utilities, Agriculture, Construction, Mining and Quarrying

YEAR	% OF DEATHS IN AGRICULTURE AS COMPARED TO THE TOTAL OCCUPATIONALLY - RELATED DEATHS IN ALL INDUSTRIES	% DISABLING INJURIES IN AGRICULTURE AS COMPARED TO THE TOTAL OCCUPATIONALLY RELATED INJURIES IN ALL INDUSTRIES
1970	(unavailable)	(unavailable)
1975	16%	9%
1976	15%	8%
1977	13%	7%
1978	14%	8%
1979	14%	8%

Source: Author's Calculations; Raw Data Obtained from the National Safety Council, "Work Sheet Accidents" Sheets, Statistics Department, Chicago, Illinois.

% Deaths/Disabling Injuries per year:

$$\% = \frac{\#\text{Deaths or Disabling Injuries in Agriculture X}}{\#\text{Deaths or Disabling Injuries in all Industries}} \quad 100$$

DISABLING INJURY RATES IN AGRICULTURE, MINING, AND CONSTRUCTION

	1970	1975	1976	1977	1978	1979
Agriculture	5556	5556	5429	5294	5429	5429
Mining	1,667	5,000	5,000	5,000	5,000	4,444
Contruction	5835	5556	5406	5715	5218	5000

Source: Author's Calculations; Raw Data Obtained from the National Safety Council, "Work Accidents" Sheets, Statistics Department, Chicago, Illinois.

$$\text{Disabling Injury Rate} = \frac{\text{Disabling Injuries}}{\text{Number of Workers}} \times \frac{\quad}{\text{100,000 Workers}} = \frac{\text{Disabling Injuries}}{\text{100,000 Workers}}$$

AGRICULTURE: OCCUPATIONAL INJURY ILLNESS INCIDENCE RATES AND FATALITIES PER STATE

	1972 INJURY/ILLNESS INCIDENCE RATES	1978 INJURY/ILLNESS INCIDENCE RATES	PERCENT CHANGE 1972 - 78	FATALITIES 1975 - 1978
Alabama	11.0	10.0	-9.1	85 156
Alaska	14.4	10.0	-30.6	74 43
Arizona	15.1	***	***	42 ***
Arkansas	18.8	10.3	-45.2	75 74
California	12.6	10.5	-16.7	527 492
Colorado	12.9	***	***	77 ***
Connecticut	9.2	9.1	-7.1	30 31
Delaware	8.2	6.6	-19.5	14 11
Dist. of Columbia	8.5	***	***	27 ***
Florida	12.6	10.2	-19.0	281 256
Georgia**	--	--	--	-- --
Hawaii	13.4	***	***	21 ***

Idaho	16.7	**	***	28	***
Illinois**	11.7	--	--	--	--
Indiana	11.6	9.9	-14.7	109	105
Iowa	11.7	10.4	-11.1	92	54
Kansas	7.8	8.8	+12.8	47	27
Kentucky	10.8	9.6	-11.1	103	79
Louisiana	11.0	9.4	-14.5	161	194
Maine	11.8	11.7	-.8	30	41
Maryland	10.6	8.5	-19.8	61	52
Massachusetts	10.6	***	***	77	***
Michigan	16.0	8.7	-45.6	173	262
Minnesota**	--	***	***	92	***
Mississippi	10.1	***	***	61	***
Missouri	10.3	9.3	-9.7	143	150
Montana	13.5	10.0	-25.9	29	29
Nebraska	10.7	9.8	-8.4	56	48
Nevada**	--	--	--	--	--

New Hampshire**	11.6	--	--	--	--
New Jersey**	11.1	--	--	--	--
New Mexico	10.3	8.4	-18.4	32	50
New York**	7.0	--	--	--	--
N. Carolina	10.1	7.6	-24.8	103	104
N. Dakota	8.1	***	***	14	***
Ohio**	--	--	--	--	--
Oklahoma	10.5	***	***	90	***
Oregon	18.4	14.0	-23.9	110	61
Pennsylvania	10.1	9.6	-.5	182	172
R. Island	10.4	9.3	-10.6	16	24
South Carolina	9.4	7.5	-20.2	45	73
South Dakota	9.2	8.8	-4.3	9	4
Tennessee	11.0	***	***	91	***
Texas**	11.0	--	--	--	--
Utah**	--	***	***	53	***
Vermont	10.5	9.6	-8.6	4	4
Virginia	10.0	***	***	107	***

W. Virginia	10.8	9.3	-13.9	60	152
Wisconsin	11.9	***	***	85	***
Wyoming	11.0	10.0	-9.1	49	45

* The occupational injury and illness data excludes farms with fewer than 11 employees. However, these employees may be included in the annual average employment.

** State did not participate in survey for years where no data appears.

***
Data not available until later in 1980.

Source:

Fernandez, Susan, "Statement of the National Association of Farmworker Organizations Concerning a Bill to Amend the Occupational Safety and Health Act of 1970 before the Senate Committee on Labor and Human Resources". D.D.: National Association of Farmwork.

LABOR LEGISLATION

THE NATIONAL LABOR RELATIONS ACT OF 1935 (THE WAGNER ACT)

Essentially, the Wagner Act excluded agricultural workers from the right to engage in collective bargaining. Under Section 2, Definitions, the term "employee" excluded "...any individual employed as an agricultural laborer..."[1] Specifically, agricultural workers are excluded from Section 7, Rights of Employees: "...the right to self-organization, to form, join or assist labor organizations, to bargain collectively...and to engage in concerted activities for the purpose of collective bargaining or other mutual aid or protection".[2]

In the analysis of the bill, it was noted that due to "administrative reasons", the Senate committees deemed it "unwise" to include agricultural laborers under the protection of the bill.[3]

THE FAIR LABOR STANDARDS ACT (AS AMMENDED JUNE 25, 1938)

Purpose: "An act to provide for the establishment of fair labor standards in employments in an affecting interstate commerce, and for other purposes."[4] Under Findings and Declaration of Policy: Section 2 (a) notes that "...labor conditions detrimental to the maintenance of the minimum standard of living necessary for health, efficiency, and general well-being of workers...", excludes hand-harvest laborers, and seasonal or migrant workers, under the term "employee" of Section 3, Definitions.[5]

Thus, these agricultural workers are excluded from the right to decent hours and minimum wage comparable to that of industrial

workers. The legislative history of the FLSA notes that the persons to be excluded from the Act were defined by the "Board", see Original Bills 2 (a) (7).[6] Who were the Board members and to what or whom was their interest and alliance pledged?

THE TAFT-HARTLEY ACT OF 1947

Purpose: "To ammend the National Labor Relations Act, to provide additional facilities for the mediation of labor disputes affecting commerce, to equalize legal responsibilities of labor organizations and employers, and for other purposes".[7] Although the Act ammends the NLRA of 1935, it still excludes "individuals employed as agricultural laborers" under Section 2 (3).[8]

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Schwartz, Bernard, editor, Statutory History of the United States: Labor Organization, New York: Chelsea House Publishers Co., Inc., 1975, (pages as noted).

Notes

1. Schwartz, Bernard, editor, Statutory History of the United States: Labor Organization, 1975, p. 628.

2. Ibid., p. 270.

3. Ibid., p. 287.

4. Ibid., p. 400.

5. Ibid., pp. 400-401.

6. Ibod., p. 466.

7. Ibid., p. 555.

8. Ibid., p. 557.

THE STORY OF A FARMWORKER--ANDRES MURILLO

Andres Murillo is a fifty year old farmworker in the San Joaquin Valley in California. The valley encompasses ten million acres of cotton, grapes, and oranges, in a state that uses more pesticides than any other in the nation. Murillo is a victim of pesticide poisoning. Years of prolonged pesticide exposure as a pesticide applicator, has resulted in destroying his nervous system; symptomized by continuous body tremors, heart and lung damage, and an unnaturally shortened life-span.

Murillo has sued the manufacturers of the four pesticides he used as a pesticide applicator. He has also filed a workmen's compensation claim against his former employer. The legal implications of such actions are enormous: the defendents are doing everything in their power to avoid a precedent-setting jury award. They will present their own medical experts to counter Murillo's claims that the pesticides have caused him harm.

Murillo review his years as a pesticied sprayer in the almond orchards with the following points:

- for years he sprayed fields for wages of $3.36 an hour
- he was forced to spray the fields even on days that were so windy that the pesticides blew all over him
- the concentrations of the sprays were so strong that the new plastic buckets in which they were mixed began disintegrating within three days
- clean filters were not provided for Murillo and he had to fight to get gloves and a face mask during the period of his employment. The fumes from the pesticides gave him headaches and made him vomit. Not enough clean water was provided for wash-ups after spraying.

. he risked his job to complain to his supervisor. If no one had been harmed by the pesticide exposure, nothing would have changed. Today, his fellow workers work under better conditions at his former place of employment, but the grower has yet to compensate him for his illness.

Source:

"The Pesticide Dilemma", National Geographic, Vol. 157, No. 2, February, 1980, pp. 145 and 148.

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IMPLEMENTATION: A BRIEF OVERVIEW

Introduction

I. What is Implementation: Definition

II. Implementation: Scope

III. Implementation: Its "nature"

IV. Implementation: "Stumbling Blocks"

V. Implementation: Recurring Themes

VI. Conclusion

INTRODUCTION

As planners, we use the word "implement" and the term "implementation" in a variety of ways according to the "object", i.e., the thing being implemented, and the context of its use. For example, planners help "implement" decisions, programs, projects, plans, social experiments, etc. in the larger context of the "implementation" of policy. Policies may be classified as distributive, redistributive, and regulative.[1] In reviewing the implementation literature, Angus MacIntyre at U.C. Davis, suggests that the type of policy examined has not only influenced the analysts' choice of methodology, but also largely determined their view of the implementation process itself.[2]

A review of the literature on "implementation" indicates that the first published books dealing specifically with "implementation" and using the term in the title, appear in 1970.[3] Of this small amount of implementation literature, it seems that most of these materials were published during the early 1970's (1970-1973) and then again from 1975 to the present time. One might speculate that this specific literature on "implementation" may document the reaction of many of the problems which arose in trying to implement the large social programs and social experiments which proliferated during the "Great Society" of the 1960's, and some of which extended into the 70's

These "implementation" studies seem to parallel the evaluation literature on the social programs and policies of these same decades; However, evaluations of government programs are much more common, and were probably undertaken as a means of justifying the degree of public

expenditures-in fields such as public health, education, etc. evaluations of programs have been documented as early as the turn of the twentieth century, and evaluations of government programs in various other policy areas have continued throughout successive decades.

In overview, the amount of literature dealing specifically with the "implementation" aspect of policies and programs is sparce in comparison to other works in the general public policy area. Up until the 1960's, there was no systematic government studies on "how things (programs) work"; the enactment of social legislation, the influx of funds for social programs and experiments and their subsequent promulgation, raised people's expectations of what government might provide in terms of providing for social needs and the delivery of service; thus, "how" government set about "implementing" social policies became an interesting research question to a few social scientists.

Walter Williams, in the 1976 book Social Program Implementation, notes that at least in the social policy area, few would "refute the point that little research has been carried out either on the implementation of social policies, programs, or projects or the implementation process in a social policy organization such as a Federal agency."[4] Williams also notes that "lack of concern for implementation is currently the crucial impediment to improving complex operating programs, policy analysis, and experimentation in social policy areas."[5]

In contrast, Angus MacIntyre notes that since the late 1960's there has been a proliferation of policy analysis dealing with the "pitfalls" encountered during the administrative application of statutory mandates.[6] In his review of the literature on the

implementation of statutory mandates, he notes that the literature appears to be divided into two methodological approaches to analysis: (1) a widely generalizable, conceptual integration of the implementation process, and 2) a rather unstructured approach to more accurately reflect the "subtle and iterative complexities of the implementation reality".

This section is not an attempt to fully analyze the concept of implementation, its complex processes and the comprehensive problems encountered in implementing government policies and programs. Instead, I present a brief overview of selected reading on this topic, to help conceptualize how it has been defined by some authors, its context and scope, its "character" or "nature", and some of the recurring themes encountered in the "stumbling blocks" of implementation.

1. What is Implementation: Definition

> TO IMPLEMENT: Produce: do; carry out; perform; execute; achieve; accomplish.
>
> Complete: effectuate; realize; bring out.
>
> (Selected synonyms from Roget's Thesaurus of English Words and Phrases, revised edition, (New York: St. Martin's Press, 1964.)[7]

There is no single definition of "implementation" among the few existing social science writings on this topic; rather the term has been defined in a variety of ways depending upon the perspective of the author and the object and context which he/she is attempting to

describe.

The verb "to implement" scrutinized in absence/isolation of an object or context, implies an action of some sort. In Social Program Implementation, Walter Williams notes that the term "implement" has two principal meanings: "to provide or equip with the means of carrying into effect" and "to carry into effect".[8] As such, this term does not provide us with a notion as to "what" is being implemented, nor does it provide an insight as to "how" things are "provided" or "carried into effect", and finally the term does not reveal "why" an action is being undertaken.

The term "implementation" comes a bit closer in aiding us conceptualize an "object of implementation and its context. For example, a policy may be implemented--and according to Pressman and Wildavsky in their classic work Implementation, policies imply theories and hypothesis.[9] These theories and hypothesis about how "things work" are operationalized when they are converted into government action. Here the "object" of implementation is a government "policy" and the context is how the theories and hypothesis upon which this policy is based "fits" with "reality".

Although the term "implementation" is defined by various authors, the use of the term generally seems to imply a "process". Pressman and Wildavsky, for example, introduce the notion that the implementation of policy, for example, is a "process" of "interaction between the setting of goals and actions geared to acheiving them."[10] Further they state that policy and its implementation are separate, distinct, although interrelated entities; the same is implied regarding programs and their implementation.

Walter Williams notes that in the context of an organization, "implementation" can be viewed a both a continous effort or process carried out over time or a one-time effort or process to put certain organizational decisions (and perhaps some mandate imposed from outside the organization) into place. In a social agency for example, "implementation" may include a "continuous effort" over time to improve its staff and field operations, i.e., improve its capabilities as an organization, as well as a "one-time effort" over time to improve its staff and field operations, i.e., improve its capabilities as an organization, as well as a "one-time effort" or process to convert agency decisions into operational terms.[12]

Eugene Bardach, in the Implementation Game, speaks of both the implementation of a policy or program as an "implementation process" which occurs in the "post-adoption period" after a bill has become a law.

This view is consistent with Pressman and Wildavsky's notion that the "implementation" of policy begins at a point when certain "initial conditions" have already been met or satisfied: legislation must first be passed and funds appropriated before policy can be "implemented" to secure its predicted outcomes.[13] In this sense, "implementation" of policy can be conceptualized to have operational boundaries, i.e., a "starting point" and an "endpoint" toward which action is directed to achieveing a desired goal.[14]

The conceptual "boundaries" of the implementation process of policy noted above, can also be applied to the meaning of the implementation of programs. The implementation of a program also necessitates a "starting point" in which inital conditions have also been

met: program embodiment in an agency, funding, staff and various other economic, politcal, and social resources. Thus, once a policy has been legally authorized and armed with a defined policy mandate; a government agency's jurisdiction over the mandate; specification of the actors and acts in which they must engage in to achieve the desired results and other necessary "initial conditions"--a policy "becomes" a program. Pressman and Wildavsky also note that programs operationalize the theories implied in its policy forebearer; programs are said to be the first link in a causal chain which connects actions to objectives. One this first "link" has been established, implementation ensues as the "subsequent links in the causal chain" to obtain desired results,[15] i.e. the "end" results of the "implementation process".

Thus far, I have presented the view of authors who conceptualize "implementation" of policies or programs as a "process", and others who speak of the "implementation process". However, what is the "nature" of this "process"? Most processes can be conceptualized as being either static or dynamic. The phrase"static process" connotes actions which are at equilibrium; a stagnant situation where nothing is gained or lost--a "steady state". In contrast, the term "dynamic process" connotes a situation in which actions flow with energy and force; such situations may contain actions, or relations which can be conceptualized looping, oscillating, etc. in a dynamic manner.

In Bardach's approach, the "implementation process" is a process of 1) Assembly: assembling numerous and diverse elements required to produce a particular programatic outcome and 2) Politics: key actors utilizing "implementation politics" play-out a number of loosely

interrelated politcal "games" whereby program elements are witheld from or delivered to the program assembly process on particular terms.[16]

In this context, the "implementation process" is distinct and unique from the policy-adoption process by virtue that the "politics" i.e., manuevers, strategies, and tactics used by those involved in the "assembly process" are influenced by the existence of a defined policy mandate which has been legally and legitimately authorized some prior political process; the dominant effect being that, the politics of the implementation process is highly defensive and a great deal of energy goes into avoiding responsibility, scrutiny, and blame.[17] The nature of this "implementation politics" is described by Bardach using the typology of "games".

Bardach notes that there are atleast two reasons why defensive politics is practiced during the "implementation process" (the post-adoption period of the policy process); 1) the primary reason is that, many of the key participants' actions appear to be based on expectations that "something will happen" that bears at least a passing resemblance to the mandate of the initial policy decision; (actors seem to be more concerned with what they might lose, rather than what they might win,) 2) the participants who favor the policy goals of the mandate, use the mandate as a moral and sometimes legal weapon "in the emerging struggle over the terms on which the policy is effected."[18] Thus implementation politics is differentiated from policy-adoption politics by "the Characteristic absence of coalitions and the characteristic presence of fragmented and isolated maneuveurs and counter maneuveurs."[19]

In addition, Bardach describes how various authors conceptualized the "implementation process" and notes the shortfalls of these perspectives: implementation as pressure politics; implementation as the massing of "assent"; implementation process as intergovernmental bargaining; implementation and the complexity of joint action.

Bardach contends that these perspectives are limited in that these conceptualizations, apart from Pressman's and Wildavsky's concept of implementation and the complexity of joint action, do not provide a dynamic interpretation of the implementation process, i.e., "an interpretation that takes the passage of time into account".[20] He contends that even the Pressman-Wildavsky approach does not go far enough; the presentation of typologies, such as the three or four types of delay processes, is rather limited; the approach stops short of presenting a condeptual basis for such typologies; the approach does not explicitly identify and analyze implementation processes that result in the "perversion or subversion of policy goals" or processes which lead to excessive financial costs; finally, the approach does not characterize the "interactions that routinely link the different kinds of institutions or roles normally involved in a process of program assembly."[21]

As an alternative to these views and attempting to fill in the conceptual gaps presented above, Bardach introduces a "generic" typology using the metaphor of "games"; a metaphor which utilizes terms such as "players", "stakes", "rules of play", etc. to illustrate the implementation process as "the playing out of a number of interrelated (political) games".

Other than the Pressman-Wildavsky notion of "the passage of time" as affecting the "implementation" of a program, as noted by Bardach, I found an implied reference to the "dynamics" of the implementation process in Pressman's and Wildavsky's conceptualization of a program (i.e., a "policy" after initial conditions have been met and thus ready for "implementation") as a "system". The authors refer to a program as "system" in which program elements are realized through sequential stages; these stages are said to be related in a back-to-front and front-to-back manner.[22] Thus one can imagine a type of "oscillating dynamics" which affects the "implementation" of a program, and thus the larger context of the "implementation" of its policy forebearer:

1) Front-to-back:

A breakdown, such as a lack of resources, at one stage in the implementation process must be repaired or "fixed" before the next stage can be realized. Once the "breakdown" is repaired a forward flow can once again start the causal chain of events leading to goal realization.

2) Back-to-front:

Another type of breakdown, such as failure to agree on some procedure down the line of the implementation process, can be said to manifest itself in a type of "clogged-drain syndrome" in which the system "backs-up" until the barrier impeding the directional "flow" of events is removed from the system.

Therefore, according to Pressman and Wildavsky, "implementation" occurs at a stage where necessary conditions have been secured and thus, "lack of implementation" should not connote the "failure to get goint", but rather the "inability to follow through". [23] Consequently, it appears that this "inability to follow through" is related to the "dynamics" of the program/"system".

Rein and Rabinovitz, like Bardach, recognize that "implementation"/ "the implementation process" is not a unified, "linear" or "sequential" process. However, Rein and Rabinovitz, introduce the notion that the implementation process can be characterized by its "circularity" or "looping" behavior, and conceptualize "implementation" as having three major stages: guideline development, resource distribution, and oversight; and contend that atleast three imperatives: legal, bureaucratic, and consensual operate at each stage of implementation. Rein and Rabinovitz suggest that the "politics of implementation" is governed by these imperatives: [24]

1. the respect for legal intent (legal rationality), which is
2. mediated by the concern for instrumental rationality as it is defined by civil servants, yet
3) informed by the knowledge that action requires internal and external consensus.

The "politics of implementation" as conceptualized by Rein and Rabinovitz, is understood as the "attempt to resolve any conflicts among these imperatives: the mechanisms for resolving these conflicts that arise during implementation are a function of the: 1) purpose, 2) resources, and 3) the complexity of the administrative process of implementation.[25]

Rein and Rabinovitz contend that all stages of implementation are interdependent and that the "implementation process" is not a smooth, linear transition "from legislation, to guidelines, and then to auditing and evaluation", rather, "circular" or "looping" process:

> "...the legislature monitors the guidelines devolped by the administration; those who must implement the guidelines monitor and attempt to influence that administration; those who develop guidelines must determine whether the lower reaches of the bureaucracy comply with them."[26]

Thus, one could characterize the Rein-Rabinovitz conceptualization of the "implementation process" as "dynamic" due to their notion of the "circularity" and "looping" character of this process, as well as for their notion of imperatives which appear to exert their influence in what one could call a "weighted" manner during the implementation process; implementation is "adrift" from declared purposes when all three imperatives operate together in translating policy into practice".[27]

In sum, I have presented the viewpoints of authors who conceptualize "implementation" as a "process" - e.g., Pressman and Wildavsky, who note that "implementation" is seperate and distinct from, though interrelated with policy, that policy and programs are the "objects" of implementation; and authors such as Rein and Rabinovitz, and Eugene Bardach, who imply that the "implementation process" is part of the policy process. However, the reader should be aware that there are other conceptualizations of "implementation". For example, Walter Williams in Social Program Implementation, that in the context

of social programs, "implementation", defined most simply, is the "stage" between decision and operations; "implementation can range from the trivial case of one individual's deciding to do something and then doing it to a lengthy process among many actors across several layers of government."[28] Williams's notion of "implementation" in the context of social programs should remind us that when we speak of "implementation" we should specify the "object" of implementation, as well as its context. The potential complexity embodied in the "range" of "implementation" described above, brings us to the next section of this paper.

II. Implementation: Scope

The "scope" of implementation/the implementation process of policies and programs can be described in terms of "actions", "interactions", and "reactions"; the quantity and quality of these activities and responses are intimately related to the "complexity" of the implementation process; in turn, this complexity is related to the relative "ease" of identifying potential implementation "stumbling blocks".

For example, in the process of implementing a policy or program, certain actions will be carried out by the participants in this "implementation process" to achieve a desired goal; this assumes that the participants in this process are both willing and capable of implementing the prescribed or neccessary actions to achieve such goals. During the course of carrying out this necessary actions, there will occur some degree of "interaction" with other participants, outside actors, organizations, etc. Bernard Friedmen,

MIT, notes that such interactions will occur in atleast the following "levels":[29]

1) inter-governmental relations: federal, state and local levels

2) bureaucratic: .intra-level
.inter-level (top-bottom, bottom-top)

3) public-private sector relations

The "complexity" of the implementation process could be said to be related to the "scope" of the types, number, level(s), and timing of the prescribed or necessary "actions" and "interactions". Further, the "reactions" by the particants in the implementation process to various "stumbling blocks" and normal activities within the process, adds to the "complexity" of the issue.

In turn, this "complexity" is related to the related to the "ease" of identifying potential implementation "stumbling blocks". As noted in the preceding section, the "scope" or "range" of the implementation process can extend from an individual acting upon a decision to a lengthy process involving many actors across several layers of government-indeed, in the latter case, the Pressman-Wildavsky approach would point out the numerous decisions and "clearance points" which would be involved in such a process. It therefore becomes quite difficult to assess where exactly the implementation of a policy or program has "gone awry" in the event that the number, type, and timing of the various activities noted above interfere with the successful realization of policy goals.

Several other authors also note the influence of "complexity" on the implementation process. For example, Rein and Rabinovitz note that these elements of complexity many "veto" any "stage" in the implementation process.[30] The authors provide three insights on the issue of "complexity":

1) Participation can inhibit decision-making: a great number of participants with decision and veto power, the less likely decisions are to be made.

2) Complexity itself is a "protection": a great number of preceeding steps in the process may effectively block a "veto", e.g., the process for approving an urban renewel project in 1969 was reported to have some 4,000 steps; a reviewer was essentially "locked in" by the several thousand preceding steps.

3) The "nature" of the policy environment may create an arena where legislature mandates may cancel each other out: an environment overcrowded with various programs may bring their mandates into conflict, and effectively cancel out their programatic effects.

Other than its relation to the "scope" of implementation, one could also state that, in the context of the implementation of policies and programs, complexity is one of the factos which often characterizes the "nature" of implementation. A brief discussion of some other factors which may "characterize" "implementation" or the "implementation process" follows in the next section.

III. Implementation: Its "nature"

To a certain extent, the preceding sections have lent a glimpse into the "nature" or "character" of implementation; however, it is not the purpose of this section to provide a comprehensive analysis of this issue.

In a sense, various authors in describing their conceptualizations of "implementation" and the "implementation process", have perhaps contributed "collectively" toward a better notion of "how" government program/policy inputs are "translated" into government program/policy outcomes. For example, Bardach uses the "games" metaphor; Pressman and Wildavsky speak of decision and clearance points and the complexity of the implementation process over time; Michael Lipsky in Street Level Bureaucracy emphasizes the concepts of communication and control to describe how "street-level" bureaucrats, in the course of implementation, develop "policy". I would contend that these and other interpretations of "how things work" are useful in mirroring various facets of "implementation"/the "implementation process"; and are perhaps more applicable in certain contexts, and levels of "action" and "interaction". Rein and Rabinovitz offer the following insights:[31]

> "The process of implementation and who or what is being served at any one point in time or on any level are often quite unclear. The implementation process, related as it normally is to narrowly defined goals and outcomes, muddles the question of whether the functions of bureaucracies are, in fact, confined narrowly to the policies with the most potential...But a clear, easily implemented but limited policy is not without its own costs. There may be a conflict between what can be implemented and what is useful...Diffficult as service strategies may be to implement, government may have to develop and improve upon them...changing the performance of institutions is an aim government cannot altogether forsake."

Eugene Bardach offers the following thoughts:[32]

> "...the single biggest problem in gathering data on the "implementation process;" no matter how the process is conceived, is that there is too much...The

> nature of the implementation process is exactly the oppsite (of the policy adoption process): instead of becoming concentrated in one place, it gets dispersed to every place.
>
> How is the researcher to cope with all of this? First, he must define his objectives. If he wants to study certain narrow aspects of the implementation process...it is possible to collect data systematically. If...on the other hand, the objective is to gain an overview of the whole process, then rigorous and systematic methods are simply not feasible. A respectable sort of impressionism is all that can be achieved...even if one were to conduct lengthy and maximally productive interview with each of the hundred (informants) about their view of the implementation process, one would still end up with merely a collage of impressions."

Thus, from the information presented in this section, one might surmise that there is not a single view on the "nature" or character of "implementation"/the "implementation process", and that the nature of the process is quite "dispersed". If a researcher seeks to gain an overview of the whole process in a particular context, then a respectable "impressionism" is at best, all that can be achieved.

Various authors in describing their notions of "implementation" and the "implementation process" have perhaps contributed "collectively" towards a better conceptualization of "how" government programs operate in striving to acheive their mandated goals, and how these processes tend to go "awry"; and as Rein and Rabinowitz note, why things may go awry is that "the process of implementation and who or what is being served at any one point in time or on any level are often quite unclear". However in the next section, one will note that even under what appears to be "optimal conditions" there will

still be some "stumbling blocks" in the implementation process. However we should keep in mind Rein's and Rabinovitz's comment that ease of implementation should not be traded-off for a limited policy or program; that government may have to develop and improve its strategies to make policies and programs more "implementable".

In the next section, I will briefly examine some of the elements that induce "less than favorable" conditions during the implementation process.

IV. Implementation: "Stumbling Blocks"

In trying to explain why "implementation" of programs and policies may go awry, I offer the following explanation;

There are atleast three factors which affect the implementation process: the theory embodied in the policy mandate, the administration of a program through an agency or bureaucracy, and certain resources necessary for the implementation of a policy or program. In considering these three factors, one may say that these factors are either adequate or "ok", or inadequate or "not ok"; thus we have 2^3 possible combinations for explaining why "implementation" of programs and policies may go awry; i.e., there are atleast (the number of determinations to be made regarding pertainent factors to implementation) "raised to the power" of the number of factors considered important to implementation:[33] (as noted at left)

Possible Combinations	Symbol Terminology
~~T~~ A R	T = Policy Theory is "ok"
~~T~~ ~~A~~ R	~~T~~ = Policy Theory is not "ok"
~~T~~-~~A~~-~~R~~-	A = Administration is "ok"
T ~~A~~ R	~~A~~ = Administration is not "ok"
T ~~A~~ ~~R~~	R = Resources are "ok"
T A ~~R~~	~~R~~ = Resources are not "ok"
~~T~~ A ~~R~~	* = some external influence other than these 3 factors which is affecting the implementation process.
*T A R	

Therefore one could say that when looking at just three factors, one could have 2^3-1 possibilities for the program or policy to go awry (one should not consider the ~~T~~A~~R~~ situation that could immediately be deemed "infeasible". Even under optimal conditions (TAR), one could expect some exogenous factors to cause the system to go awry.

This view noted above, is not consistent with the Pressman-Wildavsky definition of the "lack of implementation" which was stated earlier in this paper as the "inability to follow-through" (implying that initial conditions have been met), rather than "the inability to get going".

Other authors offer their insight on the problems or "stumbling blocks" of implementation:

Walter Williams notes that problems in "implementation" arise from "not doing what has been decided upon", and notes that in a complex organization such as a government agency, the situation is compounded by the fact that there are probably many participants

involved in the decision-making process, as well as by the fact that implementation "filters down" through several hierarchical layers.[34] Williams also notes that in the social program area, the most pressing problem is bridging the gap "between policy decision and workable field operations".

Eugene Bardach notes that the main implementation probelm is the control and direction of numerous program-related activities in 1) trying to acheive program objectives, 2) keep cost down, 3) reduce delay; the situation is problematic as many of the program-related activities are carried-out by numerous and semi-autonomous organizations and individuals.[35] According to Bardach, control, is at the heart of the implementation problem; where control is synonomous with the tactics, strategies, i.e., the "games" of the "politics of implementation".

As noted earlier in this paper, Rein and Rabinovitz state that implementation is adrift when all three imperatives: legal, bureaucratic, and consensual; operate together in translating policy into practice. The authors also note that problem in implementation can arise when goals are not clear, "symbolic", non-salient, and inconsistent; when the kind, level, and timing of resources are inadequate; and when the administrative process is imbued with complexity.[36]

The EDA-Oakland case study described by Pressman and Wildavsky note implementation failure to be ascribed to:

- various forms of delay: "the anatomy of delay: and its vicious cycle.
- fear of ultimate failure by those involved in the implementation process; a problem of "expectations"

- withdrawl of committments by participants in the process
- unanticipated number of decision and clearance points that needed to be carried out by the participants in the process

These unanticipated factors aided in creating conditions in the Oakland-Economic Development Administration project that could not be salvaged during the course of implementation despite the "optimal" conditions--political consensus, sufficient funding and initial agreement with local officials and private concerns, etc. established prior to program implementation.

Thus, it appears, that even among what appears to be "promising" conditions for implementation, the implementation process is fraught with unanticipated "stumbling blocks".

The next section will list a few of the recurring themes I found while scanning the "implementation literature".

V. Implementation: Recurring Themes

The recurring themes that I found in reading some of the "implementation" literature are listed below"

- Power: access to; concentration of; gain; loss; unequal forces of;
- Co-option: goals; allies;
- Feasibility: political; economic; implementation;
- Responsibility: avoidance of; jurisdiction over; fight for;
- Accountability: lack of;
- Communication: lack of; inability for;

- Cooperation: lack of; inability for;
- Information: lack of; unequal acess to;
- Flexibility: lack of excess of;
- Control: inadequacy of;
- "no one easy 'target' upon which to place all the blame" in the event that implementation is "faulty"

The themes presented above could be said to represent some of the critical factors that should be considered in the implementation of a policy or program. Additionally, in refering to environmental policy, Walter Rosenbaum in The Politics of Environmental Concern, suggest four possible "stumbling blocks" to successful policy implementation: 1) lack of accountability by administrators, 2) exertion of legislative pressure by various interest groups, 3) vague policy goals, 4) lack of effective support for decision favoring strong regulatory measures.[37] Once a policy is "implemented "these" stumbling blocks become apparent.

Although the implementation of several public policies and program have been deemed to be "problematic", Paul Sabatier and Daniel Mazmanian note that some federal statutes and state legislation have indeed been effectively implemented.[38] However, the authors noted that the bulk of the literature on the implementation of statutes or other major policy actions (such as an appellate court decision) tends to be pessimistic about the ability of important policy initiatives to actually effect the desired social change.[39] They note that no statute, no matter how well it structures implementation, in itself, is not sufficient enough a condition for

assuring target group compliance with its objectives.[40] Consequently, it becomes apparent that although a statute promulgated to fill some need in society is critical as a first "step" in addressing that need, a statute or other policy "device" can not be expected to fulfill policy objectives in a "vacuum", i.e., in the absence of any "back-up" and mutually supportive mechanisms to bring about the desired change.

VI. Conclusion

In conclusion, it is apparent that in the "implementation" literature, which for the most part, is based on an analysis of the implementation of some program or statute--there are various conceptualizations of the "implementation process" and what it "means" to "implement" a policy. I would like to re-state Thomas Dye's concept of "public policy"; "whatever governments choose to do or not to do" which includes all actions of government, not just the stated intentions of governments or government officials, as well as government inaction.[41] Borrowing from Dye's concept of public policy, I would contend that the "implementation" of policy is "in reality" whatever actors involved in the process of implementation "choose to do or not to do" regardless of the explicitness or ambiguity of a statute or program directives and procedures.

Notes

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17. Ibid., p. 37.

18. Ibid., pp. 42-43.

19. Ibid., p. 43.

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21. Ibid., p. 55.

22. Pressman and Wildavsky, op.cit., p. xv.

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24. Rein, Martin and Francine F. Rabinowitz, "Implementation: A Theoretical Perspective; Working Paper No. 43, Joint Center for Urban Studies of MIT and Harvard University, March, 1977, p. 39.

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26. Ibid., p. 18.

27. Ibid., p. 9.

28. Williams and Elmore, op.cit., p. xi.

29. Bernard Frieden, class lecture seminar In Program Design, 11.502, MIT, March 9, 1981.

30. Rein and Rabinowitz, op.cit., p. 33.

31. Ibid., pp. 38-39.

32. Bardach, op.cit., pp. 310-11.

33. I am grateful to Allen Lee, Ph.D. student at MIT for his insights on implementation. I present part of our March, 1981 discussion here, having elaborated on Allen's initial thoughts on the "combinations" of factors that can undermine program implementation.

34. Williams, Walter, "Implementation Analysis and Assessment", Policy Analysis, Vol. 1, No. 3, Summer 1975, p. 451.

35. Bardach, op.cit., p. 250.

36. Rein and Rabinowitz, op.cit., pp. 39-40.

37. Rosenbaum, Walter, The Politics Of Environmental Concern, 2nd edition, New York: Praeger Publishers, 1977, p. 114.

38. Sabatier and Mazmanian note that the 1964 Civil Rights Act, the 1966 Voting Rights Act, and the California which created the California Bay Conservation Commission, are statutes that have been successfully implemented, op.cit., p. 482.

39. Ibid.

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