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A THEORY OF ECONOMIC DEVELOPMENT
AT WARM SPRINGS INDIAN
RESERVATION, OREGON

by

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A THEORY OF ECONOMIC DEVELOPMENT AT WARM SPRINGS INDIAN RESERVATION, OREGON

CHAPTER I

Introduction

This chapter will present a brief historical, descriptive background of the Warm Springs Indian Reservation of Oregon and treat the possible usefulness of Warm Springs as a study in the application of a specific theory of economic development.

The background statement will (1) present a brief historical sketch of the Reservation and the people. This will cover the origin of the Reservation, a sketch of the present inhabitants and their Tribal ancestors, plus various factors which have strongly influenced activities on the Reservation; (2) examine briefly the nature of the economy and the society of the Reservation; (3) develop summarily the background of the Oregon State College Warm Springs Research Project during the 1958-60 period.

This will be followed by a short statement treating the question of the usefulness of Warm Springs in studying problems attendant with economic and social development.

Brief History of Warm Springs

At best, the information necessary to an adequate and

concise history of the Warm Springs Indian Reservation is spotty and piecemeal. Available data permit only the piecing together of individual aspects of the Reservation, such as the Treaty of 1855, lumbering, medicine, religion, and education. No sources are available which give an integrated history of the Reservation and its people. The purpose here is not to write such a history. However, a few background details will aid in picturing the area and the people. Combining these historical data with the economic and social background to follow, a modicum of understanding of the extent and duration of some of the problems facing Reservation inhabitants should develop.

The Warm Springs Indian Reservation was established by Treaty in 1855. The Treaty, signed following the June 22-25, 1855, Council meeting at Wasco, near the Dalles on the Columbia River, covered the Confederated Tribes and bands residing in Middle Oregon. These were the Sahaptin or Warm Springs and Wasco Indians. The Confederate Tribes and bands were comprised of the Taih or Upper Deschutes band of Walla-Wallas, the Wyam or Lower Deschutes band of Walla-Wallas, the Tenino band of Walla-Wallas, the Dock-Spus or John Day River band of Walla-Wallas, the Dalles band of Wascos, the Dog River band of Wascos, and the Ki-gal-twala band of Wascos (22, p. 68). The Paiute Indians on the Reservation are

descendants of bands of Paiutes arrested and taken to the Warm Springs Reservation by the War Department during the military campaign against them between 1865 and 1868. Also, part of a group held on the Yakima Reservation following the Bannock War of 1878 migrated to the Warm Springs Reservation. These groups were accepted by the others, allowed to remain, and established homes (4, p. 160-161).

The Reservation area to which the Tribes and bands were moved contained 600, 000 acres, more or less, according to the first Superintendent (22, p. 6). However, the Treaty definition of the boundaries was extremely vague and created a problem which has persisted to the present day. The Reservation acreage is currently recorded at 563, 916 acres. The discrepancy between the acreage within the boundaries described in the Treaty of 1855 and the current Reservation acreage is an area along the Western and Northern boundaries. This area is commonly referred to as the "disputed area", and comprises 61, 360 acres. Despite surveys in 1887 (Western boundary) and 1917-18 (Northern boundary), the disputes continued until 1948 when they were apparently settled, agreeably, by Act of Congress (25, p. 1237-1238). The 1948 Act granted the people of the Warm Springs Reservation all of the timber and grazing income from the "disputed area".

After the treaty of 1855, Reservation lands were used in common for a number of years, without individual ownership. However, in 1887, the General Allotment Act was made law and in 1888 the first allotments or grants of land were made to individual Indians. These grants of land ranged up to 160 acres. While the individual Indian owned the land, in the sense that he could pass it on to his heirs, the individual allotments, like all non-fee Indian lands, are held in trust by the United States. The essence of the trust arrangements is to preclude the individual Indian from selling or otherwise disposing of his land, to his possible detriment, without the consent of the Federal government. Virtually all individually allotted lands on the Reservation have passed into heirship. There were 144, 296 acres originally allotted to individuals at Warm Springs. Survey data indicate 94, 768 acres remain in heirship disputes, 4, 554 acres are held by original allottees still living, but soon will pass into heirship status, and 3, 598 acres have been fee-patented. Allotting of land to individuals ceased in the early 1930's. However, by continued fractionation of ever smaller heirship shares, the passage of time at Warm Springs has created 3, 985 separate individual ownerships of the 94, 768 acres of heirship land (21, p. 20 and 106).

Although the Indians relinquished claims to large areas of land in signing the Treaty in 1855, supposedly, they were to retain in perpetuity, their fishing rights on the Columbia River in the area around

the Dalles-Celilo region. This also applied to tribes and bands other than the Warm Springs-Wasco group. The Umatilla, Nez Perce and Yakima Indians also were to retain their traditional fishing grounds. When this aspect of the various treaties was broken to permit construction of the Dalles Dam in the early 1950's, the Federal government paid the various Tribes involved a total of \$26.9 million. The Warm Springs received \$4.5 million, the Yakima \$15.0 million, the Umatilla \$4.6 million, and Nez Perce \$2.8 million. 1/ Construction of the Dalles Dam near the Celilo fishing site terminated commercial fishing activity in this area by these Tribes. Available early history of the Warm Springs-Wasco groups in this region reveals that their economies were built around fishing, mainly salmon. They practiced little, if any, agriculture. The Paiutes were mainly hunters and gatherers; they practiced little or no agriculture.

The attempt to transform activity patterns of the Indians began almost immediately after the Indians were moved to the Reservation. Article 4 of the Treaty of 1855 provided that, in addition to the money and provisions given the Indians, the Federal government would build a saw mill, flouring mill, hospital and other buildings on the Reservation. The early grants of money were to assist in financing the breaking and fencing of land, and, in general, to start the

1/ The data on division of Celilo settlement monies were provided by Mr. Vernon Jackson, Secretary-Treasurer, Confederated Tribes of the Warm Springs Reservation of Oregon.

development of a Reservation agriculture. Lumbering began on a small scale in 1861 upon completion of the promised saw mill. The saw and flouring mills were housed together and were built on Shitike Creek at the present Agency site. Depletion of timber in the immediate area of the Agency, along with decay of the mill led to construction in 1880 of a new mill on Mill Creek about 15 miles from the Agency. This is the site now known as Old Mill. Other small saw mills were built in 1915 at Seeksequa and He-He, but the first timber sale of appreciable size was the Schoolie Unit in 1942 (22, p. 91-92). This was the first significant entry of outside firms into Reservation activities and led to construction of the Warm Springs Lumber Company mill, and the smaller Dahl Pine mill.

While the Treaty of 1855 promised both medical and educational buildings, neither was built until some time afterward. "White" medicine was introduced to the Reservation prior to educational facilities. The first doctor came to the Reservation in 1859. However, it was not until 1938 that the present hospital was opened. The first Indian Boarding School was started in 1874 with rather makeshift arrangements set up in various buildings. The first school facility, as commonly defined, was built at Sinnasho in 1881. Another school was built at the Agency in 1896. In 1880 the first Indian children were taken to the Indian School at Forest Grove and,

in subsequent years, to the Salem Indian School. Present school facilities were built in the same year as the hospital, 1938 (22, p. 99).

Although the Reservation was traversed by the old North-South Indian Trail, and by various explorers, it was relatively isolated until quite recently. This does not imply an absence of contact with whites. There has been continuous contact, especially through the Bureau of Indian Affairs, a Resident Extension Agent, and farmers immediately adjacent to the Reservation. The first bridge over the Deschutes River was built at the Mecca site in 1912. Acquisition of rights-of-way for State Highway 53, the Madras-Portland cut-off, was not begun until 1933 (22, p. 100-102). Much of this was subsequently paved and became Federal Highway 26. The opening of the completed highway in 1949 finally threw the Reservation open to frequent and easy contact with the outside, both through access of whites to the Reservation and greater ability of the Indians to leave for commerce and travel.

From the Treaty of 1855 to the passage of the Indian Reorganization Act (IRA) of June 18, 1934, the single dominant voice affecting Reservation policy was the Bureau of Indian Affairs. Subsequent to the IRA, the "Warm Springs Tribe" adopted a Constitution and by-laws under the name, "The Confederated Tribes of the Warm

Springs Reservation of Oregon". These were approved by the Secretary of the Interior on February 14, 1938. On March 31, 1938, the Secretary of the Interior issued a Corporate Charter making a Federal corporation of the Confederated Tribes (4, p. 164). Technically, this was to give Tribal government an influential voice in Reservation policy. However, through provisional and exception clauses in the Corporate Charter and the Constitution of the Confederated Tribes, all decisions regarding asset management and structure are subject to review and possible veto by the Secretary of the Interior or his delegate. While the IRA purported to establish Tribal self-government, aiming at generating self-reliant, responsible and capable Tribal organizations, the Federal government has been either unwilling or unable to follow a path which would place an increasing burden of responsibility on Tribal governments. The results of this can be seen at Warm Springs. At the present writing, the Confederated Tribes are not capable of managing their own affairs despite almost 25 years of "self-government" under the IRA.

This is not a condemnation of the government position. The nature of the Federal trust responsibility appears to preclude any overt risk in managing various Tribal assets. This means the Federal government has perhaps been unwilling to place an increasing burden of responsibility on Tribal governments in general because

they have been unable to do so in light of their trusteeship responsibilities. As Davidson has pointed out, "A direct consequence of this liability (i.e., for improper discharge of the duties and responsibilities concomitant with the trustee-beneficiary relationship) is a reluctance to transfer responsibility and a reluctance to permit untrained persons to undertake the duties. The Indian, therefore, is foreclosed to an extent from developing an ability to manage his affairs. In the main, this is a self defeating process...." (7, p. 103).

Admittedly, such a sketchy history of the Reservation must omit many incidents which have contributed to the development of the area and the people. However, the purpose has been simply to outline the factors which appear to have been the most significant for Reservation development to date.

Nature of Warm Springs Economy and Society

As indicated earlier, the pre-Reservation economy of the Warm Springs and Wasco Indians was primarily based on fishing, supplemented by berry and root gathering while the Paiutes were oriented primarily toward hunting and gathering. This pattern of existence suggests an annual cycle orientation in economic activity. At appropriate seasonal times Tribal or band movement would take

each group to the places where the various dietary components of existence were available. With an annual cycle orientation to activities, it is apparent in retrospect that such an annual cycle time span was extremely short for coping with what was to follow, once the groups were moved permanently onto the Reservation. Despite orientation of the Indians to this semi-nomadic way of life, movements to the Reservation brought immediate introduction to white agriculture.

It is true that the production of many agricultural products is an annual sequence or cycle. However, the economic organization necessary to sustain individual firms in agriculture requires orientation to a time span greater than that of an annual cycle. The first Reservation agriculture was mainly dry-land wheat and livestock, principally horses. The passage of time and various changes have altered the composition of agriculture, but orientation remains in the direction of dryland cash grain and livestock; mainly cattle at the present time. Two anthropologists, David and Katherine French, contend that the agriculture introduced to the first Reservation inhabitants was seen principally as an addition to the basic culture and economy, rather than a major change in the direction of activity (10, p. 8-9). This view suggests that only those aspects of white agriculture would be accepted which would not interfere with

continued performance of, at least, the major segments of pre-Reservation activities. Changes would be interpreted in terms of existing orientations. Such an interpretation would adjust the changes to minimize disruption in existing activities and so reduce the actual extent to which the existing activities would be altered. Simple cropping and livestock operations could be so adjusted. Crops planted in the Spring could be harvested in the late Summer. Horses could be turned out on the range and allowed to move as the weather and feed availability dictated.

The introduction of additional crops such as oats, barley, clovers and alfalfa, irrigation practices and cattle raising have not necessarily altered this basic orientation. Current agricultural practices suggest that over one hundred years of teaching and demonstrating by the Bureau, and a rapidly developing agriculture around the Reservation have made slight progress in establishing the type of agricultural organization necessary to the utilization of modern technology in a predominantly industrial economy. Land is still cropped annually; cattle and horses are still allowed to range at will; there is little or no planned breeding of livestock; irrigation is haphazard; and the same individuals will periodically move into and out of agriculture.

It is not possible to give an accurate statistical description of

agriculture on the Warm Springs Reservation. Not only are data incomplete, but it tends to be internally inconsistent. It is possible, however, to show the general nature of the agricultural resource.

The Bureau of Indian Affairs made a soil survey in 1959, mapping 55, 304 acres of land in the traditionally settled areas of the Reservation. Within this mapped area there are 19, 042 acres of tillable land. There are no accurate data on the total acreage of land currently being farmed. It is known that there are 1, 286 acres of land being assessed as irrigable. However, between 1950 and 1959 the acreage actually irrigated ranged from 18 percent (233 acres) to 57 percent (746 acres) of the assessed acreage. Presumably, the remaining 17, 756 acres are available for dry farming. Estimates of cropland being dryfarmed range from 12, 252 acres to 21, 268 acres (21, p. 90-99).

The principal crops grown, both dryland and irrigated, are wheat, barley, oats, and mixed alfalfa hay. The noticeable absence of modern technology, practices and organization can be best seen by considering the yield differentials which exist between Warm Springs and adjacent farming areas. These data, in Table 1, are for similar soils and climate.

The livestock and grazing activities on the Reservation reflect a noticeable absence of adequate management as do cropping activities.

Table 1. Comparison of Per Acre Crop Yields Between Warm Springs Indian Reservation and Adjacent Farming Areas, Dryland and Irrigated.

Crops	Dryland				Irrigated			
	Reservation Areas		Difference	Percent	Reservation Areas		Difference	Percent
	(1)	(2)	(1) - (2)	(1) is of (2)	(1)	(2)	(1) - (2)	(1) is of (2)
Wheat (bu.)	12.9	28.7	-16.1	44.9	19.8	56.0	-36.2	35.4
Barley (bu.)	9.3	40.0	-30.7	23.2	27.0	70.0	-43.0	38.6
Oats (bu.)	16.7	42.0	-25.3	39.8	40.0	70.0	-30.0	57.1
Alfalfa (tons)	.75	1.0	-.25	75.0	2.3	4.2	-1.9	54.8

Source: Reference 21, p. 118

Data gathered for the Oregon State College Warm Springs Research Project (21, p. 25-26) suggest that cattle numbers range from 3,000 to 4,000 head; the calf crop ranges from 25 to 45 percent, and bull-cow ratios are, on the average, between 1:30 and 1:35. Cattle operations in areas adjacent to the Reservation obtain 80 to 90 percent calf crops with bull-cow ratios, on the average, of 1:25. The large difference in performance is mainly accounted for by a lack of planned breeding, insufficient bulls, inadequate herding, and poor general management of Reservation livestock herds or ranges. The absence of adequate range management has resulted in Spring-Fall ranges being markedly overgrazed and Summer ranges noticeably undergrazed.

The current conditions prevail despite the presence of technical and financial assistance through the Confederated Tribes, the Bureau of Indian Affairs, and the Extension Service (technical only). It is clear that the attempt of these agencies to institute agricultural improvements and, in general, reorganize agricultural activity has met with little success.

The major portion of the income of the Warm Springs people is derived in some manner from the Reservation forest. There are a few Indians who work in the forest, on crews cutting timber; there are a few others who are employed in one or the other of the two saw

mills on the Reservation. The report on employment developed for the Oregon State College survey indicates that there are approximately 275 forestry and mill jobs available in the local economy. Tribal members held only 24 of these jobs, as of the summer of 1960 (6, p. 94). The other means by which income is derived is stumpage sales of Tribal timber. The bulk of this is distributed to Tribal members in direct per capita payments. The opening of the Reservation forest to full-scale commercial cutting can be viewed as another major change in the Reservation economy. Opening of the forest on a commercial basis meant a significant jump in available income to the Tribes. However, like the introduction of white agriculture, the benefits accruing from the opening of the forest seem to have been viewed simply as an addition to existing activity. Utilization of forest income for per capita payments has appeared as a means to accept the most desirable aspect of this change; forcing it to fit pre-conceived patterns of activity and change.

Distribution of monies in this fashion permits less dependence upon employment (less than 10 percent of the forest and mill jobs are filled by Indians) and less need to upgrade agriculture. It frees the Indian, as it were, from having to accept those aspects of the white culture and society which are the least desirable to him.

It is not reasonable to expect the complete aboriginal culture

and society of the Indians to have remained unchanged to the present day. The impact of the dominant white culture and society, as well as intra-Reservation adjustments, have brought major changes at Warm Springs. For example, movement into the Agency area from the more rural regions of the Reservation has resulted in 60 to 70 percent of the population residing in the village of Warm Springs. This has tended to break down some of the feelings arising from close affiliation with a particular Tribe. In earlier times there was rather sharp delineation among the Tribes according to the area of the Reservation occupied. The Warm Springs were largely in the northern portion, the Wascos in the central areas and the Paiutes occupied the poorest southern regions. To some extent this demarcation continues, but to a much smaller degree.

It is clear from only a cursory inspection of Reservation activities that many aspects of the ancestral culture and society of the current inhabitants have been changed through time. The language of a century ago is little used today, especially by the younger people. The clothing, housing, food, and, in general, much of the way of life of the current Reservation inhabitants have changed to such an extent that it is easier to find the "non-Indian way of life" than the "Indian way of life". However, it must also be recognized that the present inhabitants (the descendants of the first inhabitants)

have not become "non-Indians" in the sense that they are like the people in the surrounding communities. The situation is more one of the people on the Reservation resembling both groups and yet not like either. They are marginal people (19, p. 285). In a paper on the Warm Springs culture and society, Professor Plambeck says, "Marginal people live in two-culture worlds and they tend to utilize something from each, depending on what is more practical and more acceptable for the occasion" (19, p. 286).

The degree of marginality, the closeness to one group or the other, appears to vary a great deal with age. The younger tend to be closer to the white culture and society of the surrounding communities than the older people. It is clear that this is largely due to the differences in the life experiences of the two groups. Continuous addition to the early Indian life of small facets of the dominant white mode of life has left less and less of the Indian culture and traditions to transmit to the new generations. Since marginality varies with age, the older people would tend to interpret things more in line with traditional values. When the younger people recognize the inappropriateness of such interpretations they will tend to question the wisdom of the older people. This leads to reluctance and even refusal of the younger people to accept the decisions of the older people and a rejection of the values upon

which the decisions are based.

At Warm Springs, the current Tribal decision processes are largely in the hands of the older generations. As was pointed out earlier, it is noticeable that the younger generations are absent from the Tribal functions and the General Council where most major Tribal policy matters are discussed. As the younger generations pull back from participation with the older generations, traditional lines of discipline are broken. Thus, "A void is created until other disciplinary measures are acceded to by the ones to be disciplined. It is characteristic of many marginal people that they lack a sense of obligation to yield to either of the two groups between which they stand because they are not full-fledged members of either" (19, p. 286). Depending upon the circumstances, the way of life at Warm Springs today could be characterized either as "part-time Indian" or "part-time white" (10, p. 10).

While it is true that the older generations control Tribal policy, the majority of the population is under 20 years of age (9, p. 27). As the population grows and the younger people continue to receive more and more education off the Reservation, it is to be expected that dissatisfaction with the status quo will mount. A growing population and an expectation of declining per capita payments (due both to a decreased timber cut from Reservation forests and a larger

population) could easily generate a desire to dissolve completely Reservation assets. One thing is clear, however; the existing social and economic structure which is both a cause and a result of the marginality of the Warm Springs people is incompatible with a productive future at Warm Springs. It is at this point that the problems of economic and social development begin to be apparent. In attempting to find solutions to the problems of development, it is possible to utilize Warm Springs as a study in the application of a particular theory of economic development.

The Warm Springs Research Project

In 1958 the Confederated Tribes of the Warm Springs Indian Reservation of Oregon commissioned a research project at Oregon State College. 1/ The objectives and areas to be covered by the project were set out in a Memorandum of Understanding, dated 6 June 1958, between the Tribes and the College. The project was originally conceived as two separate projects, but, in actuality, all phases were carried on as a single project. One portion called for a "determination and appraisal of the Reservation's current and potential human resources and social conditions" (15, p. 3). The other

1/ The use of "college" is technically correct, since the change in name to Oregon State University occurred after this time.

portion "was a similar appraisal of the Reservation's physical resources" (15, p. 3).

There are two important reasons for discussing the Research project separately in this paper. First, the project and the manner in which it was handled mark another important change for the Warm Springs people. The project was the first of its kind and magnitude to be financed wholly by the Indians. The exception here was the Soil Survey made by the Bureau of Indian Affairs. Reportedly, however, this was about to be made anyway. The project represented an attempt to find the extent of the base on which a program of economic and social development could be built. The lengthy and repeated explanations of project results which have been (and continue to be) made to the Tribal Council and the people are the first real attempts to apprise Tribal members of their Reservation, its condition, and potentials. Second, the Project studies will be the basis of any further work or discussion concerning alternative means of developing the Reservation economy and society. While it is not necessary to describe and discuss the individual parts of the entire project, it is necessary to indicate the assumptions on which the project as a whole was based, and give a brief overview of the project.

"First, it was assumed the Reservation would continue to

exist indefinitely as a legal, political and physical entity" (15, p. 8).

This determined not only the way in which resources were studied and the character of the recommendations, but also the nature of many of the data which was sought.

"Secondly, it was assumed that the development of the Reservation's resources would necessarily involve and depend upon increasing participation by its people in the process" (15, p. 8). The implication here is that in a process of planned change, the ability of Tribal members to manage their individual and collective affairs would increase. Many things not done by the Bureau of Indian Affairs would, in time, be duplicated or overlapped by growth and changes in the abilities of the Tribal members. This implies development would necessarily be a Tribal-Bureau cooperative venture.

"Finally, nothing in the Report is intended to imply that members of the Confederated Tribes should be or would be better off were they to be 'assimilated' or 'integrated' into off-Reservation society. The project took the position simply that as and when individual enrollees decided to migrate they would be increasingly better prepared to do so as the social and economic life of the Reservation was developed" (15, p. 8).

Development of the human and physical resources available to the Tribes, along lines recommended in the Project Reports, will

involve many changes in traditional patterns of Reservation activity. The project recommendations were not organized in such a way that any single resource could be developed to the exclusion of others. Therefore, many recommendations cannot be implemented without implementing or involving others (15, p. 9). Interrelating recommendations offered an opportunity to show why, if certain things are desired, existing activity patterns must be changed, and how these, in turn, would have implications for other areas of activity. As such, the report was useful for helping the Warm Springs people understand why they are, economically and socially, where they are, as well as what can be done to achieve potential benefits from their available resource base.

Ultimately, however, any lasting success which the Tribes will have in developing the Reservation will depend upon the character of the leadership found in the Tribes. "In short, while the results of this project may be a necessary condition, leadership is the sufficient condition if the Reservation's development is to be brought to pass"(15, p. 10). The reports are then only a first step in the development of the Reservation. The emergence of a tenacious, yet flexible, leadership will determine whether the Tribes will be able to accomplish any lasting results. "In a very real sense it can be said that the Confederated Tribes have not in the past had well-articulated goals to guide the conduct of their affairs; formulating

them will be a venture new to them, one in which they will need assistance both from within and from without their membership" (15, p. 10). It is probably the important function of leadership to articulate the goals for their people and guide the decision process whereby action is taken toward attaining goals.

Warm Springs and A Theory of Economic Development

It is clear that the economy and society of the Confederated Tribes have undergone many changes since the first inhabitants were moved onto the Reservation. It is also clear that the inhabitants of the Reservation today are facing heavy pressures for even more drastic changes in economic and social behavior than have occurred to date. Production processes on the Reservation use resource input factors comparable to adjacent areas producing the same or similar commodities. Reservation products must sell in the same area markets as products produced adjacent to the Reservation. To the extent Reservation producers are not able to meet or better their competition, both organizationally and technologically, they cannot expect to earn returns comparable to adjacent areas. Socially, the coming younger generations are being educated and trained in an environment different from that of their elders. This will lead to increasingly more pressure for changes which will

move the Reservation ever closer to the dominant white culture and society. In a very crude manner the choice situation facing the Reservation as a political, economic and social entity is that it must change or cease to exist.

The Warm Springs Indian Reservation is a less developed area relative to the dominant system within which it must exist. It cannot be considered a "depressed area" as this term is generally conceived. A "depressed area", generally, is thought to be an area with a recent past history of relative prosperity. Because of some technological change, or change in the demand factor for the products of the region, or depletion of the resources of the area, the area experienced declining income and rising unemployment. Generally, these are simply "backwash" areas of the dominant culture and society. For example, areas following this pattern are the coal mining regions of Pennsylvania and West Virginia which have the burden of the transfer from coal to petroleum; or the cut-over Lake States which experienced the depletion or exhaustion of its extensive white pine forests, copper mines and iron deposits.

Warm Springs differs considerably from this type of area. Portions of the dominant white culture and society have permeated the Indian Reservation, but largely in a haphazard, piecemeal manner. The changes which have taken place up to the present time have

been too incomplete, sporadic, or inconsequential to result in a major restructuring of the economy and society at Warm Springs. Consequently, most members of the Confederated Tribes, either individually or collectively, have not developed the ability to manage fully their own affairs in the world in which they must live. While it is true that the range of changes necessary to a fuller development of this ability may have been narrowed somewhat by the changes which have taken place to date, it is also true that if the Warm Springs people are to manage or direct their own affairs, both individually and collectively, a wide range of change remains to be instituted. The scope of the change which must take place poses a significant problem in economic development and human engineering.

An underdeveloped society has certain characteristics, as does the advanced or developed one. Theories of economic development or change are put forward to explain the process of transition from underdevelopment to a state of advancement. They postulate various behavioral-attitudinal and/or economic relationships as being central to the transition. It is assumed that there is a desire for economic advancement. Particular factors impeding or assisting the process will be outlined and discussed. These will depend upon the source of the initial impetus for change (whether from external or internal pressures) and the characteristics of the culture and society.

Various hypotheses explaining the nature of occurrences in the under-developed socio-economic system will be put forward. Particular policies based upon these explanations are then offered to meet or counter the impediments and push the positive forces to the forefront.

It appears possible to use data from Warm Springs to see whether the behavior postulated by a theory of economic change or development exists. In the case of Warm Springs, changes have actually taken place. The question to be asked would then be: have the phenomena occurred which would be expected on the basis of the particular theory? This would also permit investigation of the relevance of a particular development proposal or strategy. If economically and socially relevant change has been, and is, taking place at Warm Springs, and behavioral-attitudinal and/or economic relationships are observed which are consistent with postulated relationships, the particular development proposal would be relevant to the situation.

Objectives of the Study

Utilizing the setting at and data from the Warm Springs Indian Reservation, this study attempted to accomplish four objectives. These were: (1) application of the Hirschman theory of economic

development; (2) develop an approach for a development policy at Warm Springs; (3) provide a basis for revision of the development policy prevailing in the United States Department of Interior, Bureau of Indian Affairs; and (4) investigate whether the theory and the setting at Warm Springs offer any base for a general development policy in foreign countries.

The first objective, application of a theory of economic development, should not be misleading. The attempt to apply a theory of economic development will be more than a discussion of how the particular theory, with its devices and development tools, could be applied at Warm Springs. The theory with which this paper will deal is that put forward by Albert O. Hirschman (11). Application of the Hirschman theory will consist in determining whether manifestations of the behavioral-attitudinal relationships, postulated by Hirschman as being the root of the problem of economic development, are observable at Warm Springs. Do these relationships exist? In what form? What manifestations can be expected if they do exist?

This theory consists of two primary parts. The first concerns forces which impede or corrode development. The second concerns a series of devices or mechanisms to mitigate the influence of the impediments and corrosive factors. The portion of the theory concerned with development impediments can be tested by reference to underdeveloped areas experiencing heavy pressure for economic

and social change. The second portion cannot be tested by reference to the real world at a point in time. A span of time is required whereby these devices or mechanisms, designed to induce development, are actually implemented. Testing would then be accomplished by success or failure of the program so instituted. However, if the behavioral-attitudinal-economic relationships posited by Hirschman do, in fact, prevail, there would be evidence at hand that application of his development strategy would be warranted. That is, his theory would have more foundation as a general theory of development. For this to be widely accepted, however, further testing in different situations and different stages of development would be required.

The second and third objectives may be discussed jointly in that this study may be able to provide a modicum of intelligence for a development policy both at Warm Springs and in the Bureau of Indian Affairs. The Oregon State College Warm Springs Research Project was a useful beginning in the development of the human and physical resources on the Reservation. However, the particular strategy used to implement the many recommendations will play a major role in the ability of the people to build and sustain an economic and social organization capable of yielding income, employment, and general social improvement over time.

The legal status of the Warm Springs Indian Reservation

suggests that policies appropriate for Warm Springs may be appropriate for other Reservations with the same status, albeit adjusted appropriately to their special circumstances. The Tribes on the Reservation were reorganized under the Indian Reorganization Act of 1934 as the Confederated Tribes of Warm Springs. The apparent intent of this legislation was to provide a base from which Indian Reservations so organized could embark on a course of economic, political and social development; the terminal point supposedly would be independent entities capable of managing their own affairs. This has not occurred. A means can be provided by which the initial purpose of Federal policies can be accomplished, for the betterment of the Indians themselves.

Finally, it was hoped that a study of Warm Springs and the Hirschman theory would provide a basis for making a statement concerning implications of the theory for foreign economic development policy. A moment's reflection on the Hirschman theory would point up immediate differences between current policy and a reoriented policy along the general lines of the theory. Perhaps the potential implications of the Hirschman theory can be better understood by quoting a short excerpt:

"An attempt to make the most of this positive relation between development and the tensions it creates would lead to a new emphasis and to greater effectiveness in extending technical assistance and policy advice to underdeveloped countries.

Economic advisers would be far less given to determining priorities from the outside, after an expert look at the country and its resources; they would instead be intent on discovering under what pressures people are operating and toward what forward steps they are already being impelled. Instead of laying down 'first things first' rules, they would try to understand how progress can at times meander strangely through many peripheral areas before it is able to dislodge backwardness from the central positions where it may be strongly entrenched.

"Ineffectiveness, which is too often the expert's lot, is also frequently the earmark of official economic policies. It manifests itself in the unsuccessful legislating of progress, in the promulgation of development plans that nobody takes seriously, in the establishment of abortive reforms and stillborn institutions....." (11, p. 209-210).

CHAPTER II

The Problem Situation

A statement of problems may be in terms of one or more felt needs and/or some optimum or equilibrium concept. That is, there is a need to explain, or provide an answer for, a particular phenomenon or occurrence which is causing some form of difficulty. There may be some imperfection in or deviation from what is considered as optimal. This study is to assist in providing answers to two specific problems: (1) the absence of (i.e., need for) a general theory of economic and social development, and (2) the wholly inadequate development policy at Warm Springs and in the Bureau of Indian Affairs.

A General Theory

The distinct need for a theory of economic development which will permit translation into operational terms of changes in both purely economic variables as well as changes in social and cultural variables, i.e., a theory relating economic development to cultural and social change, is noticeable by its absence (12, p. 23-27). How does a country go about transforming itself from a state of underdevelopment to one of development? What is the transition process?

Hozelitz has pointed out that, "This process involves not merely a reshaping of the 'economic order' but also a restructuring of social relations in general, or at least of those social relations which are relevant to the performance of the productive and distributive tasks of the society" (12, p. 26). Hence economic development requires a broad program of human engineering designed to create social relations compatible with advanced economic enterprises.

Basically, the concrete problems of transforming an underdeveloped society into a developed one, involve more than purely economic variables. But what variables? How are these related? Myrdal points out that, "underlying and steering every systematic attempt to find out the truth about society, there is therefore always a theory: a vision of what the essential facts and the causal relations between them are" (17, p. 160). Facts come to mean something only when they are organized and ascertained in the framework of a theory. Even more basic a point may be made; theory is necessary to determine what questions are to be asked. A theory of economic development restricted to or by the traditional division of the social sciences has no basis in reality; as pointed out earlier, problems to be faced in the transition process are not solely economic, sociological, psychological or political. Myrdal has pointed out that theory of development which restricts itself to only one of these without

attempting to explain or operationalize the others "is for logical reasons doomed to be unrealistic and thus irrelevant" (17, p. 162).

Simply transferring growth models from advanced to under-developed regions seems to be ignoring the reality of the situation. Hozelitz has pointed out that the main problem involved here is that these models have been developed from "propositions on the pattern of economic growth and associated social change under specific historical conditions encountered by countries of the western world in the last three or four hundred years" (12, p. 27). Furthermore, they usually originate in attempts to construct solutions to specific problems as of a specific point in time. The more useful they are in one setting the less so they are likely to be in another (11, p. 29). Discussion about growth in advanced countries remains "anchored to the principal concepts...: the savings function, induced vs. autonomous investment, the productivity of capital" (11, p. 31). Fundamentally, the parameters of the models are chosen to give them greatest relevance for the environment in which they are designed to work.

The availability of a general theory would provide the tools necessary to study the process of change in any setting. Why are development decisions not made? What causes development starts to go awry? What factors slow down or speed up the process of economic and social change? In situations of this type, theory may

be useful in two contexts: (1) to predict the consequences of alternative development policies or to understand and explain the development process, or (2) to use on a normative basis to prescribe action which will achieve a particular end. However, to permit concentration upon the forces impeding change, and so permit either of these uses, there is required a theory which provides insight into the nature of the structure of socio-economic relations, how these influence one another, and how these are influenced when the thought of change and/or forces for change emerge.

Indian Development Policy

In his work with the Menominee and Indian problems in general, Dorner has summarized the present situation quite well. He points out that the general problems of economic development being faced by American Indians, "while unique in many respects, do have some similarity with those encountered in the underdeveloped nations of the world. Cultural differences, high birth rates, low levels of education, poor health, weak and unstable governments are all part of the scene" (8, p. 162).

Virtually all problems and/or phenomena have one or more unique features, if only they occur in different times or places; or they arise from differences in activity sequences. Nevertheless,

the same general class of phenomena may be capable of explanation by a single theory or theoretical framework. A framework capable of handling development tasks on American Indian Reservations may also be applicable to general questions of economic and social development. However, it should be recognized that a framework found to be applicable to American Indian Reservations is not necessarily a general theory. On the other hand, if a theory has been postulated to explain general economic development, it may be tested by reference to the Indian development problems. This merely means the theory can be refuted as a general theory or have a single confirmation provided for it.

Quite frankly, the concept of economic and social development in the Bureau of Indian Affairs (BIA) has been inadequate. The 1928 study of the BIA, known as the Meriam report, summed up the history of BIA economic development attempts to that time as follows: "Even under the best conditions, it is doubtful whether a well-rounded program of economic advancement framed with due consideration of the natural resources of the reservation has anywhere been thoroughly tried out" (quoted in 8, p. 163). It is Dorner's view that, with a few exceptions where tribes have financed their own program, this statement is applicable today. The program called economic development by the BIA sets major emphasis on relocation of reservation

Indians in cities and on getting industrial plants set upon or near reservations (8, p. 164). Relocation has been subsidized since 1952 with an additional feature in 1957 of adult vocational training. The industries established have been aimed at using only one reservation resource--labor--rather than an integrated use of all local resources.

Thus the BIA concept of development has appeared more as a series of stop-gap emergency measures rather than a process of increasing productivity over a long-run period through investment in a development program constructed as a set of priorities, indicating the investment order generating the greatest direct and complementary effects on Indian income, productivity and employment. 1/

However, a very real attempt to revamp its reservation development policy may be emerging. The fact that the BIA not only supports and cooperates in such Indian financed projects as at Warm Springs, and appropriates project money directly as at Fort Hall, Idaho, suggests a genuine concern to build a sound integrated program in the BIA itself. The point here is that while past activity of the BIA in economic and social development may have been inadequate, it is much to the credit of BIA leadership that steps are apparently being taken to remedy this situation.

1/ For an excellent discussion of the basis for the inadequate concept of economic and social development in the BIA see reference 8, p. 168-170.

The reflection of the inadequate approach to development and its inability to generate needed changes can be seen quite clearly at Warm Springs. 1 / The employment of Indians (Chapter I, p. 15) in available jobs is low relative to the number of jobs available. Income from timber and water resources has been used simply to finance some activities previously handled by the BIA and to make per capita payments to individuals. Neither of these gives individuals needed experience, incentive, or new capacity to improve themselves, even though such improvements are possibly the greatest needs. There have been few visible improvements deriving from resource exploitation. Yet population trends and existing dependency ratios point to the need for intensive and rapid development of skills and gainful employment if the population is to be supported.

The enrolled Warm Springs population in 1950 was 1,036. By 1980, population is expected to be 3,960, if the current rate of increase (5 percent annually) continues. Over half the current population is under 20 years of age. As of 1959 there was a dependency ratio of 102. This is simply the number of persons under 15 years of

1 / For a survey of Indian Reservations, in the aggregate, see reference 8, p. 162-164. The data and discussions are quite similar to that found in the Oregon State College Warm Springs Research Project Reports, except the work of Dorner is for the aggregate of all Reservations. The conclusions drawn concerning the problems faced are almost identical.

age and 65 years or older for every 100 persons aged 15 through 64 years. To permit comparison with United States Census data for the population as a whole it is necessary to look at 1950 figures. The dependency ratio for 1950 at Warm Springs was 92; for the United States as a whole it was 54.

Land tenure has been complicated by Federal laws and inheritance procedures to the point where an equivalent of over 80 percent of the usable farmland is tied up in heirship disputes. Farms as a whole are so small that utilization of large scale techniques necessary to the area would not be possible even if management ability were adequate. Constitutional limitations restrict acreage of land which individuals can obtain from the Tribes to either 80 acres of dryland and 80 acres of pasture or 40 acres of irrigated land and 80 acres of pasture. Average irrigated holdings are now 27.4 acres and dry cropland averages 97.9 acres. Cattle ownership averages less than 10 head, as do cattle sales. For 1959, gross farm and ranch income averaged only a bit over \$1,700 for the farms and ranches reporting to the Oregon State College Research Project. This was prior to any allowance for interest, depreciation, or farm expenses.

Health, education and housing conditions are considerably below those for the rest of the State of Oregon or for the nation as a

whole. With only a few exceptions, the Warm Springs people are not currently capable as a people of being turned into the dominant white culture and society. Yet the pressures for economic and social adjustments of the Indians to the dominant white society are increasing. If the Indians are to be able to earn adequate incomes from their resources and improve themselves in all respects, there is need for a considerably altered view of economic and social development in the BIA. As well, there is need for institution of a planned program of change at Warm Springs which approaches development from the view of handling or circumventing the factors which have impeded development and change to date.

CHAPTER III

Theoretical Framework and Hypotheses

The purpose of this portion of the discussion is to outline the elements of the theory being considered. The first section is merely a summary of the Hirschman thesis, presented in his book, The Strategy of Economic Development (11). 1/ What has been done is to excerpt, in summary fashion, those sections which define the causes of underdevelopment, the motivation behind the drive for development, and the process which makes development possible. The second section is concerned with the foundation underlying the Hirschman thesis. This was implied but not stated in the work cited. It is a synthesis of material from several sources and has been reinterpreted in terms of the Hirschman thesis. The third section draws out the application of the thesis to Warm Springs and the hypotheses to be tested.

The Hirschman Theory

The Hirschman theory is best summarized by first outlining the fundamental components of the theory and then showing how

1/ The material for the summary of the theory proposed by Hirschman was taken from (11, p. 1-49). However, where the material parallels the book very closely, specific references will be made in each case.

these are related and interact with each other. Fundamentally, the Hirschman theory is concerned with the process by which a social system is transformed from one type to another. As such the theory centers on the social and economic organization of a society and how this organizational structure impedes or assists development and change. The major components of the Hirschman thesis can be summarized in the following ten points:

1. Economic development is a process of transition from one type of socio-economic organization or structure to another.
2. The absence or scarcity of a particular productive factor (as capital or entrepreneurship) cannot explain economic underdevelopment.
3. Emergence of activities and personalities required for development is inhibited by value systems and attitudes prevailing in the less developed areas.
4. Resources and abilities necessary to development are available in the less developed areas, but are hidden, scattered or badly utilized; i. e., the resources and abilities are latent but conditionally available.
5. Energizing or bringing forth existing (but latent) factors and welding these into a dynamic force for development requires some form of binding agent. This agent comprises both a desire for development and a perception of the road leading to development.
6. Perception of the road to development requires a knowledge of the factors within the existing socio-economic structure which must be changed if economic development is to take place.
7. The way in which changes necessary to development will take place within a society is a function of how people think such changes must take place. That is, actual change

is a function of the image of change held by a people. This focuses on value systems and attitudes, e.g., the mechanisms of socialization and defense which a particular social structure erects to perpetuate and protect itself.

8. Society then simply fails to take advantage of its development potential. That is, it fails to draw together latent resources and abilities, because its image of change attempts to prevent alteration of existing patterns of activity.

9. Development decisions (i.e., actions which weld together available factors) are not made because of a deficiency in the resource combining process or decision process. Thus, there is one basic scarcity, the ability to make and implement decisions at the required speed and in the required number.

10. The task of development theory is to examine the conditions under which necessary development decisions can be called forth. Its task is to find the mechanisms which will induce needed decisions. The success of attempts to transform a society from underdevelopment to advancement then hinges upon the ability to find or create the sequence of activities which will induce needed decisions. The strategy is to circumvent the influence of existing images of change.

Based upon this view of underdevelopment and the process of transition to a developed state, Hirschman then proposes various tools for inducing development and creating the ability to make necessary decisions. The objective is to create situations where decisions will be made because there is some extra pressure behind them as a result of pacing, routine responses, threatened penalties, certain and high profitability, or other forces. It is the ability to make development decisions which conditions all the

other scarcities and difficulties in underdeveloped countries. It would be useful, at this point, to draw the above points together and show how Hirschman postulates the causes of underdevelopment, the motivations behind the drive for development and the process which makes development possible. Subsequent sections formulate the hypotheses for examining Hirschman's contentions in the Warm Springs setting.

Economic backwardness cannot be explained in terms of the absence or scarcity of some particular human type or factor of production. Attention should focus largely on attitudes and value systems which inhibit the emergence of required activities and personalities. The activities and personalities are not scarce or difficult to realize, provided economic development itself is initiated. This means development is held back by a series of "interlocking vicious circles". The realization of the different conditions of development depends upon economic development starting, but, in turn, development depends upon fulfilling the conditions. However, this also means that once the process of development has begun, the circles are likely to become upward rather than downward spirals, as prerequisites and conditions for development are brought into being (11, p. 5).

Looking at the process of economic development in this manner

permits focusing on a fundamental characteristic of the process:

"development depends not so much upon finding optimal combinations for given resources and factors of production as calling forth and enlisting for development purposes resources and abilities that are hidden, scattered, or badly utilized" (11, p. 5). This implies that once the process has started, all of the prerequisites for development will suddenly start to emerge.

This approach indicates much similarity between the problem of getting a developed country out of a depression situation and getting an undeveloped country or region onto a development path. In the case of the former, the problem is to recombine unutilized factors, (labor, plant, and equipment). In the case of the latter, the problem is to combine underutilized labor, unutilized or latent abilities and talents, and skill and techniques available from much more advanced areas (11, p. 6).

While these two situations may appear to be wholly different, with different solutions required in each case, there is a distinct commonality in solutions to both. As well, there is a distinct advantage gained by considering resources as latent, but conditionally available in both situations. In both cases, there is a need for some agent to bind together the requisites of progress and development. The difference is mainly one of degree. In the

advanced economy, the owners of factors have been conditioned to respond to inducements and pressures of a binding agent whose purpose is economic progress. This is not the case in an underdeveloped economy, indicating either the lack of the agent or the presence of an agent with objectives other than economic progress.

The main advantage of considering factors as latent, but conditionally available, is that attention is focused upon the dynamic aspects of the development process - a search for "pressures" and "inducement mechanisms" which will call forth and mobilize or combine factors (11, p. 6). Rather than husbanding scarce resources and maximizing yields as of a point in time, the concern is to call forth potentials over time. Development planning is then the systematic erection of a series of "pacing devices", i.e., devices or mechanisms which will induce a continuous flow of development decisions.

Since the uses of different economic resources have different repercussions or "feedback" effects on the stocks of these resources, this approach to development would focus attention on these differences. For example, use of capital in one direction or venture may make easier the complementary capital formation in another, increasing the stock of capital more rapidly. Entrepreneurial and managerial abilities are increased directly through use. The use of

some natural resources may simply result in depletion (no feedback at all) or may lead to development of substitutes. Such repercussions are the dynamism of a developing and growing economy. Since the search is for the mechanism which will elicit and mobilize the largest possible amounts of these resources, consideration of the different "feedback" effects is necessary to see which ventures will generate the greatest inducements for further movement.

Viewing development as a process of drawing together conditionally available resources and latent abilities may seem to be making the problem easier than it is in actuality. This is not the case. What is avoided is focusing on a specific missing component and thereby supposing the whole process can be set in motion by simply injecting this factor from the outside (11, p 7). The view of development being discussed simply says that the process depends upon the ability and determination of a people to organize themselves for development purposes.

This may not be as vague and tautological as it appears. By focusing on the determination of a people, an important aspect of development is considered, namely the fact that these regions are latecomers. The fruits of progress available in the economically advanced areas have become a visible reality. Contact between advanced and backward areas has created the desire and

determination to imitate, to catch up, or to follow suit(11, p. 8).

Determination is an important determinant of what will happen among these latecomers.

However, the determination and desire generated by being a latecomer to the development scene implies only that the underdeveloped regions see the fruits of economic progress. There is no reason to believe they have any advanced knowledge of the road which must be travelled in obtaining these fruits of progress (11, p. 9). Knowledge of the road, and how to travel it, is, after all, basic to the ability to sustain development (i.e., in a growth sense) once development has begun. Hence, determination, in itself, is not enough to sustain the development process. Furthermore, ability to perceive changes in a social structure, and the need for the changes, can only be achieved over time as successive obstacles are overcome. The tensions and pressures created by the development process are then not so much between the known benefits and costs of a venture as between the goal and the ignorance and misconceptions of the path to that goal (11, p. 10). The ignorance and misconceptions of the road to be travelled are what lead to false starts and frustration. At the same time, if determination is real, knowledge is generated about what must be changed and ability to handle and face problems is developed. If determination is real

there is a desire to acquire the knowledge necessary to make and understand needed changes.

The nature of the "binding agent" is now clearer. It is what might be called a "growth perspective". This comprises not only the desire for economic development and growth, but also a perception of the essential features of the road leading to them. This places the difficulties of development back where all difficulties of human action begin - in the mind (11, p. 10).

While determination to have (i.e., to find a way to attain) economic progress is necessary to the attainment of this goal, the perception of the road leading to the goal is of even greater importance. The latter sustains the process by increasing the ability to solve problems. The ability to perceive the institutional and character traits which must give way if development and growth are to be attained is mainly a function of the image of change held by a people, both individually and collectively. That is, once the feeling has been generated that change is both possible and desirable, then the manner in which people will view this change as taking place has a considerable impact on the manner in which it will take place. Quite simply, the idea of change may itself be an obstacle to change. This merely means that the way in which people think change must occur may preclude changes from occurring. The changes may be

repulsive to the existing view of how a society should be organized and how individuals should behave. Where a project violates the existing image of change, say by affecting different people differently, the project may fail because it is deemed to be in violation of the collective good. The image or idea of change which is most conducive to development is the group-and-ego focused image, i.e., that the individual can advance at his own speed without an expanding and changing economy.

The image which is most likely to arise in a previously static society is not group-and-ego focused, but either group focused or ego-focused. Both of the latter two are inimical to change. Both images give rise to conflicting desires and result in confusion of the will of a people. The group-focused image impedes the dynamic patterns of change which involve major transformations of a society. The group-focused image sees change as affecting the group as a whole. If progress is regarded as possible and desirable this image transforms the change and it is seen as affecting all members of the society equally. This means everyone is seen to remain in the same relative position and all advance the same amount. This image impedes change which would affect the relative positions of individuals. Quite simply, the "well adjusted" member of the group would not even desire isolated advancement "since social controls will so

fashion character that people want to act as they have to act" and find gratification in so doing (11, p. 12). If the group must progress together, the individual does not look for means of improving his individual lot. It seems clear that impediments created by this image have major implications for factors important to change, development and general social mobility involved in transforming and modernizing an economy. Implications for such factors as entrepreneurship (i.e., individual innovation) and land tenure patterns, for example, seem rather clear. The former would be virtually absent because prestige may be more easily acquired in non-economic ways. The latter, when seen as possible, would tend toward equal division of lands among farmers and could result in many uneconomic size holdings, actually lowering available total product.

The ego-focused image is harmful to the cooperative component of entrepreneurship when individuals view change as open to them only, at the expense of the rest of the society. That is, this image will prevent the reaching of necessary agreements among all interested parties to a project and thus affect the ability to enlist cooperation among the factors necessary to undertake development decisions. Since changes necessary for development are, in reality, different for both of these images, a considerable amount of tension

is generated in a people. On the one hand, the group-focused image inhibits decisions which would change the preconceived structure of the society, permitting individuals to advance at whatever pace each one desires. On the other hand, the ego-focused image inhibits the cooperative component of management which is needed to draw latent abilities and conditionally available factors together.

This says a society simply fails to take advantage of its development potential because of its image of change (11, p. 25). The deficiencies do not lie in the area of factors or elements to be combined, but in the combining process itself. Development decisions are not made in the required number or at the required speed. Shortages and deficiencies of specific factors and elements in the development process are all interpreted as manifestations of this basic deficiency in organization; i.e., there is one basic scarcity (11, p. 25).

The inability or reluctance to agree to priorities and uneven change or to overcome the difficulties in the ability to enlist cooperation of factors can be overcome only slowly. However, these difficulties created by the images of change must be overcome. The task of development theory and policy is then to examine those conditions under which necessary decisions can be called forth, in spite of these problems (11, p. 26). The task is to find the

"pacing devices" and "inducement mechanisms" which will circumvent the influence of the existing images. 1/ It is necessary to set up a series of mechanisms which will induce the needed decisions until the decision process is better developed. These devices and mechanisms are designed to maximize induced and routinized decision making (11, p. 27-28).

1/ It may be helpful to point out one or two examples of "pacing devices" and "inducement mechanisms". One such is the concept of the efficient sequence of investment activity. Which sequence will yield the greatest complementary effects from one period to the next? Which, that is, is the most compulsive sequence and so forces additional decisions to be made? For example, maintaining a shortage of social overhead capital is a compulsive device. Development by starting with import enclave or "final touch" industries is another. In this latter case, the backward linkage effects are strong; they have a wide range and depth. Another mechanism is introduction of capital intensive, process centered industries early in the development program. This provides a device for the "machine-pacing" of operations and developing regularity in patterns of maintenance, as well as production. It is a modern device for regulating work and measuring performance. Specific devices appropriate to Warm Springs might be immediate entry into a large-scale credit program with repayment tied to per capita for failure to meet obligations from earned incomes. Another would be entry into a large-scale timber processing operation. Such projects would force the undertaking of activities necessary to sustain such major projects. For example, it would be necessary to undertake educational and job training programs, land reforms, and so on.

Hirschman espouses a theory of unbalanced growth and development which aims, "to keep alive rather than to eliminate the disequilibria of which profits and losses are symptoms in a competitive economy" (11, p. 66). To keep an economy moving ahead, development policy must maintain tensions, disproportions and disequilibria. Hence, the sequence of activity which is ideal for development and growth is one which leads continually away from equilibrium. Each move in the sequence is induced by an earlier disequilibrium which in turn creates new disequilibria, requiring further movement. The traditional theory of external and internal economies of scale is appropriate here. Expansion in A generates economies external to it but appropriable by B. Subsequent expansion by B creates economies external to it but appropriable by A or even C.

While complementarities are usually associated with economies of scale, complementarity can be defined more broadly. Complementarity can be defined, "as any situation where an increase in the demand for commodity A and the consequent increase in its output call forth an increased demand for commodity B at its existing price" (11, p. 68). This happens both through connections between the production processes for the two commodities and where increased use of A leads to greater demand for B. In more general terms, "complementarity means that increased production of A will

lead to pressure for increasing the available supply of B" (11, p. 69).

In the private sector such pressure will lead either to increased imports or production of the commodity. If the commodity is a good from the public sector (i.e., not privately produced) the pressure will appear as demand for and complaints about the level and quality of public services. Hence, complementarities appear as complaints about shortages and bottlenecks (or obstacles) to development.

Applying this complementary effect to the concept of induced investment, a new concept of induced investment arises which has more meaning for underdeveloped economies. Induced investments are projects which are net beneficiaries of external economies. In this sense induced investment appears very much like the multiplier--"each investment is conceived as inducing a series of subsequent investments..." (11, p. 71).

In this situation private profitability and social desirability are likely to coincide, not because of the absence of external economies, but because 'input' and 'output' of external economies are the same for each successive venture" (11, p. 72).

The investment concept discussed to this point is clearly a gross quantity since development does create diseconomies, largely by the damage done to existing industrial and handicraft enterprises. This is caused by the introduction of new methods and

products brought into the world by the new investments. Hence, new investments may hold back reinvestment in established enterprises while leading to complementary investment elsewhere in the economy. However, "the investment-reducing effect of new investments resulting from competition and substitution effects seems unlikely to match the investment creating effects of complementarity except where competitive industries are strong and complementarity effects rather weak" (11, p. 72).

A development policy which utilizes the inducement effects of complementarities and external economies is valuable in the development process and must be used consciously in this process. "It puts special pressure behind a whole group of investment decisions and augments thereby that scarce and uneconomizable resource of underdeveloped countries, the ability to make new investment decisions" (11, p. 73).

Investment functions simultaneously as an income-generator and capacity-creator. The theory discussed here concerns a third role: "that of pace-setter for additional investment" (11, p. 41). The complementary effect of investment from one period to the next is the fundamental mechanism channeling new energies toward the development process. Since the ability to invest is directly related to the level of investment activity, sequences of activity that compel

complementary capital formation which otherwise may never have taken place are maximizing induced decision-making thus developing the ability to invest and routinized decision-making.

The Sociological Foundation of the Hirschman Thesis

In this analysis the concern is mainly with those sets of action systems which pertain to economically relevant behavior. Therefore, no attempt will be made to describe or analyze all aspects of the different types of systems. This merely means that the functional relations between most cultural traits are left open. Attention is focused on those aspects of behavior and attitudes which have significance for economic action, particularly as this affects the conditions necessary for economic development.

Basically, the Hirschman thesis is concerned with how under-developed economies attain a form of socio-economic organization which is capable of indigenous economic growth. The central interest here is to elaborate a model permitting analysis of a process of transition from a social system exhibiting one type of socio-economic organization to a system exhibiting a more advanced 1/ form of organization. 2/ Centering on the social and

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- 1/ The meaning of "more advanced" is, in general, a socio-economic organization displaying patterns of production, distribution, and decision making similar to those in the advanced industrial societies.
 - 2/ This thought is well expressed by Hozelitz (see reference 12, p. 26). The author is, however, developing a different approach to development. Hozelitz maintains the key to development is to generate deviant behavior.

economic organization directs primary attention to the structural aspects of a social system which (1) contrast behavior and attitudes in the advanced and underdeveloped systems; (2) delineate or provide insight into social relations and processes associated with economic and social development; and (3) impede movement or change from underdevelopment to advancement. The consequence of considering both underdevelopment and the transition process as functions of the relations attendant to the social structure is to reduce all deficiencies to a single factor - improper functioning of the process and making and implementing decisions of change. In Hirschman's terms this would be the images of how things must be or must change. The manner in which structural relations generate this problem is both explicit and implicit in the Hirschman Theory.

Explicitly, Hirschman ties the basic development deficiency to the image of change held by a people. Both the ego and group focused images cause conflicting drives and result in a confusion of the will of a people, impeding their willingness and ability to make changes in their economic and social fabric, i.e., changes in the process by which change itself is instituted and in the structure which generates this process. This view of the impediment to economic and social development implies the existence of a more fundamental framework. That is, Hirschman is implying that

different levels of economic and social development must have different social structures, and behavior and attitudinal patterns, since the image of change held by a people is a product of their culture and social structure. If each stage or level of economic development has a different structural configuration, then the structure of the culture and social system in an underdeveloped society cannot accommodate development and growth patterned after an industrial system. Where there is a recognition that economic change is both possible and desirable, there are forces generated which are inimical to the structure of the culture and social system in its present form. When this recognition is based upon what others have accomplished rather than one's own experience, there arises conflicting interests and drives (11, p. 11). The end-products of change are desired, but there is no knowledge that the existing economic and social relations must be changed or given up completely (11, p. 9). If attempts to achieve development are phrased in the context of the structural relations which sustain the underdeveloped state, the society will experience failures, frustration, and confusion. Therefore, development is possible only if relations between actors involved in the interaction processes are changed to permit the necessary decisions at the required speed, in the necessary number, and at the proper time.

A social system is a network of relationships among actors involved in the interaction processes. Another way of phrasing this is that "a social system is a system of processes of interaction between actors" (18, p. 25). Now, the ways or patterns in which relations between two or more persons may be arranged or limited may be called pattern variable alternatives. It is a set of pattern variables (i.e., particular arrangements of the structural variables of a social system) which define, at one and the same time, the nature of underdevelopment and the source of the conflicts which stagnate the decision making process. On the most generalized level of socially relevant behavior, these variables can be regarded as determinants of the average real output of a society. The effect of using these variables is to reduce the contrast between underdevelopment and advancement to its basic cultural and sociological foundation (12, p. 29-30).

Economic activity can be considered as part of the structure of social relations between members of a society. Economically relevant relationships are affected by three broad factors: 1/

1. How an actor organizes economically relevant

1/ A similar, but broader, classification of pattern variables is used by Martindale in his discussion of Parsons' theory. See reference 14, p. 493-499.

objects 2 / in relation to each other and in relation to his own motivational interests.

2. How attitudes of the actor are organized toward economically relevant objects.

3. The system of interaction among parties, i.e., the manner in which contacts between actors are organized, arranged, and limited.

What then are the organizational choices? That is, in what manner or pattern may relevant relationships be organized in a social system? These choices are the pattern variables. They define the character or orientation of the relations in a social system, thus providing a basis for differentiating social structures. There are three significant reasons for introducing the pattern variable concept:

(1) it completes the Hirschman theory by explaining the source of the development impediment; (2) it provides a modicum of understanding of the functional interrelationships of general social and

2 / "It is convenient in action terms to classify the object world as composed of three classes of 'social', 'physical', and 'cultural' objects. A social object is an actor which may in turn be any given other individual actor (*alter*), the actor who is taken as a point of reference himself (*ego*), or a collectivity which is treated as a unit for purposes of the analysis of orientation. Physical objects are empirical entities which do not 'interact' with or 'respond' to ego. They are means and conditions of his action. Cultural objects are symbolic elements of the cultural tradition, idea or belief, expressive symbols or value patterns so far as they are treated as situational objects by ego...." (18, p. 4).

economic variables; and (3) it provides a better basis for hypotheses about behavior and attitudes for testing the Hirschman theory. At this point it is necessary to state the pattern variable alternatives of role definition. As given by Parsons, (18, p. 58-67) they are: 1/ 2/

- I. The Choice Between Types of Value-Orientation Standard
Universalism vs. Particularism
- II. The Choice Between Modalities of The Social Object
Achievement vs. Ascription
- III. The Definition of Scope of Interest In the Object
Specificity vs. Diffuseness
- IV. The Gratification-Discipline Dilemma
Affectivity vs. Affective Neutrality
- V. The Private vs. Collective Orientation
Self-Orientation vs. Collectivity Orientation

These alternatives are discussed by Parsons in a manner which suggests that individuals face these dilemmas in their actions. 3/

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- 1/ These are arranged in an order corresponding to the factors given above as influencing economic behavior. That is, I and II deal with object classification; III and IV deal with attitudinal classification; and V deals with problems internal to the system of interaction among actors.
 - 2/ For a definition of each pair, see the definitional note in the Appendix to this chapter, p. 181.
 - 3/ For a criticism of the Parsons theory of pattern variables along these lines, see reference 14, p. 497-499.

However, they are useful for another purpose. In implying differing configurations of pattern variables to differentiate and explain societies in different stages of economic and social development, Hirschman does not say that the variable alternatives are seen as dilemmas in each choice situation. That is, the actors do not find themselves trying to decide how their behavior and attitudes shall be patterned each time they are faced with a choice. Rather, Hirschman moves in a broader vein. The attitudes, object classification, organization, and behavior from one arrangement prevail. A social structure and culture guide individual and group behavior, channel this behavior to the proper goals, and orient or adjust attitudes. It is the particular pairing of the pattern variables which yields the particular behavior and attitudes as well as the particular image of change.

While the Hirschman discussion about the image of change is brief, it is central to the problems of an impeded decision process. A necessary condition for sustained development and growth, or complete transition from underdevelopment to development, is the generation of the group-and-ego focused image of change. In terms of the pattern variables, the principal type of social structure yielding this form of image is the universalistic-achievement pattern. The result of the application of the principles of universalism and

achievement as a norm in economically relevant behavior is specificity in the allocation of economic roles and an ever finer specialization in the division of labor. Economically relevant behavior tends to be effectively neutral, i.e., some gratifications which are available are renounced in the interest of maintaining and building further, an organized and integrated system. This is the familiar investment-consumption balance. The political and economic elite tend to maintain primarily a collective orientation toward economic goods which, together with disciplined behavior, meet demands of coordination necessary to maintenance of the productive complex. This results in some assurance of an expanding and stable economy. The combination of the collective orientation with principles of universalism and achievement permits individual advancement, on a merit basis, within an expanding economy.

This general framework may be used to illustrate further the functional relationships among variables by the proposition that economic development is associated with an ever finer division of labor. 1 / This means that development and growth lead to a finer

1 / As Hozelitz points out, relating the development process to sociological factors requires that the pattern alternatives be seen in combination. It is in this way that the pattern variables become a part of a functionally related framework. See reference 12, p. 35.

specification of the relevant economic tasks to be performed. As the division of labor progresses, and complexity of production increases, the number of jobs requiring special skills or knowledge increases. In other words, jobs are filled on the basis of technical competence in the belief that this will increase performance in the job. This is universalization of economic processes. This opens such specialized jobs to all who have or possess the definable skills. Selection of individuals on the basis of competence rather than on a particularistic basis, such as social ranking, or ascriptive basis (family ties), is an example of regulating economic relations on an achievement basis.

Major deviation from this structural pattern yields various forms of underdevelopment because of improper orientation. While it cannot be expected that the variables will be found in complete purity in any society, they may be regarded as the tendencies for behavior and attitudes. Deviant behavior does, after all, occur in the most rigid families. It is true that one or another of the pattern alternatives associated with advancement may be found in less economically developed societies. However, it is the combination of alternatives which yields the decidedly different orientation and behavior. The brief discussion of the group-focused image of change suggests two of the three remaining principal structural types.

These are the particularistic-achievement and the universalistic-ascriptive patterns. Both of these have a collective tendency in common since particularistic norms inhibit individualistic aspects of achievement and ascriptive norms inhibit these tendencies of universalism. This means individual achievement is inhibited and directed toward the collective good or goals. However, where a universalistic orientation tends toward rationalism, a particularistic orientation tends toward rationalism, (18, p. 198). For purposes of the Hirschman theory, both of these patterns could have orientations which are either diffuse or specific, affective or affectively natural. If tasks are defined specifically, they tend to be based upon status needs of the ruling elite rather than, for example, demand determined by the productive needs of the society. If tasks are diffusely defined there would be little specialization and a large pool of unskilled labor relative to the type of jobs to be performed in moving toward a developed state. If affectivity (immediate taking of desire gratifications) is inhibited, for example, by particularistic or ascriptive tendencies (so that some semblance of disciplined behavior prevails), this is more to preserve the collective integrity and its traditions by smothering individualistic expression. However, this latter action tends to cause stresses where there are universalistic or achievement principles at work.

These stresses are significant in the Hirschman theory. They will be discussed more fully at a later point.

The remaining principal structural pattern, the particularistic-ascriptive, yields the ego-focused image of change. According to Parsons (18, p. 198-199) this pattern tends to have expressive or affective attitudes. Work becomes a necessary evil. The tendency is to manipulate elements, in the sense of scheming, and there tends to be a good deal of instability. Both Hirschman and Parsons use the Latin American case as their example of this form. This form of social structure also tends to be non- or anti-authoritarian, and extreme individualism creates indifference toward larger social issues. There is a refusal to accept or recognize authority where it interferes with expressive freedom.

While these brief examples may illustrate some of the functional relationships among the variables, there remains the question of how the variables, as regulators of social structural relations, impede or assist development; i. e., the nature of the structural impediments.

Because the world does have parts which are in differential stages of development, contact with and demonstration of the more advanced areas have created a desire in the less advanced for objects from the economically advanced areas. The desire is

recognition that changes in the existing pattern of life are both desirable and possible. Where this recognition arises from outside demonstration rather than one's own experience serious problems arise. Prevailing attitudes and organizational arrangements are incapable of yielding the desired objects on a sustaining basis.

In addition to the desire for change, there is required the ability to perceive and organize needed changes in attitudes, object classification and the system of interaction; permitting transition from one set of definitional variables to another. The dilemmas and frustration are then caused by desire for change on the one hand, and an inability to perceive and/or organize existing positive forces to implement the necessary changes in the existing structure, on the other hand.

Where experience in solving such problems is lacking, the society will attempt to solve the problems of change in a manner dictated by the attitudes and system of interaction which have been sustaining underdevelopment. Since the "built-in" methods of managing change are designed, in part, to protect and preserve the system, the idea of change itself may be an obstacle to the changes needed to yield and sustain development and growth. These are the mechanisms of socialization and defense in the system. However, some illustrations at this point may clear the apparent vagueness

of this statement, and, at the same time, afford an opportunity to show the connection between configurations of the structural variables and the impediments to development as posited by Hirschman; i. e., how can the impediments be phrased in terms of the pattern variables?

The Hirschman theory deals with change from underdevelopment to development. This involves change in the relevant social and economic relationships so that a society becomes oriented toward the norms of universalism and achievement, with a high degree of specificity in the definition of economic roles, leadership is collectively oriented to the extent that it acts to afford all members an opportunity to achieve any of the socially sanctioned goals. It is this orientation which permits continuous growth and progress; the class system, that is, is kept open and fluid. The ability of members of the society to improve their position tends to be accepted as a mark of personal achievement. There tends to be belief that technical competence or ability, either in engineering agreement among all interested parties to a venture or in filling a specific technical job, will increase the effectiveness and efficiency of a venture. This is universalization of economic roles. The norms which prevail - the most rational or most efficient resource allocation, selection on the basis of competence, open and fluid class structure - permit a continuous flow of economic decisions. Whenever individuals or

groups find they can improve their position in a socially sanctioned manner, they are free to do so. This results in individual advancement within a growing economy and fluid social structure. How then does the absence of one or the other of these norms yield a structural impediment to economic and social change?

The first that might be considered is the presence of either the particularistic or ascriptive norms. These are, respectively, the counterparts of universalism and achievement. The absence of universalistic norms, where particularism is combined with achievement, shifts achievement to a diffuse basis, e.g., attaining superiority rather than technical competence. There is a general orientation to collectivism and those of superior status have responsibility for maintaining the functional integrity of the collective. The strong accent on particularism yields a strong tendency toward traditionalism. The model of collective morality of those responsible for the traditional patterns of the collective is binding to the extent that it must be continually re-achieved (18, p. 195-198). The mechanisms of socialization and social control act either to keep under control or strongly to inhibit desires for individual change in status; i.e., achievements are channeled to the collective benefit. This would mean, for example, that if deviant entrepreneurs arose, they would be forced to internalize "social costs" of creative

destruction through all manner of "welfare" measures. Since this would presumably be so strong it would be doubtful such persons would emerge. The social structure has little or no fluidity. Unless change would benefit the entire collective, leaving hierarchical network in the same relative position, any projected change may easily fail. Although the power elite is, as before, collectively oriented, the absence of universalistic norms and specificity in the definition of relevant roles, development of projects which would create more efficient allocations of resources, new classes of workers for specific tasks, and increase mobility in the socio-economic structure are strongly inhibited.

Where ascription replaces achievement, so that the universalistic-ascriptive pattern prevails, there is again emphasis on status, i.e., what a person is rather than what he has done. Ascription, like particularism, twists the meaning of achievement. There is such a strong accent on collectivism, that the ideal state is one in which achievements are defined as those enjoyed or achieved by society as a whole. Resources are all mobilized in the interest of this collective ideal. The thought of uneven change with the development of new classes on the basis of individual competence and achievement in occupations would be looked upon as trying to serve self-interest rather than collective interests. As in the

previous case, the power elite is concerned with the collective ideal, but the presence of ascriptive norms precludes making changes which would, even temporarily, benefit one class or group, even though there would be a net addition to the collective welfare. Uneven change in any development program, selecting certain areas as having priority over others, is not in the collective interest.

Where ascription and particularism are found together, they result in a highly individualistic society. There tends to be little incentive to recognize authority and the individualism is concerned primarily with expressive interests (18, p. 198-199): i.e., individuals are concerned with organizing their own current flow of gratifications. As such, there is a strong self-orientation. Any development plans would tend to be seen as means for the current elite group to enrich themselves. The anti-authoritarianism, indifference to the larger social problems of general underdevelopment, reliance on luck and scheming rather than shaping a situation through application of effort and creative energy, all combine to generate a feeling that cooperation with others will necessitate tempering one's own chance for enrichment. As such, the extreme individualism or self-orientation precludes agreements or cooperation, as well as decisions necessary to establishment of a genuine process of autonomous growth and development. Hozelitz remarks: "Instead

of a loosening of social barriers and an increase of social mobility, we may witness a hardening of the social structure, which in the long run may be maintained only by further strengthening of particularistic patterns of exercising economic roles...." (12, p. 44).

It is apparent that the presence of the particularistic and/or ascriptive norms twists behavior of individuals and society in a direction inimical to establishment of processes necessary to economic and social development along lines comparable to modern industrial societies. The presence of either or both of these brings about functional diffuseness of relevant tasks and either extreme individualism or extreme collectivism, depending upon the pairing. It is also clear that the impediments to change are rooted in the social structure. It is possible to apply this extended version of the Hirschman theory to Warm Springs, where some changes have taken place. The question, in general, is whether or not they have taken place in the manner postulated by Hirschman. If so, then there would appear to be some usefulness in applying the Hirschman development mechanism.

Admittedly, the foregoing is merely a brief and sketchy outline of the images of change and the relationships between general social and economic variables. Rather than a systematic analysis, the aim

has been to show the foundation of the thesis and offer a base from which it would be possible to state hypotheses. It is possible, for example, for the images of change to arise out of various transitional and mixed types of social structure. This paper is not, as such, an exploration of social structures, even though they may be useful as tools. The objective has been to indicate how structural variables influence behavior and attitudes so impede making decisions necessary for economic development.

Application to Warm Springs

To explore this avenue, it is best to reiterate an earlier point. For the Hirschman thesis to be at all applicable or meaningful it is necessary to assume, as he did, that an underdeveloped area has a desire for economic change and progress. As such, the thesis is not basically concerned with how the desire can be generated or whether it should be pushed into areas not already caught up in the web. It should also be remembered that the social structures outlined are only ideal type constructs which bias institutions and relationships in a given direction. The pressure of latent feeling or desires and some amount of deviant behavior give rise to openings which permit entry of alien forces. These new forces keep the social structure in some degree of flux. The strength of these

forces along with the latent desires determine the weight of pressure and tension on the structure and the degree to which the ideal-type construct is transformed to accommodate the new forces. This means that some structures which have been under pressure for longer periods may be more transitional, i. e., further from the principal ideal-types.

The focus of concern now is the meaning of the variables, at Warm Springs, in terms of (1) economically relevant behavior, and (2) conditions affecting changes in the output of the society. Change has been forceably or otherwise impressed on Warm Springs as both necessary as well as possible and desirable. The opening of the forest, construction of access routes, children leaving for school and returning, and the development of a highly mechanized agriculture in adjacent areas can be taken as evidence of pressures for changes on the Reservation. The behavior and economic relationships arising from the changes which have taken place would be expected to manifest themselves in certain directions according to the Hirschman theory. This should not imply the concern is with change in a narrow sense such as movement of the level of income to a different level. It is also relevant to consider attitudes toward change and present conditions of the economy and social structure. This is the test of the Hirschman thesis at Warm Springs, or for

that matter, in any underdeveloped area.

The feeling at Warm Springs that change and progress are both possible and desirable arises mainly from the visible reality of economic progress in adjacent areas, education of younger members in non-Indian schools, pressure from governmental units, and the work of outside business firms on the Reservation. This means that the feeling arises mainly from outside demonstration and the Hirschman thesis regarding the image of change, or attitudes toward change and present conditions of the economy and social structure should be applicable. This means also that the Warm Springs people are seeing the fruits or end products of a development process which has already taken place. The people would then have little advance knowledge of which of their institutions and character traits must be transformed or given up completely. This type of knowledge is learned in the development process. Clearly, if the desirability and possibility of economic progress arise from seeing what economic progress had provided in the way of goods and services for other areas, then the attempt to introduce these plus the accompanying organization and processes should produce major stresses in the social structure at Warm Springs. Hence, while outside demonstration may yield a desire for change and progress, it does not, ex-ante, indicate what changes in existing social

structure and behavioral patterns must be made to achieve this goal.

It is possible to extend this view and posit the presence of certain behavioral and attitudinal patterns to be examined.

If the initial motivation or desire arises from contact and seeing what is possible through economic development, then, given a means to acquire end products associated with economic advancement, it follows that such products should be acquired. This is reasonable since there is supposedly no advanced knowledge of the structure and organization underlying the production of these goods and services. The manner in which these initial desires are gratified will be an important determinant of the ability to perceive and organize and implement needed changes in the social structure.

If acquisition of these goods follows as a result of earned income arising from investments and employment of the individual members of the society, there would be no development problem. However, where income derives from exploitation 1/ by outside firms of the resources available to the society, and this income is distributed on an ascriptive or per capita basis, problems for development arise due to outside demonstration and removal of necessary pressures and tensions.

Assume the following conditions prevail: (1) resources are

1/ Exploitation is used in the broadest sense of the term.

being exploited by firms from outside Warm Springs; (2) income earned from the sale of these resources is paid into a general fund; (3) this income is the major share of the income available to the society; (4) the income is distributed ascriptively so that each member of the society shares equally in it; (5) the common resources are equally owned by all members; (6) the firms exploiting the resources are wholly owned, managed, and operated by outside interests; (7) the society has been subjected to extensive outside demonstration and contact with advanced areas and their agents.

From initial exploitation onward, increases in earnings or income would yield a rising product for per capita distributions. It is clear that productivity of such resources cannot be attributed to the Warm Springs people. The society experiences increase in income and distribution of this on an ascriptive basis yields members, individually, an increase in income. Since members of the society are able to attain goals (gratification of desires for items associated with advancement) through the mechanisms of their own social structure, this distributive pattern serves to reinforce belief in the adequacy of the structure. This is the group-focused image at work. All members are allowed to benefit from an increase in group income. In permitting gratification of individual desires in this manner, individual expression is accepted

because all members are given an equal opportunity to express themselves. However, in terms of the needs of the society, this is self-defeating.

First, unless population is falling or stagnant, a constant or rising money share means either more rapid exploitation of resources or distribution of larger portions of existing earnings. This means that funds available for employment creating investments are distributed for consumption.

Second, the distribution of the common income to individuals is merely permissive or obstacle removing. Making more income available to individual members merely permits them to invest it in productivity increasing endeavors. For example, making money income available to Warm Springs farmers would merely permit them to reorganize and invest in productivity increasing inputs by removing a monetary obstacle. Given the manner in which the income was obtained, behavior and attitudinal patterns, lack of knowledge of economic relationships necessary to advanced management, and desire to imitate behavior in the more advanced adjacent areas, it is highly probable the income would go for expenditures other than those needed to increase productivity. Such items associated with economic advancement, and most likely to be acquired, would be farm machinery and transportation vehicles.

Third, actions which serve mainly to reinforce belief in the adequacy of existing social structures preclude gaining knowledge needed to make and understand the need for changes in the structure, if development is to be realized. Quite simply, such actions do nothing to change or mitigate the influence of the prevailing image of change.

These three factors can mean the society will exhaust or seriously deplete the resource base, leaving them worse-off in terms of ability to maintain or advance themselves. Performance of production and decision tasks by outside elements precludes gaining experience necessary to management of their own affairs. When it becomes unprofitable to exploit further the common resources, the firms will depart, little or not knowledge will have been gained, and potential employment creating investment funds will have been expended on consumption. 1 /

1 / In the Keynesian view, increasing consumption spending from a given income will lead to a rise in employment and income. P. T. Bauer and B. S. Yamey (3, p. 139-142) use this concept in discussing economic development. They say heavy consumption spending will have many of the same results as forcibly channeling available monies into investment. This view may hold for a whole economy, but considering a situation like Warm Springs, this is not the case. Income derived from common resources, if spent on consumption, would have virtually no effect on consumption, would have virtually no effect on inducing development of industry and employment at Warm Springs because firms outside the area will supply the consumption goods.

Hypotheses

Prior to discussing the specific hypotheses it would be helpful to discuss briefly the question of the testability of a theory. There are two distinct approaches to the use of theory: (1) it may serve as a base from which hypotheses are drawn concerning the existence, occurrence, or relationship of phenomena; and (2) it may serve simply as a means to guide the organization and arrangement of data and what should be looked for in a particular situation.

In the first case, hypotheses are drawn or deduced from the theory for the purpose of testing the validity of the theory. This may be termed more of a pure scientific approach. If the hypotheses follow logically from the theory, and testing refutes them, the theory is simply refuted. In the words of Karl Popper: "A theory which is not refutable by an conceivable event is nonscientific... Every genuine test of a theory is an attempt to falsify it, or refute it. Testability is falsifiability; but there are degrees of testability; some theories are more testable, more exposed to refutation, than others; they take, as it were, greater risks" (20, p. 159-160). In this instance, one works with theory in an attempt to expand fundamental knowledge of phenomena in the world.

In the second case, underlying theory is assumed generally to

be true; it is used to tell how to arrange data and what to look for in studying a problem. There usually is no attempt to test the validity of the theory. This approach may be termed more that of applied science. This suggests that theory is serving as a means to practical answers to practical problems. That is, theory is used to find answers to practical issues rather than specifically to advance or promote knowledge by framing and testing hypotheses in order to establish the width and limitations of generalizations. 1/ This is not to say the second approach to the use of theory is without merit. The world is a practical place where many problems will not wait for the establishments of tested generalities. Nevertheless, this second approach to the use of theory does little to remedy the comparative paucity of illuminating observations capable of generalization, especially in the field of development. Perhaps this view may be a bit sweeping and strong. The applied scientist may, in the process of working on practical issues, be afforded the opportunity of testing the validity of a theory posited as being general. Also, if over time, applied research gives "useful" answers, this constitutes a form of test of the underlying theory.

Questions may be reasonably asked concerning the empirical

1/ This view is also expressed by P. T. Bauer in his discussion of development methodology. See reference 2, p. 3-43.

content of the Hirschman thesis. That is, is it capable of testing by reference to the real world? In the preface to his book, Hirschman expresses the hope that his proposition, "...on efficient sequences, on linkage effects, on productivity differentials..." (11, p. viii) will be subjected to critical empirical research. Such a statement appears to be asking research workers and theoreticians to accept the underlying theory of underdevelopment and his theory of the development process. These "propositions" are basically tools for attacking the problem of development. They are, as it were, designed to circumvent the defects in the structure of a society and culture which impede the making of development decisions. Unless the theory of underdevelopment and the development process are correct, the mechanisms to achieve development are not necessarily any more efficient, appropriate, or sound than possible alternative means.

The defects postulated by Hirschman arise basically from the interaction of structural variables of the social system and culture. The chain of events impeding development decision-making begins when underdeveloped peoples see and want the goods and services associated with economic advancement. That is, there is a realization that change is possible and desirable. The next link occurs when this realization is, in fact, based upon seeing what others have

done. This implies that only the end product of development elsewhere is seen and there is no perception of what must be changed in the underdeveloped society to achieve development. The third link arises when the realization that change is possible and desirable is interpreted in terms of the image of change generated by the social structure and culture of the underdeveloped society. This is where the main question as to the testability of the Hirschman thesis would arise.

Because the image of change is a product of the interaction of structural variables of the society and culture, there is implied, at the least, a sociological foundation to the thesis. There is implied principal types of social structures which yield the images of change. Where one particular image corresponds to only one principal structural type, there is no problem of imputing the sociological basis of the image. However, where two principal structural types yield the same image, it might be thought that refuting hypotheses based upon an imputed structure would not affect the Hirschman thesis, because it would be possible to impute the wrong structural type. However, Hirschman phrases his thesis in terms of the image of change and how these affect decision making. This means his theory holds for all images from all structures, other than the group-and-ego focused structure. The mechanisms to induce

development decisions are then posited in such a manner as to be applicable for all images of change other than the group-and-ego focused. As such, the theory of development and the impediments to decision making are posited as a general theory.

If the theory can be refuted by reference to Warm Springs, it is simply refuted as a general theory. However, if Warm Springs does not refute the theory, it cannot be inferred that general validity has been established, although at least one confirmation in this direction would be provided. Considering the conditions specific to Warm Springs, the validity of the Hirschman thesis will depend upon the presence of behavior and relationships which indicate (1) an inability to combine available factors, both at the individual and the collective level, and (2) misconceptions of what constitutes development. If Warm Springs validates the Hirschman theory, his tools and mechanisms have significant implications.

Interpreting the conditions prevailing at Warm Springs in terms of the Hirschman theory, the following three hypotheses are suggested as capable of determining the relevance of the theory for Warm Springs and either providing a confirmation of the theory or refuting it as a general theory.

1. Extensive outside demonstration and contact with advanced areas, and their agents, combined with availability of ascriptively distributed income from collectively owned resources, yield serious misconceptions of what constitutes economic progress. These will be reflected in consumption-investment behavior, and in views regarding further investment.
2. Extensive outside demonstration and contact with advanced areas, and their agents, combined with availability of ascriptively distributed income from collectively owned resources will cause an impasse where latent resources and knowledge of new technology and practices exist, but no action is taken; productivity will be significantly lower at Warm Springs than in adjacent areas. Performance of economically relevant tasks remains unchanged.
3. Given (1) the changes which have already occurred in and around Warm Springs, (2) the extensive demonstration of the potential benefits of changed economic and social arrangements, (3) the ready availability of capital and technical assistance, (4) the desire of the members for the fruits of a developed economy, (5) that the apparent norm for a voice in the control of decisions is mainly age, and (6) the wide range in life experience between generations at Warm Springs (mainly differences in the manner in which the age levels have been socialized and so accede to prevailing arrangements), then under these conditions, the inability of the decision process to organize available positive forces, and institute changes in key areas of the economy recognized as problems, would reflect itself in a differential feeling 1/of futility or hopelessness regarding the future, in general, and the ability to earn a living in these areas, in particular.

These three hypotheses are central to the Hirschman theory and are directed toward testing the main aspects of the theory. The

1/ The term "differential" means these feelings, under the above conditions, would be differentiated with respect to age, i. e., a function of age. This will be explained in a subsequent section where this is discussed.

first is directed toward seeing whether or not there are misconceptions about the process of change which inhibit the achievement of development when there has been extensive outside demonstration and contact with advanced areas. The second is directed toward seeing whether latent factors and attitudes conducive to change can exist alongside of low productivity. If this is the case, it suggests the image of change may be a potent force and that outside contact and advisers have failed to find "under what pressures people are operating and toward what steps they are already impelled" (11, p. 209). The third is directed toward seeing whether there are observable consequences of a decision process not being able to mobilize available positive attitudes and factors. The persistence of the problems would suggest "decision makers" are unable to reconcile changes with a "basic feeling that progress ought to be equally shared by all sections of the community" (11, p. 14).

CHAPTER IV

Investigation of Hypotheses

Methodology and Data Used

The Warm Springs data used in this paper were collected originally for preparation of Volume III: The Agricultural Economy (21) for the Warm Springs Research Project. Data were obtained from three major sources: (1) a survey questionnaire, (2) existing records of the Confederated Tribes, and (3) personal discussion with various Tribal leaders and other members, and Bureau of Indian Affairs personnel.

Attitudinal and farm inventory data were obtained from a survey questionnaire sent to those family heads who were considered locally to be farming "more or less" regularly. The questionnaire went to 109 family heads living in 96 households. The questionnaire was in two parts; a self-administered section and an inventory section. The administration of the questionnaires in the field was handled by four Indian interviewers under the direction of Mr. Delbert Frank, Tribal Council member from the Simnasho District.

The self-administered section sought the respondent's attitudes toward various specific problems and what each thought could

be done about them. Farmer's attitudes toward change and what each themselves saw for the future of farming on the Reservation received considerable attention. This was, basically, an attempt to estimate the extent to which Reservation farmers and ranchers recognize their current situation, and to estimate the types of problems which would have to be faced in constructing an organized and planned program of change. The inventory section sought information regarding a physical description of the individual agricultural operations on the Reservation.

The self-administered section was delivered to the household member recognized locally as being head of a family. The family head was asked to fill out the questionnaire, then seal it in an envelope for delivery to Oregon State College. When the self-administered section was delivered, an interviewer sat down with the family head to fill out the inventory section. Where more than one family resided in the household, the inventory was filled out with all family heads sitting together. This means that all farming and ranching operations of a given household were considered to be one operation.

The questionnaire was handled in this manner for three reasons: (1) it was believed the people would be much more willing to give their true feelings on the self-administered portion if they

had a modicum of assurance their answers would be confidential; (2) the consensus of local leaders was that the operations were run as a single unit where more than one family lived in a single household; and (3) duplication and problems of ownership would be avoided if all operations in a household were considered as a unit.

Despite the precautions taken and numerous revisits, some individuals did not desire to cooperate. Ten of the self-administered and 15 of the inventory sections were returned unanswered or were not returned at all. The remaining questionnaires were answered in full or in part. Given the background and feelings of the Warm Springs people, the survey, in general, accomplished its objectives successfully.

Tribal and Bureau records were also used to obtain data regarding the operational and organizational structure of the Reservation economy. Many of these data were incomplete and often inconsistent, but were useful in supplementing survey inventory material.

Lengthy and repeated discussions with Tribal leaders and other members and bureau personnel were extremely useful in evaluating past and present programs and practices. These discussions also provided a general background of the Reservation community itself and of the problems which occur in the day-to-day operations

of Reservation business. Too, they were very useful in obtaining some insight into the factors which underlie or motivate the actions of Reservation inhabitants.

In addition to data from the agricultural economics study at Warm Springs, material from studies on the North Unit Deschutes irrigation project is used for indication of the relative level of activity at Warm Springs. Data from other of the Warm Springs Research Project reports have been introduced to supplement mentioned sources.

The number of farmers and ranchers was small enough (109 families) to permit working with the entire number. Too, it was important to show that the views of all farmers were being considered. This was true for both the attitudinal and physical inventory material. There are two important points to be made regarding all data sources at Warm Springs. The first is that prior to the Oregon State College Research Project, interviewing of individuals concerning their attitudes and the scope of their farming operations was largely unknown. The second is that available records were not kept for purposes of studying and evaluating changes in agricultural activity. These factors had a major influence on the completeness and depth of available data, as well as the sheer ability to illicit information from individuals.

All of the data from the Warm Springs survey questionnaire were coded and tabulated on IBM cards. Various runs were made to obtain material for the Warm Springs Project report. Some of these data will be used here. All of the survey data are from the Warm Springs agricultural population. The relevant question here is: do the available data exhibit the relationships indicated on the basis of the Hirschman theory when the theory is applied to Warm Springs?

Consumption-Investment

Gratification of immediate desires by ascriptive distribution of group income is a means of quelling individualistic tendencies by showing that the existing social structure can permit higher income which can be shared equally by all. However, gratification of immediate desires without an understanding or modicum of learning as to what generates the income suggests possible behavior and attitudes regarding income, consumption and investment. This suggests that current money incomes would be directed largely into items conspicuously associated with economic advancement.

Specifically for the agricultural population at Warm Springs, this would suggest that the highly developed agriculture in adjacent areas, and the agents from these and other areas, would generate the desire to imitate and acquire the conspicuous elements of the

advanced areas. The most prominent items would be, of course, machinery and transportation items, mainly because advancement is associated with mechanization. While overinvestment in such items may be found, to some degree, in the advanced sector, a significantly greater degree of conspicuous investment 1 / would be expected at Warm Springs. This would be reflected by comparison of prevailing investment per cropland and per harvested acre, as well as in use rates of different machine items. As such, investment spending would serve the same end as consumption spending -- an attempt to achieve status and equality with the advanced area. On this basis it appears logical to say that the significance of neither the consumption-investment-income relationship nor of the economic and technical relationships of farm organization is perceived. In fact, since acquisition of such items was made possible by unearned income largely through ascriptive distribution of income from collective resources, it is probable the consumption-investment-income relationships would be seen in reverse. Therefore, in order to make productive investments it would be necessary first to increase further, money incomes or make more money available. The use of money to

1 / Conspicuous investment, like consumption, may be thought of as investment for purposes of achieving status. This means there would be a large element of consumption associated with such spending.

gratify immediate desires for conspicuous items associated with the advanced agriculture adjacent to Warm Springs, combined with the behavior-attitude pattern at Warm Springs, suggests "more money" 1 / would be seen as the most prominent solution to problems of low productivity and lack of productive investment.

Although there are both irrigated and dryland farming at Warm Springs, there is no meaningful separation of the two for farmers operating the 47 assessed units of irrigable land. Generally, irrigation farmers operate more of their irrigable land as dryland than they irrigate, if they irrigate their land at all. As was indicated earlier, the land actually irrigated between 1950 and 1959 ranged from a low of 18 percent to a high of 57 percent of the 1286 acres assessed as irrigable. The inability to separate the two types of farming makes comparison with adjacent dryland operators and North Unit irrigation operators hazardous and, at best, tentative. However, a comparison, while not exact, may be indicative of differences between adjacent farm operations and Reservation agriculture.

Machinery and equipment investment data were reported on 75 of the survey inventories. In an attempt to obtain an indication of

1 - / This term also includes "income" and "credit". Credit is included because monies from collective resource earnings used to establish credit funds would, most probably, be viewed simply as an undistributed portion of collective income. As such, credit would not be viewed as a device for imparting regularity to debt repayment and investment.

overinvestment in machinery and equipment, per acre investment for selected acreages of cropland in farms was computed. These are compared in Table 2 with per acre investment data from the North Unit and Columbia Basin dryland wheat farms. As indicated earlier, these data can only be indicative of any marked differentials in machinery and equipment investment between Warm Springs and adjacent areas. However, they do indicate that substantially greater over investment does exist at Warm Springs. If it could be assumed that farmers at Warm Springs followed practices comparable to adjacent areas, then only farms with 80 acres or less of cropland would appear to be overinvested in machinery and equipment. However, this is not the case; that is, there has been no apparent attempt to plant and harvest at least half of the available dryland (fallowing the other half) or irrigate and harvest all available irrigable land. Assuming these are the objectives of farmers adjacent to the Reservation, investments per harvested acre would appear as those in the second column of Table 2. On a harvested acre basis there is considerable difference between per acre investments on the Reservation and those in adjacent areas. In fact, rather than decreasing as harvested cropland acreage increases, per acre investment increases up to 400 acres and then declines. On a straight cropland basis, per acre investment declines throughout, at Warm Springs.

Table 2. Average Per Acre Machinery and Equipment Investment
 Columbia Basin Dryland Wheat Farms, North Unit
 Irrigation Farms, Warm Springs Mixed Type Farming,
 Selected Cropland Acreages in Farms, Per Cropland
 and Per Harvested Acre.

Cropland in Farm Mixed Dryland-Irrigated <u>2</u> /	Per Cropland Acre	Per Harvested Acre
	(Dollars)	(Dollars)
Warm Springs:		
80 Acres or Less	\$117	\$170
81-160 Acres	56	173
161-400 Acres	28	243
Over 400 Acres	8	143
Columbia Basin - Dryland: <u>1</u> /		
400 Acres	42	84
700 Acres	24	48
North Unit - Irrigated: <u>3</u> /		
30-89.9 Acres	111	111
90-159.9 Acres	91	91
160 Acres and over	98	98

1 / Minimal investment needs to perform necessary work on these unit sizes of specialized wheat-summer fallow farms. See reference 23, p. 7.

2 / Actual investments per acre of total cropland in farms.

3 / Actual investments per acre of total cropland in farms, for farms with the indicated acreage of irrigated land, Ninety-five percent confidence intervals of the mean were computed as follows: (1) 30-89.9 Acres ... \$45 to \$177
 (2) 90-159.9 Acres ... \$44 to \$138
 (3) 160 Acres and over . . . \$36 to \$160

Sources: Warm Springs: Oregon State College Warm Springs survey inventory.

Columbia Basin: reference 23, p. 6.

North Unit: Field Schedules gathered for preparation of reference 5.

A further indication of overinvestment is to compare use rates of several specialized machines with the amount of use required to "break even" with custom operations. The machines considered were hay baler, pull-type combine (new and used) and self-propelled combines. Warm Springs ownership and use rates are comparable with data developed by Conklin (5, p. 63) for the North Unit irrigation project. It is assumed here that Warm Springs farmers are facing approximately the same fixed and variable costs in machine operations as North Unit operators. Warm Springs use rates are average acreages or yields which the machine owners indicated were harvested. The North Unit data are for farmers overinvested in machinery. As can be seen, Warm Springs farmers demonstrate even smaller use rates than are obtained in the North Unit. These data help to bear out the material in Table 2. The data are strong enough to suggest substantial overinvestment in machinery and equipment at Warm Springs, and a greater overinvestment than exists on farms adjacent to the Reservation. Given the yields being generated by Reservation agriculture (see Chapter I, p. 13), it is highly questionable whether current patterns of machinery and equipment investment can be considered productive.

Turning to the views or attitudes regarding greater productive investments to increase yields of crops and live stock, five questions

Table 3. Comparison of Specialized Machine Use, North Unit and Warm Springs, Average Use Per Acre or Per Ton.

Machine	North Unit		Warm Springs		Percent Use Required to Break Even With Custom Work	Percent of Present Use Required to Break Even With Custom Work		
	Farmers Overinvested in Machinery		Farmers Overinvested in Machinery					
	Average use of Number Owning those over- invested	Average use of Number Owning those over- invested	Springs	Average use North Unit				
Hay Baler	10	133 T.	12	55 T.	230 T.	41	440	173
Pull-Type Grain Combine (Bought New)	1/	77 ac.	9	22 ac.	180 ac.	29	819	234
Pull-Type Grain Combine(Bought Used)	1/	33 ac.	14	20 ac.	75 ac.	60	375	227
Self-propelled Grain Combine.....	13	92 ac.	7	46 ac.	210 ac.	50	457	228

1/ Conklin does not indicate the number of new and used pull-type grain combines separately, but simply indicates a total of 9 farmers overinvested owned pull-type combines.

Source: North Unit Data from Reference 5, p. 63.

from the survey questionnaire will be considered. The questions considered the respondent's thoughts on what would be needed (1) to get more bulls for himself; (2) to get more bulls on the Reservation; (3) to get better bulls; (4) to use more fertilizer than is now being used; and (5) to grow more hay. These were all open-end questions, i.e., respondents were free to write in whatever they desired. However, answering the questions was contingent on whether or not the respondent was, to some degree, dissatisfied with the current situation. If, for example, the respondent was not satisfied with the number of bulls he owned, he was asked what he thought would be needed to get more bulls. The same approach was used for the other questions.

Respondents were asked whether the number of bulls they owned was enough to suit them. There were 70 answers, divided 42-yes and 28-no. All "no" answers were then asked what would be needed to get more bulls. The distribution of answers is shown in Table 4.

The same manner of question was generalized to the Reservation, i.e., what could be done to get more breeding bulls on the Reservation, if the respondent thought anything could be done. The distribution of these answers is shown in Table 5. In this case, a question of interpretation of answers arises. There were six

Table 4. Distribution of Answers to the Survey Question, "What would you need to get more bulls?", if the Respondent was Not Satisfied with the Number of Bulls Now Owned.

Answer	Number Answering	Percent of Those Indicating Dissatisfaction
More Money or Income	17	60.7
More Cattle	5	17.8
Other Factors	3	10.7
Did Not Answer	<u>3</u>	<u>10.7</u>
Total	28	100.0

Table 5. Distribution of Answers to the Survey Question, "What could be done to get more breeding bulls on the Reservation?", if the Respondent Thought Anything Could Be Done.

Answer	Number	Percent of Those Thinking Something Could Be Done
Make More Money or Income Available for Bulls <u>1/</u>	17	32.1
Everyone Have Own Bull	12	22.6
Don't Know	3	5.7
Tribal Bull Service	3	5.7
Other Answers	12	22.6
Did Not Answer	<u>6</u>	<u>11.3</u>
Total	53	100.0

1/ Includes six respondents who said "everyone should have their own bull", but in the previous question (Table 4) said that more bulls for themselves would require that more money, income or credit be made available.

respondents who answered the above question (Table 4) with "money or income", but answered the more general question in Table 5 as "everyone have his own bulls". There is, obviously, a further question implied here. This is: How does everyone acquire his own bull? Does this require added money or income or simply better management and planning of present finances? For the six respondents who answered the question in Table 4 as "more money...", but said "everyone have his own bulls" to the general question (Table 5), it was decided the implied question would also be answered as "more money...". It would be unreasonable to assume the remaining 12 who said "everyone have his own bulls" are implying the need for more money. As was the case for the specific question relating to their own bulls, the most prominent answer was "more money or income".

From another aspect, there were 57 respondents who answered one or both of the breeding bull questions. There were 24 who responded in terms of "more money or income"; or 42.1 percent of the respondents. Of these, 22 thought something could be done to improve the number of calves on the Reservation; the remaining two said nothing could be done to improve the number of calves, but answered the above two questions.

The question of improving bull quality while related to the problem of calf crop, concerns calf quality and therefore influences

market prices of Reservation calves. Respondents were asked whether or not they were satisfied with the quality of their bulls. If they answered "no", they were asked what they would need to get better bulls. The distribution of answers to this question is shown in Table 6. Only 17 respondents indicated dissatisfaction, and 12 of these saw "more money or income" as the solution. It is of interest to note that all 17 respondents thought something could be done to improve bull quality generally on the Reservation.

There were, in addition, 48 respondents who thought their own bulls were of high enough quality. However, 30 of these also said something could be done to improve general quality of bulls on the Reservation. Apparently, either the opinion of one's neighbor's bulls is quite low, or ranchers are not adequately able to judge quality. From the material in Table 6, it is apparent that the pattern of response is similar to the previous questions.

The data suggest these people are apparently unwilling to make sacrifices in their current expenditure pattern to increase the number and quality of bulls. Subsequent income data will indicate average incomes comparable to adjacent developed farming areas, indicating it would be possible to direct money from consumption to productive purposes. It would appear that there is little appreciation of the simple fact that additional money or income can be generated

Table 6. Distribution of Answers to the Survey Question, "What would you need to get better bulls?", if Respondent Was Not Satisfied with His Present Bull Quality.

Answers	Number	Percent of Those Dissatisfied With Present Quality
More Money or Income to be Made Available	12	70.6
More Knowledge or Information	1	5.9
Other Answers	2	11.8
Did Not Answer	2	11.8
Total	17	100.0

by reorganization of existing enterprises and expenditure patterns.

Turning to cropping practices, the question of what would be needed to increase fertilizer usage was considered. Respondents were asked whether or not they would like to use fertilizer more often than they do now. Of the 47 respondents who answered, there were 34 who said "yes", they would like to use fertilizer more often. All "yes" answers were then asked to indicate what it would take for them to use fertilizer more often. The distribution of responses is shown in Table 7. The pattern of replies parallels previous material closely. There were 24, or 70.7 percent of the respondents who volunteered the answer "money". It is of great interest to note that over half of the 24 respondents (13 in number) indicated on earlier

Table 7. Distribution of Answers to the Survey Question, "What would it take for you to use fertilizer more often?", if Respondent Expressed a Desire to Use It More Often.

Answers	Number	Percent of Those Wanting to Use Fertilizer More Often
More Money	24	70.7
Irrigation	1	2.9
More Land	1	2.9
Other Answers	4	11.8
Did Not Answer	4	11.8
Total	34	100.0

questions they seldom or never used fertilizer. As well, of the 24 respondents there were 23 (including the 13) who indicated they would like someone to show them how to use fertilizer; implying, at the very least, a modicum of learning is necessary regardless of whether or not money were provided for fertilizer expenditure. The yield comparisons pointed out in Chapter I, page 13, would suggest rather large gains from greater fertilizer use by diversion of funds from machinery and automobile investment.

The final question relevant to this section deals with attitudes toward possibilities for increasing hay production on the Reservation. Respondents were asked simply if they would like to grow more hay

than they are now growing. The respondents indicating a desire were then asked, "what it would take" to do this. Of the 70 respondents (85.4 percent of the 81 who answered the question) indicating a desire, 20 said "more money or income".

Table 8. Distribution of Answers to the Survey Question, "What would it take for you to grow more hay?", if the Respondent Said He Would Like to Grow More Hay.

Answers	Number	Percent of Those Who Expresed Desire to Raise More Hay
More Money or Income	20	28.6
Sprinklers, Irrigation or Water	8	11.4
Land Leveling or Land Improvement	2	2.8
Hay Equipment	9	12.8
More Cattle	2	2.8
More Land or New Land	14	20.0
More Management or Technical Knowledge	2	2.8
Other Answers	11	15.7
Did Not Answer	2	2.8
Total	70	100.0

While the nature of the attitudinal data obtained from the survey questionnaire precludes a more rigid testing of the hypothesis,

the data available are not inconsistent with it. All respondents were not expected to answer each of the above questions. Too, the questions were "open-end", i.e., respondents were not given an opportunity to choose among pre-selected answers. Data gathered during the 1959-60 period were to simply find out what the people were thinking, what they were doing, and what they understood about rudimentary aspects of agricultural technology. This was, then, exceedingly general in nature. Nevertheless, the data are useful in examining whether certain hypotheses are at least consistent with reality. More stringent testing may prove otherwise, but available data suggest the first hypothesis is not inconsistent with the Warm Springs situation. That is, that extensive outside demonstration and contact with advanced areas, and their agents, combined with availability of ascriptively distributed income from collectively owned resources, does yield serious misconceptions of what constitutes economic progress. There are sufficient grounds to say these are reflected in consumption-investment behavior, and in views regarding further investment.

That funds exist to permit diversion from consumption to productive investment, is borne out by considering Tables 9 and 10 with their accompanying charts.

Table 9 indicates the distribution of per capita income to

Table 9. Distributed Per Capita Income Per Family, Number of Families, Total Number of Persons in Families, Average Number of Persons Per Family, Average Per Capita Distribution Per Person, 1959. 1/ 2/

Distributed Per Capita Income Per Family <u>1/</u> (Dollars)	Number of Families (No.)	Total Persons (No.)	Average Number of People Per Family (No.)	Average Per Capita Per Person (Dollars)
Less than \$1, 000	19	25	1. 3	\$722
\$1, 000 - \$1, 999	8	18	2. 4	819
2, 000 - 2, 999	13	39	3. 0	923
3, 000 - 3, 999	15	66	4. 4	837
4, 000 - 4, 999	18	94	5. 2	893
5, 000 - 5, 999	10	62	6. 2	898
6, 000 - 6, 999	7	51	7. 3	904
7, 000 - 7, 999	12	95	7. 9	947
8, 000 - 8, 999	4	35	8. 8	951
9, 000 - 9, 999	--	--	---	---
10, 000 and over	1	10	10. 0	1, 000

1/ "Per capita Income" has a specific meaning in the present context. It refers to the size of the individual shares of the Tribal income which is distributed to enrolled tribal members. For 1959, there were three payments made; \$350, \$100, and \$500. The average per capita income per family member could be less than this where there are non-enrolled family members. For example, this is the case in the "less than \$1, 000" bracket where obviously 6 non-enrolled husbands or wives. Summing across enrolled individual family members would yield per capita income paid to the family.

2/ The average and median per capita distribution per family was \$4, 140 and \$3, 800 respectively.

Tribal members from Tribal earnings by the amount of such income received per family. It is significant to note that without adjusting this distribution to allow for income or losses from farming activities,

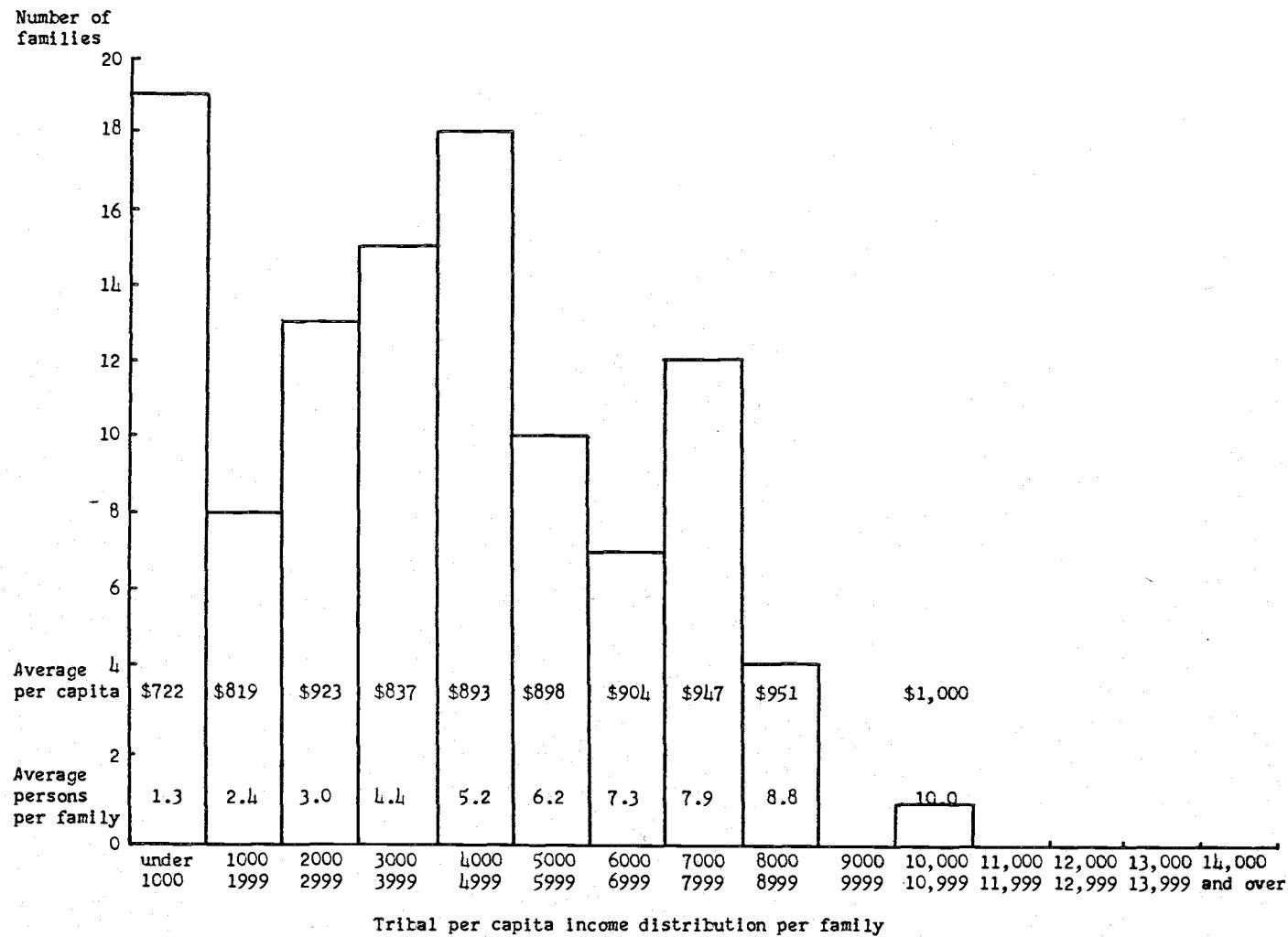


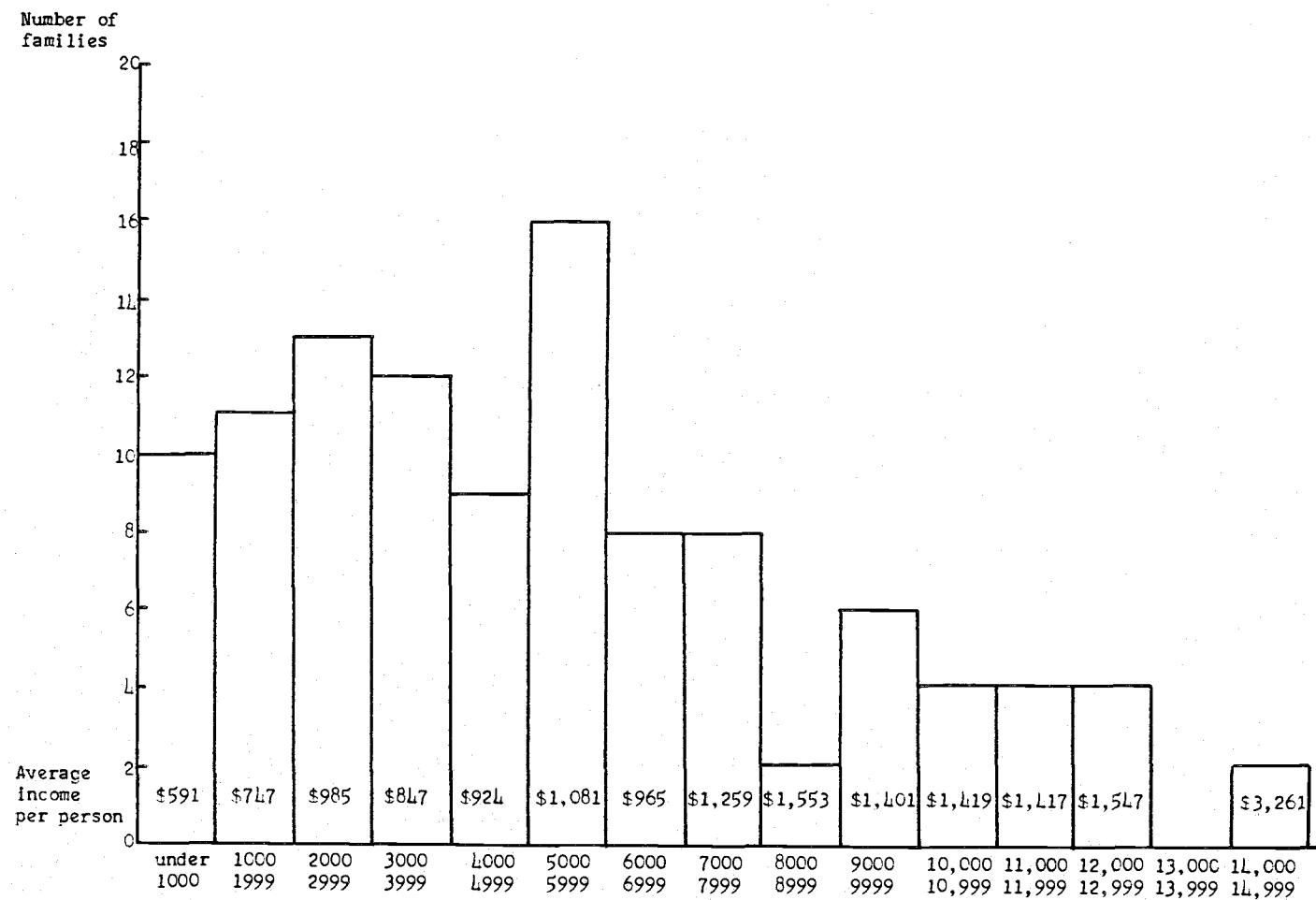
Figure 1. Distributed Per Capita Income Per Family Showing Number of Families in Each Income Bracket, Average Number of Persons Per Family and Average Per Capita, 1959.

Table 10. Per Family Disposable Per Capita Income Plus Net Farm and Wage Income Reported in the Oregon State College Warm Springs Research Project, Number of Families, Total Number of Persons in Families, Average Number of Persons Per Family, Average Disposable Income Per Person, 1959. 1 / 2 /

Distributed Per Capita Income Per Family Plus Net Farm and Wage Income Reported <u>1</u> /	Number of Families	Total Persons	Average Number of People Per Family	Average Disposable Income Per Person
(Dollars)	(No.)	(No.)	(No.)	(Dollars)
Less than \$1, 000	10	14	1.4	\$591
\$1, 000-\$1, 999	11	20	1.8	747
2, 000- 2, 999	13	35	2.7	985
3, 000- 3, 999	12	52	4.3	847
4, 000- 4, 999	9	45	5.0	924
5, 000- 5, 999	16	75	4.9	1, 081
6, 000- 6, 999	8	53	6.6	965
7, 000- 7, 999	8	49	6.1	1, 259
8, 000- 8, 999	2	11	5.2	1, 553
9, 000- 9, 999	6	40	6.7	1, 401
10, 000-10, 999	4	29	7.2	1, 419
11, 000-11, 999	4	32	8.0	1, 417
12, 000-12, 999	4	32	8.0	1, 547
13, 000-13, 999	--	--	---	-----
14, 000-and over	2	9	4.5	3, 261

1 / See footnote 1 /, Table 9. Farm income is net of reported expenses, excluding taxes on any income or property derived from the Reservation, by the Indians. Where farm income but no expenses were reported, forty percent of this was entered as net income. The arbitrary division at forty rather than the rule-of-thumb twenty-five percent arose because of the absence of any local, state, or federal taxes on Indian trust property or income from the property.

2 / Average per capita plus other income was \$5, 376 per family. Median per capita plus other income per family was \$4, 942. This compares to a mean income for farm income in the United States in 1959 of \$3, 450 and a median income of \$2, 960. Both of these are money income before taxes. Statistical Abstract of the U.S., 1961, 82nd ed.



Distributed per capita income per family plus net farm and wage income reported, 1959

Figure 2. Per Family Distributed Per Capita Income Plus Net Farm Income and Wage Income Reported in the Oregon State University Warm Springs Research Project Showing Number of Families in Each Income Bracket, Average Disposable Income Per Person, 1959.

both the mean and median income exceed those of farm operators nationally for 1959. The \$4,140 (mean) was \$3,800 (median) are, in fact, disposable income figures and compare to \$3,450 (mean) and \$2,960 (median) for farm operators, nationally, before taxes. Adjusting the distribution to include farm enterprise income and losses (Table 10) spreads the distribution out considerably. Compared to the previous distribution the mean has increased to \$5,376 and the median to \$4,942.

More meaning can be given the data in Table 10 when they are related to the individuals answering "more money" in Tables 5-8. In every case half or more of the answers were from individuals whose disposable family income exceeded both the mean and median of the distribution. In every case about three-fourths or more of the individuals had incomes exceeding the median of the distribution. In general, it can be said that those answering the questions were individuals from the upper end of the income distribution. In known cases, individuals with substantial income did not report it in the survey questionnaire. This would tend to increase the number of families in the upper portions of the distribution. That persons with incomes such as exist at Warm Springs believe additional money or income is necessary prior to increased productive investment tends to bear out points made earlier and tends to substantiate the hypothesized behavior.

In addition to supporting the cultural attitudes these data suggest an interesting hypothesis for further investigation. These data suggest a substantial outflow of investment funds into nonreservation investments or at least are being held in the form of savings in local banks. The extent of this is unknown but does appear to follow patterns similar to many other underdeveloped areas.

Given farm practices and organization at Warm Springs, the data from Tables 2 and 3 suggest the Indian farmers have directed funds to acquisition of the conspicuous items associated with the more advanced adjacent agriculture; i. e., machinery and equipment. Questions on what farmers believe is necessary for more productive investments in cattle and crops indicated more money or income is seen as the solution to low productivity and a paucity of productive investments. This implies an increase in income is required to increase income. Given the Warm Springs setting, development (i. e., greater productivity and higher income) requires a different balance between consumption spending and investment spending. Available income data suggest such a shift is possible, i. e., it seems clear money is not a limiting factor. To this point, the data available from Warm Springs do not indicate the Hirschman theory cannot be applied to the Warm Springs development problems.

Perception of Development Opportunities and the Image of Change

The combined influence of the tendency toward diffuseness in performance of tasks, the impact of outside demonstration and contact, and ascriptive distribution of income permitting gratification of immediate desires have implications for the Hirschman view that change requires more than knowledge of new techniques and how these might be beneficial. The type of agriculture at Warm Springs is, in general, oriented to cattle-grazing-cash grain enterprises. Given the soils, topography, climate and range conditions and availability, agricultural production comparable to adjacent areas requires specific, careful, and integrated management practices. It would be expected that a diffuse orientation in the performance and organization of economic tasks 1/would result in agricultural productivity being significantly lower at Warm Springs than in adjacent areas.

1/This manner of orientation is reflected in cattle operations, cropping and administrative tasks in specific ways on the Reservation. For example, cattle are permitted to run and breed at will, regardless of needs for conservation of seasonal ranges. Roundups, in Reservation terminology, cattle and horse rides, take place in areas where livestock are traditionally thought to be during that season of the year. Marketing is sporadic, with a few head sold periodically to cover immediate expenses. In cropping, planting takes place early in the Spring if a dry period occurs so fields can be worked. If not, crops wait until after Spring rains. It is then usually too dry to produce any substantial yields. There is little fertilizer used, no rotation practices, and little or no land fallowed. Administratively, the Tribal Council handles all decisions regardless of their size or importance. There is virtually no delegation of authority to members of the Tribal administrative staff. If Council members are reticent and do not desire to act

The combined influence of the above factors is to remove virtually all pressure to perform the tasks needed to increase agricultural productivity and shift income to sources alternative to the ascriptive or per capita income. Now, in the face of extensive outside contact with continuous demonstration of the value of agricultural improvements, it follows that there should be recognition that such improvements could increase productivity. This would mean significantly lower productivity existing alongside of substantial levels of disposable income, relatively larger investment in machinery and equipment, and knowledge of the value of certain improvements. Given the nature of Warm Springs Agriculture, the production methods which can be considered are: (1) usefulness of fertilizer; (2) Spring versus Fall planting of grain; (3) usefulness of increasing grass and alfalfa; (4) usefulness of coordinated range use and closer herding of livestock; (5) the need for more and better breeding bulls; (6) the usefulness of planned breeding programs; (7) the usefulness of farm planning; (8) the need for information on modern farming methods and practices.

The eight points given above can be grouped into four general areas. These are:

on a matter, it is typically put off to some future meeting or to a time when circumstances will force action to be taken. There is little attempt to involve persons outside the Council in Tribal affairs. That is, there is little delegation of authority and responsibility or specialization of tasks.

1. Crops..... This would include fertilizer use, Spring versus Fall planting, and growing more grass and alfalfa.
2. Range..... This would include coordinated range use and closer breeding.
3. Livestock..... This would include questions on bulls and breeding practices.
4. General Management... This would include questions on the need for planning assistance and information on methods and practices.

The purpose of this arrangement is to facilitate discussion. A summary of answers to the 18 survey questions to be discussed in this section is shown in Table 11. Other material from the survey will also be used to supplement these data.

Existing cropping practices on the Reservation have resulted in extremely low yields and have contributed to depleted Spring-Fall ranges by not providing adequate feed supplies to permit wintering of livestock away from needed Spring-Fall ranges. The keys to increased productivity, in terms of cropping practices only, are increased use of fertilizer, shifting from Spring to Fall planting of grains, and producing more grass and hay crops to provide winter feed as well as build soil productivity. The answers to questions 1-4, Table 11, suggest that Reservation farmers do recognize the value of these improvements. If this were not the case, the differences between the groups of respondents that responded positively

and negatively to the questions are strikingly large. Further evidence from the survey can be brought to bear. For example, in an "open-end" question, farmers were asked why they saw benefits in shifting from Spring to Fall planting: there were 45 respondents (76 percent of the 59 who saw benefits) who volunteered either that Fall planting resulted in better crops or that there was more moisture in the fall of the year. A similar open-end question on hay production yielded 30 respondents (50 percent of the 60 who thought more hay would improve farming) who volunteered there was a hay shortage, that they would have to buy less hay, or it would help the soil.

Range and livestock practices can be discussed jointly. In these areas it is apparent that some factors are not as generally recognized as being necessary to increased productivity. The primary factors in range and livestock management resulting in depleted Spring-Fall ranges, small and uneven size calf crops and poor cattle quality are free ranging of cattle, too few bulls, low quality bulls, and almost complete lack of controlled breeding. In Table 11, questions 6, 11, and 12 do not show large differences between the respondents in the "yes" and "no" groups although over half of those answering each question responded "correctly". While farmers and ranchers generally recognize that there should be close

Table 11. Summary of Survey Responses for 18 Questions Concerning Agricultural and Management Practices

Item	Yes	Percent	No	Percent	Total
Cropping Practices:					
1. Like to use fertilizer more often?	34	72.3	13	27.7	47
2. Like to learn how to use fertilizer?	43	84.3	8	15.7	51
3. Any benefits shifting Spring to Fall Planting?	59	80.8	14	18.2	73
4. Improve agriculture to grow more hay?	60	82.2	13	17.8	73
Range Use:					
5. Should be closer herding?	55	72.4	22	28.6	77
6. Lack of close herding a problem?	41	56.2	32	43.8	73
7. More cooperation improve grazing?	68	87.2	10	12.8	78
Livestock Practices:					
8. Enough breeding bulls?	14	19.7	57	80.3	71
9. Anything to be done to get more bulls?	53	82.8	11	17.2	64
10. Can bull quality be improved?	55	82.1	12	17.9	67
11. Should bulls run free?	36	48.6	38	51.3	74
12. Bulls running free make problems?	29	42.0	40	58.0	69
13. Own bulls run free?	51	85.0	9	15.0	60
General Management:					
14. Farmers need help in planning?	68	72.3	26	27.6	94
15. Farmers have plan for credit?	58	74.4	20	25.6	78
16. Help to get more information on modern methods?	68	76.4	21	24.6	89
17. Any problems on which would like more information?	55	64.7	30	35.3	85
18. More information on government programs?	74	87.1	11	12.9	85

herding between ranges (number 5, Table 11), only 14 of the 55 saw this as a means to prevent over-grazing. Of the 68 who thought more cooperation would improve grazing, (number 6, Table 11), only 18 saw this as a means to improve range management. The remainder of the affirmative answers to these questions either did not say why greater cooperation and closer herding would help, or said simply that working cattle would be easier. There is no apparent inconsistency here; that is, the evidence does not indicate a lack of sound range management is seen as a problem, but that greater cooperation and better herding would be desirable. This can possibly be explained by the nature of the people themselves. The desire to submerge open conflict and promote outward calm and cooperativeness are consistent with these two tools of range management (herding and cooperative range use). These are simply means whereby people can "get along" better, but their absence does not constitute a prominent problem.

While there is not sufficient evidence to conclude farmers and ranchers see the real value in range management improvements, the evidence is sufficient to suggest that the improvements can be instituted, albeit for apparently different reasons than a desire to increase productivity.

The need for more and better bulls is recognized by farmers and ranchers. However, the question of controlled breeding and the

relation of free-running breeding bulls to improved livestock management is not apparently recognized. There were 51 of the 60 respondents who said their bulls ran free all of the time (number 13, Table 11). The evidence indicates this causes no particular problems (number 12, Table 11). While there was a considerably larger number indicating they felt bulls should not run free than said their own bulls did run free (number 11, Table 11), it is possible that discussion of controlled or managed breeding by demonstrators has not provided the practical suggestion of how to control the bulls.

On balance it would appear that farmers and ranchers recognize only some of the means for improving calf crops and bull-cow ratios. The evidence on managed breeding would appear to reflect the presence of information from outside demonstrators as to the value of better breeding programs, but, at the same time, a pronounced lack of understanding about the relationship of current poor practices to low and uneven calf crops. As a result, the prominent solution to current cattle problems is generally more and better bulls. This is necessary but it is only part of the solution.

In the area of general management, direct questions were not asked concerning the need for farm planning or whether this would assist in raising agricultural productivity. However, it is possible to examine this factor indirectly. There were 68 respondents who

said farmers need help in planning their operations (number 14, Table 11). Of these, there were 46 who volunteered this help was needed because of a lack of knowledge and experience, to get better crops, or planning was generally useful. This constitutes recognition that planning assistance is necessary. Indirectly, it also is evidence that planning is recognized as useful. In addition, the 58 respondents who thought a farm plan should be a necessity for credit (number 15, Table 11), are also inferring that farm planning is a useful management tool. The three questions (16, 17, and 18, Table 11), on management information, all indicate the need for information on modern farm practices. This is not paradoxical with the contention being examined that farmers and ranchers at Warm Springs recognize the usefulness of certain production improvements. That the usefulness is recognized but no action is taken suggests information or knowledge may not be adequate for decision making. The availability of substantial unearned per capita distributions of communal income removes the pressure to make changes with existing levels of information and knowledge. Additional knowledge providing clearer pictures of benefits and costs is then a real need. While it could be contended that forcing decisions by decreasing unearned income would lead to necessary changes, the evidence suggests that farmers and ranchers recognize a real need for planning assistance. Furthermore,

53 answers volunteered to an open-end question on what types of information would be desired seem to bear this out. These ranged over how to use fertilizer, uses of dryland, kinds of crops and practices, irrigation, general management, soil testing, and machinery.

A comparison of crop yield differentials was made in Table 1, page 13, of this paper. Adjacent area irrigated crop yields were those found to exist in the Agency Plains and Metolius-Culver areas of the North Unit project by Conklin in this 1957 study (5, p. 101). On the basis of this work, these irrigated yields will be assumed to be relevant yields for farms in these two areas of the North Unit project. The dryland wheat yield for adjacent dryland areas is the 1959 average normal yield for Wasco County, Oregon. Dryland oat yields were taken from the 1959 U.S. Census of Agriculture for the five counties in the Columbia Basin -- Wasco, Sherman, Gilliam, Morrow, and Umatilla. The dryland barley yield was taken from a report by Stippler and Castle concerning wheat farming in the Columbia Basin. The source of their data on procedure can be found in reference 1, p. 3-6. The dryland alfalfa yield was based upon verbal information from persons in the area. Because of the incompleteness of Warm Springs survey inventory data, crop yields on the Reservation were obtained from available Bureau of Indian Affairs

records.

The greatest differential in yields on dryland is for barley. Warm Springs yields are only 23.2 percent of those in adjacent areas (9.3 bushels compared to 40.0 bushels). This is followed by oats, 39.8 percent; wheat, 44.9 percent; and alfalfa, 75 percent of adjacent area yields. Irrigated yields are generally somewhat better relative to adjacent areas, but differences are still marked. The greatest difference is for wheat, where Warm Springs yields are only 35.4 percent of those in the North Unit areas (19.8 bushels compared to 56.0 bushels). This followed by barley, 38.6 percent, alfalfa, 54.8 percent; and oats 57.1 percent of adjacent area yields.

While a portion of the differentials in irrigated yields can be attributed to poor management and maintenance of the basic irrigation facility by the Bureau of Indian Affairs 1/, the greatest portion of the differentials results from inappropriate and inadequate management practices on the farm. There is little or no fertilizer used, irrigation is haphazard (for example, the number of times crops were irrigated varied from 1 to 12) and much irrigable land is actually farmed dry. Dryland yield differentials can be traced mainly to inappropriate management practices. Crops are, in almost all cases, seeded in the Spring of the year, land that is cropped is cropped

1/ See Yoder (26, p. 155-156, 166) for the physical condition of the existing irrigation project and how it has been maintained.

annually, and little or no fertilizer is used.

Income data available for comparing Warm Springs with adjacent areas are shown in Table 12. At best, the data can only be considered as indicative of the level of income at Warm Springs relative to adjacent areas. The North Unit income figures are mean incomes computed from sample data reported on field schedules taken by Conklin in 1958. The figures represent net cash farm income adjusted for inventory changes plus non-farm income received by the operator. The income is money available to cover depreciation, interest on investment, and labor and management. Ninety-five percent confidence intervals were computed for the income figure in each farm size for each North Unit area.

The income figures for the Columbia Basin were obtained from work by Stippler and Castle (23, p. 8). The figures are budgeted figures. That is, using average prices, costs, and yields prevailing in the area in 1959, these are the average income figures which would be found for the indicated cropland acreage. Reference to the indicated work and to work done by Barkely (1, 94 numbered leaves) will provide greater detail on the procedure followed to obtain the figures. They are net cash farm income figures and do not include any non-farm income received. However, they do represent the income available to cover depreciation, interest on investment, and labor and management.

Table 12. Net Cash Income, Comparison, North Unit Irrigated Farms, Specialized Wheat Farms in the Columbia Basin, Mixed Irrigated and Dryland Farms at Warm Springs Indian Reservation.

Area	Average Dollar Income
North Unit: <u>1/</u>	
Agency Plains	
30-89. 9 acres	\$ 6, 321
90-159. 9 acres	12, 356
160 acres and over	30, 291
Metolius-Culver:	
30-89. 9 acres	4, 792
90-. 59. 9 acres	8, 389
160 acres and over	26, 206
Mud Srpings:	
30-89. 9 acres	4, 875
90-159. 9 acres	6, 881
160 acres and over	9, 747
Columbia Basin: <u>2/</u>	
400 acres cropland	4, 851
700 acres cropland	9, 349
Warm Springs: <u>3/</u>	6, 487

1/ These are simple average net cash income figures obtained from field schedules of the 60-farm survey done by Mr. Frank Conklin in 1958 in preparation of his Masters Thesis (reference 5). Confidence intervals of the means have been calculated as follows:

Acres	95 Percent Confidence Intervals of the Means		
	Agency Plains	Metolius-Culver	Mud Springs
30-89. 9	2, 050 to 10, 591	2, 394 to 6, 980	3, 320 to 6, 249
90-159. 9	5, 464 to 19, 248	2, 852 to 15, 763	3, 024 to 10, 739
160 and over	6, 831 to 53, 751	-9, 026 to 56, 618	1, 360 to 18, 134

2/ These are budgeted net cash farm income figures derived by Stippler and Castle using 1959 average prices, costs, and yields from the area. See references 23 and 1.

3/ This figure includes net cash farm income of 48 families who would give their income and expenses plus non-farm income plus per capita payments.

The income figure indicated for Warm Springs is net cash farm income plus non-farm income plus per capita payments received by the farm family. Per capita payments for the calendar year 1959 were \$950. The Warm Springs income figure is then the cash income available to cover depreciation, interest on investment, and labor and management.

It is clear that the income figures are not strictly comparable between areas. First, it is not clear that the Warm Springs data (other than per capita distribution income) are accurate. Respondents were simply asked to "write-in" their total farm income, their own non-farm income and the non-farm income of other members of the family. This was done as a check against sales figures for the farm as well as to find the total family incomes. It became apparent that it would not be possible to compute farm income from sales and expense figures. Secondly, the North Unit and Warm Springs figures are reported by survey respondents, while the Columbia Basin figures are budgeted. That is, the Columbia Basin figures are synthesized from prices, costs, yields, etc., which prevailed in the area during 1959. Third, there is a difference of two years between the North Unit data and the other two. North Unit data are for 1957, the others for 1959. However, the data do indicate that Warm Springs families, on the average, have cash incomes available to maintain

and expand investments and provide living expenses which are comparable to all groups of North Unit irrigation farmers except to farms of 160 acres and over on the Agency Plains and a 400 acre dryland wheat farm. From footnote 1, Table 12, it is seen that the Warm Springs figure falls between the confidence limits for all levels but the 160 acre and over North Unit farm and the 30-89.9 acre Mud Springs farms. If the money from per capita payments is not included in the Warm Springs figure, net cash farm income, for the 48 respondents who gave both income and expenses in the survey averaged only \$1,921 per family. The range was from \$-580 to \$6,984. Per capita then would average \$4,566 per family for the 48 families. The relationship of these data to earlier income distributions is that to make a more relevant comparison of Warm Springs to the adjacent areas, those respondents not reporting both income and expenses were not included for computing Table 12. The respondents in Table 12 would be a subgroup of those in Table 10.

Despite the tentative nature of the available data, it is not apparent that the hypothesis drawn from the Hirschman theory is inconsistent with the Warm Springs situation. It would appear that the presence of a large per capita income has removed pressure either to seek out desired information or to make changes which would correct productivity differentials. Despite recognition that certain

things could and should be done to develop Reservation agriculture, a wide gap persists between the Reservation and adjacent areas.

Development Decisions

The Hirschman view of economic and social development focuses mainly on the improper functioning of the process by which decisions of change are made and implemented, i.e., the process of making and implementing changes in the existing economic and social structure. The ability to build, to alter, and to utilize this process is acquired largely by making decisions and carrying these into effect. The impediments to the functioning of this process have their roots in the norms which influence relations, in general, in the social system.

If this ability is influenced by the norms prevailing in a social system it should be possible to observe manifestations of the interaction of the norms and the pressures for change arising from the external influences on the Warm Springs people. Under the conditions outlined earlier (Chapter III, p. 82) it would follow that problems in key areas would be seen and solutions would be desired. However, it also follows from the theory that the influence of particularistic and/or ascriptive norms should cause different responses to the thought of change across different age levels. Because a voice in policy decisions is associated directly with age, the influence of these

norms would appear in both the decision process and the outlook for the future.

The degree to which individual members have been socialized to accept or accede to the particularistic and/or ascriptive orientation varies directly with age. Change in segments central to existing arrangements would then be increasingly incompatible with the image of what should be as one moves up the age scale. Since older individuals see themselves as more or less responsible for the integrity of the collective, and age is so closely associated with voice-in-policy privileges, the thought of changes in these segments would tend to be less favorable to "policy makers". However, it is not conceivable that, at Warm Springs, the extreme pressures for change would be rejected out-of-hand by the "policy makers". Neither is it conceivable that the older persons have been completely immune to the pressures generated by demonstration of potential benefits if arrangements were changed. Rather, the pressures would tend to generate, when combined with a particularistic and/or ascriptive orientation, a feeling of confusion and futility or hopelessness. This would be the reaction resulting from an inability to reconcile changes with basic feelings that change and progress must be shared by all members equally, but, at the same time, recognizing that the collective integrity is being threatened by increasing pressure or desire for

benefits possible from alternative arrangements.

The inability of the decision process to function under the conditions described at Warm Springs should then reflect itself in views on problems of and feelings toward agriculture on the Reservation. Two of the significant features of Warm Springs agriculture are the inability to alter the physical size of farms and to regulate the use of Tribal ranges to improve their productivity. The feelings that each Indian should have his own land and be permitted free use of Tribal ranges stems from the beginning of the Reservation. Maintaining traditional patterns for handling acquisition of land and operating range lands results in extreme limitations on land availability for farming purposes and a badly depleted range resource.

An impediment along lines outlined above would have to reflect itself in the existence of positive forces for change, but no change taking place. People would have to recognize certain arrangements or traits were problems and, at the same time, see alternative arrangements as more desirable. Unless both of these were present, factors other than a crippled decision process could result in inaction. For example, something may be felt to be a problem but a lack of knowledge about alternatives may result in inaction, i. e., there is no expressed desire for a solution so the existing situation is accepted.

The pattern of values and attitudes which underlies the reluc-tances and difficulties of decision making should then generate feel-ings described above. The following factors could be considered in this investigation: (1) heirship patterns as problems in land availa-bility, (2) the desire to break existing heirship patterns, (3) the need for limitations on the acreage a man can operate, (4) existence of problems with current range use, (5) the need for change in use of Reservation ranges, (6) feelings regarding ability to expand farming operations, (7) ability to earn a living from Reservation agriculture, (8) chances for success of young people entering agriculture, (9) the future status of agriculture on the Reservation.

These nine factors concern three specific areas -- land, range use, and general feeling about the present and future. There were eleven questions in the self-administered portion of the survey questionnaire which can be used to examine these factors. The re-sponses to these questions are shown in Table 13.

While all age groups feel heirship problems are causing too much land to remain inoperative, the older age groups are somewhat less inclined in this direction. The explanation for this may lie in the fact that the land is actually not available to the younger ages. On the other hand, the older people hold the land, but on an "undivided interest" basis with other heirs. The result here is that while the

Table 13. Responses to Selected Survey Interview Questions by Three Age Groups

Question	Answer	Less than 36		36-50		Over 50		Total	
		No.	Per.	No.	Per.	No.	Per.	No.	Per.
1. Heirship as a problem in land availability	Yes	16	94.1	20	71.4	22	71.0	58	76.3
	No	1	5.9	8	28.6	9	29.0	18	23.7
2. Eight heirs to sell a piece of land, 2 not sell	Yes	13	92.8	21	87.5	20	69.0	54	79.4
	No	1	7.2	4	12.5	9	31.0	14	20.6
3. Six heirs to sell a piece of land, 4 not sell	Yes	13	92.9	21	87.5	16	64.0	50	79.4
	No	1	7.1	3	12.5	9	36.0	13	20.6
4. Need limitations on acreage man can operate	Yes	3	16.7	7	24.1	12	36.4	22	27.5
	No	15	83.3	22	75.9	21	63.6	58	72.5
5. Need for closer herding	Yes	10	66.7	19	76.0	26	70.3	55	71.4
	No	5	33.3	6	24.0	11	29.7	22	29.6
6. Lack of closer herding a problem	Yes	7	53.8	15	57.7	19	55.9	41	56.2
	No	6	46.2	11	42.3	15	44.1	32	43.8
7. Cooperation improve the grazing situation	Yes	12	85.7	27	93.1	29	82.9	68	87.2
	No	2	14.3	2	6.9	9	17.1	10	12.8
8. Young people have chance in farming	Yes	17	81.0	19	54.3	27	64.3	63	64.3
	No	4	19.0	16	45.7	15	35.7	35	35.7
9. Forces against expanding operations	Yes	16	84.2	24	77.4	24	66.7	64	74.4
	No	3	15.8	7	22.6	12	33.3	22	25.6
10. Can Indian make adequate living by farming	Yes	16	80.0	21	60.0	24	57.1	61	62.9
	No	4	20.0	14	40.0	18	42.9	36	37.1
11. Is farming situation hopeless on Reservation	Yes	4	19.0	9	25.7	20	50.0	33	34.4
	No	17	81.0	26	74.3	20	50.0	63	65.6

land cannot be worked into the operations of the older group they do hold the land. It is clear there is a definite feeling that heirship does make problems so far as farmland availability is concerned.

In an open-end question, not in Table 13, respondents were asked how important it was to the Reservation as a whole that solution be found to the heirship problem. There were 69 who volunteered an answer on the importance of a solution. There were 47 who said very important, 17 somewhat important, two not too important, two not important at all, and one don't know. These figures bear out the point in the previous paragraph.

Attempting to examine the desire to break up existing heirship patterns, two hypothetical situations were posed to respondents. In the first case it was supposed there were 10 heirs to an allotment, eight wanted to sell and two did not. Respondents were simply asked what they thought of this situation. The responses were classified into several different categories for the Oregon State College Warm Springs survey report, but for present purposes answers can be classified either as "break-up" the current manner of handling allotment sales or "no sale" unless all agree. The same thing was done for a similar situation where the division between heirs was posed as six wanting to sell and four who did not. Clearly, the latter moves the situation closer to an even division between heirs and

could receive a different response if there were not particularly strong feelings on heirship land sales. Although there was general agreement on both questions, that the sale should go through and the stalemate broken, there was also a difference in response across age groups. The older age groups tended to stay with the "no sale unless all agree" approach. It is of interest to note that there were five less responses to the six and four situation. Four of these (all in the 50 years and over group) said the majority, eight heirs, should prevail in the previous question, and one said "no sale". It would appear that while the consensus is in favor of doing away with the current unanimous agreement feature of heirship sales, the older ages felt less willing to change existing requirements.

A "yes-and-no" question was asked whether there should be a limit placed on the number of acres a man could operate. This was one way of indirectly examining existing assignment limitations of 160 acres per family head and the limitations implied in requiring unanimous consent of all heirs to lease a piece of land. It is apparent the feeling prevails that there should not be a limit on the number of acres a person can operate. The difference is significant here because it illustrates the obvious presence of an attitude conducive to change in an area which is central to breaking or maintaining the status quo.

The final four factors to be considered deal with views and attitudes toward the existing agricultural situation, in general, and how the respondent felt about the future of agriculture on the Reservation. These would indicate, in a cursory manner, whether the respondent was able to visualize any marked change in activity patterns on the Reservation or whether the current situation appears hopeless. The first question asked was whether or not the respondent felt forces were generally against him when he thought of expanding his operations. It is clear that the responses indicate a general feeling that forces are against them when they think of expanding. The significance of the difference in this feeling across age groups would reflect one or both of two things: (1) older people tend to accept the world they face as something they can do nothing about, and (2) they have achieved what they have wanted and are not thinking of further change.

Respondents were asked whether or not an Indian could earn an adequate living by farming on the Reservation. Again, the consensus was that this was possible. However, given earlier material, concerning the need for changes in Reservation agriculture, it would appear that this is a dependent answer. That is, it is possible to earn an adequate living, given that changes are made. This appears to follow since there is a real question which might be asked here:

if an Indian can earn an adequate living from farming, how is it that there is such a large expression of dissatisfaction with existing patterns of activity? Do these people see change as desirable, but lack the frame of reference which would lead them to ask how change can occur, i. e., what can be done to bring it about? It would appear this is the case.

The first question asked in the survey interview was whether or not the respondent thought a young person had a chance going into farming on the Reservation (Table 13, question 8). Significantly, the response was that a young person did have a chance. However, the question which followed this in the survey produced somewhat different results. Respondents were asked whether or not they felt the farming situation was hopeless (Table 13, question 11). Noticeably, the older age group was divided evenly on the question while 81 percent of the younger group said the situation was not hopeless. Again, there is the question of meaning when comparing this pattern of response to the view that an Indian could make an adequate living from farming and that young people do have a chance to make a successful future in Reservation farming. It would appear that respondents in all age groups do interpret the existing situation as hopeless and feel the weight of forces is against them when they think of expansion of their operations. However, in order for (1) the expression that

young farmers have a chance in Reservation agriculture, and (2) an adequate living from Reservation farming being viewed as possible, to follow, it would be necessary for these feelings to be dependent upon changes in the existing situation. All of these questions were specifically related to farming on the Reservation and so, supposedly, excluded the thought of per capita payments. Per capita would have been a significant consideration were the questions related to the general future of the Reservation.

To summarize this section, several points may be made. There is apparent confusion concerning the future. While it is evident that respondents feel it is possible to earn an adequate living from farming, they also feel the farming situation is not hopeless, that steps can and should be taken to remedy the existing situation, yet economic and social arrangements remain unchanged. The decision to make the changes cannot or will not be taken. There is some apparent difference between the age groups which is strong enough to suggest older persons actually desire to maintain the existing situation because they are satisfied. This means the hypothesized differences between ages did materialize, although not to the extent thought. It would appear that the pressures for change and demonstration of potential benefits from change by outside influences have been strong enough to bring older people quite close to the

younger people in their views. What then is the problem? It is true that the older persons tend more to view the current situation as hopeless. It is also apparent that they support existing patterns of handling heirship land. It would seem most logical to view the problem as one of a lack of a general framework either for adapting existing knowledge or asking relevant questions to seek out new information. They have something at the present time which produces some income and they have per capita payments. The recognition of potential benefits from possible changes, but taking no action, appears to be a reflection of (1) a lack of framework for incorporating available information, or (2) a lack of knowledge of the possible impact of the changes, or (3) both. The Warm Springs people have seen what others have done in adjacent areas, but have not been able to build the framework necessary for comparable achievement. While there are some differences across age levels, it is apparent they are not as strong as implied by the hypothesis. This necessarily puts a different emphasis on what is needed to break the existing stalemate. Rather than conceiving of means to circumvent the influence of older people, the direction will have to be one of finding means to impart the necessary economic and social framework to all age groups.

The strategy must be to find the means to utilize a general desire for change rather than trying to counteract the influence of one

group. That is, to find the means which will induce all groups to act in a manner which will exploit the desire for change and build the framework of values necessary to continuous growth and development.

CHAPTER V

Implications and Conclusions

There will be three things discussed in this chapter: (1) a general strategy for development policy at Warm Springs; (2) a general strategy and policy for development for the Bureau of Indian Affairs; (3) the significance and implications of the ideas presented in this paper from the standpoint of foreign economic development policy.

To some extent, these are interrelated. Briefly, the core of the relationship is the presence of the Federal government in all three areas. A development strategy and policy at Warm Springs imply a more general policy in the Bureau of Indian Affairs capable of including the specific actions at Warm Springs. The two require a high degree of consistency, assuming the objectives of the BIA are ultimately the same on all Indian Reservations. Given that Indian Reservations are underdeveloped regions, the overall economic development policy of the Federal government regarding such regions seeks the same objectives (in terms of economic and social advancement) in less developed foreign regions as on Indian Reservations. A policy framework having applicability in one region has implications for other regions striving toward similar goals. However, in moving

from one area to another, there are considerations which can modify or even nullify usefulness of the theory, especially in the foreign development area.

Warm Springs

Material considered in the previous chapter allows the conclusion that the tenets of the Hirschman theory are not inconsistent with the agricultural population of the Warm Springs Reservation. However, application of the theory, in terms of action programs, must necessarily involve all members of the Tribal collective. Clearly, alteration of agricultural production techniques, management abilities, and unit size can result in a decline in the number of farmers. This means that, in addition to programs and projects to develop Reservation agriculture, there must be other programs and projects to develop non-agricultural facilities not only to absorb the outflow from agriculture, but to provide jobs and income for non-farm people. The development strategy, programs and projects aimed at developing Reservation agriculture must be consistent with and a part of the programs for non-agriculture. It is not possible to develop fully Reservation agriculture without considering the full range of activity on the Reservation. Rather than assume the role of an outsider imposing development plan priorities on the Warm Springs people, this

section will recommend only what appears to be the best strategy, according to available data and close personal contact with leaders already discussing possible first steps for exploiting the positive relationships between development and the tensions it creates. By "best strategy" is meant the particular direction and sequence of activity which will compel the greatest amount of subsequent action to be taken. As well, some of the things that can be done in specific areas will be indicated, although no sequence suggested.

Achievement of economic and social development or advancement requires that a series of projects or programs be undertaken which produce favorable effects on the flow of income and the socio-economic structure within which activity takes place. These projects or programs cover a wide variety of fields: education, public administration, health, transportation, power, agriculture, forestry, industry, urban development, and so on. Regardless of whether limitations are the savings available or the ability to invest, the limitations require that choices be made among these projects. The question of priority in selection of specific alternatives is resolved on the basis of a comparative appraisal of the strength with which progress in one area will induce programs in others (11, p. 79). In any case, the desirable sequence of activity sought in development is that which breaks away from equilibrium. That is, each move is

induced by a previous disequilibrium which in turn creates a new disequilibrium requiring a further move (11, p. 66-67).

The core of the strategy is then a program so arranged as to be disruptive of values and activities which have been a contributing part of the underdeveloped framework. In the absence of outright compulsion, development of attitudes and abilities necessary to steady growth and development requires that the major burden of change and development be placed on individuals by making them, rather than the more nebulous Tribal collectivity, responsible for action. Centralization of investment decisions tends to be biased against introduction of changes or innovations which might cause losses to existing operators in the collectivity. This means that where all investment decisions are imposed by the authority controlling the collectivity, they tend to enhance the status quo. Where the authority has characteristics as at Warm Springs, enhancing the status quo tends to preclude any significant change unless all members of the collectivity, ideally, share in the benefits on an equal basis. Where a disequilibrium situation has been created by an external or internal force, the authority of the collectivity would attempt to move into a new equilibrium position by distributing the effects of the force more or less evenly over the members of the collectivity. Applying the Hirschman thesis suggests that this very approach may be used to create further imbalance, force additional

action to be taken, and thus enhance the ability to handle problem situations.

The situation at Warm Springs presents a picture of an external force creating a disequilibrium situation. This external force is in reality, made up of two parts -- the Celilo Settlement monies of \$4.5 million and the Oregon State College Warm Springs Research Project. These two factors were discussed in Chapter I. The two are not independent; the latter occurred largely as a result of attempts to distribute the former as per capita payments. The disequilibrium process was initiated by the settlement monies. Attempting to remedy this imbalance, there was action to distribute the money over the population. Pressure from the Federal government froze further disbursement of the funds until the Oregon State College Warm Springs Research Project was completed. The reaction from this further step has been somewhat different than anticipated. The Warm Springs Project itself, plus extensive explanation of results to the Tribal leadership and the people, have created a further disequilibrating force by making Tribal members more aware of both the interrelationships and depth of their problems, and some of the possibilities open to them. Recent meetings with Tribal leaders and members would indicate a heightened attitude of desire to implement Project recommendations. It is the aim of the

strategy and consequent program implied "to keep alive rather than to eliminate the disequilibrium" (11, p. 66) of which these attitudes are a symptom.

Two factors underlie the discussion to follow. These are (1) the existing Tribal membership desires to maintain control of the Warm Springs Reservation; (2) the Tribal members desire that the assets of the Reservation, collective and private, should produce income and employment for Tribal members, under Tribal management, comparable to adjacent areas. Both of these imply economic and social development.

Continuation of the imbalances created by Celilo and the Oregon State College Warm Springs Project implies further steps to place the Tribes, as a collective, and members individually, into increasingly more responsible and burdensome situations. At the same time, program sequences should be arranged in such a manner that the most difficult steps to be taken are left for the time when failure to take such steps will mean loss of most or all of the previous advances. Thus, the strategy is simply a series of actions, each with appropriate penalties for failure to take such action in time either to avoid or mitigate the penalties. The penalties and rewards must be so arranged that benefits from successful individual and collective endeavors are conditional upon continued success in future programs and

projects. Clearly, this particular strategy implies that the magnitude of the penalties, as also the rewards, increases with each major action.

It is strategically important that a greater number of Tribal members be placed in positions where there is no escape from bearing the burden of responsibility, both for actions taken and for failure to take any action. This is necessary both at the Tribal decision level and the individual enterprise level. The reason here is twofold. First, to the extent that ability to narrow choices and arrive at decisions is a function of decision making experience, ability will be increased. Second, the general level of understanding concerning the complexity of problems and consequent necessity for interrelationship of program solutions will be greatly increased. It is clear, however, that ability to arrive at decisions is more than a function of experience alone. Information or knowledge about the relative worth of component parts of alternative programs is required to permit consideration and understanding of all relevant alternatives. Quite simply, decision making may be stagnated precisely because of a lack of information about the technical nature of various choices (such as proper summer fallow or fertilizing methods) or about the range of choices available (such as various forms of credit programs).

The particular mechanism to implement this approach has already been developed to some extent by Alexander Davidson in his proposal for altering management of Warm Springs Tribal affairs (7, p. 109-112). Briefly, the Davidson management mechanism is to establish a set of functional action committees, immediately below the Tribal Council level, each consisting of three members. He proposed that each committee be made up of one Council member, one non-Council member, and a technical advisor specializing in the area covered by the committee. The modification which should be made in this arrangement is that all three voting members on a committee should be Tribal members. The technical advisor should act only as an ex-officio consulting member. To remove any stigma which may attach to BIA personnel, the specialists should be Tribally hired on a continuing basis. BIA personnel would act as resource personnel for the consultants in this arrangement. "Within its functional area each committee would have the responsibility for short-term policy and the successful and decisive execution of that policy.... These committees would be the highest level of executive management; that is, at this point activity in the operation and administration of Tribal affairs would begin to take place" (7, p. 110). This is the level at which specific program planning would occur, to carry out policies decided upon by the Tribal Council. It is at this

level where specific program planning would occur, to carry out policies decided upon by the Tribal Council. It is at this level where alternative choices are considered. Under present conditions, these committees would simply handle matters already current. While the new management arrangement would increase administrative efficiency, it does little to commit the Tribes and committee members to any development sequence. Neither does it bring in the individual farm enterprise operators. For the moment, however, individual operators are another matter, and means to commit them will be discussed shortly. The usefulness of this mechanism will depend upon the first major steps taken by the Confederated Tribes, and how extensively these steps involve various parts of the various parts of the revised administrative arrangement.

The single most important factor which will determine whether any long-run development benefits will accrue at Warm Springs is whether or not dissolution of the asset base of the Reservation in the near future, either through internal pressure from Tribal members to liquidate or by the Federal government terminating their trust relationship, can be prevented. While action here is strategic, it is not only the most difficult to take, but is the least compulsive from the standpoint of further action. This involves closing the Tribal rolls(ending the equal-share-of-all-assets concept)

and giving Tribal members an opportunity to dispose of their share without dissolving the Reservation. This is the concept of a closed stock corporation.

Action here carries both the greatest reward as well as the greatest penalty if the solution to this problem is properly timed. What is meant by this? While the solution to this problem may be strategic, the timing of the solution is also important. Moving on the problem too soon may lead to Tribal members resisting any action to institute such a major change in the means of Tribal asset ownership. On the other hand, if the change were readily accepted, a feeling of indifference toward further development could arise because Tribal members may feel their future was now secure. In this sense it is merely permissive of further development since it would help to eliminate any inaction arising from a fear that any improvement would be lost through termination. At this stage it can be said that this particular action is strategic but unimportant for inducing economic progress in either agriculture or non-agriculture.

In Hirschman's terms, this type of decision must be blocked-in or surrounded by a number of smaller decisions so it becomes easy to take by becoming of major importance to Tribal members. This means a series of lesser actions must be taken which will increase each individual stake in maintaining the asset base, thereby

increasing the tension and pressure on individuals from the thought of termination and consequent loss of development gains, and making the step to a corporate share-ownership form easier to take. This proposal will be discussed further at a later point.

That this is a direct application of the Hirschman thesis of efficient sequences can be seen by considering Figure 1. This model may be translated into terminology to be used in this paper. Let A represent knowledge of the possibilities and limitations of existing resources plus a desire to develop the resources. This must be realized prior to undertaking any programs simply because without these factors it is doubtful knowledge existed that alternative arrangements actually were feasible. Let B represent a group of programs such as adult education in various farm and ranch management fields, various programs for developing technical skills, development of public services, and road construction projects. Let C represent a large credit program, to finance development activities, and a directly productive activity to create jobs, increase local income, and start a training program for managers. Let D represent formation of a stock corporation to control Tribal assets, land reform programs, and formation of an urbanized area of Warm Springs. It is clear that a number of factors have been grouped which should possibly be placed in a longer sequence, however, for explanatory

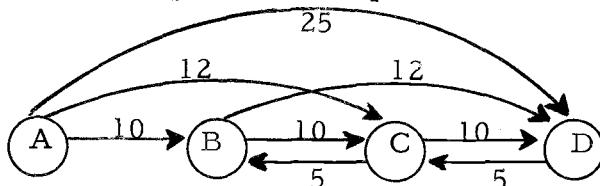
purposes the intent of the Hirschman theory has not been violated.

Too, these factors will be expanded upon at a later point.

It is apparent from the figure that sequences ABDC and ABCD yield the same results. However, it will be contended here that the best strategy at Warm Springs would be ACBD. The reasons for this will become apparent as the discussion progresses. Quite briefly, this appears to be the most compulsive sequence for the Warm Springs situation, and at the same time will utilize the currently expressed desires of the people to draw the Tribes onto a development path. This approach will attempt to (1) make those who have both the relevant economic framework and economic information take action, and (2) make those who lack both the framework and economic information acquire them.

A "first things first" approach would suggest that a series of educational programs would be appropriate so that technical skills could be upgraded in order to lay a "sound" base for any credit activities or investment in directly productive activity (as a timber processing or recreational development). However, this approach is merely permissive of further activity in that the way is made somewhat more secure for the successful undertaking of future activities. That is, there may be less chance of program failure if the skills and educational level of Tribal members are increased.

**Figure 3. Illustration of a Group of Development Steps
Showing the Order of Steps for Ideal Orderliness
in Development and Optimum Disorderliness.** 1/



1/ "To begin with, there was a great deal of exaggeration in our statement that there exist $n!$ sequences in which the n steps may be undertaken. Many sequences are unavoidably 'one-way' for purely technical reasons...; one also feels that other one-way sequences are imposed not because they are technically determined but because they are necessary if development is to be properly planned, i.e., is to proceed in an orderly fashion. ... Can we then perhaps define an optimum degree of orderliness in development? To illustrate this problem, let A, B, C, and D... represent a group of development steps we wish to take and that ought to be taken in this order if ideal 'orderliness' is to be achieved. Let us also suppose that step A must be realized before B, C, or D can possibly be undertaken, but that with A accomplished the sequence is no longer imposed. In the absence of limiting factors, the sequence ABCD would be chosen because it provides the smoothest transition from state A to state ABCD. ... introduce a limited resource, such as decision-making or organizational ability, or simply time, and assume that different amounts of this resource are spent in going from one point to another. We want to minimize the use of this resource. If say, ten units of this resource are spent in going from A to B, from B to C, and from C to D, then it is natural to think that to go from A directly to C will take a somewhat larger (say 12 units) and from A to D perhaps a much larger amount (say 25 units), because of the absence of the intermediate preparatory stages. On the other hand, less than ten units (say 5) should be needed to 'fill in' B or C after C or D, respectively, because once the later steps have been realized the lack of the intermediary ones makes itself felt in so pressing a manner that the decision to undertake them requires far smaller quantities of the scarce ability or time than when they represented genuine forward steps."

"In this example the figures have been selected so as to show that a limited amount of 'putting the cart before the horse' may be efficient as compared to both maximum orderliness and maximum disorderliness" (11, p. 79-81).

However, whether this would benefit future programs would depend upon whether or not the activity was actually undertaken. There is nothing in this approach which forces additional activity to be performed. Basically, this approach does very little to commit immediately any sizeable number of individuals to work for the success of a development program. That is, even assuming the technical and managerial skills of the people are upgraded, there is no pressure for further action or progress arising from the educational activities themselves.

In the case of individual operators, a program strategy in the Hirschman view, to commit the individual operators to programs to increase their productivity, can follow directly from the productivity and attitudinal material considered earlier. The data showed the following:

- (1) large productivity differentials exist between the Reservation and adjacent areas.
- (2) farm and ranch management practices needed to close this gap are known or recognized but are, in general, unused.
- (3) need for money is seen as the way to improve the agricultural situation.
- (4) cash income available to farmers at Warm Springs is at least comparable to most operators adjacent to the Reservation.

For committing individuals, a large, tightly controlled

quasi-commercially operated credit program in conjunction with farm and home management assistance would be appropriate. Two phrases here require further definition -- "committing individuals" and "a large, . . . credit program...". "Committing individuals" means placing individual farm operators in a position where it is necessary to undertake major reorganization of farming enterprises, shift to proper farm and ranch practices and crops, and generally upgrade Reservation farming and ranching. By "a large.... credit program..." is meant, a program of at least \$1.5 million. This program would be used to finance farm enterprise improvements and non-farm housing needs.

Any credit activities of the Confederated Tribes must necessarily involve or have provision for all Tribal members. The figure of at least \$1.5 million considers both of these groups. For example, housing needs alone for the next decade will require the building of 120 new homes to accommodate maturing males (16, p. 184). As well, Tribal leaders estimate it will be necessary to build an additional 200 homes to replace existing inadequate shelters. Until Tribal leaders learn to utilize such an organization as the Federal National Mortgage Association to sell mortgages and replenish credit funds, it will be necessary to have a sizeable amount tied up in mortgage and construction loans. These housing needs include

farm families. However, credit funds will also be needed for live-stock investments, seed and fertilizer, fencing, farm buildings, irrigation equipment, and operating capital. Some idea of the magnitude of the credit needed may be had by considering data presented by Kimball on the use of credit in the North Unit for development and operation of project farms (13, p. 83-88). He indicates that average debt per farm in 1958 was \$6,123. For 96 Reservation farms this is about \$600,000. The average annual dollars of credit used was \$14,651, of which \$9,320 was repaid during the year. Use of this much money for 97 farms totals about \$1.4 million.

The money to establish this size of a credit fund should come mainly from available Tribal monies such as undistributed Celilo money and timber revenues. At the very least, not more than one-third should come from the low interest loans available to Indian Tribes from the Federal Government. The program should be tightly controlled by setting up and enforcing a repayment schedule for each borrower. Each borrower would be required to develop a farm and home management plan in cooperation with qualified credit and farm planning advisors. The penalty attached to the individual for failure to follow through on the mutually agreeable plan would be diversion of part or all of future per capita monies to fulfill his loan

obligations. This leaves individual per capita untouched so long as the individuals abide by their agreement. Increased productivity would raise available income above present levels and operators would obtain needed experience in operating under a systematic, planned operation.

At the purely Tribal level, the program strategy suggested is immediate involvement in a large scale, directly productive enterprise. Immediately available alternatives are either a lumber processing firm, a large commercial recreation complex, or both. This approach again steps over several intervening needs, but performing the intervening needs or steps does not necessarily commit the Tribes to build either or both of the enterprises. Immediate entry in either or both of these would require further investment in training programs, roads, housing facilities, power, water, and other social overhead facilities. Building the directly productive activities would generate a great deal of pressure to undertake the additional programs in order to avoid failure of the productive activities or the credit program and a consequent loss of a large amount of money.

It does not necessarily follow that immediate involvement in one or both directly productive activities and the credit program implies a substantial risk of immediate large losses because Tribal

members are unskilled and untrained in management of such things.

Of course, any business or other activity carries some risk of failure. That the Warm Springs people are unskilled and untrained in these activities does not necessarily increase this risk. First, managerial and technical advice are readily available to assist the Tribes through initial phases of operating such activities. Second, partial development has already occurred, albeit, in the hands of outside interests in the productive activities and the Bureau in credit. Third, these directly productive facilities have proven profitable to date for the owners. The credit program has not been successful, largely because of the completely inadequate code under which it must operate. Fourth, in addition to stumpage income from timber, the income from the processed materials would accrue to the Tribes. Fifth, in the past there has been no income to the Tribes from recreation facilities (with the exception of the sale of fishing permits). Sixth, in the case of timber there is no need to depend on outside sources for the resource to process in Reservation mills. In the case of recreation, such facilities as the Hot Springs have no duplicate in the region. The conclusion of the study of Reservation recreation potentials by Tschirley indicates that an integrated development of all possibilities could be a very lucrative venture for the Tribes (24, p. 137).

As pointed out earlier, it is the manner in which the revised administrative structure is used which would determine its effectiveness. If the only tasks performed by the new structure are those currently being handled by the Tribal Council, there is little reason to believe a feeling of need-to-succeed could be generated in committee members. However, with immediate entry into projects as just outlined, most of the new action committee structure would be involved in new and vital activity. For example, the credit program would result in the activation of committees in the areas of credit, budget and finance, farm advisory, range management, housing, and adult education. Investment in one or both of the directly productive enterprises would result in the activation of committees in recreation, industrial development, power and water, budget and finance, forestry, roads, and urban planning.

It should be clear to this point that initial action in any sequence must stem from the existing Tribal Council. This means the first three parts of the proposed sequence; the action committees, the credit program, and the directly productive activities. Some of the action committees that would be activated by the credit and directly productive activities were indicated above. That these committees would be activated by the two activities implies that implementation of the various intervening programs and projects would now become

more or less mandatory. Rather than simply indicate what type of committee would be activated, it would be more helpful to indicate the nature of programs which the committees could consider in seeking solutions to existing problems.

It would be inappropriate at this time to suggest any particular sequence for undertaking programs to buttress the initial credit and directly productive activities. In the first place, this will depend to a large extent upon the direction which agricultural activity moves, i. e., toward livestock, or dryland grain cropping. Secondly it will depend to some extent on the desires of the Tribal decision makers. It would be more appropriate to outline alternatives immediately available in terms of the intervening subject matter areas, e.g., crops, livestock range, irrigation, etc. It would also be possible to indicate some of the ways in which each activity might be useful in instigating additional pressures and tension for further action.

Improvement of crop and livestock productivity should initially be concerned with improving productivity on existing farm and ranch units. The credit program should finance, initially, only those activities needed to improve existing units. This means the potential capacity of a given farm or ranch could act as a limitation on the amount of borrowing possible. However, it could be made clear to borrowers, and continuously impressed upon them, that such a

limitation is not necessarily permanent, but depends to a large extent upon the existing tenure arrangements and capabilities of farmers and ranchers. This initiates the groundwork for land reform and a revision in ownership patterns of Tribal resources (to be discussed shortly). It is clear that a credit program will require the establishment of an effective system of farm and ranch planning. In fact, a mutually agreeable farm or ranch management plan should be a requirement for farm or ranch loans. There must be flexibility in acceptability standards for a particular plan so the individual has some assurance that he will be building something he desires. Assistance in carrying out the plan would require establishment of adult education programs in cropping, irrigation, and livestock practices as well as a farm and ranch advisory service to provide continuous servicing of operators.

In the specific case of livestock, there is a definite need for more and better bulls, planned breeding and major improvement in range management. The latter two can be made a function of the program used to increase the number and quality of bulls. Money for bulls through (1) Tribal bull purchase with servicing cattle for individuals at a fee; (2) Tribal bull purchase and renting bulls to associations; or (3) loans to individuals for bull purchase, should all be contingent upon establishment of facilities to control both the

bulls and grazing of cattle on seasonal ranges. To push livestock improvement programs a bit further, the Tribes should immediately establish range units in accordance with advice of range management advisors. There must, of course, be some balance achieved between traditional grazing regions used by groups of individuals and what may be considered as an optimal range unit pattern.

Much the same picture can be drawn about the activities stemming from a directly productive enterprise. Such an investment would require establishment of facilities to train personnel, etc. It appears that the establishment of a recreational complex may involve many more facets initially, than a lumbering operation. For example, it would be necessary not only to train people, but to build modern access roads to facilities, develop power and water facilities at the sites, coordinate work with forestry, and provide a sound inducement for development of private business in riding horses, camping trips for guests, and Indian guides.

In using credit to develop a home construction program, there exists an excellent avenue to upgrade community facilities and appearance. As a part of home building, there should be established a building and zoning code. By providing some order to patterns of home and business construction, additions to public service would be made easier. This means that power, telephone, sewage,

water, and street facilities can be planned and built on a more systematic basis.

Success of these ventures would, in turn, create pressure to take other action. Earlier, it was pointed out that the ability of an operator to increase farm size was extremely limited. This was seen as a problem arising both from existing acreage limitations and heirship disputes tying up farmland. If groundwork is adequately laid in the credit and training programs, subsequent steps will not be difficult. To improve further agricultural incomes, pressure would be increased to break existing limitations on land availability. As well, the higher farm incomes, new employment and new homes from the credit and directly productive enterprises could be protected only by precluding dissolution of the Reservation as a producing entity. Rapid population growth would also be felt as a heavy pressure for further development to provide jobs for solidifying Reservation assets. There is a very simple device for treating both the asset solidification and land tenure problems.

Treating both the asset solidification and land tenure problems can be accomplished with the establishment of a stock corporation. This was mentioned earlier as being a very difficult step. If it is performed after these other activities, however, it is a necessary step to protect any gains made in development. If, for

example, the Federal government terminates its trust status under present arrangement, it is necessary to sell Tribal assets and pay each individual his or her share of the proceeds. There is, at present, no means to prevent this. However, it is possible to do so with certain voluntary changes on the part of the Indians and assistance from the Federal government by helping the Tribes over whatever legal hurdles exist.

The basic proposal is a stock corporation, wherein each enrolled Tribal member receives restricted negotiable stock certificates for the individual share in the Tribal assets. This would require closing Tribal rolls and placing the burden of rapidly rising population of the persons who now desire large families to increase their total per capita income in the family. This would stop dilution of the value of basic shares of each individual. The assets would be solidified in the corporation, but each individual would now have the ability to sell his restricted negotiable shares and do as he chose with his share. The restriction is, technically, that the right of first refusal on any stock sale would be given the corporation, so all shares would remain in Indian ownership.

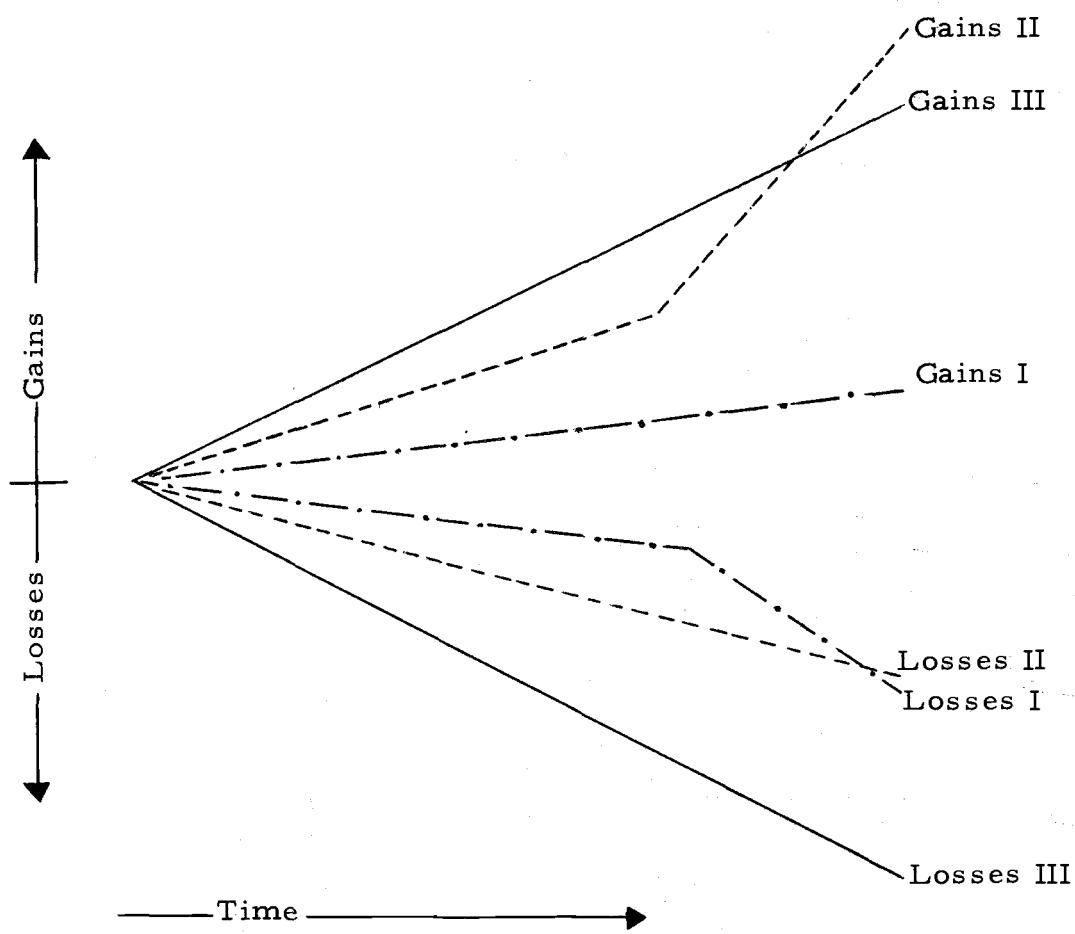
This form of organization would blend well with the action committee arrangement. In fact, the action committee would function as an intermediate device to train managers. The Tribal

Council would become a board of directors. The groundwork would be laid for separation of economic and political-governmental functions in Tribal affairs. When the corporation is operative, termination will be a formality and a governmental structure will be prepared for establishment of a separate county of Warm Springs. In this manner, the growth and development of the Indian people could be protected as long as corporation owners desired to maintain their business as an entity.

It may be helpful to diagram a rough approximation of potential gains and losses associated with, and implied by, the three extremes in strategy appropriate at Warm Springs, and then to indicate why a less extreme course appears most suitable for Warm Springs. The three extremes are I - continuation of the present course, II - a "first-things-first" approach with main emphasis on investment in social overhead facilities, and III - main emphasis on investment in directly productive facilities.

For the near future neither potential gains nor losses from strategy I are very large. Productivity of depleted farm lands and overgrazed ranges will not be improved by following current practices. Timber cutting must reach a point where current cutting rates will decline to a sustained yield level. However, there is a point in the near future where pressure from the current younger

Figure 4. Potential Gains and Losses from Alternative Strategies at Warm Springs.



- | | | |
|--------------|-------|---|
| Strategy I | — . — | Continuation of present course |
| Strategy II | ----- | Investment emphasis on social overhead facilities |
| Strategy III | — — — | Investment emphasis on directly productive facilities |

age groups will be felt. With population advancing at current rates (slightly in excess of 5 percent) the present course of economic activity can sustain Reservation inhabitants only at reduced levels of living. Pressure for jobs and income will force a good deal of outmigration. At this point potential losses begin to increase rapidly. Inability of Reservation resources to provide an adequate living decreases interest in maintaining the Reservation asset base as an economic, political and social entity. Further, as people migrate elsewhere their share of Reservation assets can provide the means of starting their new life in a different location. Potential losses from internal liquidation pressures would increase. There is little hope that the present course of activity offers any significant benefits for the future.

The second strategy would emphasize education and training of people prior to undertaking any investment in activities to actually create employment. Despite the lack of investment in directly productive activities, emphasis on education and training of the people would be able to show potential gain even in the near future. Immediate improvement of agricultural practices through management and technical training can have immediate impact on crop and livestock yields. As the people become better educated and better able to manage their environment the potential losses would increase less rapidly

than in the cases of both the first and third strategies. However, potential losses would initially be greater than in Case I since outmigration could dissipate the Reservation effects of expenditures on education and training. Too, potential losses would initially tend to be greater under II since added production investments in agricultural and other improvement face the possibility of failure before they are fully understood by operators. However, once education and training reach sufficient levels, the Warm Springs people would be fully capable of exploiting their environment under an altered system of values. Potential gains then begin to rise very rapidly. The main problem here is that it is necessary to assume future investments in directly productive activities on the Reservation will follow as a matter of course and education and training have improved the ability of the people to manage their environment.

The third strategy emphasizes directly productive activities. That is, large and continued investment in such activities as farming, recreation and lumbering as well as whatever other activity could be attracted to Warm Springs would be emphasized. Potential gains here are quite high from the outset. However, potential losses are also high. Regardless of whether directly productive activities are generated by a central authority or a private concern, requisite production and management skills plus a skilled labor force are

necessary to the ventures. With the people lacking needed skills, private entrepreneurs would most likely not enter. Building these enterprises publicly does not automatically imply success. The absence of social overhead facilities designed to create a foundation for these skills, and train a labor force, as well as improve the level of understanding of the people regarding the implications of their society and environment, would increase the possibility of failure of directly productive enterprises. Quite simply, without a substantial amount of learning at Warm Springs the possibility of failure in directly productive activities would remain high. Consequently, the scope or size of losses would tend to increase steadily as the level of capital invested increases.

Emphasis on directly productive activities as a development strategy assumes either (1) that enough income and social pressure will be generated to permit diversion of an adequate part of this to such social overhead programs, or (2) that needed skills and knowledge will be generated automatically at levels adequate to continued success of the directly productive enterprises. Emphasis on social overhead facilities as a strategy assumes development of directly productive facilities will follow as a logical consequence of a heightened ability to manipulate one's environment and exploit its opportunities. However, for the Warm Springs case the

possibilities exist: (1) social pressure stemming from current and past per capita income distribution practices will preclude diversion of increases in income from new enterprises, (2) adapt any new enterprises to existing activity patterns in the easiest manner, avoiding involvement wherever possible, force an influx of non-resident labor to maintain facilities and obtain income via continued per capita, and (3) skills and training acquired in the absence of productive facilities to utilize the skills could increase outmigration of trained persons.

The strategy appropriate for Warm Springs appears as a combination of number II and III, but tending toward III. To avoid the possibility of being unable to make necessary income diversions for education and training at a future date, the diversion is made at the outset. Investment in a major directly productive activity at the outset provides an opportunity for increased income almost immediately. Investment in a social overhead facility simultaneously offers the opportunity to provide needed training plus almost immediate increases in productivity on Reservation farms.

The Hirschman theory has been concerned with the amount of individual and collective decision making induced by a particular strategy for development. There are basic differences between the strategies which influence the amount of induced or forced decision

making flowing from each. Strategy I cannot be expected to induce or force development decisions at the required speed or in the required number. Downward spiraling vicious circles of interconnected cultural, social, economic and political factors do not generate the necessary pressures and/or incentives to alter existing institutions and character traits which are acting to sustain the current underdeveloped state.

An excess of capacity in social overhead facilities is largely permissive. While expanded education, power, water, telephones, roads, and so on may serve to reinforce any motivations which may already exist such an excess capacity is permissive rather than compulsive. Heavy investment in social overhead facilities does not necessarily create pressure to generate subsequent investment in directly productive facilities such as lumber processing, recreation and agriculture on the Reservation. That is, can we be sure expansion of industrial and agricultural activity will follow in the wake of such improvements?

Hirschman asks a question which appears as an appropriate reply and yields strategy III. He asks, "Would it be less risky and more economical first to make sure of such activity, . . . , and then let the ensuing pressures determine the appropriate outlays for SOC (social overhead capital) and its location "(11, p. 93) Clearly,

this must be flexible since some level of skill, knowledge and social facilities must exist to permit installation of directly productive facilities. However, by emphasizing and assisting investment in directly productive activities, pressure is created to expand social overhead facilities. In expanding these in response to the development pressure, more avenues or opportunities are created to exploit further the environment within which the people must live. In general, the building of directly productive facilities with subsequent investment in social overhead facilities promises the greatest amount of induced individual and collective decision making.

The particular circumstances and character traits at Warm Springs suggest a strategy part-way between II and III if the greatest amount of individual and collective decision making is to be induced or forced.

The strategy here is simply to use existing attitudes and behavior against themselves and to inject into the system a program which imposes a series of recognizable penalties for refusal to act. Nothing in this particular strategy is permissive once the first step has been taken. 1/ The imbalance created by Celilo monies and

1/ It is clear that, to a large extent, everything is permissive if an individual or group is willing to bear responsibilities and costs for failure to complete a program once begun. To say nothing is permissive in the strategy means that the penalties or costs attached to failures to act can be avoided only by taking further development steps.

the Oregon State College survey are useful tools in taking this first step. The momentum does appear great enough to carry the Tribes into the first big step. In giving the people "what they want", the "giving" can be so handled as to create additional pressures and tension and make further movement easier, mainly because of the high penalties attached to inaction or failure to continue development. However, the compulsion is not imposed from outside. It is imposed by the desire of the people themselves. The course of action proposed here is designed to make those with the frame of reference capable of handling changes actually take action. Those who do not have the framework would be required to acquire the framework, i. e., undertake to reorient their value systems.

Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) is the "field agent" for the Federal government in fulfilling Federal trust responsibilities on Indian Reservations. The responsibility of the trustee includes maintenance and preservation of assets entrusted to him (7, p. 103). As a consequence, the trustee tends to do only those things which involve a minimum of risk to the assets in his care. The spectrum of problems which face Warm Springs would suggest that the BIA has interpreted this responsibility to mean simply maintenance and

preservation of the physical extremities of the Reservation. If the BIA does have integrated concept of economic development and social change capable of aiding the Warm Springs people, or American Indians in general, to develop their own resources along lines consistent with the obligations and responsibilities of both parties, the concept has not been apparent at Warm Springs.

Dorner's appraisal of past and current BIA programs is very appropriate: "...the programs of various branches within the Bureau are unconnected. Each is appraised in isolation rather than evaluated in terms of consistency in working toward a common objective(8, p. 170). Maintenance and preservation of the assets of any Reservation, including the Indian people themselves, would seem to require that both the quality and size of the asset base not be permitted to deteriorate through neglect arising from a narrow view of one's responsibilities. As the American economy, in which a Reservation must operate, continues to grow and change, standards for evaluating quality change. This means the programs directed to maintaining and preserving Indian assets must be revised to allow Indian assets to be manipulated in ways which will keep them from deteriorating in ability to produce adequate income for the various Tribes. That is, if the Bureau were engaged in a serious program of economic development on Indian Reservations, its function would be to alter the

factors which those dealing with Indians must take as given. This can be best explained by two examples described by Dorner (8, p. 171):

"Few Indians today could meet the security requirements of a private lender for a loan of the magnitude required to establish an efficient-sized farm or ranch. They could not qualify under the traditional three C's - character, collateral, and capacity. Since these three elements are 'given' in the situation, the alteration of which is no direct concern of the private lender, the conclusion of adequacy (of available credit) is a perfectly good one - for the private lender.....

"Another example: In education, both in high school and adult vocational training, emphasis is on training for off-reservation employment. Indian boys, it is said, express no desire for agricultural training and occupations. The boys, of course, reject agriculture because under present circumstances they cannot establish a sufficient-sized unit on the Reservation nor cope with financial and land tenure difficulties. The educator takes the expressed desire of the boys as a given element in the situation."

The lack of coordinated programs with the Bureau which would permit continued alteration and upgrading of Indian resources, including the people would seem inconsistent with performance of duties of a trustee. Maintenance and preservation of Indian assets in a progressive world would logically call for progressive improvement of such assets if they are to be maintained and preserved. It is true that if each branch of the Bureau, such as range, housing, industrial development, irrigation, farm management, etc., assumes the others to remain unchanged or "given" when it develops its own programs, there appears little basis for making extensive added

investments on Reservations. Very simply, investment in irrigation is not warranted because managerial skills and capacity are inadequate and land tenure arrangements do not allow larger farms; without the investments and land reforms, it is useless to train managers, and so on. It is clear that the lack of an integrated development philosophy will continue present inadequate programs.

In the BIA, there should be created an economic development staff, headed by a person responsible only to the Commissioner of Indian Affairs. This staff would function to integrate these same activities in the various area offices and, in turn, at the Reservation level to prepare for assisting the Tribes themselves in developing their resources. This staff would initiate studies of the development potentials on the various Reservations, including both the existing interests and capacities of the Indian people, as well as the purely physical resources. However, review of numerous past studies undertaken by the BIA suggests that the capabilities and capacities of many BIA personnel may not, at present, be adequate for the task at hand. Neither is it at all clear that Indians understand the situation they face and the feasible alternatives open to them.

The second change in Bureau policy should then be to obtain, on an individual-Reservation basis, comprehensive human and physical resource studies capable of showing which development

alternatives are realistic. To preclude unnecessary expansion in BIA staff personnel and avoid any stigma on the part of the Indians of "another government study", these studies should be contracted for with private groups mutually agreeable to both the Tribe concerned and the Bureau. As well, where at all feasible, the studies should be financed by the Tribe concerned. This is vital to the success of attitudinal studies and to maximize Tribal participation in the study.

The third change in Bureau policy should be to utilize the studies, in cooperation with Tribal leaders, to inform the people of the nature of their Reservation, its possibilities, its needs if possibilities are to be realized, and its limitations. The studies would form the basis of the particular strategy to be used on each Reservation. Investment priorities would be determined through cooperative effort of Tribal leadership and the Bureau. There should be no choices imposed on one Tribe because it was found suitable elsewhere. In other words, Bureau development policy for a given Reservation should be determined by the situation on that Reservation. Bureau action would take the form of policy advice to Tribal leadership as to what is feasible, what must be done if an objective is desired, and provision of coordinated technical assistance.

Viewing BIA policy in this light, it will be necessary to upgrade capabilities of Bureau field personnel as development progresses. As well, Bureau personnel working in the field must reflect the philosophy that the goals and values of Indians are meaningful to the Indians. Because the Indian does not immediately respond to things which look good to a non-Indian does not mean the Indian is incapable of altering his pattern of activity. It may be relevant to ask Bureau personnel to consider the idea that Indian people have never been given the opportunity to understand their physical, financial, and human possibilities, as well as their limitations. It may also be relevant for those in control of Bureau policy to consider that many BIA field personnel who have restricted their activities to narrow fields within a succession of different Reservations, have encountered similar conditions at each Reservation. Many of these Bureau people may be incapable of skillfully analyzing present human and physical resource situations in order to recommend or advise on feasible alternatives because they have been acquainted with little else.

While the BIA can utilize private research groups for specific research work, the BIA must also make its own internal changes. The Bureau must adjust its own desires more toward those of the various Tribes if needed social and economic

adjustments are to be realized. Adjustments and development can occur only to the extent that the individual Indian gains experience in solving his problems through his own and collective action. This requires a more fluid policy, such as has been outlined, which can be adjusted to each Reservation. The major commonality across all Reservations would be for the BIA to interpret its trust responsibility as one of long-run economic and social development, involving an integrated process of investment with a system of priorities consistent with Indian attitudes, desires, capabilities and capacities: all of this for the purpose of creating opportunities for Indian people and enlarging the capacity of Indian people to exploit these opportunities.

Foreign Economic Policy

It is clear that neither the United States nor private firms have the degree of control or influence over development policy within foreign countries that they have on American Indian Reservations. Nevertheless, the theory considered does appear to have implications in foreign economic development policy. The degree to which statements can be made positive rather than tentative, is, however, limited by the nature of the material presented and the presence of factors outside the scope of the theory.

The economic and social problems involved in transforming an Indian Reservation are, in general, quite similar to those faced by underdeveloped countries desiring economic and social development. For example, problems relating to cultural differences, high birth rates, low levels of education, poor health, and weak and unstable governments exist in both cases. However, in an underdeveloped country there are political and military questions which alter the policy approach implied by the Hirschman development thesis. Following the Hirschman thesis, foreign economic development would, first of all, aim at a preliminary survey of the quantity and quality of a nation's resources to assist at least the leadership in understanding what is feasible. This in no way implies that a system of priorities must be immediately determined for the country. However, such knowledge would assist both native leadership and foreign technical advisors in establishing the most useful strategy for attaining development and determining the kind and amount of foreign and domestic resources to be used. Advising a government as to how to implement a particular development strategy which has been based on an evaluation of available resources and the degree to which people are aware of their situation, would not involve telling the country what it must be doing. However, this is where the political and military questions arise, creating a good

deal of uncertainty as to what the function of foreign economic development assistance is. If the function is to establish socio-economic and political structures which are closely tied to and in full support of United States interests, it does not appear that the Hirschman thesis has much application. It would have to be assumed that the political and military assignment desired by the U.S. would arise as a natural product of the transition process from underdevelopment to advancement.

It would appear that applicability of the Hirschman theory to a foreign situation may be limited for quite another reason. It may be that where another underdeveloped area lacks highly developed regions (in the case of Warm Springs, adjacent areas and the entire surrounding economy is highly developed), immediately adjacent, the tensions may not arise as they do at Warm Springs. Having such highly developed neighbors also creates opportunities which may not be present in other areas. This would mean that contact between underdeveloped and developed regions below the leadership level, would be markedly different in areas without highly developed neighbors. This would greatly influence the degree to which the general public would accept change, i. e., the degree of compulsion needed to make changes. This aspect can only be investigated by testing the theory in such regions.

While Warm Springs data may indicate the Hirschman thesis is applicable to an underdeveloped situation, it is not to be suggested that it has general validity. A great deal of further testing must be undertaken. It would be fruitful, for example, to test the theory on a much less advanced people outside of the United States, as well as on people at higher levels of development, to see whether different results are obtained. However, to the extent that political and military objectives preclude assistance which aims at helping a people develop as they choose, it is suggested that the Hirschman thesis would be of little use. Unless these questions are answered in favor of the underdeveloped country, it is also reasonable to say that any testing of the theory in a foreign country would not be a valid test. Although the nature of the unanswered questions precludes any meaningful statement about implications for foreign economic development policy, it does appear that the theory is worthy of additional testing in areas external to the United States.

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APPENDIX

APPENDIX

Chapter III

A brief discussion and description of the pattern variable alternative is in order. The definitions have been taken largely from Parsons' book (18, p. 58-67).

I. Universalism vs. Particularism - The universalistic standard is derived from the validity of a set of existential ideas, or the generality of a normative rule. Orientation is essentially to universal canons of validity. On the other hand, a particularistic orientation is essentially toward particular objects or ordered combinations of them. Concern tends to be with the status of the object. A universally valid norm or moral precept would be, for example, the obligation to fulfill contractual agreements or the belief that technical competence will increase the effectiveness of achievement. Orientation toward the particularistic would be phrased, for example, in terms of obligations toward a kinsman, or neighbor, or fellow member of a collective group simply because of his relationship or membership as such.

II. Achievement vs. Ascription - This concerns characteristics of the object which may be selected as the focus of orientations. All

objects have attributes; they not only do this or that, they are such and such. They have attributes of sex, age, intelligence, physical characteristics, statuses in relational systems, etc. Orientation toward achievement places accent on performances of the incumbent. Positive and negative rewards tend to be associated with success or effectiveness, and failure or ineffectiveness, respectively. Orientation toward the ascriptive places accent on the qualities or attributes of the incumbent independently of specific expected performances. The rewards then tend to accrue as a result of these ascribed qualities rather than specific performances.

III. Specificity vs. Diffuseness - The specific orientation concerns the definition of relevant roles, tasks, or objects in such a manner that each is capable of clear analytical segregation from the others or from moral orientations. These have limits within which obligations toward them are confined. The burden of proof then rests on him who maintains there are obligations which exist that transcend the defined limits. The antithesis of this is obviously the diffuse orientation. Objects, etc., are significant in an indefinite plurality of specific orientation contexts.

IV. Affectivity vs. Affective Neutrality - No actor can subsist without gratification, but at the same time no action system can be

organized or integrated without renunciation of some possible gratifications available in the given situation. Hence, this pair deals with the way in which actions are patterned out regarding gratification of immediate interests. For example, shall there be consumption or investment? How much of each is permissible? Necessary? Desirable?

V. Self-Orientation vs. Collectivity-Orientation - A role may define certain areas of pursuit of private interests as legitimate, and in other areas obligate the actor to pursuit of the common interests of the collectivity. The primacy of the former alternative may be called "self-orientation", that of the latter, "collectivity-orientation".