

AN APPROACH TO ASSESSING THE EFFECTIVENESS
OF THE ARIZONA RACING COMMISSION

by

Giovanna Gallottini Tozzi

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STATEMENT BY AUTHOR

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SIGNED: Giovanna Gallotini Totti

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

D. A. Tansik
D. A. TANSIK
Associate Professor of Management

Aug. 12, 1981
Date

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ABSTRACT

The ecological framework regards effectiveness as the fit between environmental demands and organizational behavior. The first step in assessing effectiveness is to evaluate how well the goals and values of the organization meet the demands of its critical constituencies. The Arizona Racing Commission (ARC) is studied from this viewpoint.

A questionnaire was mailed to the ARC executives, the ARC supervisors and the ARC critical constituencies. The analysis of the responses indicated that the ARC is aware of its constituencies, their relative importance and their demands.

The critical constituencies were subsequently grouped on the basis of resource dependence and flow. The groups which held viewpoints significantly similar to those of the ARC were the groups which provided the ARC with the most critical resources.

Overall, the data support the environmental-deterministic hypothesis and the high correlation found between the priorities and the values of the ARC and those of its critical constituencies seems to indicate that the

ARC is correctly reading the demands of its environment. Therefore the recent criticism of the ARC should not focus on the priorities and values of the ARC, but rather on how well are the goals met.

CHAPTER 1

INTRODUCTION TO THE PURPOSES AND THE BACKGROUND OF THE STUDY

Introduction

In the last several years the Arizona Racing Commission (ARC) has been constantly under fire, Public opinion, media, legislators, and law enforcement agencies have harshly criticized supposed failures in patrolling the security and integrity of the racing industry. For example, a report of the Department of Public Safety proposed a complete revision of the ARC (Arizona Republic, 9-5-80). The report also accused the Commission of allowing animal drugging and race fixing. Another occasion, House Ways and Means Committee Chairman Tony West commented: "The state of corruption is so great that we should do nothing (to fund the ARC)." (Arizona Daily Star, 5-9-81). As a consequence of the negative publicity about the ARC, in May 1981, the Legislature "slowed down" a supplemental appropriation needed to support the 210 additional dog-racing and horse-racing days. On the other hand, the regulated organizations and groups have repeatedly expressed their dissatisfaction with rulings of the ARC.

The Commission has made unpopular decisions in the past in the allocation of racing dates to various tracks. For example, in 1979, one of the two associations which use Turf Paradise, the horse racing track in Phoenix, was "punished" by having its racing days reduced. At the same time, a third group was granted, for the first time, racing days and allowed to use the facilities. This decision stirred a lot of controversy and originated a court battle which is currently far from resolved.

In this situation a question arises spontaneously: does the problem originate from the goals and values of the Racing Commission or rather from how well the objectives are met? This study focuses on the first proposition and attempts to determine whether the ARC's perceptions of environment and its environmental demands are correct; that is, whether they are congruent with the views of the critical constituencies.

The concept is of central importance in the framework adopted in this thesis, which is the ecological model. In this model, organizations are considered as living organisms closely interacting with the environment. Because the environment changes, and only the best adapted organizations survive, the organization is involved in a constant effort of reading and adapting to the environment.

Effectiveness is the measure of the fit between the organization. The ecological model therefore does not focus on internal, bureaucratic processes, but rather on the interactions of the organization with its environment. Variation, selection and retention may help explain how organizations originate, fail and perish, or succeed and continue.

The standards proposed by the ecological model are used in this study to evaluate the effectiveness of a state regulatory commission. Most of the previous research on regulation has come from economists or from political scientists; the originality of this study consists in approaching the issue from the standpoint of organization theory. The problem is complicated by the lack of research material on racing commissions and on the racing industry in general. The research question of this study is: how sensitive is the ARC to the demands of its environment, and what are these demands? Answering this question is absolutely essential before the second logical step in assessing organizational effectiveness can be formulated: how well are the demands met? This second question is not dealt with in this study, but an answer to the first question will be attempted. However, it is important that the study of effectiveness of the ARC be determined because the

problems actually facing the ARC are serious and urgent. For example, if the Arizona State Legislature had persisted in withholding the additional appropriation bill mentioned above, racing in Arizona would have come to an halt for at least two months, with loss of millions of dollars in revenue for both the State and the industry.

The structure and functions of the ARC are explained in the remainder of this chapter. Chapter Two deals with the theoretical background of the study. Characteristics and attributes of the ecological model are explained in detail and the power of the model is discussed. In Chapter Two the literature on environment is also reviewed. Special attention is given to authors who explore the open system model and/or the resource dependence model. Chapter Three deals with the different approaches to the controversial issue of regulation. The interpretation proposed is that regulatory commissions are, as any other organization, subject to the demands of their environments. Therefore, their performance should be evaluated on the basis of how well the demands are met, and not on abstract moral standards.

Chapters Four and Five deal with the actual study. the objectives of the research and its mechanics are presented in Chapter Four. The results are presented and evaluated

in Chapter Five. Finally, Chapter Six is a conclusive wrap-up of the study. Based on the findings, the effectiveness of the ARC in reading its environment is evaluated and some practical implications are suggested.

The Racing Commission

In the USA 32 states conduct and regulate parimutuel racing (Table 1.1). Although the income derived through taxation of the parimutuel activities is only a small percentage of their budgets, the states' main interest in the racing industry is economic. In 1980 the states collectively received over \$680 million with no risk and little reinvestment (Farley, 1981). In 1979-80, the state of Arizona received 1.12% of its total revenues from parimutuel taxes -- the cost of operating the ARC that year was 8.2% of the revenues originated. Moreover, bettors and horsemen pay additional income taxes on their winnings. Also, employees are taxed on their earnings as are the businesses who supply the industry with goods and services, generating an additional inflow into states' and federal treasuries of many more dollars.

According to each state's statutes, some form of Racing Commission is established, which in turn promulgates its own racing rules and procedures. Although each state has a separate Racing Commission or Board, the powers

Table 1.1. States which allow parimutuel racing,
by type of racing.*

State	Thoroughbred	Harness	Quarter	Greyhound
Alabama				X
Arizona	X	O	X	X
Arkansas	X			X
California	X	X	X	X
Colorado	X	X	X	X
Connecticut	O	O		X
Delaware	X	X		
Florida	X	X	X	X
Idaho	X		X	
Illinois	X	X	O	
Kentucky	X	X	O	
Louisiana	X		X	
Maryland	X	X	O	
Massachusetts	X	X		X
Michigan	X	X		
Montana	X		X	
Nebraska	X	O	X	O
Nevada	X		X	X
New Hampshire	X	X		O
New Jersey	X	X		
New Mexico	X	X		
New York	X	X	O	
Ohio	X	X	X	
Oregon	X	O	X	X
Pennsylvania	X	X		
Rhode Island	X	O		X
South Dakota	X		X	X
Vermont	X	X		O
Washington	X	O	X	
West Virginia	X	X		
Wyoming	X		X	

x = Form of racing legal and conducted in the state.

o = Form of racing legal but not conducted in the state.

(Source: Report of the Commission on the Review of the National Policy Toward Gambling, 1976)

given to, and the procedures followed by the Racing Commissions are very similar throughout the country. This uniformity is promoted by the National Association of State Racing Commissioners (NASRC, a professional association which also encourages reciprocity of enforcement, regulations and penalties among the states allowing pari-mutuel racing.

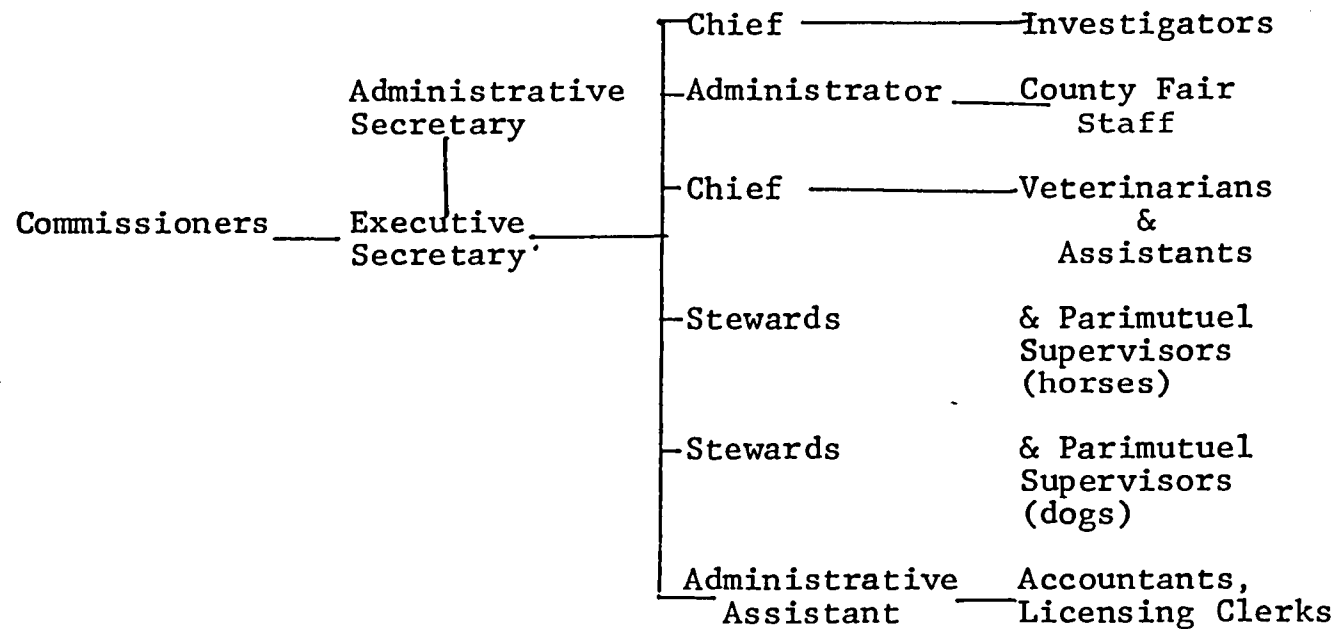
Racing Commissions are vested with rule making power and with adjudicatory power. The regulatory authority involves granting of licenses and allocation of racing dates to the racetracks within the jurisdiction. These decisions are based on the following criteria: the public interest, the location of the track, the number of tracks running or making application, the adequacy of the facilities of the track, the racing experience of the applicant, the moral and financial qualifications of the applicant's partners, officers and officials, the moral and financial qualifications of the applicant, the official attitude of local government involved, the nature of the local community affected, the expected effect upon the breeding and horse industry of the state, the expected effect upon the State's economy, the apparent or nonapparent hope of financial success, the official attitude of horsemen (Humphreys and Basye, 1973).

Other regulatory activities involve the setting of the rules of racing and the professional standards, such as the regulation of medication of the racing animals; the granting of licenses to the racing participants and the patrolling of racetracks' security and integrity. The day-to-day administration of such rules and their application are carried out by Stewards, parimutuel supervisors, state veterinarians and their staff, licensing clerks and investigators. A chart of the structure of the Arizona Racing Commission is provided in Table 1.2. The structure of the ARC's staff is typical for all the racing commissions.

The adjudicatory power allows the Racing Commissioners to issue subpoenas, administer oaths, grant or suspend licenses, hear appeals of decisions made by the Stewards, and make other determinations and orders involving the use of discretionary power.

The Racing Commission is also supposed to act as a filter between the racing industry and the legislature. For example, when in 1978 the Legislature approved the amendment bill 5-111.02 (capital improvements at horse tracks financed by a reduction in percentage to the State) the Racing Commission was in charge of approving and supervising the capital improvements. Another duty of the racing Commission is the promotion of the racing industry in the

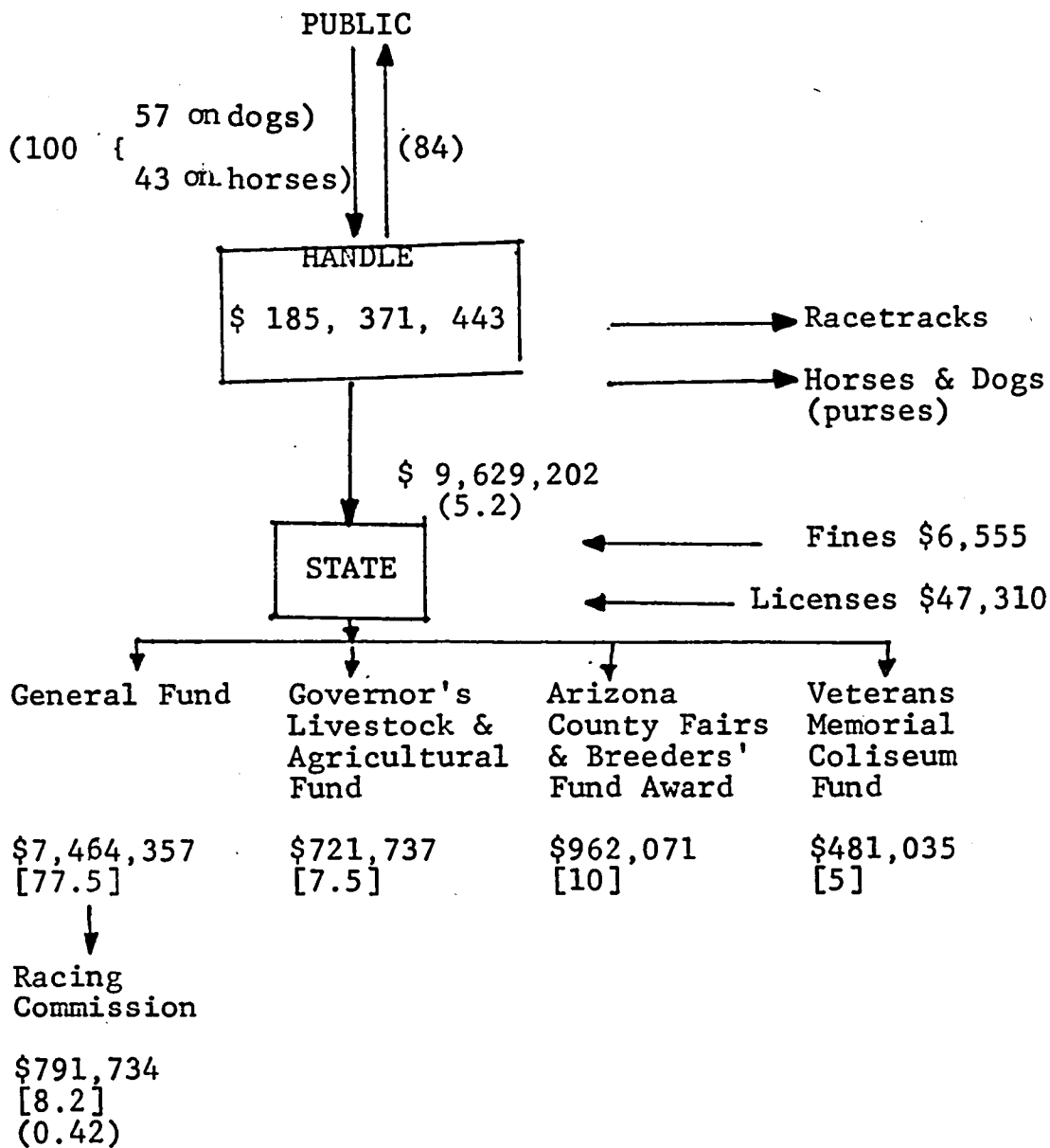
Table 1.2. Structure of the Arizona Racing Commission.



state in all its different facets: racing, breeding, ownership and ancillary activities. These activities are carried over mainly through the Arizona County Fairs and Breeders' Award Fund and the Livestock, Agriculture and Breeders' Award Fund. For example, extra purses are awarded to horses and dogs who were bred in Arizona. During 1979-80, Arizona breeders received \$1,957,445. The structure of the racing industry in Arizona is given in Table 1.3.

While the powers and attributes of the racing commissions are very similar throughout the country, there are definite differences in the size and composition of the boards of Commissioners. The Commission on the Review of National Policy toward Gambling (1976) reported that the commissions vary in the way they are set up. Members are appointed by the Governor and in about half of the states, the appointments must be approved by the State's Legislature. In about two thirds of the cases the Commissioners are unsalaried, but most of them receive token remunerations. The New York State Racing and Wagering Board is an exception justified by the volume of racing industry in that state: racing board members are paid \$48,600 a year, and the jobs are considered full time (Heckerman, 1981).

Table 1.3. Structure of the racing industry in Arizona, 1979-1980. -- (% of the handle); [% of state revenue]



In Arizona the Racing Commissioners receive only a per diem salary and are reimbursed for travel expenses. The five members are appointed by the Governor and approved by the Senate. Their term of office is 6 years and they may be reappointed. To be eligible for appointment, a potential member of the Racing Commission must have been a resident of the State, a qualified elector and an owner of real property therein for not less than five years next preceding his appointment. Also, he may not hold a financial interest in a racetrack, but he may race his horses or dogs in the State and bet on them. Of the 32 States which allow parimutuel racing, 23 prohibit Racing Commissioners from holding any pecuniary interest in racetracks within their States and only 7 prohibit the Commissioners from owning horses or dogs which race in the State. In this regard, the Commission on the Review of National Policy toward Gambling recommended that "members and staff of the State Racing Commissions be prohibited from placing parimutuel wagers at tracks within their states. . .nor should Racing Commissioners allow their horses or dogs to be raced in the State where they hold office" (1976: 123).

Overall, the ARC is fairly typical both in size and in structure. It is a small state agency with about

30 employees on its payroll, most of whom work at the racetracks, in decentralized locations. The Executive Secretary carries on day by day the decisions made by the Board of Commissioners who generally meet and hold public hearings once a month. The environment the ARC interacts with is fairly stable in regard to constituency composition. There are some "institutionalized" constituencies the ARC must respond to, such as the Legislature and the Governor. The racetracks, breeders, owners, trainers, backstretch personnel and jockeys constitute the clients of the ARC. The Department of Public Safety and the Auditor are the "watchdogs" of the ARC, while the NASRC, the Attorney General and the SRCA are its consultants. The media, the Humane Society and the County Fairs constitute means to create goodwill, but the ARC has a good degree of latitude in dealing with such organizations.

Finally, the main product of the ARC is regulation. This issue is so important that Chapter Three will be dedicated to exploring in detail and within a broader framework the regulatory functions of the ARC.

CHAPTER 2

THE THEORETICAL BACKGROUND

This chapter deals with the overall theoretical background on which this study is based. In the first part of the chapter the ecological model is explained, compared with other models and discussed. Because of the paramount importance of the environment in the ecological model, a review of the literature on environment is given in the second part of the chapter.

The Ecological Model

In the past, most of the research and study on organizations was focused on the bureaucratic processes within the organization. The scientific management school, the human relations school, the socio-technical school, the organization development school all fall in the trap of considering efficiency as the overall standard of organizational assessment. When Cunningham (1977) reviewed the strategies most commonly used to assess organizational effectiveness, he listed rational goal, system resource, managerial process, organizational development, bargaining, structure functional, and functional. Out of these seven categories only

the functional has to do with effectiveness, the others being focused on efficiency.

Recently, there has been a shift in attention toward open system models and therefore to the relationships between environment and organizations (Bendix, 1956; Katz and Kahn, 1966; Price, 1968; Perrow, 1970; Pfeffer and Salancik, 1978; Aldrich, 1979; Miles, 1980). Two frameworks were proposed before the ecological model emerged. The goal attainment framework focuses on ends, and defines effectiveness in terms of goal attainment. Problems arise with identifying goals, preference ordering of them, and distinguishing them from strategies. On the other hand, the systems model focuses on means, and defines effectiveness in terms of the organization's ability in the processes of acquiring and allocating resources. This framework has been criticized on the basis that it focuses not really on effectiveness, but rather on the means to achieve it, and it has not provided specific linkages between means and the ultimate goal of organizational survival.

The ecological model integrates these two approaches. Effectiveness is defined as an external standard of how well the organization is meeting the demands and expectations of its strategic constituencies. The ecological assessment of organizations focuses on the extent ". . .to which the

organization's goals reflect the realities imposed on the organization by powerful groups" (Miles, 1980:384).

The emergence of the ecological model has been the consequence of a change in the organizational scientists' value system, from an emphasis on internal "input-output"-type values to adaptation and survival. In these aspects the ecological model follows very closely the logics of biological science. The system organization-environment is the focus of scientific enquiry, and great emphasis is also placed on the interactions between the two components of the system. While in the long term organizations do influence their environments, in the short run the organizations are heavily subordinate to changing environmental demands. Failure to adapt satisfactorily to changed environmental demands has as an immediate consequence the failure of the organization, exactly as the dinosaurs became extinct when their environment changed but they did not, or as the Roman Empire disintegrated when other, more adapted forms of government emerged. The name of the game is adaptation, fitness and survival.

Change is a fundamental attribute of existence, and the ecological model provides a very seductive approach to explaining change processes in organizations. According to the ecological model, the relationship between organization

and environment is reciprocal and dynamic. The biological process of natural selection derives from the natural tendency toward a better fit between environment and organization and is based on the processes of variation, selection and retention (Buckley, 1967; Campbell, 1969).

Organizational forms, according to Aldrich (1979) are "organized activity systems oriented toward exploiting the resources within a niche" (1979:52). Because of a variety of causes, variations in organizational forms do occur, and they supply the raw material for selection. In organic evolution, variation occurs through the genetic process, while in organizational evolution variation occurs through the cognitive process. Different types of variations exist: variations between organizations, within organizations and over time (Aldrich, 1979). The principal sources of variability within and between organizations are loose coupling, hierarchy, error, chance, conflict, creativity and innovation (Aldrich, 1979). Another critically important source of variation is the environment. Because the environment's demands change, different organizational forms are selected, and the process of change and adaptation is perennial. If the environment did not change, once the fittest form was achieved it would persist forever without variation.

The process of selection favors the entities that more appropriately respond to the demands of the environment.

Alchian (1950) pointed out that it is relative, and not absolute superiority, which matters. Moreover, entire forms, entire organizations or parts of them may be selected or eliminated. The process of change may happen in various degrees, as evidenced by Hernes' work on structural models of social change processes (1976). Three distinct aspects of the change process may be observed: output structure, process structure and parameter structure. There is minimal change when selection criteria are stable and retention mechanisms preserve the current organizational form. In this situation the output structure is fixed, the process structure unchanged and the parameters such that the system is in equilibrium. This state is defined by Hernes as simple reproduction. Extended reproduction occurs instead when process and parameter structures are stable, but output structure changes, with the result that the less fit organizations within a form are eliminated. Transition occurs instead when output structure and parameters change. Changes in government regulation are typical examples of transition changes. Transformation involves modifications in all three structures and is the most radical type of change.

Several variables influence the extent of change: drastic changes in form are less likely when the degree of variation across organizations within a niche is low.

Aldrich (1979) also observed that "pure" environmental selection criteria may not operate freely because of government regulation, support from powerful elites, or selective ideologies. Aldrich's observation is partially correct, but these "interferences" must be considered as legitimate environmental forces. It is true, however, that they complicate the search for environmental rationality and lower the operational predictive value of the ecological model.

Retention mechanisms preserve the selected form. This result is achieved in biological entities through the biochemical structure of the genetic code. In organizations retention is achieved through institutionalization. Tradition, political and social stability, centralization and formalization, educational and informational systems and in general what we define as culture, all contribute to the retention of a specific organizational form. These elements may reside both in the organization and/or in the environment, and they are counterbalanced by two opposing forces: the occurrence of variation and the tendency toward simplicity (Aldrich, 1979).

Another feature of the ecological model is that organizations generally are not considered individually, but as populations or species. There would be no theoretical obstacle to applying the same ecological principles to

individual organizations (Hannan and Freeman, 1977) if organizational taxonomies were fully developed (McKelvey, 1975 and 1978a). Unfortunately, taxonomies, far from being operational, have become the skeletons in the closet of organizational science (McKelvey, 1975; Pinder and Moore, 1980). Theoretical taxonomies have striven for logical closure, neglecting the fit between reality and theory. Empirical taxonomies, on the other hand, have focused too closely on specific problems and relied too heavily on sophisticated methodological procedures which have reduced the applicability of the findings. Similarly, contingency theories, because of their particularism and reactivism, are poor and incomplete substitutes for organizational taxonomies (Gallottini-Tozzi, 1981).

The ecological model has been accused of building tautological explanations and of having little predictive value; also, some organization scientists do not accept the "mistique of fitness" on moral grounds. Scriven (1959) has powerfully objected that the ecological model does not propose tautological explanations when the requirements of independent evidence and actual, exclusive causality are met. Similarly to every other theory, the predictive value of the ecological model depends on how well the number of antecedent events that are likely to occur are known.

Again, the cost of information may be reduced by the operationalization of complete taxonomies. Also the criticism of the model on moral grounds does not hold true. Fitness is, in fact, an "amoral" concept. For example, the organization which is more likely to survive in a corrupted environment is the one which does not hesitate in using bribery and other shady techniques. However, fitness does not ethically justify or legitimate that organization; it simply allows its survival and prosperity. Moreover, fitness is not directly and entirely correlated with survival. To conclude, as the earliest Darwinists did, that "what exists is the fittest" is fallacious and imprecise. Sometimes, "non-adaptive partial structures or activities survive because they are tightly linked to an adaptive characteristic, because they are insulated from direct environmental pressures or simply by chance alone" (Aldrich, 1975:54). However, the natural tendency of social and organizational systems is toward a better fit between organizations and environment.

The ecological model is operationalized by Pfeffer and Salancik (1978) who propose that the environment affects organizational activities because it affects the distribution of power and control within the organization, and therefore the selection and removal of the executives. The

executives have the power to determine organizational activities and behavior. Therefore, the environment loosely controls the organization's behavior.

The next subsection will deal with how the environment is known and discussed in the literature.

The Literature on Environment

Until recently the environment was a relatively neglected topic in organization science, most of the research being focused on internal features of the organization. Following the emergence of the open systems model pioneered by Barnard (1938) and Dill (1958), other theorists and researchers attempted to build a core set of environmental attributes. The theorists Emery and Trist (1965) and Terreberry (1968) proposed as relevant dimensions interconnectedness and turbulence. Analogously, Thompson (1967) proposed heterogeneity and stability; Aldrich (1972) stability, concentration, richness, domain consensus, homogeneity, placidness, mutability; Child (1972) stability, simplicity and liberality. The researchers followed similar guidelines: Dill (1958) analyzed the environment according to criteria of homogeneity, stability and unification; Burns and Stalker (1961) based on volatility; Lawrence and Lorsch (1969) on diversification and stability; Duncan (1972) on simplicity and dynamism; Tosi, Aldag and Storey (1973) on volatility;

Hinings et al. (1974) on stability, predictability and feedback assurance; Osborn and Hunt (1974) on homogeneity and dependence; Pennings (1975) on complexity, demand volatility and resourcefulness.

Other interesting normative frameworks have been recently proposed. Based on the theorizing and research to date, Miles (1980) identified three distinct clusters of environmental dimensions. The static dimensions are complexity, routineness, interconnectedness and remoteness. The dynamic dimensions are rate and predictability of change. The receptivity dimensions are resource scarcity, output receptivity and domain choice flexibility.

Pfeffer and Salancik (1978) proposed that the major structural characteristics of the environment are concentration, munificence and interconnectedness. These structural characteristics determine the relationships among social actors: conflict and interdependence, which in turn cause uncertainty.

Aldrich (1979) observed two main approaches to organizational environments as the two extremes of a continuum. One approach focuses on environment as consisting of scarce resources for which organizations compete. The other approach focuses on environments as consisting of information flows ". . . serving as raw material. . . filtered through

members' perceptions. . .and acted on by sentient members" (1979:110). The two approaches differ on assumptions about ". . .the autonomy of the actors, concern with different stages of the process of organizational change, and ultimately on differences regarding the appropriate level of analysis in studying organizations (individuals or aggregates)" (1979:110).

Other theories have been proposed on different features of the environment. For example, it is useful to distinguish different levels of the environment to understand how the environment affects the organizations. Miles (1979) differentiated between general and specific environment. The general environment is defined as the set of legal, political, economic, demographic, ecological and cultural conditions which concern whole classes of organizations. The specific environment is composed of organizations or individuals in direct interaction with or having immediate relevance for the focal organization. Osborn and Hunt (1974) distinguish between macro, aggregation and task environments. The macro environment contains the forces which influence organizations' characteristics and outputs. The aggregation environment consists of the associations, interest groups and constituencies operating within a given macro environment. The task environment is defined as

the portion of the total environment which is relevant for goal setting and goal attainment. According to Pfeffer and Salancik (1978), there are three levels of the environment: the entire system of interconnected individuals and organizations which are related to each other and to a focal organization; the set of individuals and organizations with whom the focal organization directly interacts; and the organization's perception and representation of the environment.

Instead of focusing on intrinsic environmental dimensions, some authors have proposed normative frameworks for studying the environment more specifically in terms of interorganizational relationships. Aldrich differentiated the environment in terms of an organizations set (organizations with which the focal organization has a direct link), action set (group of organizations temporarily allied for a specific and limited purpose) and networks (all organizations linked by a specified type of relation). Van de Ven and Ferry proposed that pairwise or dyadic relationships are the "building block" and the most basic form of interorganization relationships. The interorganizational set focuses instead upon the dyadic relationships of one focal organization, as opposed to the interorganization network which focuses on the total pattern of organizational relationships, with a shift in focus from the relations between organizations to relations among organizations.

The same authors also analyzed the type and quality of organizational relationships. Aldrich (1979) proposed four dimensions of interorganizational relations: formalization (agreement and structure); intensity (amount of resources involved and frequency of interaction); reciprocity (resource and definitional) and standardization (unit and procedural). Van de Ven and Ferry (1980) proposed, instead, a more complicated set of items designed to measure interorganizational relations. On the basis of four fundamental characteristics of all interorganizational networks (formalization, structural complexity, centralization, and intensity) they designed thirty-three questions to test resource dependence, agency awareness, personal acquaintance, consensus, domain similarity, information flows, formalization of agreement, formalization of committee, perceived effectiveness of relation and quality of communications.

Research has not kept pace with the richness and complexity of the theoretical frameworks proposed. The principal cause of the halting progress in environmental research is the difference over conceptualizing and measuring organizational environments. Downey and Ireland (1979) attempted to clarify the confusion originated by Dill's suggestion (1962) that environments be treated and/or analyzed in terms of their effects upon the organizations.

"Should perceptual measures be used to operationalize environmental attributes? What 'objective' measures should be used? Do individual differences influence? Why is it that perceived environmental uncertainty scores do not correlate with price volatility etc.?" (1979:63). Downey and Ireland observed that in the environmental literature "objective" refers to the tabulation of objects or events, "subjective" to participants' perceptions. In reality, subjectivity may be to the assessor as well as to the assessee; the type of objectivity desired in science is on the part of the researcher, not necessarily of the researched. The studies on organizational environments may therefore be examined using two dimensions: conceptualization (what is being measured: participants' interpretations or environmental attributes) and operationalization (how it is being measured: qualitative or quantitative measures). Most studies have used quantitative techniques for assessing participants' interpretations and environmental attributes; however, according to Downey and Ireland, qualitative measures could be successfully adopted for studying environmental attributes without the risk of losing objectivity.

Notwithstanding the difficulties, two interesting studies have been done lately. Hall et al. (1977) explored the patterns of dyadic interorganizational relationships

among organizations which deal with problem youth. Their analysis demonstrates that the exchange model of interorganizational coordination is useful in most cases, but that the mandated and the standardized-voluntary theories of coordination should also be used in interpreting interorganizational patterns.

Provan, Beyer and Kruytbosch (1980) have studied the effect of environmental linkages and power on resource-dependence relations between organizations. According to Benson (1975), interorganizational power is to be explained not only as internal network exchanges but also in terms of linkages with the larger environment. Six groups of independent variables were used to measure relations between agencies and their environment which may explain the agencies' relative power relations. The groups were "links to the community through interested individuals; links to the community through elites; interorganizational linkages within the United Way network; establishment within its domain; demand for its services; types of services provided." The dependent variable, power, was studied using both objective and subjective measures. Therefore potential, perceived and enacted power and their interactions were considered. The hypothesis was that agencies which have linkages with important community elements would be more powerful in relation

to the focal organization than agencies listing weaker linkages. The analysis revealed that potential power best supported the hypotheses, and that interaction between potential and the other two types of power was also significant.

This brief review of the literature on environment has hopefully conveyed the growing relevance of the environment in organization theory. However, no research has been done specifically on the environment as conceptualized in the ecological model. Such research should be organized not along structural dimensions of the environment, but rather on the dynamic processes within the system. In other words, it is not so important to take a perfect analytical snapshot of all environmental dimensions as it is to follow for a period of time the changes happening within an environment. The history of organization systems, supported by both quantitative and qualitative data, is much more interesting than the most complete analysis of a given environment. In this sense, the strain of theory and research which focuses on interorganizational relationships, most closely approaches the ideals of the ecological model.

This study attempts to avoid the problems indicated by Weick (1974), who pointed out that "We treat effects more crudely than we do causes. If we tried obsessively to

discriminate subtle differences in effects, we would probably find more single-cause, single-effect relationships than we now see" (1974:366), and by Cameron (1978), who observed that: ". . .one of the reasons for the lack of theoretical and methodological development in studies of organizational effectiveness is the tendency of researchers to do a fine-grained analysis of causes but a coarse-grained analysis of effects" (1978:625). The emphasis of this study is on effects, on identifying the environmental actors and their expectations for the ARC. The critical constituencies which compose the ARC environment are ranked by their importance for the ARC and grouped on the basis of the type of their interaction with the ARC. Therefore, in this study no attention is paid to environmental dimensions such as complexity, turbulence and so on, but rather to the inter-relationships of the components of the system with the focal organization and to the demands placed upon it.

CHAPTER 3

THE ISSUE OF REGULATION

Regulatory agencies are public organizations. Dahl and Lindbloom (1953) have distinguished public organizations from private organizations as being more controlled by political than price systems, as having to cope with funding which is highly contingent upon previous experience and perceptions of superiors, as tending to have vaguely defined or multiple goals, as generally lacking objective tests of efficiency, and as being able at times to shift their costs to other agencies.

More simply, Wamsley and Zald (1973), propose that the fundamental features of public organizations are ownership and source of revenues. Public organizations are perceived as belonging to the public, but the taxpayers are only indirectly involved in the decision to purchase the public goods produced, and therefore the price-utility relationship is lost. Ownership and resources are key concepts in defining the political and economic dimensions of public organizations. According to Wamsley and Zald (1973):

political refers to matters of legitimacy and distribution of power as they affect the propriety of an agency's existence, its functional niche, its collective institutional goals. . . (on the other hand). . . economic refers to the combination of factors of production, the arrangement of the division of labor and allocation of resources for task accomplishment. . . (1973:18).

The political dimension of an organization consists of the exchanges between the environment and the organization for control over legitimation, resources and goal definition. The economic dimension of the public organization consists of "the supply and price schedules and behavior necessary in obtaining factors of production and the exchange of output at organization's boundaries " (1973: 21). The output of the public organization may be material (prices, contracts, services) or nonmaterial (status, prestige and recognition); also, rather than reward, it may be deprivation or sanction.

In 1971, the Advisory Council on Executive Organization, known as the ASH Council, presented the President with a study on the independent regulatory agencies of the Federal Government. The Ash report identified the following features possessed by regulatory agencies:

In charge of the agency is a tribunal of essentially co-equal commissioners, responsible for establishing agency policies, making final decisions in specific cases coming before the agency, and managing the activities of the staff. . . the agency is formally independent of the other three

branches of government. . .the legislation defining the mandate of the agency is general and vague, typically giving the agency the responsibility and power to regulate a particular industry, activity or resource in the public interest. . .the methods of collecting information and reaching decisions practiced by the agencies are similar to practices of the federal courts. . ." (1971:5).

The main functions of regulatory agencies are price regulation, franchise awards, influence on technical change, product and process quality control. The Arizona Racing Commission performs all four functions. It controls the prices of bets, admission, concessions and other sources of revenue, and it makes important recommendations to the state Legislature concerning the percentage of amount of takeout on betting volume. The ARC awards franchises by licensing racetrack operators and racing participants, and by determining the number of racing days. The pricing and licensing functions, usually closely related in regulatory activities, are only loosely coupled in the case of the Arizona Racing Commission. By controlling prices, profits and entry, the Arizona Racing Commission controls the regulated firms' choice of technology. When, in 1978, the Legislature passed the amendment bill 5-111.02, which authorized capital improvements at racetracks in the state to be financed by the state's percentage of the handle, Turf Paradise, a horse racing track in Phoenix, underwent extensive changes. The facilities for the customers were

remodeled; a new computer system to handle betting was installed, and a test barn was built. Each improvement had to be authorized and monitored by the Arizona Racing Commission. The Commission also controls product quality and process, from the cleanliness of the tracks' restrooms to the use (or abuse) of medication of the racing animals.

Vogelsang (1980) has proposed the use of postulates for regulatory rules, which would dissipate much of the uncertainty related to the regulatory process. The postulates are: P1, no discretion: the rules have to be binding on the players, especially the most powerful ones; P2, duration: because regulatory rules are costly investments in social organizations, they should be valid for a long period of time. P3, limitation: regulatory rules should specify under which states of the world they apply, and what happens if they are not applicable. P4, enforceability: the rules must be backed by the coercive power of the states. P5, publicity: the obligations and benefits of each rule must reach all parties concerned. P6, observability: it must be possible to ascertain if the regulators and the regulated have obeyed the rule. P7, feasibility: this postulate requires the rule to be feasible in a private-market system. P8, no misrepresentation: the rules should provide incentives for those concerned not

to misrepresent the preferences and possibility sets.

P9, optimality: the incentives provided by the rule should lead the regulated to improve its actions in terms of the regulatory goal.

Vogelsang, as most economists, focused on regulatory rules as policy tools to implement prespecified goals, and restrained himself from dealing with ends rather than means. As a matter of fact, Noll (1971) has observed the lack of a generally accepted theory of regulation. He noticed two different views on regulation. The traditional view holds that the political system is to be distrusted, and that decisions about business should be left to independent experts who are able to detect the socially most desirable policy (Stiegler, 1971). On the other hand, Kohlm (1974) and Fenn (1974) have observed that identifying the meaning of public interest is a problematic task. Noll (1971) has defined socially desirable policies as those "the government would pursue if it gave equal weight to the welfare of every member of society." The second approach is the politico-economic view which argues that the regulators, being representatives of some interests, are far from independent and impartial, and that in the regulatory process, because of its political components, there is a tendency to make socially undesirable policy.

Post and Mahon (1980) have proposed an alternative framework in terms of game theory. They analyzed the inter-relationships between the regulatory agency (seen as a buffer and change agent) and the regulated car insurance industry in Massachusetts. The findings showed that different "games" were played at the same time, each involving a different role of the Commission. The change agent role for the regulatory agency was better accomplished in the technical core of business, while the buffer role was used against changing public expectations. For example, during the tenure of Commissioner James Stone (1975-78) the regulatory commission was successful in holding rates down, despite the industry's demands for increase. During the same period the Commission solicited and obtained significant change in the technical basis on which auto rates were calculated. Ultimately, "the regulatory agency was not only an articulator of change, but a powerful systemic force in the interpenetrating relationship between the industry and the society" (Post and Mahon, 1980:406).

Samuels (1973) approached the issue of regulation in terms of theory of power. He argued that the legal (political) and economic paradigms represent incomplete approaches which must be integrated with each other.

The resolution of economic problems is a function of the legal process, and the legal process is a function of the power play of economic actors.

Regulation, as any type of government, is an instrument available for the use of whoever controls it. Therefore, regulation is not per se a remedy, but as part of a larger power structure, is "an arena in which power players contest for position and fruits" (Samuels, 1973: 110). The constituent representative model proposed by Noll (1971) recognizes the reality of interest group influence in appointment to commissions, and attempts to move the median position within the regulator commission closer to the societal median.

Samuels further observes that, due to its structure, regulation has come to protect and rationalize business interests, to maintain the status quo, to anesthetize consumers' concern and to act as a scapegoat. Analogously, Kohlm (1974), Pellerzi (1974) and Posner (1974) have noticed that regulators may become captives of the regulated, being the regulated the only constituency visible to the regulators. Similarly, Dewey (1974) has defined regulation as "a forum for group therapy, a better business bureau, a check on bureaucracy and a brake on economic and social change" (1974:37).

Other criticism was proposed by the Ash Council

previously mentioned in this chapter. It was observed that independency fostered lack of accountability, response and coordination; that the collegial form was inefficient in making decisions; that the hearing-type, case by case reviews of decisions was a slow and inefficient procedure; and that regulation and promotion of the regulated industry were incompatible. As remedies, the Ash Council proposed major changes in the structure of regulation: limit the number of commissioners (also Statler, 1981); make regulation more responsive to the political system by making the agency heads members of the President's administration; limit internal agency review and create a special Administrative Court; and rationalize the distribution of functions and responsibilities among agencies. The Ash report focused on "the inability of regulatory agencies to achieve whatever objective happens to be established" (Noll, 1971:15), and therefore on efficiency. Noll (1971) suggests an alternative view of the regulatory failure: regulators have "failed" because they represented other interests, and therefore pursued other goals, than the public's (of course, if the public is thought to be the most critical constituency). The problem lies therefore in a lack of effectiveness.

Most of the discussions on regulation deal with problems of valuation, rate of return and pricing structure, taking for granted the existing institution of regulation. Consequently, the history of regulation seems to be the history of the perception of deficiencies ("failures") and of crises, as regulation was continuously reassessed in the light of changing issues and problems. This process may be attributed to the dichotomy structure versus results (Samuels, 1972; Samuels and Trebing, 1972): "whether we are more interested in the decisional structure of administrative regulation or in its specific decisional results and impact upon the regulated industries. . ." (Samuels and Trebing, 1972:xii). The answer is not to come from a value-laden framework, but from an "amoral" viewpoint such as the ecological. Regulatory agencies, as all organizations, exist and interact with an environment. Their behavior is the result of environmental pressures which translate in the power game between the participants of the organizational set. The agencies which survive and prosper are those who more adaptively respond to the changing environment. It is therefore correct to assess the effectiveness of the regulatory agencies in terms of how well the goals of the agency respond to the demands of the critical consti-

tuencies, and how well the goals are met, which is the language of the ecological model.

It is appropriate to discuss now, why the concept of "negotiated environment" has not been previously mentioned. The authors who proposed the ecological model have generally emphasized the importance of choice (Child, 1972; Aldrich, 1979). Also Pfeffer and Salancik (1978) have proposed that the demands placed on organizations by their environments may be managed through adaptation or avoidance; that interdependence may be controlled; and finally, that the environment may be negotiated and even "created." The author doubts that Pfeffer and Salancik explored in depth why the organization needs to use cooptation, merger, interlocking directorates or any of the strategies suggested to negotiate and "create" the environment. The answer, according to the author, is that organizations tend primarily to survival, and in order to survive they are forced by their environment to adapt. What is seen by Pfeffer and Salancik as the exercise of free choice is in reality a forced response to environmental pressures. The example they report, on page 163, the creation of a Committee on the Status of Women in a large State University supports the author's reasoning very nicely. Women were present in the University long before the 1970's: why did not

university administrators try to accomodate them? In other words, what triggered the creation of the Committee on the Status of Women? Pfeffer and Salancik identify three main causes: pressures from women concerned with discriminatory practices; need to comply with federal regulations; fear of negative publicity. The administrators were compelled to adapt by the demands of their changed environment, and therefore they adopted the strategy which better allowed the organization to survive. So much for free choice.

Miles (1980) discusses the issue of the role of choice from a different viewpoint. He writes:

The ecological niche. . . consists of the choices management makes of the domains in which it attempts to operate and the mix of strategic constituencies and their imposed goals which are associated with each domain. From this view, the key managerial choices are in the area of domain selection and strategy formulation and implementation. Having made a choice of what domain the organization will operate in, a set of strategic constituencies and expectations for the organization is largely determined. In a sense, the organization inherits a set of imposed goals when it chooses to enter a particular domain of operations: (1980:381).

The choice of domain depends on two factors: the environmental context and the organization involved. The environmental context is the unavoidable universe of the organization. There are no other alternatives than those present in the actual environment, except organizational suicide. The ability to know niches and

opportunities in the environment is a fixed attribute of the organization at any given time. If an organization needs to make a decision about diversifying, the decision will be made based on the scanning ability possessed by the organization precisely at that time, which is a function of an organization's structure and history. Finally, the organization's ability to change and adapt is fairly independent from its scanning ability, but it is again a fixed characteristic at any given time. In many instances, successful organizations have identified favorable niches but have failed in changing and adapting to the new reality.

These observations greatly limit the scope of choice in strategy formulation and implementation. The strategy which best enhances the organization's chances for survival is to be chosen; there is no room for diversion. Moreover, the author wishes to mention again that, according to biological reasoning, the individuals or species are dominated by the environment in the short run, and only in the long run can they actively influence the environment.

In the case of regulatory agencies, and of the ARC in particular, the available choices are even scarcer. The goals of the ARC are determined by the statutes, therefore should the critical constituencies' demand change, the

ARC would be unable to respond quickly. The monitoring ability of the Commission is determined by the funding and personnel which are rigidly controlled by the State Legislature. Although severely limited by bureaucratic forces, the fate of the ARC is all but secure. For example, in 1980, Mr. Vento (Rep.-Minnesota) introduced in Congress a Bill which if adopted would bring animal medication under federal control, thus severely reducing the usefulness of the racing commissions.

Therefore, it seems inappropriate to talk about strategic choices (which are non-existent in this predicament) when rather the environmental imperative should be emphasized.

CHAPTER 4

PURPOSES AND METHODOLOGY OF THE STUDY

Purposes of the Study

The main focus of this study is on assessing the effectiveness of the Arizona Racing Commission in terms of the ecological framework. Effectiveness is defined as the fitness and the adaptation of the organization to its environment, and the organization's ability to satisfy the expectations of its strategic constituencies. Therefore the study attempts to identify the strategic constituencies of the Arizona Racing Commission (ARC), what demands they impose on the ARC, and how these demands are perceived by the ARC members.

Miles (1980:380) has suggested that the assessment of organization effectiveness can be structured into identifying the strategic constituencies, assessing their relative power and determining their expectations. Similarly, Pfeffer and Salancik (1978:84) proposed that interest groups be determined and weighted, that their criteria be assessed and that the impact of future actions on organizational effectiveness be forecasted. The procedure proposed is followed in this study.

Objective 1A is to determine what are the ARC's strategic constituencies. This objective is achieved by having representatives from each constituent group rate all the other groups in terms of their importance for the focal organization (Pfeffer and Salancik, 1978:85; Anderson, 1976:311). Similarly, objective 1B is to determine the perceptions of ARC executives (1Ba) and ARC supervisors (1Bb) concerning what their critical interest groups are. Any variance between the determination of critical constituencies done by the interest groups themselves and the perceptions of the ARC (be it executives or supervisors), will be analyzed. Once ranked, the critical constituencies' interrelationships with the ARC are to be analyzed in terms of resource dependence and flow (Van de Ven, 1980:321,325).

Objective 2 focuses on the values/goals of the ARC according to the ARC (2Ba and 2Bb) and to its critical constituencies (2A). Rokeach (1968, 1973) has defined values as prescriptive and proscriptive beliefs which have cognitive, affective and behavioral components. Values are desirable modes of conduct (instrumental values) or desirable end-states of existence (terminal values). According to Rokeach, ". . . values are standards that guide ongoing activities. . . and value systems. . . general plans employed to resolve conflicts and to make decisions. . ." (1973:12).

Values are used as standards to evaluate, judge and persuade others and they are therefore relevant in organization interrelationships. Salancik (1975) has shown that Rokeach's values can be used in organizational settings. Thompson and McEwen (1958), Etzioni (1961), Lorsch and Lawrence (1970), Ruedi and Lawrence (1970) have evidenced that organizations adapt themselves to their cultural context and support the dominant value system (Sutton, 1974). Sutton has studied state planning and developing agencies in terms of their political cultures defined as value systems. He found that,

. . . as one considered in turn the traditionalistic, the moralistic, and the individualistic political cultures, state governments would be more innovative, change-agent organizations would be more amply funded, their activities would be more abstract and future-oriented and they would more frequently carry on their work under supervisory board or commission (1974:560).

Traditionalistic, moralistic and individualistic value systems are used in this study to assess the values of the critical constituencies and of the Arizona Racing Commission. Four functions of the ARC, as mandated by the Legislature, are to be ranked in order of importance by the critical groups (2A) and by the ARC (2Ba and 2Bb). "To be responsive to the needs of the racing industry" corresponds to the individualistic culture, where responsiveness to individual needs is emphasized. "To defend the public good"

and "to increase revenues for the State" correspond to the moralistic culture. Finally, "to keep racing clean and orderly" roughly corresponds to the traditionalistic culture, where great emphasis is placed on stability and on the preservation of traditional lifestyles.

Linkages to other organizations reduce uncertainty for the focal organization by providing information and commitment of support from the environment. Interlocking directorates is the strategy of choice for the ARC because proprietary strategies for coping with interdependence are, by statute, not available. According to Pfeffer and Salancik (1978:228), environmental forces (the interest groups) influence the tenure and selection of the executives, who in turn influence the organization's behavior. Level 3 and 4 objectives are meant to examine these processes from the viewpoint of the critical constituencies (3A and 4A) and of the ARC, (3Ba and 3Bb; 4Ba and 4Bb).

A summary of the purposes of the study is provided in Table 4.1.

Methodology

After the objectives of the study were delineated, the actual research was planned in three stages. In the first stage the author familiarized herself with the ARC, its goals, its behavior, and its environment. Two sources

Table 4.1. Purposes of the study.

-
-
- A1. What are the ARC's critical constituencies?
 - A. According to the interest groups.
 - B. According to the ARC's executives(a) and supervisors (b).
 2. What are the values of the ARC?
 - A. According to each interest group.
 - B. According to ARC's executives (a) and supervisors (b).
 3. To what degree do external groups influence the selection and appointment of the ARC's executives?
 - A. According to the critical constituencies.
 - B. According to ARC's executives (b) and supervisors (b).
 4. To what extent do ARC's executives determine the short- and long-term actions of the ARC?
 - A. According to the critical constituencies.
 - B. According to the ARC's executives (a) and supervisors (b).
-

were used: the extensive library material of the Racetrack Industry Program at the University of Arizona, and collections of past issues of the major newspapers in Arizona. During this phase, the author realized some of the difficulties to be overcome in the field study. The populations to be studied were of small size, which would greatly reduce the choice of statistical tests; and were very diversified and scattered throughout the State, which would make data collection difficult and expensive. Moreover, because of recent adverse publicity, the respondents could be reluctant to answer sensitive questions.

The second stage of the research was planned in centrifugal direction and at the institutional level. The Executive Secretary of the ARC (the focal organization) was contacted in an informal meeting and asked to list the organizations which interact with the ARC. In turn, knowledgeable high-ranking officers of each of the organizations indicated were contacted by phone and asked to suggest additional organizations to be included in the list of the ARC's "relevant others." All the respondents were also asked to describe the nature/type of the relationship between their organizations and the ARC in terms of resource dependence and flow. Another piece of information collected through the phone interviews was a list of the expectations their organizations held in regard to the ARC.

The persons contacted within each organization were ideally the highest ranked and most knowledgeable (about the ARC) officers. According to Yutchman and Seashore (1967), Price (1972), Turcotte (1974), Pennings and Goodman (1977) and Cameron (1978), the organization's decision makers should be the sources for the measurement of organizational effectiveness. During this phase, the author also refined her perceptions about who were the knowledgeable high-ranking persons within each constituency.

In the next phase a questionnaire was designed based on the information gathered about the ARC's critical constituencies, and their expectations of the ARC. The questionnaire was mailed with a cover letter and a self-addressed and stamped envelope. A copy of the cover letter and the questionnaire are provided in Appendices A and B. Reports of the results of the study were promised to each interested respondent, but respondents' names were kept confidential.

In the case of "multiple" interest groups, with several individuals within each constituency, such as the newspaper, the legislators and the racetracks, a screening procedure was adopted to keep data-collection efforts and costs within acceptable limits. All the racetracks in Arizona were contacted; that is, their General Managers. Of the newspapers, the three newspapers that routinely had

articles about the ARC were chosen, the others generally providing only the results of the races. Two of these newspapers were in the Phoenix area, with one in the Tucson area. The persons contacted within each newspaper were the journalists who wrote the articles about the ARC. The Legislature offered difficult problems to solve in choosing a representative sample. The author contacted by phone the Speaker of the House and the Senate Majority Leader, who kindly indicated which Legislators were more personally involved with the ARC, and therefore more knowledgeable about it. A list of six names was put together, three from the House and three from the Senate. All six were contacted by questionnaire or by phone, and all answered. Because of their "multiple" nature, population distributions were calculated for each group and are given in Appendices D, E and F.

The same questionnaire was mailed on June 20, 1981 to six ARC executives; to five ARC supervisors; and to seventeen ARC critical constituencies. Within two weeks 100% of the answers were received. Approximately 50% of the organizations contacted completed and mailed the questionnaires. The remaining organizations were contacted by phone within the following two weeks. Two organizations (Department of Public Safety and Auditor General) declined

to answer because they are prohibited by Statutes to discuss the object of investigations in process. One recently appointed commissioner also refused to answer, based on his "inexperience" (which, however, does not preclude him from functioning as a commissioner). A serious problem for the study is also the lack of response from the Office of the Governor which, although repeatedly solicited, failed to answer. Overall, answers were obtained by 14 out of 17 interest groups, 5 out of 6 commissioners and executive secretary, and 5 out of 5 supervisors of the ARC.

Once the responses were obtained, the data were tabulated and statistically analyzed wherever feasible. The saliency of the critical constituencies for the ARC was ranked by the critical constituencies themselves, by the ARC commissioners and executive secretary, and by ARC supervisors. Differences in ranking order were analyzed by using the Spearman rank correlation test. The formula used is:

$$r_s = \frac{\Sigma x^2 + \Sigma y^2 - \Sigma d^2}{2\sqrt{\Sigma x^2 \Sigma y^2}}$$

where

$$\Sigma x^2 = \frac{N^3 - N}{12} - \Sigma T_x \quad \Sigma y^2 = \frac{N^3 - N}{12} - \Sigma T_y$$

and

$$T = \frac{t^3 - t}{12}$$

with t = the number of observations tied to a given rank. To check r_s significance, Table P in Siegel (1956) is used.

Similarly, the goals/values of the ARC were ranked by the critical constituencies (weighted by their importance), by the ARC executives, and by ARC supervisors. Differences in ranking order were analyzed by using the Spearman rank correlation test.

Another analysis was attempted by classifying critical constituencies into groups based on type of resource dependence and flow (Van de Ven, 1980). Table 4.2 provides an outlook of the classification. Differences in rankings were again submitted to the Spearman rank correlation test. Finally, the ARC executives, the ARC supervisors and the critical constituencies' perceptions regarding the selection and appointment of ARC executives and their influence on the ARC were tabulated and compared.

Table 4.2. Classification of the critical constituencies into groups.

Group	Exchange	
	Requires	Provides
HBPA, ATBA, Racetracks	Regulation, technical assistance	Goodwill, visibility; essential to attainment of ARC's goals and mandates
AQHA, JC, NGA	ARC is essential to attainment of their goals and mandates	Records, technical assistance
Media, County Fairs, Humane Society	Information	Public visibility, goodwill
NASRC, TRPB, SRCA, Attorney General, Legislature	Information; ARC is important for attainment of their goals and mandates	Technical consultation, financial support instruments (laws and regulations)
Auditor General, DPS*	Information	Equipment, technical assistance

*This group did not complete the questionnaire.

CHAPTER 5

RESULTS AND LIMITATIONS

Results

The ranking orders of critical constituencies (according to the perceptions of the groups questioned) are indicated in Table 5.1. There are differences in rankings, but r_s (Spearman rank correlation coefficient) calculated for the critical constituencies versus the ARC executives, and for the ARC supervisors versus the ARC executives, indicate in both cases a significant correlation at $\alpha = 0.5$ with $N = 17$. The correlation is slightly stronger in the case of the environment versus the ARC executives, which indicates stronger similarity of perceptions (Table 5.2).

In Table 5.3 the values of the ARC are ranked by the critical constituencies. In Table 5.4 the ranking orders of the values of the critical constituencies, ARC executives and ARC supervisors are provided and compared. In Table 5.5 r_s is calculated: at $\alpha = .05$ with $N = 4$ there is significant and perfect correlation in both cases.

Table 5.4 shows the rankings of ARC values by the critical constituencies organized in groups. The differences are used in Table 5.7 to calculate r_s . At $\alpha=0.5$ and $N=4$

Table 5.1. Ranking of the critical constituencies by their importance.

Organization	Rank		
	According to A Racing Commission's Executives	According to ARC Supervisors	According to the Relevant Constituencies
HBPA	12	13.5	12
ATBA	12	8.5	15
AQHA	14.5	10	16.5
Attorney General	3	4.5	4
Auditor General	12	11	10
County Fairs	7	13.5	14
DPS	7	7	6
Governor	1.5	2.5	5
Humane Society	16	17	16.5
JC	14.5	15	11
Legislature	1.5	1	3
Media	9.5	12	8
NGA	17	8.5	13
NASRC	5	6	7
Racetracks	4	2.5	2
TRPB	7	4.5	9
State Racing Chemists Organizations	9.5	16	1

Table 5.2. Spearman rank correlation of the rankings in Table 5.1.

	Spearman Rank Correlation (r_s) (corrected for ties)	
	Environment/ Commission Executives	Commission Personnel/ Commission Executives
N	17	17
Σd^2	199.75	217.5
ΣT_x	5.5	5.5
ΣT_y	.5	2
Σx^2	402.5	402.5
Σy^2	407.5	406
r_s	.753	.73
Significant at .05?	Yes	Yes

Table 5.3. Ranking of the ARC values according to the critical constituencies.

Critical constituencies	Goals of the ARC			
	To be Responsive to the Needs of the Racing Industry	To Increase Revenues for the State	To Keep Racing Clean and Orderly	To Defend the Public Good
HBPA	1	4	2.5	2.5
ATBA	4	1	2	3
AQHA	1	2	3	4
Attorney General	3	4	1	2
Auditor General	Not Available			
County Fairs	3	4	2	1
DPS	Not Available			
Governor	Not Available			
Humane Society	3	4	1	2
JC	1	4	2	3
Legislature	3	2	1	4
Media	3	4	2	1
NGA	4	3	1	2
NASRC	3	4	1.5	1.5
RT	3	4	2	1
TRPB	1	4	3	2
SRCA	3	4	1	2

1 = Most important value
2 = Second most important value

3 = Third most important value
4 = Fourth most important value

Table 5.4. Ranking of the ARC's goals.

Goal	Rank		
	Critical Constituencies*	RC's Executives	RC's Supervisors
To be Responsive to the Needs of the Racing Industry	3	3	3
To Increase Revenues for the State	4	4	4
To Keep Racing Orderly and Clean	1	1	1
To Defend the Public Good	2	2	2

*Critical constituencies weighted by importance.

- 1 = Most important value
- 2 = Second most important value
- 3 = Third most important value
- 4 = Fourth most important value

Table 5.5. Spearman rank correlation of the rankings in Table 5.4.

	Environment/Commission Executives	Commission Supervisors/Commission Executives
N	4	4
Σd^2	0	0
ΣT_x	0	0
ΣT_y	0	0
Σx^2	5	5
Σy^2	5	5
r_s	1	1
Significant at .05?	Yes	Yes

Table 5.6. Ranking of ARC goals by groups of critical constituencies.

Goal	Group			
	HBPA- ATBA- Tracks	AQHA- JC- NGA	Media County Fairs- Humane Society	NASRC-TRPB- SRCA-Attorney General- Legislature
To be responsible to the needs of the racing industry	3	1.5	3	3
To increase revenues for the state	4	3.5	4	4
To keep racing orderly and clean	1.5	1.5	2	1
To defend the public good	1.5	3.5	1	2

- 1 = Most important value
 2 = Second most important value
 3 = Third most important value
 4 = Fourth most important value

Table 5.7. Spearman rank correlation of the rankings in Table 5.6.

	HBPA-ATBA- Tracks/ Commission Executives	AQHA-JC- NGA/ Commission Executives	Media-County Fairs- Humane Society/ Commission Executives	NASRC-TRPB-SRCA- Attorney General -Legislature/ Commission Executives
N	4	4	4	4
Σd^2	.5	7	2	0
ΣT_x	0	0	0	0
ΣT_y	0	0	0	0
Σx^2	5	5	5	5
Σy^2	5	5	5	5
r_s	.95	.3	.8	1
Significant at .05?	No	No	No	Yes
If not, significant for $\alpha =$.10	.65	.20	x

there is significant and perfect correlation only between the rankings of group (NASRC, SRCA, Attorney General, Legislature) and the ARC executives. The correlation is not significant in the other cases, but there seems to be almost significant correlation in the perceptions of the group (NBPA, ATBA, racetracks) and of the ARC executives. Also, the group (Media, County Fairs, Humane Society) seems to be closer to significant levels of correlation with the ARC executives than the group (AQHA, JC, NGA) whose values and ranking differ strongly from the views of the ARC executives. The group (County Fairs-Media-Humane Society) would yield significant correlation at $\alpha = .20$; the group (AQHA, JC, NGA) at $\alpha = .65$; the group (HBPA, ATBA, race-tracks) at $\alpha = .10$.

The views of the ARC executives, ARC supervisors and critical constituencies slightly differ on the matter of selection and appointment of ARC executives (Table 5.8). A large percentage of ARC supervisors does not know; the remaining employees tend toward high values, that is, they attribute the selection and appointment of ARC executives mainly to political processes. The ARC executives are instead distributed around central values (.68 at 2 and 3), with some observations at higher values (.32 at 4 and 5). In other words, they tend to attribute their own appointment

Table 5.8. Influence of the environment on the selection and appointment of ARC executives.

	N	(distribution %)					
		Do Not Know	No Influence	Minimal	Some	Much	Extensive
Commission Executives	5	0	0	.34	.34	.16	.16
Commission Supervisors	5	.6	0	0	.2	0	.2
Critical Constituencies	14	.14	.07	.07	.36	.22	.14

to a mixture of political and technical reasons, with the accent on the political. The critical constituencies tend to be more evenly scattered, with the majority being in the second half of the scale.

The situation is not repeated in Table 5.9 concerning perceptions of ARC executives' influence on their organization. ARC supervisors perceive ARC executives to be slightly more influential than ARC executives do. In turn, ARC executives perceive themselves to be slightly more influential than the critical constituencies do. Overall, the differences are too small to be conclusive.

This last part of the study (purposes 3 and 4) was meant to focus directly on the environment's influence on organization behavior through the intermediating role of the organization's executives. This point was particularly meaningful given the peculiar structure of the ARC, with a commission board superimposed to a fairly typical administrative structure. The question was whether the board was perceived to act as "the long arm" of the environment, or rather as a buffer agent between the organization's core and the environment. Had the ARC respondents indicated that the commissioners were not very influential within the organization, or that their appointment was due essentially to personal competence, that would have suggested that the

Table 5.9. Commission executives' influence on their organization.

	N	Do Not Know	None	Minimal	Some	Much	Extensive
Commission Executives	5	0	0	0	.16	.50	.34
Commission Supervisors	5	0	0	0	0	.6	.4
Critical Constituencies	14	0	0	.07	.14	.5	.29

environment does not influence the organization's behavior through the intermediating role of the executives. Had there been discrepancies between the ARC constituencies and the ARC respondents, that would have suggested that the ARC is not effective in perceiving its interdependencies with the environment. Because there were no relevant discrepancies between the perceptions of the ARC and those of the ARC's constituencies, it may be concluded that the environment actively influences the behavior of the ARC through the ARC executives and that the ARC knows it.

The first part of the study was aimed to establishing what are the critical constituencies of the ARC, and what expectations they hold of the ARC. Had the priorities of the ARC and those of the critical constituencies been significantly different, the ARC would have been judged ineffective in reading its environment. Because the differences were not significant, such was not the case. However, the analysis of the critical constituencies grouped by resource dependence and flow, indicated variances which supported the resource-dependence model. According to the model, when the organization is effective, there is direct and positive correlation between the environment's influence on it and the dependence of the organization on the resources provided by the environment. This proposition is well-supported in

the case of the ARC by resource input considerations. Given that the ARC's effectiveness had been previously determined, the findings show that the organizations which provide increasingly critical resources (respectively technical and financial assistance, goodwill and records) hold views that are increasingly similar to those of the ARC.

On the other hand, an interesting observation can be made after having analyzed the type of resources that the ARC is supposed to provide. The findings show that groups of constituencies which require little from the ARC (because by their Statutes they are responsible for supporting the ARC) hold either very similar or very dissimilar views from the ARC's. In between are respectively the group which requires regulation and technical assistance and the group which requires only information.

It appears, therefore, that what determines the views of the ARC and its constituencies to be congruent, does not depend on the resources that the critical constituencies obtain from the ARC, but on the resources that the ARC obtains from its critical constituencies. This finding is perfectly consistent with the environmental-deterministic framework proposed. Overall, the findings have evidenced the influence of the environment on the ARC, and have indicated that the effectiveness of the ARC in reading its environment is satisfactory.

Limitations

The problem of validity originates from the indirect type of measurement used in social sciences. There is no absolute certainty that the instrument measures the exact property it was meant to measure. In this study effectiveness is assessed in terms of how congruent are the priorities and values of the ARC with those of its critical constituencies. Therefore it is not the correctness of the ARC's actions which is evaluated in this study, but rather it is the ARC's awareness of the critical constituencies and their demands which is evaluated. Awareness and action are closely interrelated, and it is a logical assumption that awareness is the first step toward correct action. The late Frank Knight, an economist at the University of Chicago, used to say that most people manage to act more sensibly than they talk. But he was referring to talking, and not to thinking or knowing. There would be no possibility of progress if awareness or knowledge were useless for decision making and action.

The research instrument adopted measures actual awareness in terms of perceptions. There is a body of literature about perceptual versus objective observations (among others: Schneider, Parkington and Buxton, 1980; Bourgeois, 1980). It may be useful to remember that in scientific

inquiry objectivity is desired on the part of the researcher, not necessarily of the researched (Downey and Ireland, 1979). This study focuses on awareness, that is, on the comparison of perceived versus objective environmental forces. In the case of the ARC, the commissioners act based on their perceptions of the environment, and the success (effectiveness) of their actions depends on the factual reality of the environment. The problem is in determining whether the environment's perceptions of itself (assessed according to a Delphi-type technique) are consistent with the objective reality. On the other hand, the same observations made in regard to the ARC commissioners can be repeated about the environment. The critical constituencies act based on their perceptions, therefore the problem has more theoretical than practical implications.

The choices of including the ARC Executive Secretary with the Commissioners, of choosing the legislators and the newspapers to be questioned may lead to accusations of arbitrariness. The same accusations may be made about the systematic choice of institutional analysis. Walton (1981) challenged the interchangeability of survey and institutional measures of organization structure and it is possible that his observations apply also to other organizational dimensions. In defense of the study, it can be said that the same

approach was used throughout the research; therefore (hopefully) the interclass error was minimized. Moreover, many of the ARC-critical constituencies are very large organizations and only a limited number of persons within them interact with the ARC. Beyond considerations of cost and time, it would not have been very sensible to ask sensitive questions to persons unqualified to answer.

Responses were obtained by 84%, 100% and 82% of the populations, respectively, of the ARC executives, ARC supervisors, and ARC critical constituencies; therefore samples of different size and comprehensiveness were compared. Given the small size of the populations in question, there was no alternative to collecting all the possible available information.

Reliability is an indication of the extent to which a measure contains variable errors. The amount of error varies from one individual to the next, and also differs for a given individual each time he/she is tested (Helmstadter, 1970). The problem is well known in social research (among others: Zelditch, 1979; Dean and F. Whyte, 1979; Becker, 1979). No estimate of reliability has been done, but if the study had to be repeated any of the test-retest, split-half, or parallel-form techniques could be used. There is some indication that the problem of reliability might be important

in this case; the simple fact that half of the responses were obtained by mail and half by phone interviews would be sufficient to raise criticism. However, only by "hassling" the respondents personally by phone could the data be collected. The alternative of obtaining responses from 50% of very small populations was clearly unacceptable.

Finally, the problems involved in doing research are well known to the persons who have tried their hands at it at least once. In this case the author well experienced the frustration which originates from limited resources, the tightness of a specified time frame, and the final feeling of incompleteness and need for more research. However, the results of incomplete or flawed studies do yield some useful information, which contributes to creating the weight of evidence. Hopefully, such is the fate of this research.

CHAPTER 6

IMPLICATIONS AND CONCLUSION

According to Boulding (1978), the reality of the environment is composed by a triad of "trinities." The artifacts (things, organizations and people) are produced through the interaction of know-how, energy and materials organized by threat, integrative and exchange processes. This system, which represents the social reality on the planet Earth, is only a small fraction of the Universe; however, it is our fraction. We perceive it, we are largely responsible for creating it, and to be interested in it is an essential component of our beings.

The three families of phenotypes, the three genetic bases and the three bonding relations mentioned before, all interact with each other. This observation would be meaningless if it did not encourage one to explore the questions of what depends on what, and what things are more important. The human mind seems to have a passion for patterns; according to Boulding (1978) evolution is the pattern of the universe in space and time. The study of evolutionary processes attempts to answer to the questions of what exists and why. In order to assess what has survived, we

need records of what existed before and lists of what exists now. Although, according to Boulding, "our records are miserable, and our interpretations of them dubious" (1978:29) we do need records, if nothing else to transmit the actual knowledge. On the other hand, in order to assess why, we need to understand patterns of changes towards informational complexity. In the case of organizations as well as of people or things, we need to assess how well they adapt within their environment. For example, this study has brought into evidence two interesting considerations. The practical implications of these findings are that the effectiveness of the ARC in reading its environment may be considered satisfactory, and the origin of the actual problems and criticism should be attributed to defects in meeting the stated goals. According to the framework adopted (Pfeffer and Salancik, 1978) the environment influences the behavior of the organization through the intermediating role of the executives. The study has shown that the political nature of such role is perceived slightly more acutely by the ARC (executives and supervisors) than by its critical constituencies. Because the environmental-deterministic model insists on political processes within the system organization-environment, this finding is reassuring about the ARC's

sensitivity to its environment.

The second observation is that there seems to be significant agreement between the ARC and its critical constituencies about the relative importance of the interest groups and the goals and values of the ARC. In concordance with the resource-dependence model, the groups which most closely agree with the ARC are those who provide the most critical resources. For example, the group (NASRC, TRPB, SRCA, Attorney General, Legislature), which provides the most essential resources (technical and financial assistance) holds identical values to those of the ARC.

The ecological approach adopted in the study has integrated the two extreme "resources versus information" interpretations of the environment. The interrelations between the focal organization and the critical constituencies have been studied in terms of resource dependence and flow, but without insisting on the concept of scarce resources. The obsession with scarcity and finiteness probably originates from the Darwinian concepts of "struggle for existence" and "fight for survival." Evolution is not a race toward an ideal destination where the runners sabotage each other and only the winner is rewarded. In the environment there is a multiplicity of continuously changing niches, and populations interact

ecologically in many different ways. The individuals and species within the system do not compete with each other for the possession and use of scarce resources, but rather each try to adapt to the environment. Therefore, the critical force behind the scenery is not scarcity but change. In this sense, the study reconciles the resource view with the information view by also testing awareness and adaptation to change at a given point in time.

The study also breaks with the traditional assessments of environments. We should not be looking for a complete and therefore static description of the environment (which is anyway difficult and expensive to obtain) but rather we should be searching for what is happening within it. We should not focus on things, but on processes, and not even on a pattern but on a succession of patterns. The conventional theories on the environment would at their best measure adaptation, which is a static dimension significant only for short term survival. The leading feature of evolution is adaptability, and because we are interested in the predictive power of knowledge, adaptability is the criterion we should focus on.

Because the time dimension is essential in the ecological theory of organizations, and effectiveness over time determines the fate of the organization, to be really meaning-

ful this study should be repeated periodically to check for changes in the critical constituencies and/or their demands. Also, variances in effectiveness should be compared and trends over time analyzed in the broader context of all the racing commissions and boards in the country. This type of assessment falls within the competence of the National Association of State Racing Commissioners.

Finally, this study has been the first in an unexplored field. Only when his/her study is considered surpassed, has the author a measure of his/her work significance. Hopefully, such measure will not be late in coming.

APPENDIX A

COVER LETTER

June , 1981

Dear Sir:

I am a graduate student in the Department of Management at the University of Arizona. One of the requirements for graduation is the completion of a thesis. My thesis will be on the interactions and linkages between the Arizona Racing Commission and other related groups.

Because of the interactions between your organization and the Arizona Racing Commission,* your organization has been selected as part of my sample. If you would, please complete the enclosed questionnaire and return it in the envelope provided. Your assistance in this project will be greatly appreciated.

Please indicate on the survey form if you would like to receive a copy of the results of the survey. I will be looking forward to hearing from you.

Sincerely,

Giovanna Gallottini Tozzi
3737 N. Country Club Rd., 105N
Tucson, Arizona 85716

*In the letters mailed to the ARC executives and ARC supervisors this sentence was changed to "Because of your role in the ARC, you. . . ."

APPENDIX B
QUESTIONNAIRE

The Arizona Racing Commission interacts with a variety of organizations. One of the purposes of this research is to assess the relative importance of those organizations. Please indicate how important you believe the following groups to be to the Arizona Racing Commission. (circle one rank for each group)

	Not Imp. At All	Minimal Imp.	Some Imp.	Very Imp.	Crucial
Az Horsemen Protective Benevolent Assn.	1	2	3	4	5
Az Thoroughbred Breeders Assn.	1	2	3	4	5
American Quarter Horse Assn.	1	2	3	4	5
Attorney General's Office	1	2	3	4	5
Auditor General's Office	1	2	3	4	5
County Fairs (as a group)	1	2	3	4	5
Department of Public Safety	1	2	3	4	5
Governor's Office	1	2	3	4	5
Humane Society	1	2	3	4	5
Jockey Club	1	2	3	4	5
Legislature	1	2	3	4	5
Media (newspapers)	1	2	3	4	5
National Greyhound Assn.	1	2	3	4	5
Natl. Assn. State Racing Commissioners	1	2	3	4	5
Racetracks (as a group)	1	2	3	4	5

	Not Imp. At All	Minimal Imp.	Some Imp.	Very Imp.	Crucial
Thoroughbred Racing Protective Bureau	1	2	3	4	5
State Racing Chemists Assn.	1	2	3	4	5
Other (please specify)	1	2	3	4	5
<hr/>					
Other (please specify)	1	2	3	4	5
<hr/>					

Within the limits imposed by the Arizona Legislature, the Arizona Racing Commission performs a variety of functions. The second focus of this research is an assessment of the relative importance of each of these functions to your organization. Please do not assign the same rank to two different goals. 1 is the most important goal, 2 the second most important, and so on.

- to be responsive to the needs of the racing industry
- to increase revenues for the State
- to keep racing orderly and "clean"
- to defend the public good
- other (please specify)
- other (please specify)

In your opinion, to what degree do external groups influence the selection and appointment of the Arizona Racing Commissioners and the Executive Secretary? (please circle one)

Do Not Know	None	Little Impact	Some Impact
Much Impact	Extensive Impact		

In your opinion, to what extent do the Racing Commissioners and the Executive Secretary determine the short and long-term actions of the Arizona Racing Commission? (please circle one)

Do not Know None Little Impact Some Impact

Much Impact Extensive Impact

Do you wish to receive a copy of the results of this survey?

Yes No

THANK YOU VERY MUCH. PLEASE MAIL IN THE ENCLOSED ENVELOPE.

APPENDIX C

LIST OF ABBREVIATIONS

HBPA Horsemen Protective and Benevolent Association
ATBA Arizona Thoroughbred Breeders Association
AQHA American Quarter Horse Association
DPS Department of Public Safety
HS Humane Society
JC Jockey Club
NGA National Greyhound Association
NASRC National Association State Racing Commissioners
RT Racetracks
TRPB Thoroughbred Racing Protective Bureau
SRCA State Racing Chemists Association

APPENDIX D

RACETRACKS, FREQUENCIES

Distributions of frequencies.

Goal	Rank			
	1	2	3	4
Be responsive to the needs of the racing industry	.16	.34	.50	0
To increase revenues for the state	0	.34	.34	.32
To keep racing orderly and clean	.32	.34	.34	0
To defend the public good	.34	.50	0	.16

APPENDIX E
LEGISLATORS, FREQUENCIES

Distributions of frequencies, N = 6.

Goal	Rank			
	1	2	3	4
Be responsive to the needs of the racing industry	0	.33	.33	.33
To increase revenues for the state	.33	.33	.33	0
To keep racing orderly and clean	.67	.16	.16	0
To defend the public good	.16	0	0	.84

APPENDIX F

NEWSPAPERS, FREQUENCIES

Distribution of Frequencies, N = 6.

	1	2	3	4	5
HBPA	.16	.16	.34	.34	0
ATBA	0	.34	.34	.16	.16
AQHA	0	.34	.68	0	0
Attorney General	0	0	0	.34	.66
Auditor General	0	.16	.34	.34	.16
County Fairs	0	.16	0	.34	.50
DPS	0	.16	.34	.16	.34
Governor	0	0	0	.16	.86
Humane Society	.34	.34	.16	.16	0
Jockey Club	0	.16	.50	.16	.16
Legislature	0	0	.33	.33	.34
Newspapers	0	.16	.16	.34	.34
NGA	.17	0	0	.66	.17
NASRC	0	0	.16	.50	.34
Racetracks	0	0	0	.34	.66
TRPB	.16	0	.34	.16	.34
SRCA	0	0	.16	.16	.68

Distributions of frequencies, N = 6.

	1	2	3	4	5
HBPA	0	0	.5	.16	.34
ATBA	0	.16	0	.50	.16
AQMA	0	0	1	0	0
Attorney General	0	.84	.16	0	0
Auditor General	0	1	0	0	0
County Fairs	0	.16	.50	.34	0
DPS	.84	.16	0	0	0
Governor	.84	.16	0	0	0
Humane Society	1	0	0	0	0
Jockey Club	0	.84	.16	0	0
Legislature	0	.84	.16	0	0
Newspapers	.16	.68	.16	0	0
NGA	0	.16	.50	.34	0
NASRC	0	.34	.50	0	.16
Racetracks	0	0	.16	.68	.16
TRPB	0	.16	.84	0	0
SRCA	0	0	1	0	0

Distributions of frequencies.

	0	1	2	3	4	5
Selection and appointment of ARC executives	.16	0	.16	.34	0	.34
ARC executives' influence	0	0	0	.16	.50	.34

Distributions of frequencies.

	0	1	2	3	4	5
Selection and appointment of executives	0	0	.33	.33	.33	0
ARC executives' influence	0	0	0	.16	.84	0

Distributions of frequencies.

	0	1	2	3	4	5
Selection and appointment of ARC executives	.33	0	0	.33	0	.34
ARC executives' influence	.33	0	0	.33	0	.34

Distributions of frequencies, N = 3.

	1	2	3	4	5
HBPA	0	0	1	0	0
ATBA	0	.67	.33	0	0
AQMA	.33	.67	0	0	0
Attorney General	0	0	.33	.33	.34
Auditor General	0	0	0	1	0
County Fairs	0	.33	.67	0	0
DPS	0	0	.67	.33	0
Governor	.33	0	0	.67	0
Humane Society	.33	.67	0	0	0
Jockey Club	.33	.67	0	0	0
Legislature	0	0	0	1	0
Newspapers	0	0	0	0	1
NGA	0	.67	.33	0	0
NASRC	0	1	0	0	0
Racetracks	0	0	1	0	0
TRPB	.33	.67	0	0	0
SRCA	0	1	0	0	0

Distributions of frequencies, N = 3.

	1	2	3	4
To be responsive to the needs of the racing industry	0	.33	.67	0
To increase revenues for the state	0	0	0	1
To keep racing orderly and clean	.33	.33	.33	0
To defend the public good	1	0	0	0

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