

*Three attitude dimensions are apparent among zoological managers. They concern professional ethics, organization, and responsibility toward animals. In this article, four models of the acceptance of professional norms are tested, and career-related goals are found to be the best predictors of such attitudes. Noneconomic goals seem to promote zoological professionalism, whereas entrepreneurial activities reduce support for generally accepted norms of behavior. The implications of these findings and possibilities for further research are discussed.*

## ***NORMS OF PROFESSIONAL BEHAVIOR IN HIGHLY SPECIALIZED ORGANIZATIONS The Case of American Zoos and Aquariums***

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**A “norm” is a shared expectation about proper behavior. For the most part, organization scholars have concentrated their efforts on studying norms of employees in large, bureaucratic organizations. Surprisingly little is known about the behavior of highly skilled professionals who serve the public through small organizations controlled by governments**

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or philanthropic societies. This article focuses on the nature and sources of the norms that have been adopted by zoological managers, who have attempted to move toward recognition of their professional status over the past 2 decades.<sup>1</sup>

The authors begin by presenting a short history of the development of the zoological profession. Then, the attitudes of public and private zoo managers are compared, and their responses to a series of inquiries about professionalism are factor analyzed. Four basic models of the acceptance of norms are tested, and the implications of these findings for further research are discussed.

### A SHORT HISTORY OF ZOOLOGICAL PROFESSIONALISM

The available literature tracing the development of zoological occupations is quite limited, and a few comments on its history are in order here. The first known zoos were assembled in ancient Mesopotamia. During the golden age of Greece, Aristotle wrote the first encyclopedia of zoology, his *History of Animals*, which classified and described about 300 species of vertebrates (Dembeck, 1965). By the 16th century, zoos had become very popular among the royal families of Europe. King Louis XIV of France assembled the greatest collection, which was the first "zoological garden" to house all its animals in one area. During the French Revolution, a mob descended on Versailles, demanding that the animals be released in the name of the Revolution, and only withdrew after realizing that many of them were dangerous. Three years after Louis XVI's death, the zoo was successfully "liberated" and became a popular tourist attraction (Curtis, 1978).

John Burton, an Englishman, well represents the entrepreneurial spirit that until recently was the fundamental motivation of most individuals who worked with wild animals. His "Old Curiosity Shop" in Falmouth was an agent for many European exhibitions. In a letter to a newspaper in 1882, Burton responded to a negative editorial and described his ability to procure animals. "Mentioning white elephants, doubtless the writer thought to be witty, but white elephants are not the curiosities that he imagines, and should he give me an order, accompanied by a substantial cheque in payment, I will guarantee to deliver him one or more, direct from Burma, in less than three months, and as many alligators as he pleases."

The first American zoological collections appeared in the early 19th century as traveling menageries. The animals were moved from town to town by wagon or riverboat. Their promoters were showmen, and although their motives were purely mercenary, these traveling zoo operators provided many people with their first exposure to the wild animal kingdom. This gave birth to an intense public interest in such animals. The first permanent zoo in the United States opened its gates in 1874 in Philadelphia, and so zoos began to appear all over the country (Curtis, 1978).

Over the past few decades, the role of the modern zoo has undergone dramatic change, and a refined conservation and education mission has evolved. The impetus for this development is the escalating destruction of the earth's environment and a real sense of urgency to save the remnants of a once abundant wildlife resource. Currently, we are losing one species to extinction each day, and by the end of the century, we could be losing one species every hour (Bendiner, 1981). Today's zoo managers are faced with a seemingly overwhelming challenge: housing and preserving increasing numbers of endangered species but doing so with limited space and resources.

The complexity of the modern zoo's mission, an increasing need for financial support, and a heterogeneous staff have contributed to the development of the professional manager. In the recent past, most employees were oriented toward the care of animals. The director, curator, and zookeeper were the main job classifications. It is thought that they often held a common philosophy, and their primary concern was for the welfare of the living collection. Those in upper management generally started their careers as zookeepers. A strong hierarchal order existed that was based on tenure. Husbandry skills were learned on the job, and the most respected expertise involved animal management. These generalizations no longer hold, and now zoo administrators come from diverse academic and professional backgrounds.

## DATA COLLECTION

The data used in this study were collected in 1988 from a nationwide random sample of managers in American zoos. A population of 1,044 professionals was identified from the staff positions described in *Zoological Parks and Aquariums in the Americas* (1986-1987 ed.) and the United

States Department of Agriculture's 1987 list of licensed exhibitors. A six-page questionnaire was designed to identify personal characteristics and place and type of employment. It included a number of items about professional and philosophical issues. The questionnaire was distributed to a random sample of 500 individuals. Of these, 330 completed and returned the instrument, for a 66% response rate.

Because of the scarcity of literature on zoological professionalism, 10 varied questions about potential norms were posed. They inquired about issues that frequently are the topic of discussion among practitioners and have resulted in a number of recent convention papers. The specific items were based on the standards of the AAZPA (American Association of Zoological Parks and Aquariums), which adopted a code of ethics in 1976 (see Boyd, 1988) and the judgment of one of the coauthors, who is an AAZPA member.

The items dealt with the major elements of professionalism as commonly identified by other researchers (Benveniste, 1987, pp. 32-44). They concerned major professional issues in the zoological field, such as responsibility for the animals in one's care, the possibility of licensing, the need to standardize techniques, and the importance of visitor enjoyment, public education, and professional organizations. The range of possible answers to each Likert-type item was scaled according to the following agree-disagree continuum: *agree*, *agree with reservations*, *disagree with reservations*, and *disagree*. The exact item wordings are presented in the appendix.

## ZOOLOGICAL NORMS

Certain types of norms commonly are thought to arise from one's work environment. Consequently, the first issue that we will examine is whether different norms are held by public and private zoo professionals. These differences might stem from different sources of funding of public and private zoos, different types of oversight, or other monetary considerations. In particular, differences would be found if norm acceptance is largely a result of the general administrative environment rather than personal characteristics.

Table 1 presents the proportion of individuals in both groups that accepted each of the 10 standards. Individuals who answered *strongly agree*, or *agree with reservations* are categorized as supporters of each

**TABLE 1**  
**Percentage Favoring Individual Attitudes**

| <i>Attitude</i>               | <i>Governmental</i><br>( <i>n</i> = 171) | <i>Private</i><br>( <i>n</i> = 155) | $\chi^2$ |
|-------------------------------|--|-------------------------------------|----------|
| Code of ethics (2)            | 97.1                                     | 96.8                                | 0.48     |
| Animal responsibility (1)     | 97.0                                     | 95.5                                | 0.00     |
| Public education (8)          | 96.5                                     | 97.4                                | 0.05     |
| Conservation (3)              | 81.2                                     | 75.3                                | 1.10     |
| Standardize techniques (9)    | 53.3                                     | 50.6                                | 0.09     |
| Visitor enjoyment (10)        | 50.9                                     | 48.4                                | 0.05     |
| Professional title (7)        | 39.3                                     | 32.9                                | 1.54     |
| Exotic wildlife (4)           | 37.6                                     | 37.9                                | 0.01     |
| Professional organization (6) | 35.3                                     | 43.5                                | 2.50     |
| Licensing (5)                 | 27.1                                     | 27.8                                | 0.01     |

NOTE: None of the  $\chi^2$  statistics are significant at the .05 level. Numbers in parentheses refer to questionnaire items (see appendix for item wording).

attitude. A  $\chi^2$  test was used to determine if significant differences at the .05 level existed between the two groups. No differences existed between publicly and privately employed professionals on any of these 10 attitudes.

When an attitude is accepted by 80% or 90% of a group's individuals, it commonly is called a "norm." Four of the attitudes probably should be considered norms because they were accepted by a much larger proportion of individuals than were the other items. Attitudes regarding the need for a code of ethics, the necessity of feeling responsible for animal stewardship, and the need for public education are clearly norms. These attitudes were accepted by over 95% of the respondents. The ideal of conservation also was accepted by 78% of individuals, which is a substantially greater level than was evidenced by other responses. The next greatest level of support concerns standardization of techniques, but only 52% of respondents supported that item.

## A FACTOR ANALYSIS OF PROFESSIONAL ATTITUDES

To this point, the study has identified some norms of behavior among zoological professionals but that among this group of professionals, norm

**TABLE 2**  
**Factor Analysis of Attitude Structure**

| <i>Attitude</i>                  | <i>Factor 1</i>                  | <i>Factor 2</i>                  | <i>Factor 3</i>              |
|----------------------------------|----------------------------------|----------------------------------|------------------------------|
|                                  | <i>Professional Organization</i> | <i>Professional Ethics Norms</i> | <i>Animal Responsibility</i> |
| Professional organization (6)    | .75                              | -.12                             | .01                          |
| Licensing (5)                    | .72                              | -.03                             | .17                          |
| Standardize techniques (9)       | .51                              | .28                              | -.01                         |
| Code of ethics (2)               | .22                              | .65                              | .08                          |
| Conservation (3)                 | -.02                             | .59                              | .04                          |
| Public education (8)             | -.03                             | .55                              | -.22                         |
| Visitor enjoyment (10)           | .31                              | -.39                             | -.11                         |
| Animal responsibility (1)        | .07                              | .29                              | .75                          |
| Professional title (7)           | .36                              | -.15                             | .58                          |
| Exotic wildlife (4)              | .38                              | .21                              | -.53                         |
| Percentage of variance explained | 18.3                             | 14.4                             | 12.2                         |

NOTE: Numbers in parentheses refer to questionnaire items (see appendix for item wording).

acceptance is not directly related to employment in the public and private sector. The next step was to examine the correlations among different types of attitudes to ascertain the *structure* of professional ethics. Principal components factor analysis was used to sort out the pattern of responses. According to both eigenvalue and substantive criteria, three factors were present, which collectively explained 45% of the variance in responses. The factor solution was exceptionally clean, and an oblique analysis showed that the greatest correlation between factors was a minuscule .03.

As Table 2 shows, the first factor represented support for professional organization. The three items that loaded heavily here were the need for a "gatekeeper" to restrict entry into the field (.75), the need to license zoo personnel (.72), and the need to standardize techniques of animal maintenance (.51). Although not loading most heavily on this dimension, support for the idea of restricting use of the term "zoo professional" to those involved in the care and maintenance of collections also loaded at .36 on the factor.

The second factor was largely composed of *norms* of professional ethics. Three of the four items that were initially identified as norms loaded most heavily on this dimension: the need for a strong code of ethics

(.65), the belief that animal conservation is more important than public entertainment (.59), and the belief that public education is necessary to increase conservation efforts (.55).

The third factor measured animal responsibility. Three variables loaded most heavily here: the belief that the primary responsibility of professionals is to the living collection (.75), concern for use of a professional title (.58), and the belief that possession of exotic wildlife should be restricted (-.53). The last item was negatively correlated with the dimension, indicating that one's belief in responsibility to animals is *not* positively related to the idea that exotic wildlife should be restricted to public collections.

### SOURCES OF NORMS

The sources of professionalism often have been viewed by administrative scholars as originating outside the organization where one works. When professionals hold attitudes that are critical to their belief system, they see these beliefs as the *correct* way of doing things. Simply put, "professionals have commitments and loyalties to a reference group composed of other professionals and to a definite set of normative standards governing their worth, besides their commitment to the organization" (Grusky & Miller, 1970, p. 475). If an individual's attitude is also a professional norm, it is reinforced by the almost unanimous agreement of others in one's profession.

Many of the early students of norms pejoratively labeled those who did not agree with dominant group attitudes as "deviants" or "mavericks," and conformism came to be viewed as a normative "good." In the public sector, the implications of this position became all too clear following a series of major fiascoes that included the American defeat in the Vietnam War, Watergate, and the *Challenger* disaster. In each instance, the suppression of dissent and distortion of truth had become norms among important decision makers.<sup>2</sup>

Recently, an entire literature has developed on the persecution of whistle-blowers by governments and corporations (e.g., Bowman, 1983; Elliston, Keenan, Lockhart, & Schaick, 1985; Jos, Tomkins, & Hays, 1989). It has become clear that many whistle-blowers feel *morally* compelled to bring "the truth" of matters to the attention of higher administrators, governmental officials, or the public when their co-workers are

equally intent on suppressing such knowledge. The conflict between whistle-blowers and bureaucracies well illustrates what *sometimes* is considered to be the fundamental difference between "bureaucratic" and "professional" patterns of behavior. Professionals often bring externally defined ("professional") standards to their work, and call on these standards when making decisions (e.g., see Blau & Scott, 1962; Hodges & Durant, 1989; Lawler & Hage, 1973; Miller, 1967; Montagna, 1968; Mosher, 1968; Sorensen & Sorensen, 1974). Because of their reference to external standards, professionals may be less loyal to an organization and more committed to their jobs or their profession (Cayer, 1986, p. 180; Champion, 1975, p. 82).

The problems inherent in understanding the structure of normative belief systems are not trivial. Scholarly studies of norms have been based on many different and usually conflicting approaches taken from sociological, theological, philosophical, historical, psychological, sociobiological, game theory, and organizational perspectives. In his classic discussion of belief systems, Converse (1964) wrote that "belief systems have never surrendered easily to study or quantification. Indeed, they have often served as primary exhibits for the doctrine that what is important to study cannot be measured and what can be measured is not important to study" (p. 206).

With perhaps the lone exception of the "rational" bureaucratic behavior literature, most theories of norm acceptance by governmental employees are not well developed (Asher, 1973; Fisher, Brunk, & Cohen, 1990; Hebert & McLemore, 1973; Price & Bell, 1970). This generalization is most germane when applied to ethical belief systems (see Brunk, Secrest, & Tamashiro, 1990; Mansbridge, 1990; Secrest, Brunk, & Tamashiro, 1991). This lack of a scholarly consensus almost certainly results from the varied sources of professional norms (Kellar, 1988). At least three different basic sources of norms are recognized: laws, customs, and moral beliefs. Each of these provides different legitimizing justifications for professional behavior.

Laws are explicit governmental acts, but during the best of times they are only loosely related to each other in any logical sense, and often, on close examination they can be seen to be contradictory. Here is one of the major distinctions between "rational man" and "irrational society" (Niebuhr, 1932). Consequently, it is almost impossible to justify a blind obedience to the law by all well-educated professionals. The second



category of norms stems from informal standards that are associated with each other only because of historical chance. Again, this type of norm cannot easily be justified to professionals because it is without logical coherence.

The last source for norms is the ethical belief system, which consists of a closely related set of rules of behavior that may be *deduced* from a few simple assumptions. One early example of such an ethical system regarding governmental behavior was developed by medieval theologians. In particular, Augustine and Aquinas argued that the component principles of “just war theory” *will* be derived through the simple application of rational thought by most individuals who believe in the golden rule (see Donagan, 1977; Secrest et al., 1991). The argument is quite persuasive, and today, “just war theory” forms the basis of most international law on warfare.

It would seem that the varied sources of norms will almost inevitably bring professionals into conflict with their nonprofessional colleagues over the content of the “rules of the game.” To act “professionally” often means bringing into play standards of conduct brought from outside the organization. Seen from this light, some of those who have been called “deviants” in unprofessional environments are really ethical individuals operating from deductive models of moral decision making. Rather than simply “going along” with the “unprofessional” behavior of their co-workers, they follow professional norms developed outside their organizations. Mosher (1968) put the problem of being a professional in such a nonprofessional organization this way: “Politics is to the professionals as ambiguity to truth, expediency to rightness, heresy to true belief” (p. 109). Later, he wrote,

There is a built-in animosity between the professions and politics. . . . Most of the professions . . . won their professional spurs over many arduous years of contending against the infiltration, the domination, and the influence of politicians (who to many professionals are amateurs at best and criminals at worst). . . . Professionalism rests upon specialized knowledge, science, and rationality. There are *correct* ways of solving problems and doing things. (Mosher, 1982, p. 118)

Such comments about the general nature of professionalism may offer useful insights into the type of variables that are important in determining professionalism within the present study group.

## PREDICTING THE ADOPTION OF PROFESSIONAL NORMS

Numerous writers have offered various standards to measure professionalism (e.g., Hodges & Durant, 1989; Pugh, 1989; Schein, 1972; Wilensky, 1964), but no one has been successful in specifying the differences between necessary and sufficient conditions for professionalism (Roth, 1974). Nevertheless, there is a core of commonly encountered arguments from which a number of testable hypotheses can be derived.

Individual motivations are seen by many scholars as critical to professional norms. Most "professionals" are assumed to have a strong motivation or calling. Professionalism often is defined in relationship to one's level of training. Professionals are said to make decisions on behalf of their clients predicated in terms of general principles or "professional ethics." Finally, these individuals often form organizations that define the criteria for their "professionalism" (Blau & Scott, 1962, pp. 60-63).

Four possible sources of professional norms are examined. The dependent variable in this analysis consists of the factor scores of the second dimension that were taken from the previous analysis presented in Table 2. The hypothesized sources of professionalism examined here are the organizational environment, the likelihood of reflecting on professional standards, economic goals of individual actors, and the noneconomic goals of these same managers. Because most past quantitative explanations of the sources of such norms produced only very weak statistical results (e.g., see Brunk et al., 1990), the present study tested a series of stepwise regression models in which five variables were used to measure each of the hypothesized sources of norms.

### ORGANIZATIONAL ENVIRONMENT

One theory of institutional development emphasizes the role of the environment in shaping the organization and suggests that institutions largely react to outside demands. If professional norms "evolve," then the structural conditions of organizations should have a major impact on the *type* of norms that develop in any given setting (Cayer & Weschler, 1988). Varied evolutions can occur because different strategies are useful for maximizing different goals. Five major aspects of the organizational environment were operationalized using the amount of money spent per animal, metropolitan population of the area where a zoo is located, the zoo's budget, the age of the institution, and the size of the collection. The

**TABLE 3**  
**Testing Models of Norm Acceptance**

| <i>Model and Variables</i>        | <i>Standardized Regression Coefficient</i> |
|-----------------------------------|--|
| <b>Organizational environment</b> |  |
| Expenditures per animal           | -.23                                       |
| Age of institution                | .13  |
| R <sup>2</sup>                    | .06  |
| <b>Chance for reflection</b>      |  |
| Age of respondent                 | -.13                                       |
| R <sup>2</sup>                    | .02  |
| <b>Economic goals</b>             |  |
| Profit motive                     | -.12                                       |
| Entertainment                     | -.14                                       |
| Produce animals for research      | -.12                                       |
| R <sup>2</sup>                    | .09  |
| <b>Noneconomic goals</b>          |  |
| Conservation of wildlife          | .24  |
| Education resources               | .17  |
| R <sup>2</sup>                    | .11  |

NOTE: All variables and all equations are significant at the .05 level.

evidence is presented in Table 3 using standardized regression coefficients taken from stepwise regression equations, which are calculated separately for each of the four models being examined.

The age of an institution was a significant predictor of one's support for standards of professional ethics at the usual .05 level for two-tailed hypothesis tests. Age had a beta of .13, which indicates that in older institutions there is a very slight tendency for greater professionalism. However, per capita spending on animals was negatively related to professionalism (-.23), which may result from the fact that some species are more costly to maintain than others and the composition of collections differs among large and small zoos. Overall, the equation explained only 6% of the variance in adoption of professional attitudes.

#### CHANCES FOR REFLECTION

Early research on the professional norms that develop in legislatures stressed the importance of the institution in transmitting expected patterns

of behavior to its new members. Senior members were thought to be especially crucial in the "learning" of new norms (e.g., Asher, 1973). If individual norms are part of a structured system that can be deduced by logical thought, then any factor that increases the chance for reflection on professional issues should be related to the acceptance of norms. In a similar vein, Kuklinski, Metlay, and Kay (1982) demonstrated that individuals with the greatest amount of technical and scientific knowledge hold the most structured opinions concerning public policy issues about nuclear power.

Five variables measuring the potential for reflection on professional ethics were operationalized by using the length of employment in the zoo field, age of a respondent, gender, level of education, and whether one had held employment outside the zoo field. Table 3 again presents the results. Of all these variables, only age ( $-.13$ ) was significantly related to professional ethics, but the coefficient was not in the predicted direction. Older respondents were less likely to support professional ethics, which may reflect the less professional attitudes that were common in the field when they were socialized into it. Given this evidence, one can safely conclude that the chance for reflection on professional issues is a very poor predictor of the adoption of professional ethics among zoological managers.

### INDIVIDUAL GOALS

Another way to study the adoption of norms is to examine behavior in terms of game theory: With desire for a particular career comes a stake in the maintenance and enhancement of a profession as well as an incentive for the development of norms of professional conduct, but why should career goals cause the development of *specific* types of norms? When non-zero-sum games—those where the total level of rewards for the participants can be increased—are played repeatedly, implicit cooperative agreements ("norms") often develop among players that will increase their overall rewards (e.g., see Axelrod, 1984; Mansbridge, 1990). Some gaming strategies are superior to others in yielding greater rewards. As soon as these strategies are discovered, they are copied, and in this way norms of conduct "evolve." To take an example from contemporary politics, it appears that in some circumstances, politicians become more *honest* the longer they stay in office because consistent policy positions

are easier to explain to voters than a series of ad hoc arguments (Asher & Weisberg, 1978).

To generalize these varied findings, it seems likely that Platonic systems of rules develop because certain norms provide survival, time saving, and numerous other types of advantages (also see Benveniste, 1987, pp. 14-23). At one extreme, individuals who have little long-run interest in the goals of a profession have no incentive to maximize anything but their own self-interest. Only economic incentives or peer pressure can induce them to move into agreement with a set of group norms. At the other extreme, individuals with a great interest in making an occupation their life's career will develop similar implicit sets of rules that structure their behavior. Eventually, these come to be viewed as expected standards of conduct and are formalized into professional codes of behavior.<sup>3</sup>

Given these arguments about individual goals, it was hypothesized that the most important source of professionalism among zoological managers should reside in their attempts to maximize economic and noneconomic goals. Economic goals were operationalized using individual beliefs about the importance of the following actions: profit making, raising animals for biomedical research, public entertainment, attracting tourists, and providing revenues for local government. Noneconomic goals included support for wildlife preservation, providing refuge for endangered species, providing humane animal treatment, conservation of wildlife, and providing public education resources. One's attitude toward each of these goals was measured on a 4-point Likert-type scale.

An interesting pattern of moderate magnitude emerged in Table 3. All the statistically significant economic goals *reduced* the acceptance of norms of professional ethics, whereas all the statistically significant noneconomic goals *increased* their acceptance. Increased emphasis on profit, entertainment, and producing animals for research all depressed professionalism, whereas a greater belief in the necessity of wildlife conservation and the need for educational functions in zoos increased support for professional ethics. Furthermore, no changes in the signs of these coefficients occurred when variables from all four separately estimated models were entered into one equation, which explained 19% of the variance and was significant at the .05 level.

## DISCUSSION

This research identified a series of professional norms held by zoological managers. Three attitude dimensions emerged that were related to support for professional organization, professional ethics norms, and animal responsibility. The three factors explained 45% of the variance in responses. Most past researchers had concluded that it is difficult to empirically explain the adoption of professional norms in a statistically very satisfying way. Although such norms can be integral parts of belief systems, a number of different, ethically coherent systems may evolve side by side if the circumstances are favorable to such evolution. Some belief systems allow deduction of the *same* norms in radically different ways or produce *different* norms from only slight changes in basic assumptions.<sup>4</sup>

An investigation of four general explanations of professional behavior was undertaken; statistical models were based on organizational characteristics, the chance for reflection on issues of professional ethics, and individual economic and noneconomic goals. Although many researchers have looked to organizational structure to explain individual attitude differences, the present study found that the public versus private character of an organization has little impact on zoological professionalism.

Although of only moderate strength, the most interesting finding concerns the effect of individual goals on professional norms. Increased stress on economic goals tends to decrease support for professional ethics, whereas an increased interest in various noneconomic goals increases the level of support for professional ethics.<sup>5</sup> Such a finding warrants further research by administrative scholars. It suggests that an increased emphasis on economic motivations, as might occur with the "privatization" of governmental functions, will decrease support for professional ethics, whereas an increased noneconomic emphasis will increase professionalism.

The full ramifications of the findings likely are much stronger than the reported regression coefficients indicate. Norms are created through three processes: reflection, formal rules, and informal peer pressure. Those who personally deduce the Platonic rules of a professional belief system should be the leaders in their adoption. Because of reasoned argumentation, their support for particular rules will eventually cause others with similar goals to adopt the same positions about professional conduct. The total magnitude of this effect cannot be captured in an ordinary, cross-sectional research design, which only examines covariance among attitudes. The

ripple effect from the deduction of the rules of professional behavior should take considerable time — perhaps many generations — before it is felt throughout a profession.

This research into the attitudes of zoological managers fits neatly into the emerging literature concerning the empirical examination of normative issues and the development of ethical belief systems. Because the broader literature has major implications for both managers and organizational theorists, it is important that other scholars attempt to confirm two important hypotheses that flow from it: first, that most professional norms constitute sets of interconnected rules that can be deduced through reflection by self-motivated individuals, and second, that the adoption of professional ethics is affected by one's goals. These goals, in turn, can be manipulated by organizational policy, and in this way, organizations may have the potential to affect the level of professionalism of their members.

**APPENDIX**  
**Item Wordings**

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*Animal responsibility*

1. A zoo management employee's primary responsibility is to the welfare of the living collection.

*Code of ethics*

2. A strong code of ethics is essential to the proper operation of zoos and maintenance of their collections.

*Conservation*

3. The conservation mission of a zoo is more important than its public entertainment aspect.

*Exotic wildlife*

4. Possession of exotic wildlife should be restricted to public institutions.

*Licensing*

5. Individuals working in zoos should be licensed to do so.

*Professional organization*

6. There should be a professional organization for zoos that plays a "gatekeeping" role for entry into the field.

*Professional title*

7. Use of the term "zoo professional" should be restricted to those individuals directly involved in the care and maintenance of the collection.

*Public education*

8. Zoos cannot effect long-term wildlife conservation without a public education program.

*Standardize techniques*

9. The techniques of captive animal maintenance should be standardized for uniformity of application.

*Visitor enjoyment*

10. Animal welfare concerns in zoos must be tempered by the need for the visitor to enjoy the trip.
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## NOTES

1. For purposes of the discussion, the term "zoo" shall refer to both zoological parks and aquariums.
2. For a theoretical perspective on this general problem, see Janis (1967).
3. From this viewpoint, codes of ethics serve more to formalize already accepted standards of conduct than to chance professional behavior. This is an interesting hypothesis that deserved more empirical examination.
4. See Brunk et al. (1990) and Tamashiro, Secrest, and Brunk (in press), who suggest that although many traditional, normative approaches exist to the common ethical dilemmas encountered in public administration, there likely is a simple structure that underlies most of them. When discovered, this structure allows for a description of the interrelationships among schools of thought using only a few fundamental variables and moral sensibilities.
5. There are interesting parallels here regarding economic and noneconomic goals and the structure of elite attitudes toward international conflict. The opinions of America's leaders are fundamentally shaped by their perceptions of the risks faced by one's reference organization and their concern for citizens of foreign countries (Tamashiro et al., in press).

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