# Citizen Attitudes in the U.S. about Children Learning to Hunt:

# Findings From an ESPN Flash Poll

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## Introduction

In November 2005, ESPN conducted a flash poll on its ESPN Outdoors website, asking respondents to indicate at what age children should be taken on their first hunt. Response categories were: 8-10, 11-13, 14-16, and never. Responses were retrievable for each of the 50 United States. There was considerable variation across states with respect to the percentage of respondents who indicated that children should never be taken hunting (Table 1). In South Dakota and Wyoming only 7 percent of the respondents indicated that children should never be taken hunting. By contrast, at least 40 percent of the respondents in California, Connecticut, Hawaii, Massachusetts, New Jersey, and Rhode Island indicated that children should never be taken hunting.

Table 1 about here

The pattern of responses highlights what may emerge as a significant policy issue in wildlife management: the declining effectiveness of using state-licensed private hunters to control populations of game species, such as deer. One implication of the poll results reported in Table 1 is that, barring an influx of new hunters that is hard to foresee at the present time, intergenerational recruitment of hunters is likely to lag considerably in some states, as compared to others. It seems likely, then, that these states will find it increasingly difficult to manage populations of game species by the traditional method of state permitting of private hunters. Depending on one's perspective, burgeoning populations of these game species may be a good

Table 1. Percentage of Respondents to ESPN Flash Poll who Indicated That Children Should Never be Taken Hunting

| State | Percent responding never | State | Percent responding never |
|---|---|---|---|
| Alabama | 19 | Montana | 15 |
| Alaska | 14 | Nebraska | 20 |
| Arkansas | 18 | Nevada | 32 |
| Arizona | 28 | New Hampshire | 27 |
| California | 41 | New Jersey | 43 |
| Colorado | 27 | New Mexico | 26 |
| Connecticut | 41 | New York | 41 |
| Delaware | 34 | North Carolina | 30 |
| Florida | 33 | North Dakota | 10 |
| Georgia | 25 | Ohio | 30 |
| Hawaii | 40 | Oklahoma | 17 |
| Idaho | 11 | Oregon | 27 |
| Illinois | 36 | Pennsylvania | 31 |
| Indiana | 25 | Rhode Island | 41 |
| Iowa | 21 | South Carolina | 22 |
| Kansas | 17 | South Dakota | 7 |
| Kentucky | 21 | Tennessee | 26 |
| Louisiana | 14 | Texas | 24 |
| Maine | 14 | Utah | 21 |
| Maryland | 33 | Vermont | 39 |
| Massachusetts | 41 | Virginia | 31 |
| Michigan | 24 | Washington | 29 |
| Minnesota | 17 | West Virginia | 23 |
| Mississippi | 10 | Wisconsin | 17 |
| Missouri | 23 | Wyoming | 7 |

thing or a not-so-good thing, for individuals living within the state in question, as well as for those living in adjacent states that might feel spillover effects.

An enhanced understanding of the factors that influenced the state-specific percentage of respondents who indicated that children should never be taken hunting may yield insights into intergenerational recruitment issues and, thereby, management policy. Our objective in this paper, then, is to refine our understanding of the response pattern identified in Table 1.

Methods and Data

We expect that aggregated state-wide percentage responses to the ESPN Outdoors website flash poll asking respondents to indicate the age at which children should be taken on their first hunt will be influenced by the factors included in the reduced-form model described in equation (1):

$$\text{(1)}\quad \text{NeverHunt\%}_i = \beta_0 + \underset{(+)}{\beta_1}\,\text{FamilyIncome}_i + \underset{(+)}{\beta_2}\,\text{\%Age65+}_i + \underset{(-)}{\beta_3}\,\text{RuralPop}_i + \underset{(-)}{\beta_4}\,\text{\%Hunters}_i + \underset{(?)}{\beta_5}\,\text{\%Foreign Born}_i + \underset{(-)}{\beta_6}\,\text{HunterSpending}_i + \epsilon,$$

where NeverHunt% is the percent of ESPN flash poll respondents from state i who indicated that children should never be taken hunting, FamilyIncome is median family income in state i in 2004, AGE65+ refers to the percentage of state i's population in 2000 that was composed of individuals aged 65 and older, %RuralPop refers to the percentage of the population in state i that was officially classified by the 2000 Census as rural, %Hunters is the percent of the population 16 years of age and older in state i that hunted as reported in the ***2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation***, %ForeignBorn refers to the percent of state i's population classified in the 2000 Census as being born in a country other than

the U.S., HunterSpending refers to the average annual dollar expenditure per person by hunters on hunting in state i, and ε is the random disturbance term, assumed to be normally distributed.

Our expectations regarding the signs of the coefficient estimates are in parentheses above the explanatory variable in equation (1). We suspect that as per capita income rises, in general, a relatively smaller fraction of the state's population hunts game for food, while a relatively larger fraction of the state's population hunts game for sport. Our own sense is that the former effect is likely to overwhelm the latter, but we are happy to be informed by the data. We also suspect that as people age they become more concerned about putting guns in the hands of young people. Rural dwellers are more likely than urban dwellers to have developed perceptions of game species based on a first-hand understanding of the real benefits and costs of those species, as well as the real benefits of hunting (both to man and to native ecosystems). Consequently, as the percentage of a state's population that was classified as rural in the 2000 Census rises, we expect the percentage of flash poll respondents who do not want children ever taken hunting to decline. Since children typically are taken on their first hunting experience by a family member who hunts, it stands to reason that as the percentage of hunters in a state rises, the percentage of people who think that children should never be taken hunting should fall. People from non-U.S. cultures may view hunting very differently than Americans do. Consequently, states that have a relatively larger percentage of foreign-born residents may feel an impact both on hunting activity and on residents' perceptions of hunting (including taking children hunting). Although we suspect that foreign-born residents are likely come from cultures in which hunting is not a significant activity and therefore are not likely to be as enthusiastic about hunting as native-born Americans, we prefer to let the data speak to the directional effect. Finally, we expect hunting expenditures per hunter to reflect the relative importance of hunting to these individuals. As the

relative importance of hunting to these individuals rises, we expect that they will be more likely to share/promote their hunting and fishing passion with their children. Likewise, higher hunting expenditures per sportsman in a state also reflect a greater overall contribution of hunting to that state's economy. This increases the likelihood that other non-hunters whose livelihood is impacted (positively) by hunting will feel positively inclined towards hunting. In turn, this likely reduces the reluctance of parents to let their children experience hunting.

Results

Results of Ordinary Least Squares regression estimation of the model presented in equation (1) are reported in Table 2. As expected, we find that the percent of respondents who indicated that children should never be taken hunting is related positively to median family income and the percentage of population aged 65 and over. Conversely, the percent of respondents who indicated that children should never be taken hunting is related negatively to the percent rural population, the percentage of hunters in the 16-and-over resident population, and annual hunting expenditures per hunter. Finally, we also observe a significant, positive relationship between the percentage of foreign-born residents in a state's population and the percent of respondents who indicated that children should never be taken hunting.

Table 2 about here

Discussion

The problem raised implicitly in the data is a compelling one - - changing deer population dynamics combined with changing human demographics (leading to changing patterns of human hunting) may create conditions that make effective management of deer populations in the United States by means of state licensing of private hunters increasingly ineffective in a number of states. Our empirical analysis confirms the potential seriousness of the problem. Youth

Table 2. OLS Regression Results

Dep. Var.: Percent of poll respondents indicating that children should never be taken hunting

| Explanatory Variable | Coefficient Estimate | Standard Error | t-statistic |
|---|---|---|---|
| Constant | 5.3975 | 11.0436 | 0.4887 |
| Median family income | 0.0004 | 0.0001 | 2.5585*** |
| 65 and older population (%) | 1.1751 | 0.4369 | 2.6895*** |
| Rural population (%) | -0.1304 | 0.0762 | -1.7110* |
| Hunters (%) | -0.9142 | 0.1945 | -4.7005*** |
| Foreign born residents (%) | 0.4587 | 0.2163 | 2.1202** |
| Hunting expenditures per hunter | -0.5419 | 0.3389 | -1.5989@ |
| R-squared statistic | 0.7558 | | |
| Model F-statistic | 22.1793*** | | |
| N | 50.0000 | | |

*** significant at the 0.01 level; ** significant at the 0.05 level; * significant at the 0.10 level; @ significant at the 0.12 level

involvement in hunting in the U.S. has been declining for many years. This likely reflects the decades-long, steady migration of the population, especially the younger population, from rural areas to urban areas. This means that, percentage-wise, fewer and fewer young people are learning to hunt or, for that matter, even express an interest in hunting. Those that do hunt increasingly are confining their hunting attention to trophy animals, rather than hunting as a supplemental source of food (venison). In addition, as immigrant populations increase significantly in certain states, the intergenerational transmission of a culture of hunting will involve a smaller and smaller percentage of the population, not only directly, but also because hunters' children are more likely to have friends who are not interested in hunting.

The bottom line is that while, in absolute terms, the number of hunters may hold steady or even climb over time, we are likely to see a decline in hunters as a percent of the population, with at least 2 likely effects:

(1) public policy discussion and formation with respect to game management increasingly will be dominated by nonhunters, and

(2) holding other factors constant, private hunting will cull progressively fewer and fewer deer and, consequently, become an increasingly ineffective means of controlling deer populations.

Reference

U.S. Fish and Wildlife Service (2002). ***2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation***.