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Using Age, Cohort, and Period to Study Elderly Volunteerism

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ABSTRACT

American volunteers, both informally and through organizations like the Corporation for National Service, make huge contributions to the wellbeing of millions of Americans and, via their unpaid or minimally reimbursed work, to the American economy. Can America continue to count on maintaining or increasing volunteer contributions in the future? This question is especially important as the Baby Boomers replace the current generation of older Americans. This article provides faculty and students with information on elderly volunteering. It suggests and demonstrates using age-cohort-period analysis to understand different forces affecting volunteering by older Americans. A major benefit of age-cohort-period analysis is preventing faulty conclusions and, consequently, faulty policy decisions and waste of resources. Such analysis can also enhance current and future efforts to recruit and retain volunteers, particularly among the elderly.

INTRODUCTION

Volunteers contribute an immense amount of in-kind value to all types of organizations across America and around the world. Their contribution to rescue and relief efforts after the December 2004 Indian Ocean tsunami is a huge, and most recent, but by no means isolated example. In the United States, older persons provide a significant portion of total volunteer hours and value across a wide range of organizations. Most of these organizations would have to severely curtail their services, and many would cease to exist without such dedicated contributed labor. While some volunteers are reimbursed for some of the incurred costs of volunteering (e.g., travel expenses, uniforms), for many the rewards are essentially intrinsic.

While volunteerism by elderly Americans increased about 40% between the 1960s and the millennium (Janicki & Ansello, 2000), that is no guarantee for the future: Volunteerism may continue to increase, remain at current levels or, even, as some predict, decline (Boldt, 2000). If we view volunteering as a social institution—as a pattern of behavior developed to satisfy a societal need—we can then raise the question of institutional survival: As institutional members (i.e., volunteers) leave through out-migration or death, how are they replaced? To answer this question is to examine the various forces—individual, familial, communal, societal—that converge and interact to determine, in this case, the incidence and prevalence of volunteering.

In this article we assume that volunteerism is a valuable institution worth preserving, and argue that the forces that affect volunteerism odds and levels can be described and understood via the concepts of age, cohort, and period. More generally, a wide range of gerontological issues is amenable to age-cohort-period analysis, which should, thus be part of a gerontology student's methodological arsenal. Our two goals are as follows: first, to provide a framework for understanding and predicting volunteerism among older Americans and, second, to present volunteerism as an illustrative example in the teaching of age-cohort-period analysis.

The scope and value of elderly volunteerism are evident in the following examples:

- For many years hospitals and other health care organizations have made effective use of older volunteers in a variety of nonprofessional roles that improve patient relations and save considerable resources. In fact, volunteers have been so successful that some hospitals may be blurring the lines between volunteer and nursing roles in an attempt to lower the ratio of nursing staff to patients and, thus, cut costs (Abraham, Arrington, & Wasserbauer, 1996).
- In Mexico City, older volunteers have been enlisted to wear vests with embedded sensors measuring six types of air pollution (“Elderly Volunteers Become Mexico City Smog Detectors,” 2004).
- In Israel, more than 4,500 older volunteers trained by the National Insurance Institute's Counseling Service for the Elderly assist over 13,000 older clients per month, linking them with community services and advising them on such issues as pension rights, legal rights, employment, retirement homes, and support groups (National Insurance Institute of Israel, n.d.).

- For many decades, older volunteers in museums, public historical buildings, and a variety of other public and private settings have helped reduce operating costs by filling necessary but unfunded roles (Lee, 2004).
- A May 1999 survey of older retirees found that about 3/4 of respondents reported “having participated in community service and volunteer activities in the past year” (“The New Face of Retirement,” 1999).
- In many cities across the United States, under-staffed police forces are utilizing older volunteers to write parking tickets and assist with paperwork. In 2002, for example, over 1,500 older volunteers, many in their 80s and even 90s, contributed well over 45,000 hours to the Boynton Beach, Florida police department. Nationwide, it is estimated that the number of hours donated to senior-policing programs by older adults is in the millions (Zaslow, 2003).
- IBM, Bank of America, and General Electric are among major U.S. corporations that have developed employee and community service programs staffed on a volunteer basis by their own retirees (Hess, 2000).

The potential impact of volunteerism by older adults is underscored by considering that the 2000 census counted nearly 35 million Americans age 65 and over (Hetzel & Smith, 2001). This number is expected to double by the time the Baby Boom generation—those born between 1946 and 1964—joins America’s older population. While it is true that a lower percentage of older people volunteer when compared to younger people, older volunteers contribute a higher average number of hours than do younger volunteers (Van Willigen, 2000). In fact, from September 2002 to September 2003 the median number of volunteer hours contributed by older adults was the highest of any age group (Boraas, 2003). Furthermore, Goss (1999) found that while volunteerism is increasing in the United States, nearly all of the increase can be attributed to persons age 60 and over.

The Corporation for National and Community Service (CNS; www.nationalservice.org) is a major force behind volunteerism in America. The CNS mission is “to provide opportunities for Americans of all ages and backgrounds to engage in service that addresses the nation’s educational, public safety, environmental, and other human needs to achieve direct and demonstrable results and to encourage all Americans to engage in such service” (“Mission statement,” n.d.). CNS operates three programs: Senior Corps, AmeriCorps, and Learn and Serve America. Senior Corps, with more than 500,000 volunteers over age 55, oversees three programs: RSVP (Retired and Senior Volunteer Program), Foster Grandparents, and Senior Companions. Ameri-Corps oversees nearly 75,000 positions in AmeriCorps_ VISTA (Volunteers in Service to America) and AmeriCorps_ NCCC (National Civilian Community Corps), offering education grants, living allowances, and health benefits to its (typically) younger volunteers. Learn and Serve America provides grants to schools, colleges, universities and communities for service-learning activities involving 1.1 million students (“Corporation for National and Community Service Releases 2004 Performance and Accountability Report,” 2004).

The value of such programs is indisputable: Older volunteers make a vital contribution to national economies. For example, Canadian researchers estimate that Canadians age 65 and over provide over 161 million hours of volunteer activity per year, valued at nearly \$2 billion (Fieldhouse, 2003). In the U.S., in fiscal 2004 Senior Corps's 536,000 volunteers served over 119 million hours, an average of 222 hours per volunteer ("Corporation for National and Community Service Releases 2004 Performance and Accountability Report," 2004). Even at a minimum wage of \$5.15 per hour, this represents a contribution of \$613 million to the well-being of needy Americans ("About the Corporation," 2003).

BENEFITS OF VOLUNTEERING

The labor of elderly volunteers clearly benefits their clients. What is equally clear, though less recognized by the public (and perhaps policymakers), is that volunteers themselves benefit from volunteering. A recent study found that older volunteers not only improve their clients' lives, but also "realize meaningful improvements in their own mental and physical health." According to Dr. Linda Fried of the Johns Hopkins Center on Aging and Health, "Giving back to your community may slow the aging process in ways that lead to a higher quality of life in older adults "Physical, cognitive and social activity increased in volunteers, suggesting potential for [volunteer] programs to improve health for an aging population, while simultaneously improving [client] outcomes. . ." ("Hopkins researchers. . .," 2004).

Systematic reviews of elderly-volunteering literature have also found physical, psychoemotional and social benefits to volunteering (e.g., Butler, Lewis, & Sunderland, 1998; Lowy, 1985). For example, Aquino, Russell, Cutrona, & Altmaier (1996) argue that volunteering increases the life satisfaction of older persons. Graff (1991) found that volunteering can have positive outcomes for health, self-esteem and longevity. Caro and Bass (1997) also found a relationship between volunteering and health. Young and Glasgow (1998) reviewed over half a dozen longitudinal studies and found consistent linkages between volunteering and health. Studies such as these, while suggestive, should not be accepted uncritically. Some suffer from small sample sizes, from correlational analysis that does not per se discern cause from effect, and from cross-sectional rather than longitudinal design—a potential weakness discussed later in this article. (For an evaluative summary of this literature, see Chappell, 1999.)

Despite the shortcomings of some existing reports, it is generally accepted that volunteering can promote a sense of belonging and social utility for the elderly. "Volunteering builds morale among elderly people by providing them with a public social role that increases self-esteem and connectedness to the community. It provides a sense of structure, purpose, and identity to volunteers. It's also an opportunity for older adults to reciprocate and even build a legacy" (Fieldhouse, 2003). Thus, while it is likely volunteering can improve the volunteer's own life, there's often more to it than that—a sense of generativity, of constructively contributing to the future. In sum, then, the benefits of volunteering are meaningful social roles for individuals, low/no-cost reliable labor for organizations (Hendricks, Hatch, & Cutler, 1999), and higher levels of physical and mental health for volunteers.

AGE, COHORT, AND PERIOD EFFECTS

In studying how people change as they age, gerontologists often use age, period, and cohort effects as analytical tools. An age (or maturation) effect is a change that occurs essentially due to the aging process. Physiological changes, such as graying hair and immune system deterioration are examples. Thus, age changes occur to everyone, regardless of when one was born or what historical events have occurred or are occurring. An age effect on volunteering might be normal declines in mobility, strength, vision, or hearing that come with age and that could reduce an older person's ability to function in a volunteer capacity. An age effect is best inferred from longitudinal studies; attempting to argue age effects from cross-sectional data is risky business.

A cohort effect refers to differences between generations that can be attributed essentially to the unique experiences of each generation. For instance, although all Americans are experiencing the war in Iraq, the typical impact of this war on a generation depends on whether it's the generation whose children are fighting in Iraq, the generation doing the fighting in Iraq, or the generation whose parents are fighting in Iraq. Other examples include generational differences in musical tastes or trust in politicians. In each of these cases, certain meanings, preferences, or attitudes adhere to each generation, are likely to remain with that generation as long as it lives, and distinguish it from other generations. Since there is evidence that attitudes toward, and participation in, volunteering are formed well before one reaches old age, it is quite possible that each generation may form unique volunteering attitudes and behaviors. Cohort effects are assumed to be relatively stable and so remain representative of a cohort, even as it ages over time.

A period (or historical) effect is a change, typically across a population, that is essentially due to a historical event. For example, the passage of the Old Age, Survivors and Disability Insurance Act in 1935 changed the perception of retirement and image of retirees in America. And, it can be argued, that the entire population—all ages and generations—experienced these changes. Regarding volunteerism, should existing sources of financial support decline, motivations to volunteer among all age groups could be affected. In this case, if volunteerism were to decline it would likely be due to an historical event, not to the aging process or attitudinal differences between generations.

AGE, COHORT, AND PERIOD EFFECTS: ANALYTICAL MATRIX

If the necessary data are available, the relative contributions of age, cohort, and period to a phenomenon (e.g., volunteerism) can be inferred via an analytical or "cohort matrix" (Schaie, 1983). Using hypothetical data, Table 1 is such a matrix showing an age effect. Note that the rows designate ages and the columns the survey periods, i.e., the years in which the dependent variable was measured. For the matrix to be mathematically correct, the number of years between surveys (columns) and the number of years between age groups (rows) must be the same; in this example, there's a 10-year difference between age rows and a 10-year difference between survey (or period) columns.

Table 1. Percent volunteering more than 50 hours per year: Age effect (hypothetical data)

Age	Year					Birth cohort
	1965	1975	1985	1995	2005	
35	30	30	30	30	30	
45	40	40	40	40	40	
55	50	50	50	50	50	1960
65	60	60	60	60	60	1950
75	50	50	50	50	50	1940
Birth cohort			1910	1920	1930	

The reason for this requirement is that this table contains information on four variables: age, period, the dependent variable (volunteer hours), and cohort. Given equal intervals between age rows and period columns, various birth cohorts can be followed along the diagonals as they age over time. The birth year of each cohort is found at the lower right of the table, and each cohort can be tracked over time along its corresponding shaded or unshaded diagonal. This is usually done by starting at the upper left of the table, at the earliest time period and where the subjects in a cohort are youngest, and proceeding diagonally toward the lower right, the most recent period where the subjects are oldest.

Thus, in 1965, when the 1930 birth cohort was 35 years old (the upper left cell: born in 1930 + 35 years old = 1965 survey period), 30% volunteered more than 50 hours per year. In 1975, 10 years later, when that cohort was 45 years old, the percentage was 40. The 1930 cohort can be tracked on down the diagonal (50%, 60%, 50%) to the bottom right cell, containing the 2005 data, when those born in 1930 are 75 years old.

An age effect is inferred when the data are consistent (in this example, the same) across rows (i.e., within an age group), but differ between rows=ages. (Note that not all rows need be

different from all other rows; both 55- and 75-year-olds score 50%). In Table 1, 30% of 35-year-olds volunteered more than 50 hours per week, regardless of period or cohort. Thus you do not need to know when someone was born (cohort) or when the survey was taken (period) to predict the results; age suffices.

Table 2 illustrates a period effect. Here the data are consistent within each column, i.e., in each survey period. For example, in 1965 80% of respondents volunteered more than 50 hours per year, regardless of age (rows) or birth cohort (diagonals). The 1975 level was 40%, regardless of age or cohort, and so on. If you know when people were surveyed, you know the results; neither age nor cohort allow accurate prediction of responses.

Table 2. Percent volunteering more than 50 hours per year: Period effect (hypothetical data)

Age	Year					Birth cohort
	1965	1975	1985	1995	2005	
35	80	40	60	50	40	
45	80	40	60	50	40	
55	80	40	60	50	40	1960
65	80	40	60	50	40	1950
75	80	40	60	50	40	1940
Birth cohort			1910	1920	1930	

Table 3 illustrates a cohort effect. Here the data are consistent within a diagonal, and different from (most) other diagonals, which are themselves internally consistent. For example, 60% of the 1930 cohort volunteer more than 50 hours per week. It doesn't matter when, or how old they

are; it's a trait of their generation, developed when young and maintained across the life course. It distinguishes them from other cohorts. Neither a given age nor any one survey period shows this internal consistency. Thus, cohort is most strongly related to volunteering hours in this example.

Table 3. Percent volunteering more than 50 hours per year: Cohort effect (hypothetical data)

Age	Year					Birth cohort
	1965	1975	1985	1995	2005	
35	60	50	40	30	35	
45	50	60	50	40	30	
55	40	50	60	50	40	1960
65	35	40	50	60	50	1950
75	30	35	40	50	60	1940
Birth cohort			1910	1920	1930	

For students, there are three steps in the analysis. The first is to identify the effect, which can be done through rote memorization, matching effect with direction of data consistency (horizontal, vertical, diagonal). Preferably, the student will learn to identify the effect by answering the question, "Is age, cohort or period the main determinant of the cell value for any cohort at any age and time?"

Second, the student should be able to describe the effect by saying/writing, in his/her own words, that the chosen effect is more strongly associated with the dependent variable than are the other two effects. (Note: students are taught that the independent variable is the "cause" and the dependent variable the "effect." It should be clarified that if we say, for example, that

political orientation is a cohort effect, we mean that political orientation—the dependent variable—is an effect of cohort, the independent variable.)

The third step is to try to explain why this effect exists. The student should be able to offer a plausible explanation for why the dependent variable should change because a population ages; or why cohorts should differ from each other on the dependent variable; or what historical (period) events could account for observed change in the dependent variable across a population from one time period to another.

CONFOUNDING AGE AND COHORT EFFECTS

Most research, including gerontological research, is cross-sectional rather than longitudinal. This is so even though how people change as they age (age changes), usually the primary interest of gerontologists, is best studied longitudinally and is not the same as differences between younger and older people (age differences). A cohort matrix, in essence, synthesizes a longitudinal study from a series of cross-sectional studies. Thus, its explanatory potential is superior to trend studies but inferior to panel studies, since a cohort study cannot argue that the same members of each cohort are surveyed in each survey period. Even so, the cohort matrix as a quasi-longitudinal analytical tool has considerable value.

Here's why. Table 1 presents a pure age effect. Table 3 presents a pure cohort effect. If students compare the 1995 columns in those tables, they'll see that they are the same. So are high levels of volunteering an age effect or a cohort effect? If you only had one (1995) cross-sectional survey, you couldn't tell. If you guessed, you could be wrong. If decisions were made based on your incorrect guess, they could be ineffective and a waste of money.

THE SALIENCE OF AGE, COHORT, AND PERIOD FOR ELDERLY VOLUNTEERISM

It is important for officials of volunteer organizations to understand to what extent each effect explains levels and trends in elderly volunteerism. For example, an age effect will continue to manifest itself over time in each new generation of older Americans irrespective of historical events. If volunteerism rates are always high in middle age and declining in old age, then changes in the size of the middle-aged and old-age populations will affect the pool of potential volunteers. Such an effect, whether viewed as desirable or not, must be planned for, essentially in perpetuity.

A cohort effect, however, means that a trait, such as a commitment to volunteering that characterizes today's older volunteers, belongs to that generation. As the generation dies out and is replaced by a new generation of elderly, the trait may disappear as well, replaced by the volunteering values and behaviors of the new elderly. Thus, a cohort explanation suggests that, for example, a decline in elderly volunteerism may merely be an indicator of generational attitudes, and that the next generation of elderly may have different attitudes and, therefore, different levels of volunteerism. Finally, a period effect suggests that historical events shaped

current conditions, that those conditions impact levels of volunteerism, and that new events are likely to have an impact on volunteerism in the future.

The salience of age-cohort-period analysis and the potential for the age-cohort confusion possible with a cross-sectional study is illustrated in Figure 1. Aside from the 16–19-year-olds, many of whom volunteer as part of high school class requirements, there is almost a normal-curve distribution of volunteering across age groups. But, you cannot tell from examining the results of this one cross-sectional study whether or not 20–24-year-olds, for example, will increase their levels of volunteering as they marry, raise children, and become established in their communities (as may be happening with the 25–34 and 35–44 age groups). Instead, they might retain their low levels of volunteering, for some cohort-specific reason, throughout their lives. The first possibility could be a life-stage type of age effect, while the second would be a cohort effect.

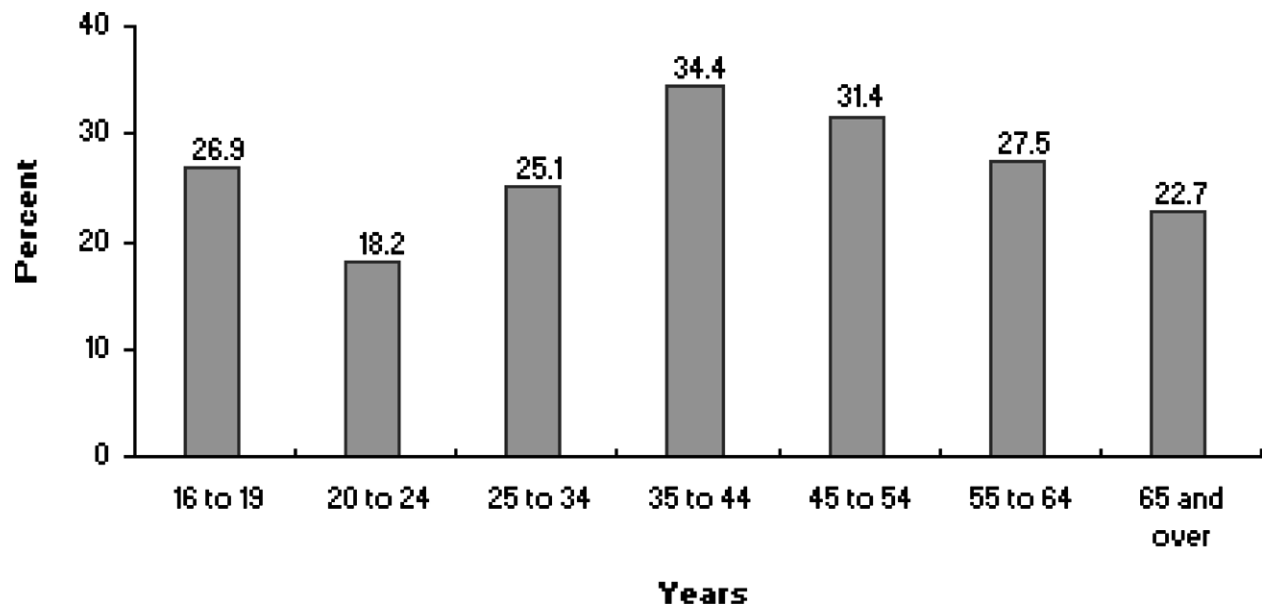


Figure 1. Volunteer rates by age, September 2002. Source: Volunteering across the age (2002).

Being able to untangle the contributions of age, cohort, and period to the challenges and potential of elderly volunteerism will help organizations determine whether a given challenge will remain a challenge, will lessen and disappear over time, or can be addressed through legislation. Such explanatory insights, ideally, will result in more informed decision-making and more effective use of what are certain to be limited resources.

ELDERLY VOLUNTEERISM: THE IMPACT OF AGE, COHORT, AND PERIOD

In reality, our attitudes and actions are determined by combinations of age, cohort, and period effects. It is useful, however, to provide some examples—both empirical and anecdotal—of how each of the three concepts might affect elderly voluntarism.

Age

In addition to the implied lifestage age-effect in Figure 1, there is an association between increasing age and a decline in volunteering among the elderly themselves. Among Americans over age 70 in 2000, the percent who had performed volunteer work in the preceding year declined monotonically from 20% of those age 70–74 to 17.3% of those age 75–79, 12.7% of those age 80–84, and 7.2% of those over age 85 (Federal Interagency Forum on Aging-Related Statistics, 2000). Similarly, Boraas (2003) found that September 2001–September 2002 volunteering rates fell from 26.3% of those ages 65–69 to 25.0% (70–74), 22.9% (75–79), and 16.1% (over 80).

Agencies are finding seniors less willing to make long-term volunteer commitments, perhaps due to their own age, their own special needs, or their own retirement plans (Fieldhouse, 2003). As volunteers decline physically and, perhaps, mentally with age, they are not the only ones reluctant to increase or maintain their volunteer hours and activities; sometimes their supervisors worry, too. “Our volunteers are getting older and more frail,” said Evie Rinke, who coordinates aging programs in Traverse County, ND. “When it’s ice and snow we wonder, oh my, should we even send them out?” (Woodward, 2004).

And people die. Police departments that use elderly volunteers know that constant recruitment is a necessity, as age claims its casualties. “We’ve lost 200 volunteers since 1995,” said one supervising officer. “I go to a lot of funerals.” (Zaslow, 2003).

Cohort

One correlation with—and proposed explanation for—the rise in volunteerism since 1960 is that each generation is healthier, better educated, and retires earlier than the one preceding it (Janicki & Ansello, 2000; Quadagno, 2002; Hooyman & Kiyak, 2002). Better education leads to skills and knowledge of longer-lasting relevance. Perhaps this improvement leads to increased levels of motivation to make contributions in the last stages of life. Earlier retirement and better health translate into more postretirement years when volunteer activity is feasible.

Other traits can affect the levels of elderly volunteerism as well. Hooyman and Kiyak (2002) note that better health and education, higher income, large amounts of nonobligated time, a history of volunteering, and wide-ranging interests are linked with higher odds of volunteerism in old age. These can be viewed as cohort traits, with certain average levels characterizing one generation and differentiating it from another.

Today’s elderly are World War II veterans (and spouses and siblings of veterans), consider themselves patriotic, and see volunteering as helping fulfill a patriot’s obligations to his=her country. “I fought for this country, and by God, I’m not going to let a bunch of ruffians take over,”

said a volunteer at the Delray (FL) police department. His supervisor adds, “The Greatest Generation knows what it’s like to volunteer. They’ve changed the way we do policing.” But he worries that retiring baby boomers will have different attitudes—attitudes inherent in a self-absorbed, self-indulgent generation raised in prosperous times (Elliott, 2005; Zaslow, 2003).

A cohort effect proposes that volunteerism attitudes and behaviors are developed earlier in life. Retirees don’t suddenly discover volunteering, although they do have more discretionary time available should they want to volunteer. Other analysts, looking at a mix of cohort and period effects, see different results: With better health, more wealth, longer life expectancy, and launched children, aging Baby Boomers will have both unprecedented freedom in retirement and more retirement years to fill. To some extent, then, Boomer attitudes and behaviors regarding volunteering could indeed change as they enter senior citizenship (Elliott, 2005).

Period

While many period effects are expected and usual, others are indirect and don’t come immediately to mind. For example, in spring and summer 2004 gasoline prices across the United States soared to over \$2 a gallon. Many Americans were forced to curtail their work, leisure, or vacation transportation, the elderly were affected as well. Bannerjee (2004) reported the loss of Meals on Wheels volunteers in the Denver, CO area since, according to the program director, they could “no longer afford the rising cost of gasoline.” This period effect was felt across the country and by all groups, including elderly volunteers and their clients. Another period effect is America’s increasing litigiousness, which has led to insurance and liability concerns that create financial and psychological barriers to recruiting and retention of older volunteers (Fieldhouse, 2003).

Another example of a period effect is the historical improvements in health that have accrued to all Americans, including the elderly (Quadagno, 2002). The development of vaccines and other medications, new surgical techniques, and medical technologies are examples of period effects. These produce life-improving and life-extending benefits across age groups and cohorts. As noted above, this translates into more and healthier retirement years, broadening the time available for volunteering.

A third example is the National Family Caregiver Support (NFCS) Program. This program allows states more discretion over the funds they get so that the type of assistance offered by counties can be matched to the needs of caregivers (Woodward, 2004). Such matching promotes a more targeted, cost-effective approach and includes, at least, informal volunteers.

The NFCS Program is a result of political policy. Policy changes over time and affects the nature, number, size, resources, and public perception of volunteer programs. These, in turn, affect the opportunities and inducements for volunteers. Of course, these affect how many volunteers there are in different time periods. In Canada, for instance, changes in government policy created rising demands on volunteers, a serious concern of program directors (Fieldhouse, 2003).

A final example of a period effect is how financial support for programs promoting volunteerism varies widely over time. For example, despite widespread political support for AmeriCorps, Congress did not increase appropriations for AmeriCorps in 2003. It did so in 2004 only under White House pressure and after widespread criticism. Simultaneously, however, Congress attempted to change the Corporation for National Service's regulations, requiring "[a] steep increase in the amount of money [CNS] must secure from other sources." This was a change, it was predicted, that would ". . . dismantle many of the most effective and cost-efficient agencies that operate local AmeriCorps programs" ("Crossroad for National Service," 2004). In a December 2004 speech to the National Press Club, CNS chief executive officer David Eisner, expressed appreciation for 2004's increase in Congressional funding for CNS. He noted, however, that "national service programs have not been reauthorized over the decade of the Corporation's existence" ("National Service Chief Calls On Business, Higher Education, and Congress to Help Spur Volunteerism in America," 2004). "If there's more elderly and there's less money, what are you going to do?" asks North Dakota Senior Services director Pat Randall (Woodward, 2004).

THE MIX

The important question is deceptively simple: What is the best means to determine the effects of age, period, and cohort on volunteerism? Unfortunately, the answer is anything but simple. Earlier, we noted that a cohort matrix can be constructed "if the necessary data are available." However, locating reliable data that have been collected consistently over a long period of time is not as easy as one might think. For instance, the U.S. Bureau of the Census aggregates and disseminates information on volunteering by age. But it is not able to present data for every year or, even, for the same age groups from one survey period to another. If we require comparable age groupings, we have the poor approximation of a cohort matrix as shown in Table 4.

This persistent lack of comparable data is disappointing. We might expect that earlier surveys, when volunteering was less wide-spread and life expectancy was shorter, would use different age categories than those in Table 4. For example, a 1974 survey (still in use 7 years later; U.S. Bureau of the Census, 1981) used volunteer age categories of 14–17, 18–24, 25–44, 45–64, and 65 and over. Data for 1981 and 1985 lump together everyone age 25–64 (U.S. Bureau of the Census, 1987). But even more recently, the Statistical Abstract of the United States: 2000 had age categories of 18–24 (as vs. 16–24 in Table 4), 65–74 and 75 and over (as vs. over 65). We cannot depend on intervals between surveys equaling age intervals. Also, data are not always collected by the same sources: 1974 data came from U.S. Action's Americans Volunteer, 1974, 1989 data from the U.S. Bureau of Labor Statistics News, and 1998 data from the Gallup Organization. The inordinately higher 1998 figures in Table 4 could be a strong period effect, but may just reflect differences in how volunteering is operationalized by different sources. Finally, if the wording of volunteering questions changes between sources and/or over time, comparability of results becomes problematic.

Table 4. Percent volunteering, by age and year

Age	Year			Birth cohort
	1989	1998	2002	
16–24	12.3	n/a	22.2	
25–34	20.2	54.9	25.1	
35–44	28.9	67.3	34.4	
45–54	23.0	62.7	31.4	?
55–64	20.8	50.3	27.5	?
65+	16.9	n/a	22.7	?
Birth cohort		?	?	

Sources: U.S. Bureau of the Census (1991, 2000) Boraas (2003).

CONCLUSIONS

The discussion so far has focused on the separate natures, impacts, and meanings of age, cohort, and period effects. All three effects contribute to the meaning of old age for individuals and for society, and since a confusion of effects can lead to misinformed social policy and the consequent waste of resources and lack of effective goal attainment, this disaggregation of effects is valuable per se. However, it is exceedingly rare to find a socially-relevant aging-related phenomenon that is explained by one effect to the complete exclusion of the others. Reality is more complex and often results in a policy mechanism making complex decisions about how to achieve socially relevant but ill-defined goals based on inadequate and often incorrect information. Ultimately, what remains is an attempt to maximize the effectiveness and the efficiency of older volunteers within a definition of “appropriate goals” that is both a product of, and sensitive to, the political constraints of any given historical period.

America’s lack of policy clarity and lack of resource-based commitment is not shared by all industrialized societies. Canada, for example, has a long history of recognizing the value of volunteering—for volunteers themselves, for their clients, and for the larger society. This led to a commitment to structured recruitment efforts that are specifically targeted at the older Canadian population (see http://www.volunteer.ca/volunteer/pdf/booming_trend.pdf). The province of Ontario plans “to further examine how volunteering is structured and supported. . . [and] to investigate how different factors—such as activity type, amount of time volunteered and the working environment—affect the older volunteers.” The goal is “to find conditions that are optimal for promoting the morale and well-being of senior volunteers. . . [by] looking at the volunteers’ personal characteristics, the characteristics of clients, and the agency context” (Fieldhouse, 2003).

Although not specifically addressed here, it is important to recognize that there is an important distinction between formal and informal volunteering. While much literature on volunteerism focuses on formal volunteering, we should not overlook the myriad hours of informal volunteering contributed by older persons. Since it has been estimated that 75–85% of personal care delivered to the elderly globally is provided by family and friends, regardless of the health care system in place (Kane, 1990), such informal supports are of at least equal importance to the formal support systems exemplified by such programs as Senior Corps. In the United States, the National Family Caregivers Association estimates the annual value of such informal services at \$257 billion, based on the contributed hours and services of 27 million Americans of all ages (Woodward, 2004). In addition, since the beneficiaries of informal volunteering are often family members—a bond that formal volunteer activities lack—informal volunteering may assume priority over formal volunteering when they compete for the same, limited time an older person has to offer. As Chappell (1999) notes, there has been little research on the interdependency of formal and informal volunteering, and there should be more.

It is also important to recognize the impact of variables outside the age-cohort-period analytical model. For example, women volunteer at higher rates than men across all age groups and educational levels (Boraas, 2003; Hooyman & Kiyak, 2002). One could argue that traditional differential sex-role socialization has made women both more available as volunteers and more

motivated to volunteer. As the push for equality in the home and work force continues, sex-role socialization differences and their impact on volunteering are likely to diminish. This could make the sex differences a period or a cohort effect in the long run, but for now the impact of one's sex on volunteering seems to fall outside age, cohort, and period categorization.

Finally, different units of analysis can lead to different conclusions. Caution must be exercised when comparing studies that focus on the number or percentage of volunteers in different age groups to studies that focus on, say, the median hours contributed per volunteer. For example, September 2001—September 2002 data show that Americans over age 65, who comprise 15.4% of the civilian noninstitutional population age 16 and over, accounted for only 12.7% of volunteers, an apparent under-representation. However, the median annual hours volunteered by those over 65 was 96; the next highest was 60 hours (for those age 55–64; calculated from Boraas, 2003). If different age groups rise to the top using different units of analysis, which group is more valuable? Which should be the primary target of recruitment efforts? In addition, these distinctions are both quantitative. They say nothing of more qualitative measures of the value of volunteer efforts, though qualitative measures clearly have merit.

In *The Sociological Imagination*, C. Wright Mills (1959) describes how history and biography converge to meet in society. Both Mills, known as a conflict theorist, and sociologist Robert Merton (1968), a functionalist, argued strongly that if social scientists are to have any positive impact on society, their applied and analytical sights should be set too high (at the level of “grand theory,” which they felt was difficult, if not impossible, to test and apply). Neither should social scientists set their sights too low (at such a microempirical level that we know everything about one piece of the puzzle, but nothing about the picture itself). Instead, the proper focus is on what Merton called “theories of the middle range” used to address problems at what Mills called “the institutional level” of society.

Volunteering provides services, and often originates, at the individual and community levels. The perseverance and success of volunteering, which depend on individual, age-group and societal attitudes, are much more likely if volunteering receives recognition and support as a valuable social activity at the institutional level. This includes parents teaching their children about the benefits of volunteering; clergy exhorting their congregations to volunteer; employers providing time or other compensations for their employees who volunteer; educators incorporating volunteering discussions and/or activities into their classes; and governments providing at least minimally necessary resources to support volunteerism.

There is hardly any activity that provides a greater and more dependable return on the investment than volunteering. It is incredibly cost-effective, as close as one can come to getting something for nothing. Volunteering should be encouraged and perpetuated, and understanding the age, cohort, and period components to volunteering motivation and participation levels will help program directors and policymakers develop the best mechanisms for encouraging and perpetuating volunteerism.

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