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Charitable Support for U.S. National and State Parks Through the Lens of Coproduction and Government Failure Theories

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Abstract:

Substantial public budget constraints across the United States have increased reliance on charities for some public service provision. This article builds a unique historical dataset and presents the first systematic look at the charities supporting U.S. national and state parks through the lens of coproduction along with other major theories of government-voluntary interaction and its consequences. The results suggest that parks-supporting charities are involved in a multi-dimensional pattern of coproduction with distinct and differentiated forms of involvement in public service provision at the state and federal levels. Their growth over time reflects theories of government failure and philanthropic insufficiency. And their permanency suggests the value of greater understanding of public service reliance on private philanthropy.

Keywords: philanthropy, public services, coproduction, government failure, philanthropic failure

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1 Introduction

In the United States, many governmental agencies have found their budgets constrained due to the double impact of the 2008–2011 global recession and calls for increased government efficiency. The effect on U.S. public services has been likened to a “new fiscal ice age” (Kiewiet and McCubbins 2014, 105). Particularly hard-hit have been public services deemed to be non-essential (Schatteman and Bingle 2015). Thus, many public parks and recreation departments have faced severe budget cuts (Kaczynski and Crompton 2006).


These constraints have significant fiscal implications at all levels of government. In 2016, its 100th year of operation, the National Park Service, custodian of four hundred sites across 84 million acres, had a deferred maintenance backlog of \$12 billion USD (NPS 2015). Across the 50 American states, 10,234 state parks spend \$2.5 billion USD to protect 18 million acres of land (NASPD 2016). The fiscal situation is much the same at the state level, with one state official observing, “we’ve gone from ‘lean and mean’ to emaciated and violent” (Wharton 2011). State parks absorbed some of the deepest fiscal cutbacks, exacerbating existing shortfalls in capital funding and staffing, and delaying parks’ ability to replace aging infrastructure and meet unanticipated challenges caused by climate change (Walls, Darley, and Siikamäki 2009). At the same time, parks visitorship is at an all-time high, increasing the costs of operations and reflecting a growing demand for the provision of this public resource.¹

Although fewer than 50 % of American state parks budgets depend on state legislature general funds, those dependent on these discretionary fund allocations have fared considerably worse than those enjoying dedicated tax funding. These states may then seek non-public sources, including revenue-generating (business) activities such as fees and concessions, and private sources such as philanthropy (Smith and Leung 2016). These revenue-generating activities sometimes involve access fees, challenging the ability of public parks to be accessible to all, especially those of lower-income.²

1.1 “Friends of Parks” Charities

The response by many government agencies of all kinds has been to attract charitable support for these services, often by forming affiliated tax-exempt organizations or by encouraging citizens to form charities. Nonprofit

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commentator Rick Cohen (2012) noted the large number of federal agencies that “have created or spurred the creation of philanthropic offshoots that serve as mechanisms for accessing private, charitable capital.” In parks and recreation services, this phenomenon manifests itself in nonprofit “Friends of Parks” and “parks foundations” engaged in fundraising, trail and infrastructure maintenance, advocacy, programming, visitor support, and volunteer engagement (Gazley 2015; Harnik and Martin 2015; Walls 2014; Murray 2010).

For example, as the official charity of America’s national parks, the National Park Foundation energetically used the 100th anniversary of the park service to solicit new gifts, raising nearly \$375 million, nine times more than was raised three years earlier (NPF 2017 and 2014). One of the newest national park sites, the Flight 93 National Memorial in Somerset County, Pennsylvania, would not even exist without \$40 million that the National Parks Foundation raised in private support.

Some limited efforts have been made to measure the growth and impact of charitable support for other public services. Nelson and Gazley (2014) have found that nationally, American charities supporting public K-12 (primary and secondary) schools are being established at a 30 % faster rate than the U.S. charitable sector is growing overall. These public school foundations, Parent Teacher Organizations, and booster clubs raised nearly \$1 billion USD in 2010. Some studies also raise troubling social equity concerns by finding a connection between community wealth and the growth of these charities (Nelson and Gazley 2014; Paarlberg and Gen 2009; Suslova 2018). Schatteman and Bingle (2015) found that while public libraries in the state of Illinois are mainly dependent on public funding, the reliance on private philanthropy through “Friends of the Library” charities increases as local government funding declines.

This article offers the first systematic scholarly assessment of American charities supporting state and national parks. The major research question attempts, simply, to understand the nature of this field of charitable activity over time. That portion of the analysis is therefore historical and descriptive, examining their relationship to economic and policy events. The second question looks at their growth through the lens of the major supply and demand theories of the sector, to understand not only why they have been created (i. e. through some form of government failure, explained below) but also to produce some propositions about their future viability. The resulting analysis, while mainly descriptive, offers a rich, new historical landscape to understand how longstanding coproduction and “failure” theories manifest themselves in the context of this public service, parks and recreation.

2 Literature Review

Parks-supporting charities offer a new and interesting form of nonprofit activity. How well do current nonprofit theories explain their behavior? At present, the field relies on a robust and mostly complementary group of theories to explain government and nonprofit behavior under circumstances where single sectors inefficiently provide a desired service. Some, such as coproduction and interdependence theories, address the supply-side considerations of citizen demand, wherein citizens create their own solutions, whereas “failures” theories address demand-side considerations, wherein service gaps and opportunities for citizen action are created.

2.1 The Supply Side: Parks and Recreation Charities as Coproductive Partners

Given the situation described in the Introduction where governments appear to be actively encouraging charitable involvement in public parks, interdependence theory might be a tempting explanation for their existence, whereby both sectors grow together, in complementary and mutually reinforcing ways (Lecy and Van Slyke 2013; Salamon 1987; Steinberg and Young 1998). Interdependence theory in its present form argues that the government/nonprofit relationship is financially interdependent and that the funding flow is two-way and mutually reinforcing. Interdependence theory at present assumes government efforts to foster a robust charitable sector involve financial subsidies (Lecy and Van Slyke 2013).

However, at times, government-nonprofit interdependence may possibly involve alternative ways in which governments foster nonprofit activity, with the same outcome of becoming “dependent on nonprofit organizations to provide services that meet entitlements and to pursue a ... policy agenda ... aligned with public ... goals” (Lecy and Van Slyke 2013, 192). The government action or resource may not be funding but rather legal authority, where the charitable partner must be invited into the public sphere through legislation. Only with an expanded definition does this situation seem to explain government-supporting charities such as public school foundations, friends of the parks, and friends of public libraries, which present the unusual aspect of charitable funding flowing to the public service instead of the reverse. In other words, a basic tenet of interdependence theory, that nonprofits still depend on government grants even when engaged in public goals, is reversed. Here, it is government that may only be legally encouraging nonprofits while depending on them

fiscally. Here, government may be getting subsidized rather than doing the rescuing (Guo 2007; Kettl 2002; Steinberg and Young 1998). Yet, nonprofit dependence of a kind still exists since governments may remove a park or school charity's privilege to operate on public land or dictate its behavior while it operates.

What is the nature of the nonprofit relationship or service activity that emerge under these arrangements? Coproduction describes the activities that citizens contribute to the provision of public services (Parks et al. 1981). While considered to be primarily an individual, consumer activity, Brudney and England (1983), Alford (2014), and Bovaird (2007) and others note the possible role of institutional actors in service coproduction, such as non-governmental organizations. Paarlberg and Gen (2009), Suslova (2018), and Nelson and Gazley (2014) argue that coproduction is a particularly apt lens by which to study government-supporting charities. Under a resurgence of interest in this concept, scholars have recently called for broader and more comparative studies of coproduction, in more policy areas and with larger datasets (Brandsen, Pestoff, and Verschuere 2012; Brandsen and Honingh 2016). For example, coproduction theory has been developed mainly in the context of municipal services, and few studies have tackled bigger geographical scales or other jurisdictional levels. Also, studies addressing coproduction in parks and recreation have focused on volunteer labor rather than related institutional activity.

Coproduction scholars generally accept multiple forms in which government-supporting activities might occur. For example, Brandsen and Pestoff (2006) offer a multi-dimensional typology wherein third-sector actors might "co-manage" a government service or might also be involved in "co-governance" by participating in both service delivery and planning. Cheng (2018a) validates such a typology and explores the conditions under which nonprofits are likely to move beyond public service delivery to the planning and design of public services. One way in which the coproduction of interest here, via organized charitable institutions, might appropriately be analyzed is through Young's three-lens theory of inter-sectoral relationships. This possible connection has existed since the early development of the theory, wherein Brudney (1987) described coproduction as the efficient response of "an increase in citizen participation in service delivery to *supplement* rather than replace public action" (emphasis added). Under Young's formulation of this theory, parks-supporting charities would be supplementing government services when they are fulfilling heterogeneous citizen demand for services, and the evidence would be "niche" services such as specific programming. A "complementary" relationship might find parks charities in more closely coordinated roles with government, supporting activities central to the government's mission such as maintenance. An "adversarial" role for a parks charity might involve advocacy (still possibly complementary) or outright disengagement from the governmental mission, so possibly less relevant to these cases.

2.2 The Demand Side: Parks-Supporting Charities through the Lens of "Failure" Theories

Despite the resurgence in interest in this concept as noted above, coproduction in the public sector has also generally been discussed on its own, without reference to the closely related macro-theory of three-sector failure. Although coproduction is mainly viewed as a supply-side activity (individuals providing resources), it is a reflection of demand-side pressures in that the services are not being provided elsewhere.³ In the case of public parks, citizen demand for recreational opportunities may exceed the government's ability to supply it. For example, Follman, Cseh, and Brudney (2016) have documented a significant growth in volunteer programs for U.S. national parks, which they attribute to financial need.

Government failure theory describes instances where median voter preferences or the demands of a majority of constituents limit what government provides, and leave the demand for some collective goods to the market or the nonprofit sector (Smith and Grønbjerg 2006; Steinberg 2006). In the case of services provided on government-owned land, pure market solutions are not possible,⁴ leaving the solution to nonprofits or donors (Weisbrod 1977). A philanthropic solution can be viewed as a natural and benign means of allowing citizens with minority preferences to coproduce their own services to their own satisfaction using their own resources. Supporting this viewpoint is the fact that charities created to support government services are not controversial from a legal standpoint. Legislators have defended their efforts to create charitable foundations by arguing that these new entities can bypass legal obstacles to public-private partnerships, increase flexibility and minimize red tape (Cohen 2012). Moreover, the legal definition of a "charity" via the United States tax code covers not only the commonly recognized "relief of the poor", but also activities that support public service provision such as "erection or maintenance of public buildings, monuments, or works"; and activities that "lessen the burdens of government" (U.S. Treasury Regulation § 1.501(c)(3)-1).

But the alternative world has its risks, perhaps most especially when the philanthropic activity is targeted at a permanent, public, natural resource. Government "failure", even when met with philanthropic resources, can still result in various forms of voluntary "failures" or inefficiencies (Salamon 1987). Walls (2014) suggests that an entirely donations-based approach to public parks maintenance is likely to result in underfunding public spaces over time since some free-riding citizens can still enjoy parks without supporting them ("philanthropic

insufficiency"). Donors may also withhold their support if they suspect that government will withdraw its own financial responsibility for the service as donations increase. Donors may also refuse to contribute to parks services they do not control ("philanthropic particularism"). In other words, although government-supporting charities can supplement public resources, various forms of voluntary failure may stop them from entirely fulfilling their function and promise.

It is for these reasons that observers have expressed concern over the National Park Service's efforts to raise philanthropic support for basic operating expenses and jobs, arguing that the absence of a bright line policy about the expected roles of Friends of Parks groups (e. g. to add "value", not to replace public monies) can tempt the NPS to abdicate its greater responsibility to secure adequate public funding to protect public spaces (Fortwangler 2007). Finally, an understanding of parks coproduction is further complicated by the fact that many private gifts directed toward government services are intended as short-term infusions of support and not intended to permanently replace tax-funded or fee-based public services. A recent example is found in various philanthropic initiatives to temporarily shore up government services during the 2013 U.S. federal sequestration.

For these various reasons, a number of hypotheses and theories are needed to illuminate the ways in which philanthropic support for public parks could manifest itself under government and/or voluntary failure. First is the question of the nature of the trend itself. If the growth of these charitable entities is long-term, the result might be an equally long-term and possibly even permanent infusion of philanthropic support for public services. Surprisingly, few efforts to test this idea have occurred since scholars tend to view private sector gifts as incidental and unimportant to government revenue planning (Irvin and Carr 2005). We therefore begin by testing that assumption:

Hypothesis 1: In contrast to assumptions that philanthropy is an incidental and unimportant source of public revenue, U.S. state and national parks charities provide sizable and consistent long-term support for public services over time.

Next is the question of how the trend relates to governmental activity, e. g. in complementary or supplementary ways to governmental activity. Evidence of government failure could be seen in the growth of "friends of the parks" groups during periods of government retrenchment or policy shifts. American examples include the privatization era of the 1990s and recessionary periods of 1980–1981, 1990–1991, 2001, or 2008–2009. Philanthropic insufficiency (voluntary failure), on the other hand, might be seen at the same time in a less stable/more volatile revenue stream for parks services over time. Thus, economic trends could produce the opposite results for parks charities. The lack of prior data in this field requires a test of both theories:

Hypothesis 2a: Reflecting government failure theory and the supplementary model of government-nonprofit relations, the rate of parks charity creation will be *stronger* and total expenses of parks charities will *increase* during economic recessions or government policy shifts toward privatization.

Hypothesis 2b: Reflecting philanthropic failure theory and the complementary model of government-nonprofit relations, the rate of parks charity creation will be *weaker* and total expenses of parks charities will *decrease* during the same periods of economic and government retrenchment.

The final research question looks at the nature of the services these government-supporting charities are engaged in. Coproduction scholars have offered multi-dimensional models to understand the separate "who", "what", "when" facets of coproductive activity (Nabatchi, Sancino, and Sicilia 2017; Osborne, Radnor, and Strokosch 2016). They conceive of coproductive activity as a continuum or range of activities that evolves through its own success as a consumer-driven activity into either governmental or citizen efforts to institutionalize the activity. In such circumstances, theoretically, coproduction will manifest itself differently depending on the extent to which citizens are involved and their proximity to the core services of the government agency they are supporting (see for example Brandsen and Honingh 2016).

However, little research has focused on the range of activities in which an institutionalized (e. g. nonprofit) coproducer is engaged, or also in how situational differences might shape services in different ways. For example, the range of activities and services coproduced through the charitable partner might manifest itself differently at state versus national levels due to variations in such elements as how the service has evolved, the regulatory environment, the resource environment, or the geographic scope of the service. If they do so, they also help to explain the ways in which different jurisdictional levels (e. g. federal, state) respond to sectoral failures.

Public parks across the globe are geographically bound spaces that are inherently democratic in their intended goal of universal public access. Such a political philosophy would seem to dictate an equal distribution of government resources to parks (e. g. an equal amount of dollars spent per visitor). However, such an expectation is not necessarily imposed on private donors. Under the theory of "philanthropic particularism", wealth

and income disparities across geographic areas may be reflected in parks support (Salamon 1987). Donors may view parks as private amenities and be more likely to support the park in their neighborhood than the park across town. This principle may also apply to state parks since nearly all state park users visit during single-day trips and so do not live too far away (NASPD 2016). But the principle is less likely to apply to national parks since most visitors may travel greater distances to reach them, and may have a less central role in service coproduction. Therefore, applying coproduction's case for variation in services based on the regulatory environment, and considering philanthropic particularism and citizen preference, the following hypothesis is offered:

Hypothesis 3: Patterns of coproductive activity will differ at state and federal levels.

3 Data and Methods

These hypotheses are tested using a national, original dataset of public parks-supporting organizations built on primary and secondary data. The unit of interest is any United States charitable organization that operates to support a U.S. state or national park or natural resource. The support must occur on *publicly owned land* and is broadly defined to include activities whose *primary purpose* is to support the park and its functions. Privately-owned land trusts and conservation organizations were excluded, as were organizations using public facilities (sports associations, ski clubs) but where park support was not the primary purpose. Public parks and recreation associations were also excluded if their missions are focused on training or advocating for parks professionals, not the facility. Additionally, inactive organizations are not counted (i. e. no reported activities via a website or federal informational return).

Data collection began with annual information returns of registered U.S. charities (the 990 Form), obtained from the Core Public Charity files of the National Center for Charitable Statistics (NCCS). However, since Internal Revenue Service and NCCS data miss tax-exempt organizations under the filing threshold of \$50,000 in annual revenues, or those that have incorporated at the state level only, additional sources of data were sought (Grønbjerg et al., 2010). At the federal level, the National Park Friends Organization Directory offers a comprehensive list of parks charities that work with different national park units. This list was independently verified and found to be complete. No such directory exists at the state level. Therefore, a list of parks in each state was first compiled using state parks websites. Then a web search was conducted to identify and match possible state park "friends' groups" to any state park using internet listings, Guidestar filings, state corporation searches, Google, and other methods. This strategy is necessary when attempting to capture parks "friends groups" that are volunteer-run, intermittently active, or otherwise under the federal "radar screen" of 990 filings. A comprehensive dataset of parks charities was then built through merging these sources by using the organization's name and/or Employer Identification Number (EIN). All cases were reviewed for eligibility by two or more members of the research team.

The resulting search produced 395 charities supporting 408 national park units and 1,860 "friends of state parks" across the 50 United States, supporting approximately 4,487 state parks. This count suggests that at least 40% of all state parks and nearly all (97%) national parks have an active friends' of the parks organization; however, a single friends group could support multiple park units and a single park unit could have more than one friends' group, so the percentage coverage could be higher but not lower. (An undetermined but large number of charities and foundations support municipal and county parks and recreation departments, but are outside the scope of this article.)

Park charities in the comprehensive dataset were then linked to the 1989–2012 National Center for Charitable Statistics Core File dataset by their unique EINs. Historical expenditure of park charities was aggregated at the federal and state level to represent the total expenditure of the corresponding category of park charities. Since ruling year and annual expenditure are only available for registered charities, the trend analyses displayed in Table 1 rely only on the larger or more institutionalized, federally registered organizations. State parks expenditure figures were obtained from the National Association of State Park Directors (Smith and Leung 2016). Annual budgets of the National Park Service were accessed through NPS's official website. This data was used to produce trend analyses displayed in Figure 3–Figure 5.

Table 1: Distribution of cases according to reporting status (population and sample comparisons).

Population (frequency/count)	Coded Sample (frequency/count)	Total % coded

	State (n=1860)	National (n=395)	Total	State (n=393)	National (n=223)	Total	State	National
US-registered, Reporting in 2012	31.8 % 591	67.3 % 266	38.0 % 857	42.0 % 165	66.4 % 148	50.8 % 313	27.9 %	55.6 %
US-registered, Not reporting in 2012, but reporting in another year	12.6 % 234	10.1 % 40	12.2 % 274	10.4 % 41	11.7 % 26	10.9 % 67	17.5 %	65.0 %
US-registered, Not reporting (No 990 data available)	25.4 % 473	8.1 % 32	22.4 % 505	23.4 % 92	8.1 % 18	17.9 % 110	19.5 %	56.3 %
Not US-registered but State-registered	18.1 % 336	0.0 % 0	14.9 % 336	15.5 % 61	0.0 % 0	9.9 % 61	18.2 %	N/A
Not US-registered or State-registered but has a website	9.5 % 176	13.7 % 54	10.2 % 230	7.6 % 30	13.5 % 30	9.7 % 60	17.0 %	55.6 %
None of the above	2.7 % 50	0.8 % 3	2.4 % 53	1.0 % 4	0.4 % 1	0.8 % 5	8.0 %	33.3 %
	100 %	100 %	100 %	100 %	100 %	100 %	21.1 %	56.5 %

The next step was to draw a random, stratified (by state) sample of these organizations to code their activities based on the information obtained from 990 forms, websites, etc. (Given the number of cases, coding all organizations was impractical and did not add significantly more empirical power to the analysis). A grounded theory (i. e. open coding) approach used organizational websites to identify and categorize the activities of these supporting organizations. A set of 30 randomly selected organizations was used to start the coding, with new categories of activities added as more organizations were examined. Coding protocols were coordinated and standardized across research team members.

A total of 393 state and 223 national supporting charities were randomly selected and coded. Table 1 compares the full population of organizations to the random sample of coded organizations according to their sources. As Table 1, demonstrates, margins of error are appropriate, at <5 % at a 95 % confidence interval overall. However, as noted, IRS-registered organizations are still oversampled due to the researchers’ reliance on that primary source. The results verify the external validity of the sample overall with respect to geography, but probably reflect a bias toward larger and more organized charities. Also, because the sampling strategy was not stratified for all 50 states, between-states differences (i. e. in policy towards their state parks) are not captured.

One result of using multiple sources to collate data on each case is that the data may come from a range of reporting years. Therefore, the data can be said to reflect the activities of these organizations as far back as 2011, which is the reporting year for most of the Internal Revenue Service-registered charities, but possibly as recently as 2016 since website data and phone calls were included. For the trend analyses in Figure 1 and Figure 2, only IRS data from 2011 is used. For the activities analyses in Table 2, Table 3, and Table 4, data from this range of years is included. The reader should also note that since charitable information returns are frequently delayed, using very recent IRS data is not recommended due to the risk of missing and late returns.

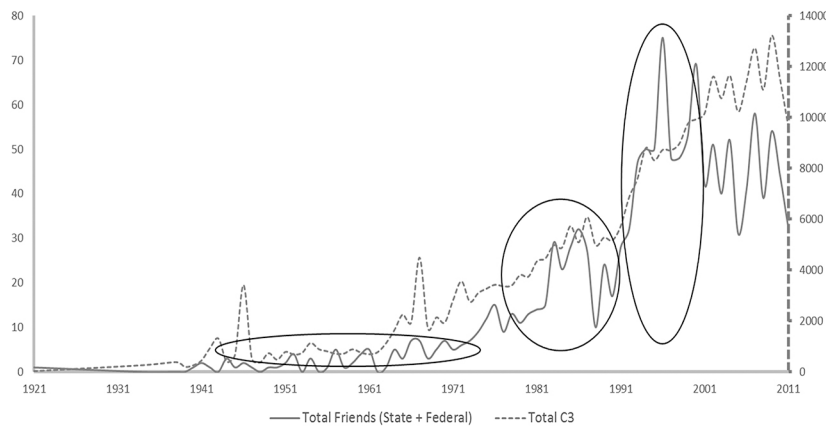


Figure 1: Comparing creation rates: All C-3 U.S. Charities versus “Friends of the Parks” charities (2011 Data).
 Note: The tailing off of cases in 2011 is due to reporting and filing delays. Source: National Center for Charitable Statistics.

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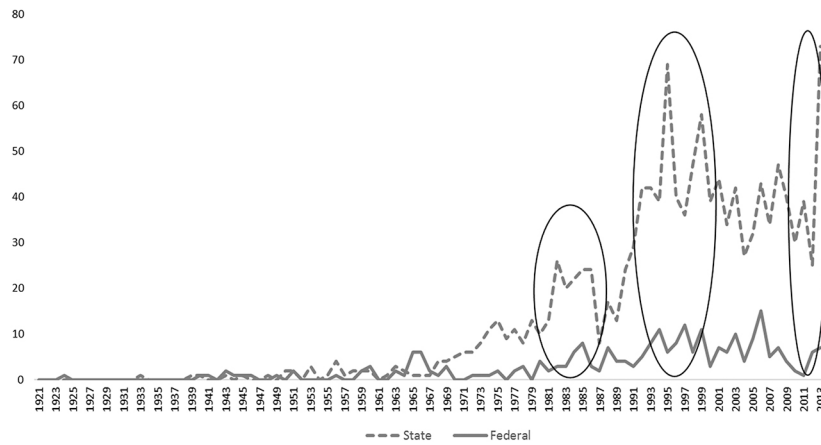


Figure 2: Creation rate of parks charities by Jurisdictional level.
Source: National Center for Charitable Statistics.

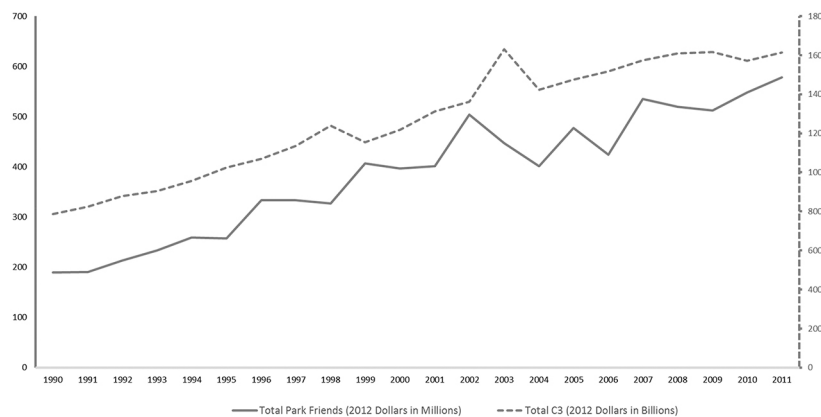


Figure 3: Comparison of U.S. Charity and parks charity total annual expenses.
Source: National Center for Charitable Statistics.

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Table 2: Coproductive activities of parks charities.

Category	Number of state parks charities reporting activity (frequency) N = 340 Coded1	Number of national parks charities reporting activity (frequency) N = 215 Coded2
Fundraising – e. g. raising philanthropic funds for benefit of a public park	279 (82.06 %)	198 (92.09 %)
Natural resource maintenance and construction – e. g. volunteer day for trail construction	252 (74.12 %)	118 (54.88 %)
Volunteer recruitment and management – e. g. NPO provides an internet portal for volunteer recruitment	251 (73.82 %)	133 (61.86 %)
Public education and outreach – e. g. volunteer led nature education	196 (57.65 %)	146 (67.91 %)
Advocacy – e. g. with state budget, Congress	42 (12.35 %)	43 (20.00 %)
Membership organization – has members	192 (56.47 %)	130 (60.47 %)
Offers recreation programs – e. g. owns a boat concession on a lake inside a state park	107 (31.47 %)	53 (24.65 %)
Conducts Research	9 (2.65 %)	34 (15.81 %)
Erection or Construction of Facilities	28 (8.24 %)	19 (8.84 %)
Runs Facilities inside a state or national park	39 (11.47 %)	45 (20.93 %)

¹ 53 (13.5 %) out of the 393 total state FOs included in analysis were not coded due to lack of information, leaving 340 FOs for analysis.

² 8 (3.6 %) out of the 223 total national FOs included in analysis were not coded due to lack of information, leaving 215 FOs for analysis.

Table 3: Results of exploratory factor analysis for charities supporting national parks (N=215).

Category	Factor 1	Factor 2	Factor 3
Fundraising – e. g. raising philanthropic funds for benefit of a public park	0.6996	0.2972	–0.1384
Natural resource maintenance and construction – e. g. volunteer day for trail construction	0.7244	–0.2839	0.138
Volunteer recruitment and management – e. g. NPO provides an internet portal for volunteer recruitment	0.6739	0.1931	0.249
Public education and outreach – e. g. volunteer led nature education	0.0564	0.0417	0.8651
Advocacy – e. g. with state budget, Congress	0.5231	0.1085	0.4063
Runs Facilities inside a state or national park	–0.6027	0.3052	0.4437
Membership organization – has members	0.0115	0.7857	0.0213
Offers recreation programs – e. g. owns a boat concession on a lake inside a state park	0.2313	0.3005	0.0119
Conducts Research	–0.0704	–0.2241	0.1758
Erection or Construction of Facilities	0.0121	–0.6635	–0.1906

Note: Bolded coefficients mean significant factor loadings.

Table 4: Results of exploratory factor analysis for charities supporting state parks (N=340).

Category	Factor 1
Fundraising – e. g. raising philanthropic funds for benefit of a public park	0.5081
Natural resource maintenance and construction – e. g. volunteer day for trail construction	0.6162
Volunteer recruitment and management – e. g. NPO provides an internet portal for volunteer recruitment	0.5330
Public education and outreach – e. g. volunteer led nature education	0.4701
Advocacy – e. g. with state budget, Congress	–0.0531
Runs Facilities inside a state or national park	0.3643
Membership organization – has members	0.4604
Offers recreation programs – e. g. owns a boat concession on a lake inside a state park	0.1053
Erection or Construction of Facilities	0.4341

Note: (1) Bolded coefficients mean significant factor loadings. (2)The item “Conducting research” is dropped because of low activity frequencies (less than 5%).

4 Findings and Discussion

The discussion of findings begins with an analysis of trends in parks charity activity over time, then continues with an analysis of the activities in which they are engaged. The final section discusses the results of an exploratory factor analysis of these activities to determine how patterns of coproductive activity in public parks charities align with current theory.

4.1 Trend Analysis

In Figure 1, the rate of creation over time of parks-supporting charities (numbers in left margin) is compared to the rate of creation for the U.S. charitable sector overall (numbers in right margin). The unit of measurement is the “ruling year”, the year in which the charity was recognized by the Internal Revenue Service.⁵ Three circles have been added as a reader’s aid to identify points of interest.

One sees first a long period with no growth, with fewer than 20 organizations being created in any year, but a stable pattern not too different than the charitable sector overall. The pace picks up for all charities in the 1970s. While the environmental conservation movement might have spurred some growth in parks charities, the growth in the rest of the charitable sector still keeps the same pace. In the second circle of interest, during the economic downturn of the early 1980s, a distinct jump in creation rates signals that parks-supporting charities

now outpace the growth of the sector overall. A second jump is seen in the 1990s, during the privatization era, with significant spikes in the rate of creation for parks charities. These results support Hypothesis 2a.

The pace is not sustained into the next decade, however. In the 2008–2011 recessionary years, the creation rate for parks-supporting charities drops while the sector's overall rate does not (note, however, that some charity activity, such as higher education and social services, is economically counter-cyclical). This figure also displays greater volatility overall in the creation rate for parks charities. The results support Hypothesis 2b in finding more volatility for parks charities during economic downturns compared to the sector overall, and therefore more potential evidence of both government failure and philanthropic insufficiency.

Figure 2 displays rates of creation for charities supporting state or national parks separated by jurisdictional level. As noted, rates of creation were quite low until the 1960s, so the focus here is on more recent years. Three circles have been added as a reader's aid to identify points of interest. The first finding of note is the overall non-linear pattern, most especially at the state level, with an accelerating rate of increase in parks charities over time. An increase at both jurisdictional levels in the rate of creation during the 1980s and again in the 1990s is also evident – two distinct periods of conservative fiscal policy. However, there is also some dissimilarity between the state and national patterns. The circled areas display times during the 1980s, 1990s, and most recent recession when the more active creation of state-level parks charities occurred compared to national charities, reflected in faster growth rates. The difference could be attributed to greater need at the state level, but also greater opportunity since many state parks charities are still becoming established – therefore, both supply and demand are at play.

A third phenomenon is the decrease during the relatively healthy economic period of 2003–2005 in the rate of state-level supporting organizations, although national parks charities grew in number in the same time period. One possible explanation is that state parks were able to use the relatively healthy economy in this time period to increase public allocations for parks, decreasing the need for parks charities. Another is that the slowdown in the growth rate resulted simply from less opportunity, as state parks charities were well established by then. Yet another possibility, however, is that new charities could not thrive without robust state partners – a pattern potentially reflecting both government failure and philanthropic failure.

Finally, in the most recent recessionary years, the number of parks charities increases for state parks but drops off at the national level. Here, the recent Recession may have caused both government budget cuts and falling income for donors, reflecting both philanthropic and government failure. Then, as the economy recovers, more nonprofits are set up to support those public parks and we can observe an increased number of parks charities after 2009.

This analysis finds support for Hypothesis 1. The data certainly suggest that support for public services is neither a temporary nor a short-term trend. Support is also found for Hypothesis 2a in the connection between recessionary periods and growth of these charities, signaling government failure. However, philanthropic failure (Hypothesis 2b) may also be reflected in the greater volatility in the rate of growth in this subsector of charitable activity, where the upward pressure of government failure theory but also the downward pressure of philanthropic failure theory both play a role in charity creation.

A second approach to testing Hypothesis 1 is to look at charitable spending rates rather than simply creation rates, to explain whether there is real, permanent material and budgetary support behind these organizations in addition to their potential to bring non-financial resources such as volunteers. Figure 3 accomplishes the same goal as Figure 1 but from a budgetary perspective (all data in 2012 adjusted dollars). The results suggest that as a subfield of the entire charitable sector, parks charities display a unique path that only partly follows overall economic trends driving the sector. For example, although it is more volatile, the rate of growth of parks charities is slightly stronger than that of the sector overall, with some counter-cyclical periods.

Turning next to a comparison between these charitable spending and state and national parks budget trends, a revealing picture emerges. Where Figure 4 begins, in 1990, parks charities are spending \$85 USD million nationwide (in 2012 dollars) against total state parks operating expenditures of \$5.766 billion USD (in 2012 dollars). By 2012, although parks charities show a volatile path in their growth, they have increased their total expenses to \$234 million against declining state park operating expenditures of \$2.648 billion. In other words, the ratio of public to charitable dollars has changed from 68:1 to 11:1. This is a significant number as the general fund revenue distributed by state governments also only counts toward 30 to 40 % of the total operating budget of state parks (Walls 2013). Meanwhile, at the national level (Figure 5), while federal parks units outspend related friends of the parks charities overall by a factor of roughly 10:1, their relative contributions have also changed over time in the same manner. In 1990 for every \$25 a national park unit spent on operations, parks charities raised and spent \$1. By 2012 that margin had shrunk to \$8.5:1. Based on the change of the ratio of charitable support and state and national park operating expenditures, we can see that this trend of charitable support for parks services is growing rapidly. As governments at all levels suffer from financial losses and parks services often at the forefront of budget cuts, the importance of charitable support for parks services is expected to continue growing.

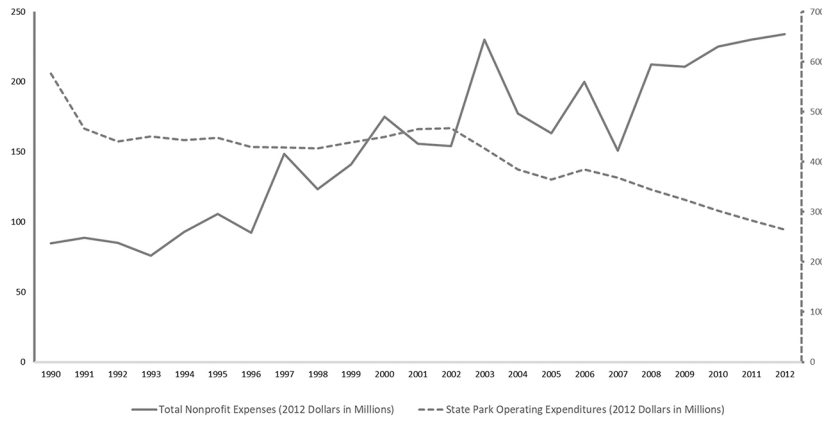


Figure 4: Total expenses of state park charities vs. State parks operating expenditures. Sources: National Center for Charitable Statistics and (Smith and Leung 2016).

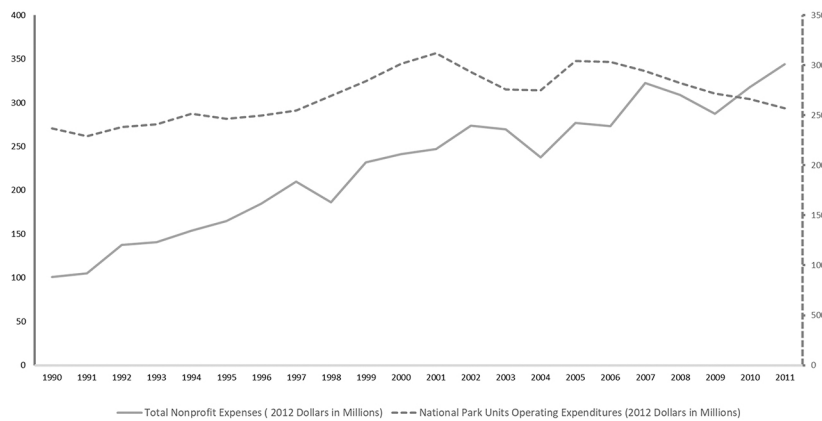


Figure 5: Total expenses of national park charities vs. Operating budget of national park units. Sources: National Center for Charitable Statistics and National Park Service.

This analysis also finds support for Hypothesis 1 in suggesting charities are raising sizable and long-term support for public lands. This funding is volatile, supporting Hypothesis 2b and reflecting some aspects of philanthropic failure in the sense that it is harder to budget on a volatile revenue stream.⁶ But it is becoming an increasingly large portion of the whole, suggesting support for Hypothesis 2a and government failure theory. From a three-lens theory perspective, state-level trends suggest the supplementary behavior is outstripping the complementary behavior in the sense that charity dollars appear to be replacing some state dollars (Young 2000). Overall, as noted in the Introduction, state parks policy still depends on other revenue sources such as fees, in addition to philanthropy and taxes. The volatile growth line in charity spending certainly supports the argument for a diversified state budget policy. National parks operating budgets, on the other hand, are holding their own from an annual expenditure point of view, but as noted in the Introduction, considerable deferred maintenance and infrastructure needs suggest national parks operating budgets are still losing ground over time.⁷ We also note that the size of the charitable contribution is larger for parks than was found in K-12 public education. While identifying the same long-term, robust growth in school-supporting charities, Nelson and Gazley (2014) concluded, however, that the charitable contribution was fairly small and incidental when averaged across school districts.

4.2 Coproductive Activities of Parks Charities

The final stage of analysis examines what these organizations coproduce for public services. A grounded theory, open coding protocol involving scans of website information, 990 Forms, and occasional informational telephone calls identified 10 categories of major supporting activities. These include (1) fundraising, (2) natural resource maintenance and construction, (3) volunteer recruitment and management, (4) public education and outreach, and (5) advocacy. These organizations may also (6) run (and sometimes own) a parks facility, (7) serve as a membership organization, (8) offer recreation programs, (9) erect or construct a facility, and (10) conduct research (Table 2). A very small number of organizations (<2 %) also purchase land, but outside of private land conservancies, this is mainly a direct government responsibility. At this level of analysis, only charities sup-

porting single parks were included, and those organizations supporting parks systems were omitted under an assumption that these distinct patterns of support should not be analyzed together.

According to Table 2, among the representative random sample of 616 coded organizations, the most common activity is fundraising, conducted by 82.06 % of state parks charities and 92.09 % of national parks charities. Natural resource maintenance, volunteer management, and public education and outreach involve one-half to two-thirds state and national organizations. Approximately half of both state and national parks charities use a membership model to build the involvement of parks users and donors. Lower levels of engagement are seen in the remainder of the list, including recreation programs, advocacy, running facilities, construction of facilities, and research.

With the exceptions of natural resource maintenance and volunteer recruitment, charities supporting national parks are more likely to be involved in the listed activities when compared to state parks. This difference is seen most especially with respect to fundraising, public education and outreach, advocacy, and research. National parks charities are also more likely to operate facilities (and in fact, regularly sign contracts with the national park service to serve as facilities managers, also known as “cooperating associations”; see Yandle, Noonan, and Gazley 2016).

As noted in Hypothesis 3, the difference in frequencies could reflect the longer federal history of parks management, which in turn could lead to more experience engaging charities in public service provision and in developing these activities. Comparing the span of Internal Revenue Service ruling years (the year in which the charity gained federal recognition) for the two jurisdictional levels, national parks charities are only marginally older, with a median ruling year of 1996 compared to a median ruling year of 1999 for state parks charities. However, since charities can choose whether and when they will seek IRS recognition, public records are imprecise.

Another possible explanation is that the greater size of national parks and their greater geographic span means they attract a greater range of human support, manifested in higher levels of contributions to all kinds of support activities. Despite the differences, the strong similarities in other areas suggest that national and state parks-supporting charities have been asked to take on similar roles in parks support, even if they have made different choices in their patterns of coproductive activities. Many of these differences are also likely to be based on public policy differences at the state and national levels, including not only decisions on the scope of authority offered to the private sector partner but also in the resources available. Notably, at certain points, the resources would appear co-equal: for example, theories of coproduction assume a central goal is volunteer engagement. Here, indeed, roughly two-thirds of both state and national parks charities recruit or manage volunteers. However, in addition to this traditional complementary model of volunteer provision, the principal activity of both state and federal parks charities is fundraising, a supplementary role consistent with government failure theory.

4.3 What Forms of Coproduction?

This count of coproduction activities also suggests that although parks charities are heavily involved in fundraising and volunteering for public parks units, and in the “heavy lifting” of natural resource maintenance, they are far less involved in the planning, decision-making, and advocacy related to management of public parks and recreation units. Using Brandsen and Pestoff’s (2006) typology, the relationship between these parks charities and government agencies reflects a dominant “co-management” model where nonprofits produce services in collaboration with government agencies and a “co-production” model where citizens are involved in producing their own services. Much less evident is a “co-governance” model where nonprofits are engaged in the planning and decision-making on service provision. For example, few organizations run or own the facilities they support.

Some caution need to be applied when interpreting the frequencies of coproduction activities as our activity coding is mostly based on organization websites, which may have been designed for fundraising and marketing purposes instead of full activity disclosure. However, this coding strategy most likely results in more false negatives than false positives, meaning underreporting of activities is more likely, a result which may be seen at the bottom of Table 2. Despite this potential underreporting, our coding strategy can still be used to compare supporting activities between national and state levels. And the strategy does not diminish the noteworthy finding of tremendous fundraising and volunteer engagement activity on the part of parks-supporting charities.

But this finding challenges the conventional wisdom that money will bring power. Although parks charities provide financial and human resources to public parks and recreation units, they may not influence planning and provision decisions, which in this context may be jealously guarded by public officials. Such a result may be a good thing: these are, after all, public resources subject to public accountability. Subsequent survey research and qualitative interviews could explore this question further, while a longitudinal study could also understand the changing relationship between charities and public budgets of parks agencies.

An additional theory-testing analysis was produced to determine among this list of supporting activities whether underlying patterns exist and whether observable patterns of related activities are similar across jurisdictional levels. The endeavor may help to explain how coproductive activity manifests itself in this subfield of intersectoral service provision. Displayed in Table 3 (national parks) and 4 (state parks) are exploratory factor analyses identifying underlying latent variables.⁸ Since the coding was binary (a charity either provided an activity or did not) a polychoric estimation is required (produced using the polychoric command in STATA/MP 14.1, with Varimax rotation).⁹

The results find that supporting activities load on different constructs or factors by jurisdictional level. Exploratory factor analysis of the supporting activities of national park supporting charities generates a three-factor solution (three factors with an eigenvalue larger than 1), which accounts for more than 86 % of the total variance. In the first factor, a group of charities provides a combination of fundraising, natural resource management, volunteer management, and advocacy. This group is unlikely to be running facilities in national parks. In the second factor, charities are likely to use a membership structure and offer recreation programs in national parks, suggesting a pattern of member serving activities. Public education and outreach loads independently on the third factor. Remaining outside a factored solution is research, suggesting charities conducting research for national parks independent of other services or in a non-patterned way.

For charities serving state parks (Table 4), “conducting research” was dropped due to insufficient cases (<3 %). The results return a robust one-factor solution (one factor with an eigenvalue larger than 1 and accounting for 62.9 % of the total variance), and with a significantly different pattern of activities than at the federal level. The one-factor solution reflects a combination of fundraising, natural resource maintenance, volunteer management, public education and outreach, facilities operation, membership, and construction.

This pattern of state-level parks activities is interesting since it appears to suggest that national park supporting charities have developed a differential pattern of their supporting activities, while state park supporting charities are still developing and their activities are more generalized. Remaining outside this factored solution are advocacy and offering recreation programs, suggesting state parks charities provide these services independently of other services or in a non-patterned way. Thus, support is found for Hypotheses 3 in that national and state parks charities indeed present very different profiles of park-supporting activities and there is not a single pattern of coproductive activity.

5 Conclusion

This study contributes to theory building through its examination of an understudied form of organized coproductive activity. We attempt not only to depict the fiscal implications of charitable support for parks services, through the trend analysis, but also to create a more nuanced understanding of parks service coproduction activities at the national and state level. The coproduction literature (while focused on public services) has traditionally focused more on the citizen model of co-production (e. g. volunteerism) than on citizen provision via formal institutions such as nonprofit organizations. Therefore, this study’s first contribution is in describing a major, additional form of (institutionalized) citizen support for public goods provision beyond volunteerism. And the findings are significant in suggesting, overall, that philanthropic funding for public services is a robust, long-term trend that is responding to government failure. The fact that citizens and government agencies are creating entirely new 501(c)(3) institutions as vehicles for organizing volunteers and donors suggests that the goal is a permanent infrastructure. The non-linear increase in the rate of creation of permanent, organized government-supporting charitable institutions also challenges traditional notions that this funding is incidental and unimportant to government revenue planning, and further suggests the value of understanding public budgetary responses to new forms of government philanthropy. It also suggests the existing public finance literature needs updating to correct its assumption that the funding flow from governments to nonprofits is unidirectional.

But the recency of this growth in charitable activity suggests new motivations are in play. While the invitation to charities to “lessen the burdens of government” has been in the tax code for generations, this analysis reinforces, empirically, observations from practitioners that government policy is evolving to a much greater level of dependence on charities (Cohen 2012). Therefore, the second theoretical contribution is in expanding the general understanding of interdependence and three-lens theories with a specific example of a relationship that appears interdependent through legal rather than fiscal reciprocity, and is possibly both supplementary and complementary—but again, is certainly permanent.

This analysis also suggests that coproduction manifests itself in different patterns as jurisdictional levels and contexts change. It does seem self-evident that state policy and federal policy regarding the deployment of private sector resources would diverge based on different histories, needs, and funding contexts. And, al-

though the data are from the U.S., this research is also relevant to public administration in other countries as economic instability, calls for smaller governments, and shrinking budgets force public institutions to identify new revenue sources for adequate public service provision (see, for example, Suslova's 2018 examination of the rise of public school-supporting philanthropy in Russia).

Although this research has built the best available multi-jurisdictional dataset for public parks and recreation supporting charities, there are still several limitations. First, the inability to find the necessary data for all cases means some inferential statistics was required, based on a partial sample. Some trends also include only registered and reporting charities, meaning larger nonprofit organizations were over-sampled (in the figures). However, in Table 2–Table 4, cross-referencing different data sources helped somewhat to compensate, producing much richer data than most of the studies that depend entirely on NCCS data.

Third, while the analysis of activities depended on a random sample that is representative within confidence bounds at a national level, the study does not stratify for possible across-state differences. As state policies toward natural resource management are better understood, future research can accomplish more finely-grained across-state comparisons. Additionally, coding judgments based on the contents on those organizations' websites may not capture all activities those organizations carry out in reality.

Finally, the traditional empirical approach in coproduction studies is to focus on citizen activity as the source of the coproduced service, leaving out the related government action (or inaction). In this study, this action-and-reaction cycle is captured only in broad strokes by observing the fiscal constraints under which governments might encourage parks philanthropy. Future work might also capture the details, to examine the coproductive arrangements at the park unit level and define patterns of joint service activity. Alford (2014) observes that there is more to be learned by analyzing not just the outputs but also the role choices, motivations, and outcomes of coproductive activity. What motivates the thousands of volunteers and donors shoring up public parks? Further, when and by what means do government actors encourage parks charities to form?

To continue this point, future analysis might not only expand the number of cases but also attempt to tease out which nonprofits are set up by government agencies and which by citizens, and also how they are funded. Such an analysis would clarify the taxonomic patterns and illuminate this field's relationship to "failures" theories. One testable "philanthropic failure" proposition is that the higher rate of volatility found here in the rate of creation of friends' groups compared to the charitable sector overall will be even more enhanced when comparing them based on revenue volatility. Here, we should also note that government failure theories are traditionally tested in light of demand heterogeneity or some other proxy for the median voter hypothesis (see, for example, Paarlberg and Gen 2009). Here, a regression model is not employed, but we argue that evidence is still found for a government failure hypothesis in light of the increase in overall U.S. population and ethnic/racial diversity, and a situation wherein state and national parks do not appear to be increasing their operating expenditures to keep up with demand as measured by the general population.

Additional questions related to the impact these organizations have on power relationships between nonprofits and government are also worth pursuing. What does this trend mean for how public parks in the United States are governed? Are we moving to a more polycentric park governance system, i. e. with more diverse actors? Will they crowd in or crowd out government involvement? Will they help citizens to be engaged more in the provision of public services? Although the general tone of coproduction is positive toward the quality and quantity of public service provision, scholars also recognize potential problems. The first concern is with accountability (Bovaird, Downe, and Martin 2009). There are also concerns that charitable support might crowd out government spending on these services (Cheng 2018b; Walls 2014). How should the government and citizens share responsibility for public service coproduction? When and where should we expect private provision to become a larger share of public service provision?

A rich set of social equity considerations is also worth pursuing. How do these coproductive activities affect citizen access to public services? Is coproduction appropriate as the major public service delivery arrangement in low-income communities? What governance mechanisms can ensure that certain participants do not gain undue influence within these semi-privatized services, or do not otherwise exacerbate social inequality (Rich 1981; Warren 1987)? The number and richness of these remaining research questions reinforce the value in continuing to explore this particular area of joint nonprofit-government service provision.

Ostrom (2009), in her 2009 Nobel Prize Lecture, observed the conceptual and empirical problems with viewing public and private sectors separately rather than in terms of their relationship to one another. The dichotomization of "market" and "state" fails to account for their dependence on one another, and on how the behavior of one sector shapes another. While Ostrom did not incorporate the nonprofit sector's macro-theories into her work, the perspectives are closely related to her idea of coproduction, and we therefore argue that a joint treatment is appropriate. As Salamon and Anheier (1998) have observed, only a combination of theories may best explain nonprofit activity, even when focusing only on the behavior of one sector.

This analysis does suggest that various strands of the sector's current theoretical framework can help to explain this phenomenon of government-supporting organizations, but that no theory appears to do so alone.

Whether, in the specific context of parks, the coproductive relationships created through permanent parks charities is best viewed as conflicting or as mutually supportive is a question left to future research. The evidence here suggests the latter, and in fact, a highly cooptive form of governmental dependence. Parks charities appear to be involved, or used, for multiple purposes – for direct resource acquisition, but also for advocacy, engagement, and perhaps legitimacy.

Notes

- 1 Office of Communications, National Park Service. 2017. "National Park System Sees More Than 330 Million Visits." Retrieved from <https://www.nps.gov/orgs/1207/02-28-2018-visitation-certified.htm>. See also National Association of State Park Directors. 2016. "Park Season Opens to Growing Demand." <https://www.stateparks.org/park-season-opens-to-growing-demand/>
- 2 For example, the National Park Service is increasing entrance fees but has faced public pressure to keep them lower than planned (see National Public Radio. 2018. "National Park Service to 'Modestly' Raise Entrance Fee in Plan to Cut Repair Backlog." Retrieved from <https://www.npr.org/2018/04/13/601980212/national-park-service-to-modestly-raise-entrance-fees-in-plan-to-cut-repair-back>).
- 3 For example, a traditional example of coproductive activity is when citizens sort their own recyclable waste prior to government-subsidized trash pickup. They do this when a local governments does not find sufficient taxpayer support to subsidize the full recycling process.
- 4 There actually are some government efforts to provide a market solution, such as federal plans to de-certify some public land as a park and to sell off assets such as mineral rights.
- 5 Legally, a charity's activity could commence prior to being recognized by the IRS, although with no assurance of tax benefits for the organization or donors. Basing charitable activity on ruling years introduces possible error in annual reporting in that activities could have commenced earlier. However, the error should be random and non-biased.
- 6 According to Fischer, Wilsker, and Young (2011), "the more public a nonprofit's services, the greater its reliance on donations" and so, in times of economic shock, these publicly-oriented nonprofits are prone to increased revenue volatility. The standard deviation, acting as an expenditure volatility measure, is 0.2262 for non-profit total expenses and 0.0562 for state park operating expenditures from 1990 to 2012. Thus, non-profit total expenses are slightly greater than 4 times more volatile than state park operating expenditures.
- 7 National park-supporting non-profits had an expenditure volatility measure of 0.1408, and national parks had an expenditure volatility measure of 0.0577. National park-supporting nonprofits are 2.44 times more volatile than national park operating expenditures.
- 8 An exploratory factor analysis is conducted in areas without clear theoretical direction—otherwise, a "confirmatory analysis" might be recommended where the goal is to confirm a previously conceived structure.
- 9 Fit statistics were within confidence bounds according to χ^2 test and root mean square error of approximation.

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