The Influence of Organizational Characteristics, Environmental Factors and Changes on

Nonprofit Missions

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David Berlan

dgberlan@maxwell.syr.edu

Information on Current Draft

The following paper is an initial round of analysis on a subset of data. Due to a very labor intensive manual coding process, the following analysis is derived from only a third of the final data set, and is thus very preliminary. In addition, this research will eventually examine four different forms of organizational change within nonprofits: leadership, mission, strategy, and structure. This paper only examines one of these changes, mission. Future iterations will cover the entire data-set and incorporate all four forms of change. More details and tables have been incorporated into the body of this paper than might otherwise be the norm, in order to allow for comment. Any feedback on this initial analysis is welcome and appreciated.

Abstract/Introduction

Managing nonprofit change is a complicated process. Funders frequently change focal areas and decision-making criteria. The broader operating environment for individual nonprofits can shift substantially in response to demographic and policy changes. Shifts in structure or leadership alter both internal and external relationship while introducing new ideas about future directions. In response to these organizational and environmental changes, discussions occur on reinterpreting or even altering the mission pursued; even more frequently, strategies to pursue these missions change. To manage nonprofits during periods of such uncertainty, it is necessary to understand the interplay between these various changes, particularly how they relate to the fundamental idea around which nonprofits organize and are evaluated: mission.

Prior research on nonprofit mission change either lacks sufficient nuance by considering tensions only to exist between funding and mission fidelity, draws from a relatively limited set

of organizations, fails to consider multiple theoretical lenses, and/or examines only a brief period of time. This paper considers both the possibility of nuance in mission change and a range of alternative theories. Through examination of a large sample of complex, cross-national nonprofits over a longer period of time, it provides additional observations and potential variation.

This paper seeks to identify factors correlated with shifts in nonprofit mission. Through logistic regression of panel data covering 152 nonprofits over a period of 14 years, environmental and organizational characteristics and changes will be examined for correlation with subsequent mission changes. Drawn from form 990 data and a series of leader interviews, the model includes explanatory variables suggested by a range of organizational theories, including institutionalization, resource dependence, network theory and prior nonprofit scholarship. These variables include funding growth, share of funding from government, centrality of volunteers, politically connected board members, new leaders, organizational renaming, headquarters relocation, sub-sector and presence of founder on board. The dependent variable, mission change, is hand-coded from a common source of mission statement content, the summary of an organization's purpose in this annual IRS filing.

Absent a sufficient pre-existing body of relevant theory, causality cannot be strongly inferred from these results. Nonetheless, tests for organizational characteristics, types of changes and environmental factors associated with higher rates of nonprofit mission change. This exploratory analysis, even absent strong evidence for causality, can inform practice by identifying conditions under which concern about fidelity to mission or the option to proactively address the possibilities of reinterpreting or changing mission might arise. These findings will also serve as a launching point for future research on the dynamics of nonprofit organizational, environmental and mission change.

Theory

Prior literature on nonprofit management, and the broader body of organizational theory, suggests a number of potential types of factors, and some specific factors, that could influence or be correlated with change. These works do not suggest a single testable model of

change, nonprofit mission change specifically, but identify potential explanatory variables for initial research.

The existing nonprofit sector literature on organizational change, particularly regarding mission change, focuses substantially on the interaction between environmental forces and the nonprofit. This work introduces the pressure brought upon nonprofits by government contracts (Guo, 2007), private donors (Brody, 2002; Brown & Moore, 2001; Edwards, 1999; Edwards, 2008; Frumkin & Andre-Clark, 2000; Tandon, 2002), commercialization (James, 2003; Salamon, 2005; Tuckman & Chang, 2006; Young & Salamon, 2002) and competition from the private sector (Frumkin & Andre-Clark, 2006; Tuckman, 1998; Young & Salamon, 2002). Where these changes become threats to the survival of nonprofits, population and community ecology theories predict pressure to change becoming especially acute (Aldrich & Ruef, 2006; Astley, 1985; Hannan & Freeman, 1984; Young, 1988).

Work from institutionalization, organizational culture, resource dependence, and nonprofit scholars identify a range of organizational characteristics that can impede changes in response to such environmental pressures. Of course, identifying and securing funding more in line with mission purposes enables a nonprofit to avoid this pressure (Froelich, 1999), but is not always achievable. Absent such alternatives, nonprofit structures and actors play a deciding role in whether or not change occurs.

Older organizations are generally viewed as less responsive to change (DiMaggio & Powell, 1983; Minkoff & Powell, 2006; Selznick, 1996) though some contradictory evidence is present amongst nonprofits (Minkoff & Powell, 2006). Organizational size is theorized to reduce flexibility and thus likelihood to change in response to outside pressure (DiMaggio & Powell, 1983; Minkoff & Powell, 2006), as is complexity of activities and structures (Young, 2002).

The actors substantially involved in a nonprofit also are predicted to influence response to environmental pressure, including board members, executives, members, staff and volunteers. Alignment of mission values with stakeholder groups (Voss, Cable & Voss, 2000) can limit the effects of outside pressures, such as in organizations with an ideological base (Minkoff & Powell, 2006), reliance on volunteers (Guo, 2007) or a formal membership.

Similarly, shared normative, professional or subculture values can either encourage or inhibit change (Curran, 2005; DiMaggio & Powell, 1983; Frumkin & Andre-Clark, 2000; Mahler, 1997; Selznick, 1996; Smircich, 1983), depending upon the shared values in question.

Though some disagreement exists on whether responsibility for interpreting, achieving and changing the mission lies with management (Moore, 2000; Wilensky & Hansen, 2001) or the board (Axelrod, 2005; Miller-Millesen, 2003; Ostrower & Stone, 2006), both are recognized as having strong roles in organizational change. Founders can serve to prevent change, but their departure often leads to upheaval (Allison, 2002; Minkoff & Powell, 2006); where they continue to serve on the board, change may be less frequent. Board members with connections to business, donors or politics may have the opposite effect (DiMaggio & Powell, 1983; Guo, 2007; O'Toole & Meier, 2004; Salamon, 2002; Selznick, 1996; Young, 2002).

From these various bodies of literature, nonprofit organizational change, especially of mission, would be expected to involve environmental pressures, board characteristics, characteristics of other actors affiliated with the organizations, elements of organizational structure, and financial performance. These works do not address alternative explanations, or go into substantial detail about potential causal complexity, especially involving multiple changes, which also must be explored in attempts to model factors correlated with nonprofit mission change.

Methodology

This paper uses logistic regression to analyze panel data on 152 internationally active nonprofits over a period of up to 14 years. This paper draws upon a previously selected sample of organizations at which interviews with leaders were conducted, and introduces manually coded variables from annual financial and informational filings to supplement interview data and create a panel. Nonprofit mission change is analyzed as the dependent variable, with a model that captures other forms of organizational change, a range of organizational characteristics, sectors, and individual years as independent variables.

The sample of organizations used in this paper is the set selected by the Transnational Nongovernmental Organization (TNGO) Initiative at Syracuse University. Housed in the

Moynihan Institute of Global Affairs at the Maxwell School of Citizenship and Public Affairs, the TNGO Initiative (http://www.maxwell.syr.edu/moynihan_tngo.aspx) conducted a series of interviews with leaders at 152 internationally active NGOs (or nonprofits). This group of organizations was selected through stratified random sampling that sought to capture a representative sample of nonprofits according to size of budget (small <$1m per year; medium $1m<$10m; large >$10m), sector (conflict resolution, environment, human rights, humanitarian relief, and sustainable development), and financial health (Hermann, et al., 2010). Organizations eligible for inclusion needed to be evaluated by Charity Navigator as of 2005, listed as 'International', an IRS code 501(c)(3) organization, have at least four years of annual IRS form 990 filings, have over $500,000 in public support, and not be foundations, hospitals, media venues, or universities (Hermann, et al., 2010). These criteria narrowed down the population sampled to 334 organizations, of which a final total of 152 had leaders interviewed during the project between 2006 and 2008 (Hermann, et al., 2010), with questions covering a variety of topics including accountability, collaboration, communication, effectiveness, governance, and leadership (http://www.maxwell.syr.edu/moynihan/tngo/Research/).

To develop a panel data set using this sample, annual IRS 990 forms were captured for each organization, covering all years with available on GuideStar.org's webpage and archive of nonprofit annual reports and filings[1]. GuideStar.org provided the author educational access to the documents and various research tools available from the website, enabling the capture of this information. As a result, the panel data is drawn from almost 2000 annual filings, covering the period of 1997 through 2010. Some of the organizations have missing reports, or a set of reports starting at a later date, though over two thirds of them have 13 or 14 years of reports, as shown in table 1 below.

Table 1: IRS Form 990 Counts		
# of years	# of nonprofits	# of 990s
14	50	700

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[1] Due to confidentiality concerns, this full dataset cannot be shared publicly, as individual organizations could be identified from the data. I plan to share the data with the TNGO Initiative after completion of the dissertation to which this paper is an element; further dissemination or sharing of the data would be constrained by the project's conditions (IRB restrictions and promises to respondents).

13	65	845
12	24	288
11	10	110
10	1	10
9	1	9
8	1	8
Total	152	1970

From the 990 forms, two coders (the author and a colleague) captured a range of organizational data, covering a range of time variant organizational characteristics. The TNGO Initiative interviews provided a set of time invariant organizational characteristics, and a set of sub-sectors to capture some environmental changes. The year of each filing were used to create year fixed effects, to represent additional environmental changes; 2000 was used as the base year, as it would be the first required reporting year for nonprofits in the sample (due to Charity Navigator's requirement of four previous reports to be rated in 2005). In 2008, the IRS made several changes to the form 990, which created the opportunity to capture board, employee, and volunteer numbers in the most recent years, which were not possible in previous years; due to lack of variation over the entire timeframe, these variables are not being used in the current round of analysis, but may be incorporated in future analysis. The full set of variables captured through this coding is presented in tables two through six, below.

Table 2: Dependent Variables		
Variable	**Details**	**Source**
MissionChange	Substantial language change in description of purpose	Form 990s
ProgramChange	Largest program changes	Form 990s
StructureChange	Name or address changes	Form 990s
LeaderChange	CEO or board chair change	Form 990s

The dependent variable of focus in this paper, mission change, is drawn from the brief description of each nonprofit's purpose included in the annual 990s. Comparisons between current and prior years led to only substantial language changes being coded as a change; these changes include the addition, subtraction, or substitution of key language about the values, purposes, targets, or activities pursued by the organization. This measure picks up far more changes than would examination of formal mission statements, but may miss some changes or

capture language changes with limited impact on the interpretation or achievement of the nonprofit's mission. In future rounds of analysis, separate models will be run with three other dependent variables: program (or strategy), structure, and leader changes. In this paper, changes in these areas are included as independent variables. The full model used in this paper includes both prior year and current year changes, while a restricted model examines includes just prior year changes. Prior changes provide evidence of temporal order when multiple changes occur, while the recent changes versions capture the interrelation between different changes, providing more potential evidence but less support for causal inferences.

Table 3: Change Variables		
Variable	**Details**	**Source**
PriorMission	Change in description of purpose during previous year	Form 990s
PriorProgram	Largest program change during previous year	Form 990s
PriorStructure	Name or address change during previous year	Form 990s
PriorLeader	CEO or board chair change during previous year	Form 990s
Deficit	A decline in net assets during current year	Form 990s
PriorDeficit	A decline in net assets during previous year	Form 990s
BudgetChange	Percentage change in total revenues from previous year	Form 990s

In addition to change variables, the model in this paper examines a range of time variant characteristics, including two other changes: budget changes and the presence of a deficit. Other time variant characteristics include a range of financial variables predicted by theory.

Table 4: Time Variant Organizational Characteristics		
Variable	**Details**	**Source**
GovtPct	Percentage of revenues from government grants	Form 990s
MiscPct	Percentage of revenues from sources other than donations and grants	Form 990s
BudgetM	Total revenues during current year, in millions	Form 990s
AssetsM	Total net assets during current year, in millions	Form 990s
Prgm1Pct	Percentage of expenses dedicated to largest program	Form 990s

This model expressly does not include organization fixed-effects, in order to test a range of time invariant organizational characteristics either directly or indirectly predicted by organization theories or prior nonprofit management literature.

Table 5: Time Invariant Organizational Characteristics		
Variable	**Details**	**Source**
AgeIn2000	Years since founding in 2000	Guidestar.org
Advocacy	Conducted advocacy efforts, independent from service	TNGO Interviews
Service	Provides direct service, independent from advocacy	TNGO Interviews
StaffB	Staff representatives on board	TNGO Interviews
FounderB	Founder on board	TNGO Interviews
ConnectedB	Board members connected to government/politics	TNGO Interviews
Complex	Organization self-reports as complexly structured	TNGO Interviews
FormalB	Formal board of directors	TNGO Interviews
InformalB	Informal advisory board	TNGO Interviews
ActiveBoard	Board is self-reported as active	TNGO Interviews
PassiveBoard	Board is self-reported as passive	TNGO Interviews
Faith	Organization is faith-based	TNGO Interviews
Members	Organization has a formal membership	TNGO Interviews
VolCentral	Organization self-reports volunteers as central	TNGO Interviews

Finally, the model used in this paper includes two sets of proxies for environmental changes. First, it includes sub-sector variables, with variables for the environmental, human rights, humanitarian, and conflict resolution sub-sectors, tested against the sustainable development comparison group, selected by virtue of being the group with the most organizations. Second, year fixed-effects are included to account for changes in the general funding and operating environment facing nonprofits. 2000 is used as the comparison year, due to it being the first required year for inclusion into the sample.

Table 6: Environmental Variables		
Variable	**Details**	**Source**
Y1999-Y2010	Year fixed effects, 2000 as comparison year	Form 990s
Enviro	Environmental sub-sector	TNGO Interviews
Rights	Human Rights sub-sector	TNGO Interviews
Relief	Humanitarian Relief sub-sector	TNGO Interviews
Sustain	Sustainable Development sub-sector, used as comparison group	TNGO Interviews
Conflict	Conflict Resolution sub-sector	TNGO Interviews

This final model takes the form of: Mission Change = Other Changes + Time Variant Organizational Characteristics + Time Invariant Organizational Characteristics + Sub-sector + Year. Logistic regression is used to analyze this data using different variations of this model (full

and partial; temporally ordered changes and overlapping changes). Due to the use of change

variables and prior periods, the first two observations from each nonprofit drop out of the

dataset being analyzed. Incomplete data, in the form of no financial data, led to only two

additional observations being discarded from the sample. Missing data from single variables

(such as lack of information about the current CEO) was treated as no evidence of change,

rather than being excluded. Changes in financial measures were evaluated from the previous

complete observation for the two discarded observations, while any reports from a partial year

(due to shifts in the accounting period) were annualized to calculate the total budget variable.

Data

The data and results presented in this paper draw from an as-if randomly selected third

of the total dataset, and were performed in SPSS[2]. 48 of the 152 nonprofits were fully coded in

time to perform this initial analysis, selected intentionally in a manner that would not

oversample any one sector. The TNGO Initiative sample was numbered in a manner that mostly

grouped the sub-sectors together[3]; coding for this project occurred in sets of common last

number[4], resulting in an initial set of data the covered the full spectrum of sub-sectors. After

the two earliest observations for each nonprofit dropped out of the sample, a total of 520

observations remained. The final version of this analysis will include the entire dataset (once

coding is complete), with around 1600 observations.

Not all years are covered for all nonprofits in this sample, as seen in table 7. 2001

through 2009 each include at least 45 of the 48 nonprofits, while small numbers of

organizations have data available in 1999, 2000, and 2010. Variations are due to newer

organizations, differences in filing periods and/or accounting periods (especially for 1999 and

2010 years), changes in accounting periods[5], and a limited number of missing observations. On

average, almost 13 years of data were available for each nonprofit, including the initial two

years that established baselines and prior period changes.

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[2] Future rounds of analysis are expected to be performed in SAS, which was temporarily unavailable to the author
due to hardware and software changes.
[3] For example, the nonprofits in the human rights sub-sector might all fall into codes 1 through 30.
[4] The organizations coded 22, 32, 42 ... 152 would be completed at the same time, and so on.
[5] Which explains why there are 49 observations in 2004

Table 7: Data in sub-sample by year	
Year	Observations
1999	23
2000	40
2001	47
2002	45
2003	45
2004	49
2005	47
2006	46
2007	47
2008	48
2009	48
2010	35
Total	520
Average	10.8

Table 8: Frequency of Changes	Organizations Changing	Total Changes	Average
Mission	44	93	2.1
Program	35	94	2.7
Name	10	10	1.0
Address	12	13	1.1
CEO	27	52	1.9
Board Chair	36	107	3.0

Mission changes were the most prevalent form of change in the sample, with all but four organizations altering their mission at some point during the twelve years in the panel, as shown in table 8, above. Program (or strategy) and leadership changes also occurred regularly, present in more than half of the organizations. Structural changes occurred least frequently, with only 25 combined name or address changes. Self-reported changes, see table 9 below, did not follow this same pattern, with goal changes being least common. The sub-set of data included in this paper reveals an oversampling of organizations that changes goals, relative to self-reported strategy or structure changes, which could account for this variation.

On most of the other variables captured through the TNGO Initiative interviews, the sub-set of data analyzed in this paper is relatively representative of the entire set, as demonstrated in table 9. This is especially true for representation of the different sectors, which the coding methodology attempted to distribute evenly relative to share of organizations within the larger data set.

Table 9: TNGO Initiative Variables	Current	Total	%
Cases	48	152	32%

Sector			
Conflict Resolution	4	13	31%
Environmental	9	22	41%
Human Rights	7	21	33%
Humanitarian Relief	10	32	31%
Sustainable Development	18	64	28%
Organizational Characteristics			
Advocacy	28	82	34%
Service	36	118	31%
Complex	11	51	22%
Faith Based	16	42	38%
Formal Membership	16	47	34%
Volunteers Central	17	92	18%
Board Characteristics			
Staff on board	8	27	30%
Founder on board	10	21	48%
Politically connected board	3	11	27%
Formal board	28	102	27%
Informal board	7	16	44%
Active board	28	87	32%
Passive board	14	45	31%

The other explanatory variables, drawn from the 990 forms and shown in table 10, below, demonstrate significant variation. Of particular note, the MiscPct, or percentage of revenues from sources other than donations or grants, ranged from 100% of the revenues to a negative 114% of revenues, due to one-time losses or other unusual accounting occurrences. Organizations in the sample ranged from 3 to 84 years of age in 2000. Board sizes, as might be expected saw much less variation than within employee and volunteer counts; no organization operated without a board, per legal requirements, though some report no employees.

Table 10: Descriptive Statistics of Form 990 Data					
	N	Minimum	Maximum	Mean	Std. Deviation
AgeIn2000	520	3	84	19.62	15.471
GovtPct	520	.00	.58	.0430	.10862
MiscPct	520	-1.14	1.00	.1174	.21566
BudgetChange	520	-.99	77.42	.4788	4.30234
BudgetM	520	.00	1316.50	29.1707	126.97851
AssetsM	520	-.83	327.71	11.7219	40.20153
Prgm1Pct	520	.00	1.00	.6516	.23766

Results

In the following section, two separate models of nonprofit mission change are analyzed with logistic regression. The first full model includes both current and previous year changes, while the restricted model only includes prior changes. The full model is anticipated to be more accurate, but due to temporal overlap between mission and other changes, has little ability to support causal inferences. The restricted model clearly demonstrates the omission of important variables, the other forms of change during the current period, but has clear temporal separation, and thus alleged support for evidence of causation.

Table 11: Full Model

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	372.319[a]	.171	.287

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	PriorMission	-.404	.412	.962	1	.327	.668
	PriorProgram	-.012	.400	.001	1	.977	.989
	PriorLeader	.485^	.317	2.341	1	.126	1.625
	PriorStructure	-.328	.740	.197	1	.657	.720
	PriorDeficit	-.073	.301	.059	1	.808	.930
	ProgramChange	1.130**	.357	10.008	1	.002	3.095
	LeaderChange	.621**	.312	3.970	1	.046	1.861
	StructureChange	1.445**	.575	6.307	1	.012	4.240
	Deficit	-.026	.302	.008	1	.931	.974
	BudgetChange	-.275	.267	1.061	1	.303	.760
	AssetsM	-.007^	.006	1.481	1	.224	.993
	BudgetM	.003^	.002	2.281	1	.131	1.003
	GovtPct	-1.325	1.558	.723	1	.395	.266
	MiscPct	-.631	.726	.755	1	.385	.532
	Prgm1Pct	-.842^	.754	1.246	1	.264	.431
	AgeIn2000	.012^	.011	1.295	1	.255	1.012
	Advocacy	.314	.433	.527	1	.468	1.369
	Service	-.434	.610	.508	1	.476	.648
	FounderB	-.041	.441	.009	1	.926	.960
	ConnectedB	.177	.734	.058	1	.810	1.193

StaffB	.012	.512	.001	1	.982	1.012
FormalB	.767**	.357	4.617	1	.032	2.153
ActiveBoard	-.133	.354	.141	1	.707	.876
Complex	-.761^	.481	2.504	1	.114	.467
Faith	.300	.395	.574	1	.449	1.349
Members	.464^	.427	1.180	1	.277	1.591
VolCentral	.065	.336	.038	1	.846	1.068
Enviro	-.148	.542	.074	1	.785	.863
Rights	-1.624**	.795	4.169	1	.041	.197
Relief	-.337	.494	.465	1	.495	.714
Conflict	-1.078^	.879	1.504	1	.220	.340
Y1999	-.913	.911	1.006	1	.316	.401
Y2001	-.305	.643	.225	1	.635	.737
Y2002	-.764	.742	1.061	1	.303	.466
Y2003	.235	.617	.145	1	.704	1.265
Y2004	-.892^	.747	1.426	1	.232	.410
Y2005	-.595	.686	.750	1	.386	.552
Y2006	-.333	.653	.260	1	.610	.717
Y2007	-.928^	.717	1.674	1	.196	.395
Y2008	1.670**	.576	8.412	1	.004	5.311
Y2009	.223	.643	.121	1	.728	1.250
Y2010	-.794	.786	1.022	1	.312	.452
Constant	-1.566	1.111	1.988	1	.159	.209

** Significant at a .95 confidence interval
* Significant at a .90 confidence interval
^ Not statistically significant but potentially could become significant with analysis of full data set.

In the full model, table 11 above, all three other forms of change during the same year – leadership, structure, and program/strategy – demonstrate statistically significant increases in the likelihood of mission changes. As these changes occur during the same calendar year, direction of causality cannot be inferred with any confidence whatsoever, and these results indicate the presence of causal complexity, as expected. The model also finds increased likelihood of mission change in organizations with formal boards and during 2008, with decreased likelihood amongst human rights organizations. None of the variables individually predicted by organization theories or prior nonprofit management literature were supported in these results, but could be when the entire dataset is examined.

The findings, and mostly lack thereof, related to board characteristics are interesting. Despite significant scholarship on founder syndrome and the influential role of founders more generally, their presence on the board demonstrated no results; nor did political connections or staff presence on the board. The impact of formal vs. informal boards, the only significant board characteristic, is not substantially theorized, and could be predicted to impact change in either direction, depending upon whether management or the board instigates change. A formal board would have more power to either push for changes or to resists the introduction of changes suggested by executives.

The reduced likely of organizations in the human rights sector to change missions is somewhat surprising, given that the period studied included a movement within the sector toward a broader definition of rights (Nelson & Dorsey, 2003; Roth, 2004; Rubenstein, 2004). The increased frequency of change in 2008 is most likely due to the altered format of 990s beginning in that year, rather than early responses to the economic crisis facing nonprofits. The new format does not substantially alter either the requirements or space available for describing the organization's purpose, but places it earlier in the document. The revised form includes the basic description on the first page, before any financial data, and program service accomplishments on the second page, while the original form had both on the third page, well after most of the basic financial data. According to the IRS (2007), the revised form also included more opportunities for the inclusion of supplemental information. These changes encourage organizations to pay more attention to how they describe their work, which may have led them to include additional information or make modifications to reflect prior changes that had not yet been included in their basic descriptions of their purpose.

Table 12: Restricted model without current year changes

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	394.972[a]	.134	.225

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a] PriorMission	-.412	.399	1.065	1	.302	.662

PriorProgram	.153	.378	.164	1	.685	1.166
PriorLeader	.402^	.306	1.729	1	.189	1.495
PriorStructure	-.413	.728	.322	1	.571	.662
PriorDeficit	-.049	.290	.028	1	.866	.952
BudgetChange	-.272	.260	1.092	1	.296	.762
AssetsM	-.008^	.006	2.008	1	.156	.992
BudgetM	.003*	.002	3.225	1	.073	1.003
GovtPct	-1.122	1.420	.624	1	.429	.326
MiscPct	-.376	.696	.292	1	.589	.687
Prgm1Pct	-1.390**	.689	4.075	1	.044	.249
AgeIn2000	.013^	.010	1.569	1	.210	1.013
Advocacy	.197	.410	.232	1	.630	1.218
Service	-.692^	.573	1.458	1	.227	.501
FounderB	-.035	.425	.007	1	.935	.966
ConnectedB	.488	.695	.492	1	.483	1.628
StaffB	.207	.491	.177	1	.674	1.230
FormalB	.624*	.343	3.302	1	.069	1.866
ActiveBoard	-.127	.337	.143	1	.705	.880
Complex	-.845*	.464	3.321	1	.068	.430
Faith	.281	.380	.548	1	.459	1.325
Members	.487^	.408	1.430	1	.232	1.628
VolCentral	-.021	.323	.004	1	.948	.979
Enviro	-.211	.533	.157	1	.692	.810
Rights	-1.713**	.745	5.292	1	.021	.180
Relief	-.205	.476	.186	1	.666	.814
Conflict	-1.285^	.839	2.346	1	.126	.277
Y1999	-.797	.872	.837	1	.360	.450
Y2001	-.249	.605	.170	1	.680	.780
Y2002	-.934^	.697	1.796	1	.180	.393
Y2003	.104	.588	.031	1	.859	1.110
Y2004	-.860^	.686	1.573	1	.210	.423
Y2005	-.668	.646	1.067	1	.302	.513
Y2006	-.416	.628	.440	1	.507	.659
Y2007	-.902^	.690	1.711	1	.191	.406
Y2008	1.664**	.534	9.711	1	.002	5.282
Y2009	.264	.612	.186	1	.666	1.302
Y2010	-.888^	.757	1.379	1	.240	.411
Constant	-.394	1.019	.150	1	.699	.674

** Significant at a .95 confidence interval
* Significant at a .90 confidence interval
^ Not statistically significant but potentially could become significant with analysis of full data set.

In the model without current year changes, in table 12 on the previous page, three other variables emerge as statistically significant at a 90% confidence interval, budget size increasing the likelihood of change, with the likelihood of change decreasing with increases in the percentage of expense spent on the largest program and amongst organizations self-described as complex. The other three findings from the full model remained present.

The budget size finding contradicts prior theory, which expected larger organizations to be more resistant to change, while complexity making organizations more resistant to change is consistent with theoretical explanations. The third new finding from this model, share of expenses dedicated to the largest program, is not directly predicted by organization theory, but introduces the extent to which a single large program might dominate a nonprofit's attention, and thus be less susceptible to change.

Of course, future iterations of this research incorporating the entire dataset could result in evidence of other significant factors (such as age or total assets), or lead to significant variables dropping out from this initial model. Nonetheless, these initial results find little support for prior nonprofit literature or organizational theory, except when present year changes are excluded from the model.

Discussion

The initial findings from this paper, if affirmed in future iterations, find only limited support for the existing literature on organization theory and nonprofit management. Instead, they suggest that causal complexity between different forms of change is the key feature of nonprofit organizational change. These findings, in no way, can be construed as rejecting prior literature, but they may serve to introduce the possibility of alternative elements of complexity necessary for understanding the dynamics by which organizations change. By addressing the limitations of this initial research and establishing a plan for future iterations, a better understanding of the factors and processes of change within nonprofits, and perhaps organizations more broadly, could emerge.

Measurement of variables in this project, especially mission change, leaves room for criticism. All of the forms of data are self-reported, either through interviews or form 990 filings. Most of the variables from the 990s are relatively clean measures of finances or obvious changes; mission change is not. Ideally, a more informative and consistent statement of mission and purpose would enable for greater accuracy in identifying changes. Nonetheless, the basic description of purpose deemed significant enough to include in the annual filing is a significant piece of information; changes in it are somewhat significant, if not necessarily always of the same significance. The lack of time variation amongst the variables from the interviews, and the employee, board, and volunteer counts, makes those characteristics less useful for analysis, as some or all of them would have varied over time for individual organizations and thus afforded greater precision. A future round of analysis dropping these time invariant organizational characteristics may sacrifice the ability to identify correlations involving them, but could allow for better fit through the inclusion of organization fixed effects.

The causal complexity involved in the variety of different changes nonprofit make, as evidenced by the statistical significance of leadership, program/strategy, and structure changes during the same period, rules out the ability to comfortably make causal inferences. The lack of a pre-existing fully-fledge theoretical model to test further restricts evidentiary claims. Nonetheless, identifying correlated variables for future testing is an important contribution, especially absent full theoretical models.

Removing current changes from the model reintroduces a temporal order to changes, and the illusion of evidence of causation. It also directly introduces omitted variable bias, either in the form of causally inter-related changes, or of a missing variable (or variables) that result in multiple changes. As such, the restricted model is not an acceptable substitute, and the findings it introduces absent overlapping changes cannot be considered substantiated. These observations might be supported when the entire set of data is analyzed with the full model, and may have similar implications as a result.

Despite these limitations, if similar findings occur in future iterations of this work, some conclusions can be drawn. The limited support for prior literature and theory identifies a gap in the understanding of the processes by which nonprofits change, suggested that a more

complex model, especially one addressing the inter-relation of various forms of change, is necessary. Underlying factors that drive changes would need to be identified, if present, or the mechanisms by which these multiple changes occur need to be explored.

This research will continue in the future in a number of ways which will improve the analysis and make findings more relevant. First, the entire dataset will be available in the future, and included in further iterations of analysis. Second, models with the other three forms of change as dependent variables will be compared with mission change, to identify cross-cutting or conflicting patterns of factors influencing change. Third, an alternative model may be attempted through multinomial logit that incorporates all forms of change into a single model. This would only be possible with the full dataset, as there are not yet enough observations in all combinations for meaningful analysis at this point. Fourth, an alternative form of analysis may be attempted that takes a logical, rather than probabilistic, approach to identifying factors influential in organizational change. Such an approach, likely in the form of fuzzy set qualitative comparative analysis (Ragin, 2008), does not provide the same reliability for potential causal inference as a logistic regression, but can identify patterns of necessary and sufficient conditions for groups of similar organization years that undergo, or not, changes. Finally, this paper and the future related analysis is part of a mixed-methods dissertation examining the processes by which nonprofits change. Detailed case studies of nonprofit undergoing transformational organizational change will be integrated with this statistical analysis, finding consistencies or inconsistencies between the two forms of evidence, fleshing out understanding of change processes through identification of mechanisms, or identifying better fits between bodies of theory and empirical results.

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