CHAPTER 7

HOW NONPROFITS CLOSE

Using Narratives to Study Organizational Processes

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INTRODUCTION

Organizational theorists have long been interested in why organizations close. These theories attribute closure to newness and small size (Hannan & Freeman, 1989; Stinchcombe, 1965), an inability to reproduce commitment (Starbuck, Greve, & Hedberg, 1977), intra-organizational conflict (Levine, 1978), the lack of human resources and management skills, unfavorable niche conditions (Carroll & Swaminathan, 2000; Hannan & Carroll, 1992), the lack of organizational sociopolitical legitimacy (Singh, Tucker, & House, 1986), the lack of connections to other organizations (Baum & Oliver, 1991), and the completion of the organization’s mission (Levine, 1978). Most of the studies of organizational closure focus on uncovering various correlates of failure. Except for Sutton (1987), few examine the ways that organizations close. This paper focuses on how organizations close—the process of closure—looking at how events unfold in the process of closure.

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We add to the literature by arguing that some features of nonprofit organizations, which the extant literature has ignored, may affect how they close. In particular, we focus on the non-distribution constraint and the mandate to provide community benefits. After developing a model for how and why nonprofits might close and representing these in event structures, we test these stories describing closure against the stories of closure as told by former executives and board members of 31 nonprofit organizations that closed between 1980 and 1994 in the Minneapolis-St. Paul metropolitan area.

STORIES ABOUT NONPROFIT CLOSURE

Researchers have begun to recognize that the character of nonprofit organizations can affect why and how they close. In contrast to strictly ecological studies of nonprofit closure (e.g., Hannan & Freeman, 1989; Minkoff, 1997), researchers have noted that factors distinctive to the nonprofit form affect the rate of dissolution. For example, Singh, Tucker, and Meinhard (1991) and Singh et al. (1996) discussed the vulnerability of voluntary social service organizations to external constituencies and evaluations, because of the difficulty of measuring performance using conventional output or process measures. Baum and Oliver (1991) argue that people in Toronto viewed nonprofits as more appropriate providers of childcare services. People feel that for-profit providers are more interested in profits than quality care. In contrast, nonprofits are typically viewed as more oriented toward community responsiveness, noncompetitive behavior, cooperative activities, social image, and the fulfillment of social needs (Baum & Oliver, 1996, p. 1388). They see this legitimacy as a hedge against closure and important in explaining how nonprofit childcare providers coped with competition. Hager, Galaskiewicz, and Larson (2004) also focus on the fact that nonprofits are often tied to larger institutional structures, for instance, the government, but also noted that they often have ties to donors and volunteers. Because of their orientation toward community service, these organizations can draw on the goodwill of the community, which can buffer them from the liability of newness. Because donations and volunteer time are “free” to the organization, the nonprofits have more slack than their business counterparts whose employees and investors are looking for financial returns.

This paper focuses on two institutional aspects of the nonprofit organization that previous research on closure has not specifically addressed: the non-distribution constraint and the community benefit purpose of the organization. The factors that the above studies have focused on are more prevalent in nonprofits than for-profits; for instance, ambiguous technologies (Singh et al., 1986), dependence on government funding (Singh et al., 1991), favorable public opinion (Baum & Oliver, 1996), and donations and volunteers (Hager et al., 2004). However, these factors are not unique to the nonprofit form nor does each and every nonprofit share these traits. Instead we focus on two institutional norms that uniquely bind private nonprofit organizations: the non-distribution constraint, and, for public charities in the United States, the expectation of community benefit.

Nonprofit organizations are constrained by the non-distribution requirement, which requires any organization acquiring tax-exempt status as a nonprofit organization to refrain from distributing any profits to private parties (Simon, 1987). The organization is not forbidden from generating a profit; however, private individuals either inside or outside the organization cannot personally benefit financially if the organization does make a profit. For instance, upon dissolution, the earnings from the sale of organizational assets may not be distributed to individuals but must be passed on to another nonprofit organization or used for some public purpose. Recently, this has been demonstrated in the creation of new health care foundations upon the sale of nonprofit hospitals to business owners and investors (DeLucia, 2001).

The significance of this constraint is that mission or non-financial goals are more important than earning a profit. These are what drive strategy, program planning, and policies. Examples of non-financial goals include increasing literacy, working toward social justice, feeding the hungry or providing better housing for the poor. Consequently, goal attainment or failure should be an important part of a nonprofit’s closure story. While a particular initiative in a business may succeed or fail, it makes little difference if there are no “bottom-line” implications. However, in a nonprofit where non-financial goals are important, failure may lead to serious morale problems inside the organization and a crisis of legitimacy among external stakeholders, while success may mean that the organization is no longer needed in the community.

Clearly then the personal commitment of administrators, employees, and volunteers to the organization’s goals is very important in nonprofits (Hager et al., 2004). While this seems obvious for volunteers, paid personnel often derive “psychic rewards” by working for nonprofits (Young, 1987). If a non-financial mission is driving strategy and program activities, then personnel must buy into the mission, at least to some degree, in order to accomplish organizational ends. Unless the organization is a “for-profit in disguise” (Weisbrod, 1988), in other words, plowing surplus back into salaries and perquisites, the success of the organization will depend upon personnel believing in the goals of the organization and figuring out ways to accomplish these ends. This makes people and their values/beliefs very important to the organization and the organization very vul-
nerable to people’s feelings. Indeed, if administrators, employees, and volunteers no longer believe in the stated goals, there is very little to compel them to further the organization’s mission. These are issues that businesses need not worry about as much as people will still work for pay even if they do not believe in the goals of the organization. Consequently, if insiders’ commitment to the nonprofit falters and/or they leave, it jeopardizes the organization. These are major events. If conflict erupts, the situation may be desperate since it suggests that people are not all working toward the same ends.

Another consequence of the non-distribution constraint is that it is difficult to evaluate the organization and its outputs. As noted by Frumkin and Galaskiewicz (2004), nonprofits’ outputs are often indivisible and outcomes cannot be measured until far into the future. Without the “hard data” which businesses rely on for their measures of effectiveness, such as sales, stock market price, and net income, nonprofits have to rely on other indicators. For example, they may measure number of volunteers or employees, donations, numbers served, and total revenues. But these are input measures, these measures do not get at outcomes, and many non-financial goals have to do with outcomes, such as a healthy and educated citizenry, greater appreciation of art and music and social justice (Herman & Renz, 1999). Alternatively, one measures the process of evaluation instead of actually measuring inputs, outputs, or outcomes (Forbes, 1998). Evaluation is thus socially constructed or negotiated by those in the organization. Our point is that non-financial performance is much more difficult to measure than financial performance.

One consequence of this is that it is difficult to make strategic decisions with respect to mission, since information feedback on performance is not readily available. Different alternatives can appear attractive, but there is no way to evaluate them with any rigor. In a crisis situation this can be devilish. Without clear criteria to make decisions, nonprofits are prone to experimenting and can overreact to situations and change radically. On the one hand, they might expand operations by recruiting new members, procuring a new grant, hiring new administrators, or moving into new product lines. They could also merge with or acquire other organizations. On the other hand, they can contract by divesting assets, terminating product lines, or firing people. While they may be able to calculate the potential financial benefits or liabilities of each option, there is little way to measure the potential impact on outcomes and thus goal attainment.

While nonprofit organizations may be very flexible and responsive to their internal situation and external environment, they may be too fluid for their own good. Hannan and Freeman (1989) warn that every time organizations change they raise doubts about their reliability and accountability. If they expand operations or merge with another organization, organizations have to learn new routines and figure out how to structure roles and restructure incentives. Learning imposes costs on organizations and puts them at a competitive disadvantage vis-à-vis more seasoned providers. If they contract, they lose capacity (skills and resources) and become weaker. This may also signal the outside world that they are “in decline” which will only exacerbate their problems. Thus, while it may be tempting to change course, the outcomes are not always beneficial.

It is also the case that certain nonprofits, specifically public charities, are expected to benefit the community rather than just members or owners (Simon, 1987). That is, they are expected to provide socially desirable but economically unprofitable goods and services, which the government decides it will not or cannot produce (Weisbrod, 1988, 1998). These services include education, religion, amateur sports, prevention of cruelty to children and animals, elimination of prejudice and discrimination, and relief of the poor, distressed, or under-privileged.2 In exchange for providing these community benefits, charities are given access to tax deductible contributions, and some are given exemptions from property and sales tax as well as reduced postal rates. Because they are ostensibly public-regarding, charities need to be cognizant of how the community evaluates them. If a charity’s bona fide is called into question, the community’s perceptions of the organization become crucial. In this respect they are more vulnerable to issues of legitimacy than businesses (Baum & Oliver, 1991, 1996). Thus events like a funder terminating a grant or clients no longer using the services of the organization or the public signaling that it does not want its services can be crucial. In many respects, this sounds familiar to Stinchcombe’s (1965) account of how newer organizations have to worry more about their relations to stakeholders. However, in our story this is endemic to all nonprofits whatever their age. If a public charity loses its legitimacy in the community, it may lose its community’s support.

This is not to say that finances in nonprofits are unimportant. However, their role in the organization is different from businesses where they are an end in and of themselves. In contrast, in nonprofits financials are the means to achieve non-financial ends. As James (1986) argues, nonprofits will often subsidize unprofitable mission-related activities (for instance, running a soup kitchen) with profitable activities that are not central to the mission (such as selling cookies, auctioning off prizes, hosting a golf tournament, or doing fund raising). If profitable activities fail to generate enough revenue to subsidize mission-related activities, then the organization has a financial crisis. This, in turn, can lead to program failure (insufficient funds to support mission-related activities) or to a loss of external legitimacy and support (no one wants to support a losing organization). Alternatively, program failure or the loss of external legitimacy can create a financial crisis, because of a loss of revenues. The causal ordering can go in
either direction. Nonetheless, financial performance is important in nonprofits as it is in all organizations; however, it fits into the organization's story somewhat differently than in the case of businesses.

**PUTTING A MODEL TOGETHER**

Sutton (1987) gives us a scenario for how organizations close. He argues that the death process proceeds in identifiable stages. The first stage includes efforts by members to avert organizational demise. Most of the examples given by Sutton included what we would characterize as radical change. The organization tries to do something different to increase the organization’s legitimacy, the flow of resources or efficiency. In the same period, rumors would fly about the organization that it was on the verge of closing and panic would set in. If turnaround efforts were unsuccessful, managers would then announce that closure was inevitable and begin to dismantle the organization. Often an official closing date is announced. In response, people feel depressed or sad and some feel angry with management. The next stage involves both disbanding and reconnecting tasks. Disbanding tasks sever ties between the organization and its members, clients, suppliers, and even physical objects and settings. Reconnecting consists of establishing links between these elements—especially members, employees, and clients—to other organizations. Finally, management makes a statement that the organization is defunct, the entity closes, and in some cases parting ceremonies are held.

Our goal is to speculate on how nonprofits, and particularly public charities, might close. If we modify Sutton’s (1987) general framework to fit the nonprofit organization, we would speculate that the sequence of events might follow the scenarios in Figure 7.1. Here we argue that, if an organization fulfills its mission (Mission Completion), people inside the organization will lose interest in the organization, begin to leave, and there may be some bickering over how to close down operations or whether the organization should find a new mission (Loss of Internal Commitment). After that, the organization simply closes. Nothing is really done to change the situation, since the organization has accomplished its mission and need not go on.

In contrast, a failed program (Program Failure), losing the support of external stakeholders (Loss of External Commitment), or a serious financial problem (Financial Crisis) should lead to the kind of frenetic change activity that Sutton described. A financial crisis may precede program failure or a loss of external support; alternatively, a loss of external support or program

![Figure 7.1. Model of organizational closure for nonprofit organizations.](image)

failure may precede a financial crisis. Whatever the sequence, nonprofits will respond with an effort to change the situation. Thus, the image is an organization desperately seeking a way to do something right in the face of a crisis. It may divest assets, downsize or fire staff (Contraction) or it may aggressively recruit new members, hire new people, expand their offerings, go after a new grant, or merge with another nonprofit (Expansion). We suspect that if the situation stabilizes and the organization returns to equilibrium, then the crisis is over. However, as Hannan and Freeman (1989) warn, organizational change can be problematic. If the organization expands operations or merges, it is learning how to do new things at a time when it needs stability and clear direction. If the organization contracts operations, it loses capacity and may appear to be faltering in the eyes of stakeholders. If these measures fail, then the next stage of Sutton’s story plays out: insiders walk, those who are left have a lower level of commitment to the organization, and conflict is common (Loss of Internal Commitment). At this point, people begin to connect with new causes and the organization has closing ceremonies.

**NARRATIVES**

Scholars in social and formal organization have a history of deep descriptions and careful inferences that are drawn from lengthy periods of observations and interviews. At best, this research allows a clearer understanding
of complex organizational processes. Selznick's work is emblematic of this research in his analysis of local economic and political control (Selznick, 1949) and co-optation of organizational processes (Selznick, 1952). The past 50 years have included a decided shift in scholarship of social and formal organizations. Such scholarship has come to be known as "organizational science," and most of this work reflects the positivist approach that such a name implies. As in many disciplines, large-N quantitative analysis has supplanted deep description as the primary means of studying organizational processes.

Whatever advances might be claimed from the trend toward quantitative analysis of organizations, the disadvantages are stark. The sharpest shortcoming is the diminution of complex descriptions of organizational processes, especially across individual, group, organizational, and community levels of analysis. Selznick's studies give readers a clear understanding of the nuances that influence organizational behavior and outcomes. Before quantitative analysis had become so firmly entrenched in organizational science, Daft and Wiginton (1979) argued for a greater diversity of modes of communication to the study of organizations. They suggest that the mode of analysis should match the degree of complexity in a social system. When a system is simple and well understood, mathematical models are well suited for describing the system; however, when the system is complex, high variety language is needed to make sense of the complexity.

Reflecting on Daft and Wiginton (1979), Pacanowsky (1988) extends the argument to choice of methodology. He opines that most organizational scholars, "by their choice of statistical and scholarly languages, have maximized their ability to capture low-to-medium-equivocality organizational events, but have butchered (or of necessity, avoided) highly equivocal (read: every day) organizational events" (p. 458). Organizational life is nuanced and complicated, two characteristics that often make quantitative analysis a poor choice as an investigative tool. Daft and Wiginton suggest that poem, painting, and song may be better matched to the complexity of the phenomena, although Pacanowsky is content with narrative as a means of understanding organizational processes.

Narrative as a method of analysis has been used in organizational studies, social psychological research as well as historical analyses. Franzosi (1994, 1998) argues that narratives are filled with information that gives the researcher the possibility of both linguistic and structural analyses, which are rich with evidence. Shelton Reed (1989) argues that the scholarly writing in the social sciences could benefit from further emphasis on narrative and more emphasis on application of concepts to descriptive and interpretive narratives that contextualize the theory. He suggests that not only does this offer a more interesting and provocative reading but will make social science research more accessible to the general public.

In the organizational literature, Stevenson and Greenberg (1998) analyze narratives in looking at organizational change. They employ event structure analysis to look at the narration of an organization's mobilization around an environmental issue. Additionally, social movements' scholars such as Polletta (2002) use narratives to discuss the construction of explanations of the occurrence of 1960s sit in protests. She finds that the narratives are a key method of explaining the discourse and the trajectory of the movement organizations. Social psychologists use narrative analysis to look at the construction of identity and identity politics as told in interview settings (Somers, 1994). One example of an application of this type of identity work is Mason-Schroek's (1996) study of transsexuals and how they deal with identity in preoperative interviews. Historical sociologists find narrative useful in the temporal construction of historical events. This helps to systematize explanations and interpretations of the time period studied. Griffin (1993) offers an example of event structure analysis in the story of a lynching in the 1930s to demonstrate the advantage of this method (see also Calhoun, 1998).

In the present context, narrative refers to understanding organizational processes by listening to and making sense of stories. Stone (1979) defines a narrative as the organization of materials into a sequential order and focusing the content into a single coherent story, inevitable subplots notwithstanding. Researchers have analyzed narratives in a great variety of ways, ranging from summary of general impressions to rigorous analysis of the orders and relationships of words and concepts (Miles & Huberman, 1984).

A primary, contemporary criticism of organizational analyses that rely on qualitative data is that they are not sufficiently rigorous, and that results are therefore based too much on the interpretations of the analyst rather than on the structure underlying the data. Consequently, qualitative data analysts have made inroads into the club of positive organizational scholarship through rigorous analysis of event sequences (e.g., Abbott 1993; Abbott & Helycke 1990). The method and analysis in this chapter likewise seek to bridge the methodological criticism gap via rigorous treatment of narrative data. We believe that narratives are superior elements for studying the complexities of organizational life. However, we also believe that analysts can study narratives in a way that is both honest to narratives and appropriately analytic in the eyes of the positive scientist.

A STUDY OF ORGANIZATIONAL CLOSURE

The data for this paper are from a longitudinal study of nonprofits in the Minneapolis and St. Paul, Minnesota metropolitan area (see Galaskiewicz & Bielefeld, 1998). A population of tax-exempt organizations under IRS
section 501(c)(3) was compiled from the Cumulative List of Organizations (U.S. Department of the Treasury, 1979) for the Twin Cities five county metropolitan area. The list was current for October 31, 1979. Private and corporate foundations as well as churches and congregations were then excluded; however, social service agencies with religious affiliations, such as Catholic hospitals, were kept in the sampling frame. Thus, all the organizations in our study were public charities. The organizations in the population were then coded into functional categories: health/welfare, education, legal, housing/urban development, mass media, recreational, civic, cultural, environmental and miscellaneous, and researchers took a 20 percent stratified random sample of the population. This sample included 326 nonprofit organizations, of which 229 were interviewed in 1980 and 1981. The researchers asked for detailed information on finances, personnel and organizational mission and goals.

The researchers returned to conduct follow-up interviews in 1984–85, 1988–89 and 1993–94. In 1984–85, the study interviewed 201 nonprofits, of which 193 were reinterviewed in 1988–89, they reinterviewed 174 nonprofits and for the final phase in 1993–94, they interviewed 162 organizations. By the end of the study in 1994, there were 156 organizations. (For further details on the study design consult Galaskiewicz & Bielefeld, 1998 and Hager et al., 1996.)

Through the course of the fourteen-year study, 74 organizations left the panel. Thirty-nine of these exits were because the organization closed. Organizational closure was defined as an organization whose services were no longer available to the community. Thus, mergers, acquisitions, conversions, and departures were not counted as closures. For some organizations, the legal status of nonprofit may still exist, but there is no activity within the entity (see Hager et al., 1996). These organizations were considered dead.

One of the authors conducted in-depth, audiorecorded exit interviews with representatives from 31 of the 37 cases (Hager, 1999). He was unable to find or was turned down by representatives of six organizations. Since recall problems and respondent reinterpretations of historical events challenge this research design (several organizations had been closed for more than 10 years), he sought multiple respondents whenever possible. For 21 organizations there was a single respondent, in 10 there were at least two respondents. Most interviews were conducted face-to-face, although some were collected over the phone and some stories were supplemented by stories found in newspaper archives. Most of the organizations that closed were very small with little or no paid staff.

Hager (1999) asked interviewees to tell us all they could about the circumstances surrounding the closing of their organization. The questioning was open-ended and the interviewer asked a minimum of questions, preferring to allow the respondent to tell the story. By using open-ended ques-

<table>
<thead>
<tr>
<th>Table 7.1. Organizations by Activity</th>
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<tbody>
<tr>
<td>Educational</td>
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<tr>
<td>Social Services</td>
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<tr>
<td>Arts</td>
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<tr>
<td>Church Affiliated</td>
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<tr>
<td>Children</td>
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<td>Urban Development</td>
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<td>Seniors</td>
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<tr>
<td>Political</td>
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<tr>
<td>Health Care</td>
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<tr>
<td>Other</td>
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</tbody>
</table>

How Nonprofits Close 179
the arts. There were a significant number of organizations with church affiliations that offered services such as counseling or marriage "encounters." Four organizations focused on activities designed to bring housing or development to the urban areas. Our sample had three organizations apiece that focused on senior citizens, political activities and health care.

Figure 7.2 shows the age distribution in the thirty-one organizations we interviewed. In total the average age at closure was 13.4 (with a standard deviation of 10.5). In Figure 7.3, 48.3 percent or almost half of the organizations were less than ten years of age and 77.4 percent of the organizations were under the age of 15 years. These 31 organizations were generally younger than the organizations that survived the panel study (Hager et al., 2004).

Armed with 31 transcripts of such stories, our research question was whether we could uncover general processes of organizational closure. That is, despite the fact that the details of each story were startlingly different, could we abstract chains of events that helped to explain (and therefore increase understanding of) the organizational closure process for these community-based nonprofits?

![Number of Organizations](image)

**Number of Organizations**

<table>
<thead>
<tr>
<th>Number of Organizations</th>
<th>0</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of Age at Death</td>
<td>1-5</td>
<td>6-10</td>
<td>11-15</td>
<td>16-20</td>
<td>21-25</td>
<td>26-30</td>
<td>31-35</td>
</tr>
</tbody>
</table>

**Figure 7.2. Age of organizations at closure.**

Three Approaches to Data Analysis

Some research projects begin with a clear plan for data collection, analysis, and reporting and end after implementation of that plan. This was not one of those projects. Rather, the data analysis described in this chapter emerged over a period of years. At each stage, we took stock of the nature of our data and the array of tools available to us and adapted the tools to fit our analytic needs. Retrospectively, we can identify three distinct approaches to data analysis, each with its own following and literature. Our results are a unique amalgamation of different approaches to the analysis and presentation of qualitative data.

1. Event Structure Analysis

The first task was to translate each organizational narrative into a format that would facilitate analysis. We considered Abbott’s (1983, 1992) optimal matching approach, but that approach is limited to linear sequential events while our stories rarely described linear sequential causal processes. Rather, the stories more often reflect a complex web of interconnected events. Consequently, we adopted Heise’s (1980) event structure analysis (ESA). Event structure analysis is a computer-assisted method for defining the logical relations among events, focusing on how each event enables and expands other events (Heise, 1991).

The first step in creating an event structure of a narrative is reduction of the narrative to a list of sequential events. These events are rarely a series of events where one event is a necessary and sufficient condition for the event that immediately follows it. Rather, the list is a sequential offering of events that were relevant to the research query—that is, the reasons why the organization closed. The event list for an art organization in our study is as follows:

1. Divorce of the directors.
2. Not enough staff to maintain the organization.
3. One director left the Twin Cities.
4. Organization closed.

To create the event structure for this case, we entered these events in the given order. When all the events have been entered, ESA asks a series of questions about how each event relates to previous events. More specifically, ESA asks which prior events are prerequisites for the last event entered, building a logical structure of cause and effect as it goes. For example, ESA began its queries with "Was divorce of the directors a cause of not enough staff to maintain the organization?", to which we answered "Yes" since our understanding of the story and the dynamic of organizational
events dictated that the divorce was a direct cause of the staffing problems for the organization. Next, ESA asked “Was not enough staff to maintain the organization a cause of One director left the Twin Cities?” to which we answered “No” since the narrative did not suggest that the reduced staffing was the reason why one of the directors left the city.

The questions continue until ESA has established a full accounting of all the causal relationships between events. ESA does not need to ask about all the logical combinations of events, however. According to Heise (online tutorial), “ESA conducts complete and very efficient elicitations, asking every required question and never a needless question even in very complex systems with scores of events.” Once the questioning was complete, ESA displayed its output in a relational graphical display with nodes representing events and lines representing causal connections between events. The event structure for the arts organization example is found in Figure 7.3.

The reader should be aware of two important characteristics of these structures. First, the figures represent a chronological unfolding of organizational events. This is not to say that the events represent a timeline where the distance between events in the event structure represents a proportional amount of time elapsed. Rather, the boxes have only a simple temporal relation with top boxes representing initial events, parallel boxes representing concurrent events, and the bottom box representing the terminal event. Second, the boxes in the figures have not been selected to tell a particular story, but rather represent the best approximation of organizational events based on the data in interviewee narratives. They are a reduction of the existing data, with the minimum of interpretation required to portray a coherent narrative of organizational events.

Heise (1991, p.136) contends that event structure analysis “materializes expert understandings about processes that might be impenetrable to the uninformed.” Whereas we began with a narrative about marital divorce and ultimate organizational demise, the result is a logical structure of events from beginning to terminal event and pairings of events that have causal relationships. According to the event structure (Figure 7.3), the co-directors’ divorce (the first event which the interviewee identified as relevant to the closure story) resulted in two outcomes, namely the lack of adequate staff to run the organization and the decision for one director to pursue a job in another city. Both of these factors directly influenced the closure of the organization.

Hager (1999) initially constructed 31 event structures. Subsequently, two colleagues reread the original narratives and made suggestions on how the event structures might be modified. These suggestions were incorporated in the event structures we analyze in this paper. While the structures were informative in their own right, they did not immediately result in information that would allow us to make claims about general organizational processes. For that, we needed to conduct additional analysis.

2. Focused Coding of Events

Glaser and Strauss’s (1967) pioneering book, The Discovery of Grounded Theory, remains the most thorough guide on the systematic inductive development of general empirical claims from narrative or observational data. Many qualitative data collection projects generate idiosyncratic events or observations that must be sorted into categories. If a category captures a large number of these events or observations, it takes on theoretical significance. Part of the sorting process in the grounded theory approach is called “focused coding.” Charmaz (1983) describes focused coding in this way:

Focused coding is the second, selective and conceptual, phase of the coding process. In focused coding, the researcher takes a limited set of codes... and applies them to large amounts of data. The process is selective because the researcher has already weeded through the materials to develop a useful set of categories. It is conceptual because the codes employed raise the sorting of data to an analytic level rather than one that is used to summarize large amounts of information (p. 116, emphasis in original).

Whereas the example discussed above had only three events preceding closure, more complicated cases had more than 30 such events. The goal of focused coding was to sort hundreds of precipitating events into a discrete number of theoretically meaningful categories. This was achieved through an iterative process wherein we generated a list of general categories that encompassed the specific organizational events. For example, “divorce of co-directors” generated a category of internal conflict after we observed other examples of discord among our organizational events. "Not enough staff to maintain organization" fostered a category of low board/staff capacity, and "one director left Twin Cities area" helped generate abandoned by insiders.

![Figure 7.3. Event structure for arts organization divorce example.](image-url)
The creation of categories and focus coding of events is not straightforward due to its subjectivity. Consequently, the three authors and two additional colleagues read interview transcripts, reviewed event structures, and independently coded events into the emerging analytic categories. When we differed on coding, or when events suggested the creation or elimination of an analytic category, we met to discuss and resolve the issue. The final categories and focus codes of events were reached through debate and consensus. Table 7.2 shows our final list of 31 focused coding categories, the number of different organizations where we found this code, and the number of times we found this code across all organizations.

Table 7.2. Focus Codes and Frequency Within Event Structure Diagrams

<table>
<thead>
<tr>
<th>Focus Code Description</th>
<th>Organizations with code</th>
<th>Code Frequency within all ESDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Declining civic capital: People's interest in and ability to volunteer time to work on projects that benefit the community. Declining civic capital means that people were less likely/willing to volunteer.</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2 Decreased commitment to the organization/mission: People in the organization were not as committed to the organization or its mission as before. They exhibited frustration, depression or burnout.</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>3 Decreased funding availability: Funding for the organization had dried up or funders (donors, foundations, government agencies, companies) were not as interested in funding the organization or its mission.</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>4 Displaced by competing organization: Other nonprofits, for-profits or government agencies began to provide similar services to the same clients as the focal organization.</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>5 Expansion of infrastructure: The organization expanded its operation into a new domain, for instance provided a new program or service, served a new type of client, or acquired another organization.</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>6 Abandoned by insiders: Members and people who were working for the organization, for instance managers, employees, volunteers (but excluding clients), left the organization voluntarily.</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>7 Abandoned by clients: Users/consumers of the organization's services stopped attending/buying services.</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>8 Low board/staff capacity: The people in the organization lacked the skills/energy/capacity to do the work of the organization.</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>9 Mission completion: The organization accomplished its goals.</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

10 Program failure: The organization tried to provide some activity or program services to members and/or clients, and it failed or failed to accomplish the goal it set for itself.

11 Reliance on a declining movement: The organization had been a part of a larger social movement, but interest in this movement had begun to wane.

12 Internal conflict: Somebody in the organization was in conflict with someone else.

13 Institutionatization: The organization formalized procedures.

14 Downsizing: Closed facilities, eliminated programs, or people were fired or dismissed.

15 Financial crisis: Organizations did not have enough money to pay their bills or there was a scandal having to do with finances.

16 Hire or recruited new personnel: Organization recruited new staff, trustees, volunteers or administrators.

17 Received new grant or contract: Organization received a new grant or contract from a government or private sector funder.

18 Deviation of assets: Organization sold or donated some or all of their assets.

19 Public doesn't want/need services: There was no interest or need to the community for the services/products of the organization.

20 Government extraction on activities: Government made them do things that were unpleasant or told them not to do certain things such as lobbying or engaging in political activity. Also, government insisted on certain standards/accountability.

21 Image/reputation declines/suffers: The image or reputation of the organization is soiled or damaged.

22 Program success: The organization does something right, succeeds in a project/program it implemented.

23 Merged: Organization merged with another.

24 New members joined: New people joined the ranks of the organization.

25 Random events: Acts of God, mishap, accidents, etc.
Table 7.2. Focus Codes and Frequency Within Event Structure Diagrams

<table>
<thead>
<tr>
<th>Focus Code Description</th>
<th>Organizations with code</th>
<th>Code Frequency within all ESDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 Firing: Organization fires a member of senior management, Board or senior management dismisses a key member of the management team.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>27 Inertia: Organization’s management or board members do not change.</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>28 Disband: Board votes to disband the organization.</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>29 Consume: The board convenes for positive change.</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>30 Demographic Shifts: Broad scale societal or demographic changes.</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>99 Miscellaneous</td>
<td>10</td>
<td>14</td>
</tr>
</tbody>
</table>

The result of this process was that relationships between idiosyncratic events were reduced to relationships between analytic categories of events. That is, while “divorce of co-directors” leading to “one director left Twin Cities area” does not allow us to make general claims about organizational processes, internal conflict leading to being abandoned by insiders does. However, the observation of this relationship in a single case, or even in a handful of cases, does not lead us to conclude that the process is generalizable. The task remains to review the cases for common sequences of events.

3. Qualitative Comparative Analysis

Qualitative comparative analysis (QCA) looks for various paths to an outcome variable through the use of Boolean algebra (Ragin, 1987). The methodology finds combinations of causal conditions using truth tables of binary data. A truth table predicates the presence or absence of conditions that lead to a particular outcome. The presence of a condition is coded “one” and the absence of a condition is coded “zero.” Using Boolean algebra, these tables are then reduced logically to an equation that gives the combinations or paths leading to the outcome. The method helps to discern the key factors that create the outcome while dropping the unimportant events. One way to think of this process is that we are discovering the “recipe” that leads to our outcome, in this case, organizational closure. There may be several combinations of ingredients that create the same outcome. Through this method, we use deductive reasoning to discern which ingredients those are. Qualitative comparative analysis is especially useful for studies where the researcher has in-depth knowledge of a smaller number of cases. It has the advantage of rigorously and logically analyzing data while still allowing for a smaller number of cases.

If we think of organizational closure as the outcome event—closure, the results of a QCA analysis might be a Boolean algebra equation where there were two or more paths toward that outcome. It is important to note that in Boolean algebra, logical AND is multiplication, while logical OR is addition. Using the example in Figure 7.3, we can describe two paths to closure in this organization:

**INTERNAL CONFLICT
→ (and) LOW BOARD/STAFF CAPACITY + (or) ABANDONED BY INSIDERS
→ (=) ORGANIZATIONAL CLOSURE**

In this case, there were two paths toward the outcome of organizational closure, (1) internal conflict (divorce of co-directors) weakened the capacity of the board/staff which then lead to closure or (2) internal conflict lead to an insider leaving the organization (one of the co-directors) which then lead to closure.

To look at our data using QCA, we turned the focus codes into variables in the truth tables where “one” was the mention of this event in the narrative and “zero” was nonexistence of the condition. The truth table describing the presence or absence of a focus coded event in the stories of the 31 organizations is found in Appendix A. Because it is a binary variable, if an event structure diagram contained two of the same focus code, it was coded as one (or the presence of the event).

In these data, there are several issues with using QCA to analyze the data. To begin with, all of the cases have the same outcome (they have all closed their doors). Thus the outcome for each case in our sample has the presence (coded as one) for the outcome. In QCA, the researcher can gain significant logical leverage with negative cases. In this study, there is no possible narrative explaining how an organization did not close, so there is no way to create a viable negative case. Thus our task of looking for the various combinations of these variables/focus codes that lead to organizational closure becomes considerably more challenging.

With 31 possible focus codes (or coded events), it is immediately apparent that it is problematic to address the logically possible combinations with the data we have. Each code or variable increases the number of logically possible combinations. The formula is $2^k$ where $k$ = the number of causal conditions. Whereas a study with 4 coded events yields $2^4$ or 16 logically possible combinations, a study with 31 coded events would yield $2^{31}$ or $2,147,483,648$ logically possible combinations. With so many combinations across the entire set of variables or focus codes, we had no common combinations. Indeed it was difficult using even selected focus codes to obtain any useful combinations with the QCA software. This is not surprising given the number of logically possible combinations for our set and our
It is important to remember that in using this method, overly complex models with multiple levels of causality will be harder to fit to the population, while simpler models with only one causal level will be much easier. As a result, we attempted to work with the theoretical building blocks of simpler models to determine a useful explanation of organizational closure among community based nonprofit organizations. Then we proceeded to build and test more complicated models. To determine the fit of the model, we looked at the event structure diagrams that contained the focus coded events of interest and then made sure that the causal direction of the events was consistent with the model. We ignored intervening events between the causal variables that we were examining. We were interested in the existence of the causal direction in the structure of the argument. Thus, we examine if the structure of the theoretical account exists within the trajectory of the narrative.

1. Program Failure/Mission Completion/Lack of External Commitment/Financial Crisis

Our first proposition is that program failure, mission completion, a lack of external commitment or financial crisis was commonplace in the stories about closure. In effect, these factors were important catalysts for closure. Program failure was mentioned twelve times and occurred in eleven different organizations. Six organizations said that they completed their mission while fifteen organizations said they had a financial crisis. Twenty-one organizations expressed that the public didn't want or need services, there was a decrease in funding, or the clients abandoned them, indicating that there was a loss of external commitment to the organization. If we were to express this model in a QCA notation, it would read as follows:

Model 1

\[ \text{PROGRAM FAILURE} + \text{(or) MISSION COMPLETION} + \text{(or) FINANCIAL CRISIS} + \text{(or) LACK OF EXTERNAL COMMITMENT} \]

We found that this model as a whole described the situation in thirty of the organizations in our study (that is 96.7 percent of the organizations).

2. Lack of Internal Commitment

We argued that nonprofits are particularly vulnerable to changes in commitment of their staff and volunteers. When a crisis occurs, the organization will find it difficult to survive if personnel are not committed to the...
organization. If those inside the organization lose faith, the organization is doomed to fail. We define a lack of internal commitment as abandonment by insiders, a decreased commitment to the organization by staff, administrators, or volunteers, or conflict within the organization.

Model 2

Lack of Internal Commitment
ABANDONED BY INSIDERS + (or) DECREASED COMMITMENT + (or) INTERNAL CONFLICT
→ (c) ORGANIZATIONAL CLOSURE

Twenty-four of the 31 organizations fit Model 2. That is, 77.4 percent of the cases mentioned a lack of internal commitment in their narratives.

3. Organizational Expansion or Contraction

We argued that when nonprofit organizations face crises they make changes, partly because there are no established measurement criteria that can inform administrators and board members about what needs to be done. The organization continuously overcorrects its course, and personnel who observe this tendency can lose faith in the organization and its mission if they are unsuccessful. Because expansion requires organizational members and employees to create and/or learn new techniques and routines and contraction reduces organizational capacities, the chances of failure are high.

Beginning with the concept of organizational change, our data showed two types of change events within the organizations: contraction and expansion. Some organizations changed by attracting new members, expanding programs, hiring new executives, getting new grants or merging with other organizations. In this way they expanded their base and tried to make positive changes to help the organization. Other organizations divested assets, downsized or fired executives, thus contracting the organization. Model 3 incorporates these two types of change (see Figure 7.6).
Model 3

**Organizational Expansion**
NEW MEMBERS + (or) EXPAND PROGRAMS + (or) HIRE EXECUTIVE + (or) NEW GRANT
or
**Organizational Contraction**
DIVEST ASSETS + (or) DOWNSIZE + (or) FIRE EXECUTIVE
→ (=) ORGANIZATIONAL CLOSURE

The overall fit for Model 3 is 58.0 percent (18 of 31 organizations).

4. **The Overall Model**

We built Model 4 from the components in Model 1 and 2. According to our story, program failure, mission completion, a lack of external commitment or financial crisis are key precipitating events. These lead to a lack of internal commitment: internal conflict, insiders abandoning, and a decreased commitment to the organization. We can model this process using the following equation. These components of the model in Figure 7.7 can be expressed in the following Boolean equation where "→" represents both a logical AND as well as a causal direction in the event structure diagram.

Model 4

**PROGRAM FAILURE** + (or) **MISSION COMPLETION** + (or) **FINANCIAL CRISIS** + or
**Lack of External Commitment**
PUBLIC DOES NOT WANT SERVICES + (or) DECREASED FUNDING + (or) CLIENTS ABANDON
→
**Lack of Internal Commitment**
ABANDONED BY INSIDERS + (or) DECREASED COMMITMENT + (or) INTERNAL CONFLICT
→ (=) ORGANIZATIONAL CLOSURE

We find that this model fits fifteen of the thirty-one organizations in the sample accounting for 48.3 percent of the organizations.

Finally, we constructed a complete model that addresses all of the components in Models 1–4. In this model, the precipitating factors are program failure, financial crisis, a lack of external commitment and mission completion. For this model, we suggest that mission completion leads directly to a lack of internal commitment, while program failure, a lack of external commitment, or a financial crisis would first lead to an organization trying to implement some sort of change through either expansion or contraction. After getting new members, hiring an executive, expanding programs, getting a new grant, divesting assets, downsizing or firing their executive, we suggest they lose internal commitment. By this, we mean that they will have internal conflict, insiders abandoning, or a decreased commitment to the organization.

Model 5

**PROGRAM FAILURE** + (or) **FINANCIAL CRISIS** + (or) **PUBLIC DOES NOT WANT SERVICES** + (or) **DECREASED FUNDING** + (or) **CLIENTS ABANDON**
→
**Organizational Expansion**
NEW MEMBERS + (or) **EXPAND PROGRAMS** + (or) **HIRE EXECUTIVE** + (or) **NEW GRANT**
or
This model described the pattern in ten organizations, which makes up 32.2 percent of our sample. Considering the complexity of this model, it seems to hold some explanatory power.

Summary and Discussion

Our best fitting model is also the simplest. The first model focused on the precipitating events program failure, mission completion, financial crisis and a loss of external commitment. Program failure was a common occurrence. It occurred in eleven organizations. One arts organization had a successful big name performance, which generated money and helped their financial situation. They tried the same tactic again and the second big name performance did not generate the expected revenue. As a result, they laid off staff and moved to close the organization.

Six of our organizations reported that they closed because they completed the mission of their organization. This is a point that is often not addressed in the literature. Rather than organizational death being a failure of the organization to survive, in these cases the organization actually succeeded in its goal. One such organization was a grassroots movement to mobilize the community for a specific change in local governance. When they succeeded in making the changes, they stopped meeting and disbanded. This finding is in contrast to the idea that a voluntary organization will continue to exist in perpetuity even when they have completed their mission.

Sills (1957) discusses the dilemma faced by the March of Dimes organization. Upon realizing that the Salk vaccine was likely to eradicate polio in 1955, the organization faced the completion of their mission. Rather than turn out the lights, they chose to take up the cause of infantile paralysis because this issue did not have a champion to raise money and awareness, thus mobilizing the resources of an already established and respected organization toward a new mission. While this “story” has come to define the nonprofit sector, our findings suggest that this is not always true and should be reexamined.

When external stakeholders lose interest in a nonprofit, it has an impact on the organization’s ability to stay viable. In our sample, this was one of the key variables. Some organizations found that their client base or audiences were decreasing. Others had a hard time finding new funding sources when old ones dried up. It was evident in the narratives that nonprofits were dramatically affected by developments in their external environment. One organization that was focused on educating the community on issues of aging reported that the public had little interest in their message. The respondent said “why keep educating the world if they don’t want to be educated?” Another organization that was dedicated to the dis-
tribution of certain films found that they were receiving less and less calls from interested parties. When the organizations began to get less support and positive response from the community for their mission, employees within the organization became less committed to their mission.

Organizational closure among these nonprofits was influenced heavily by the loss of internal commitment as seen in Model 2. Waning commitment brings the viability of the organization into question. People hold these community-based nonprofit organizations together. One organizational closure involved an accident that left the director incapacitated and unable to work. He was so essential to the success of the organization that they had to close their doors. Another organization that offered Jewish couples marriage workshops closed their doors because they lost the rabbinical couple that had previously conducted the workshops. In these cases the organizations faced a difficult hurdle when there was a change in the organizational leadership. These organizations were driven by mission, not profits, and if people ceased to believe in the organization or withdrew support, these organizations were in big trouble.

At the same time, we did not find as much resistance to closure or conflict as we had expected. When reading through the narratives about closure we were struck by how respondents used particularly organic metaphors such as "it withered on the vine," "we eased our way out of it," "finally it dissolved," the "thread started unraveling and unraveling and finally it was gone." Respondents talked about the organization's closure as almost a natural occurrence. There was little anger or resentment. In describing the death itself, respondents reported "it was harmonious, it died gracefully," "if no one calls a meeting, we won't meet again," "There wasn't a lot of fuss about it," "it was time to close" and "we just stopped meeting." These metaphors could indicate that as nonprofits began to notice a loss of community and internal interest in the organization, they followed a natural process toward closure. Indeed, looking at Table 7.2 we recall that there was very little conflict. Only seven organizations mentioned internal conflict (although these seven mentioned more than two instances of conflict on average in their organizations). But the narratives of those closures seemed only mildly conflictual. For instance, one organization that had conflict as a part of the narrative can be seen in Figure 7.3. The two founding members who had been married and were closing the organization because they were divorcing. Thus while people's commitment was an important part of the closure stories, there was not much resistance to closure.

It could be that non-financial goals provide a less volatile organizational context than if there are financial incentives. For example, one possible reason for the lack of conflict is that nonprofit tax status disallows distributing the assets and resources of the organization among stakeholders in the organization upon dissolution. Thus there is no incentive to engage in conflict when it is clear that the organization is in demise. In this case people within the organization may choose to "cut their losses" and leave the organization without conflict rather than stick around when it would be unlikely that they would receive any reward for doing so.

Model 3 is a change model that looks at what these organizations did either through expansion or through organizational contraction. Not surprisingly, eighteen out of our thirty-one organizations had some form of change in the process of closure. Often organizations seemed to try to make some changes as a "last ditch effort" in order to save their organizations. For instance, one housing development organization hired an executive director to save the organization. He had little support and it became impossible for him to pull the organization out of their crisis. Other organizations experienced these changes in the process of closing their doors. For example, a dance group had increasing problems from a damaged reputation to financial mismanagement. They fired the old director and hired a new one, but the difficulties continued, so they had to lay off staff and eventually close their doors.

Ten organizations fit Model 5. This model is the most complicated. On the one hand, in organizations that completed their mission, employees' and volunteers' commitment waned and they left the organization. Eventually, they closed without much rancor. On the other hand, in the wake of program failure, financial crisis, or a loss of legitimacy, there were change initiatives. Similar to Sutton's description of the organizations he studied, organizations in our sample often tried to do something to solve the problem. Sometimes they tried to expand organizational activities; sometimes they contracted. In turn, internal constituencies withdrew their support or reduced their commitment to the organization. That nearly one-third of the organizations in our study exhibited this pattern strongly suggests that this is a very credible model describing nonprofit closure.

Thus far we have not discussed financial crises. In our earlier discussion we implied that it may not be as central to nonprofit closure because goals were primarily non-financial in nature. Yet there were 19 instances of financial crises in 15 organizations, a little less than half of the organizations. While it is clear that finances appeared in our closure stores, we found evidence that they may not be as important for nonprofit organizations as the other events we cited. To illustrate, we took the financial crisis variable out of our Model 5 and found that all ten of the organizations still had paths toward closure that fit the model. This is not to say that there were not paths in the models that did use the financial crisis variable, but our model fit some organizational narratives with multiple paths. This suggests that the financial crisis variable in Model 5 is not a necessary or sufficient condition for the closure of a nonprofit organization. While it is
certainly a factor; it seems to be a factor that happens in conjunction with other events. This makes sense with what we know about nonprofit organizations. The lack of a focus on profit means that while it is important for these organizations to find the finances to secure their activities, it is not the key motivator.

Finally, we should note that the incidence of closure was quite low. We began the study period with 229 public charities. At the end of the 15-year panel, 156 were still in our study. However, only 39 actually closed down operations. The rest moved out of town, merged with another organization, converted to another form, closed and reopened again, or decided that it no longer wanted to be in the study. It is hard to say if this is a high or low "death rate," however, it suggests that failure is not pervasive, especially since we know that six of the 39 closed willingly because they had completed their mission. This suggests either that nonprofits are very robust and can "take a lot" or that they live well beyond their usefulness. Economists might argue the latter. Because of the non-distribution constraint, there is little incentive to acquire them if they underperform and no financial incentive to liquidate their assets. This, of course, reminds us of Meyer and Zucker's (1989) permanently failing organizations which persist even though they perform poorly. Yet because nonprofits are not held to a "bottom line" and "efficiency norms," they may be much better able to ride out the hard times. People who have an interest in literacy, health care, education, social justice and helping the needy and disadvantaged may be stymied because of the lack of funding or the departure of key personnel, but their goals are still intact and, evidently, so are their organizations. Needless to say, more research on the apparent longevity and resiliency of the nonprofit form needs to be done.

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NOTES

1. This is not to say that employees of nonprofits will work for free. However, there is substantial evidence that pay in nonprofits is less than in for-profits for comparable work (Young, 1987).

2. For a complete list of purposes which would qualify an organization for public charity status under section 501(c)(3) status of the U.S. Internal Revenue tax code, see www.irs.gov/charities/charitable/article/0, id=96009,00.html (accessed 11/16/2004).

3. Of the organizations that exited the panel and did not close their doors, seven reorganized into a new entity, four merged or were acquired, four became or merged with for-profits, two left the sample area, two were in the same area, four were never in the sample area, four closed but then revived, and two were lost. For four organizations the parent organization closed and six organizations refused to participate.

REFERENCES


APPENDIX A
Truth Table of Organizations by Focus Codes

| Org | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 99  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| A   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   |
| B   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   |
| C   | 1   | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| D   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| E   | 0   | 0   | 0   | 1   | 1   | 0   | 1   | 0   | 0   | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 1   |
| F   | 1   | 1   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| G   | 0   | 1   | 0   | 0   | 1   | 0   | 0   | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| H   | 0   | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| I   | 0   | 1   | 0   | 1   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| J   | 0   | 1   | 0   | 0   | 0   | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| K   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| L   | 0   | 1   | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| M   | 0   | 1   | 1   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   |

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