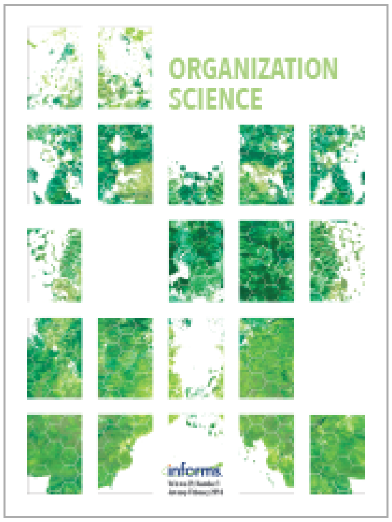

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"Making" Your Numbers: Engendering Organizational Control Through a Ritual of Quantification

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Abstract. Numbers such as output controls drive action in organizations, yet we know little about how key numbers are created and take on authority. Using qualitative data from multiple properties managed by a hotel management firm, we find that individuals develop and then become committed to achieving budget goals through a *ritual of quantification.* The budget numbers serve as output controls for the properties and employees. We find that the strength of the budget number as an undisputed future projection emerges from the ritualistic intertwining of process and normative controls in the course of producing a robust output control. Process controls delineate stages in the budgeting cycle, while normative controls (performative work and emotional investment) operate at each stage, propelling people from one stage to the next while also increasing commitment to both the process and the outcome. The result is a single reified budget number. This ritual of quantification further fosters collective solidarity and an underlying belief in the objective authority of numbers to motivate action, assess success, and drive continuous organizational growth. This work has implications for our understanding of systems of organizational control, rituals of quantification, and the microprocesses supporting the emergence of numbers seen as objective and neutral.

Keywords: quantification • qualitative research • organizational processes • governance and control

Organizational control is often enacted through what is known as "output control," in which individuals, units, and organizations are required to meet quantified targets. While scholars have long been interested in how output controls direct individual behavior and organizational decisions (Anderson and Oliver 1987, Cardinal 2001, Eisenhardt 1985, Turner and Makhija 2006), we know little about how these targets are created and why some output controls are aligned with organizational interests and others lead to gaming and malfeasance (Hope and Fraser 2003). Without deeper insight into how output controls are produced, we cannot fully understand how these numbers may or may not exercise control in organizations.

We look to the literature on organizational ritual to understand how middle managers simultaneously create and come to accept the authority of output controls (Islam and Zyphur 2009, Johnson et al. 2010, Trice and Beyer 1984). By conceptualizing the number production process as a ritual, we observe how process and normative control intertwine in service of creating a robust output control. In essence, process controls delineate stages and the activities expected in each stage. The performative and emotional elements of normative controls operate in conjunction with process controls, increasing commitment while simultaneously motivating the move from one stage to another. The lens of ritual calls attention to the relationship between engaging in a sequence of structured activities, experiencing intense emotion, and establishing robust output controls.

We detail this *ritual of quantification*—a ritualistic process through which key financial figures are developed. Specifically, through ethnographic data gathered in workplaces and homes of middle managers, we examine the process of budgeting in multiple properties run by the same hotel management firm. At Silver Lake Hospitality (SLH),[1] budgeting is an intense, collective process that requires a substantial investment of time and energy from middle managers and corporate executives. The budget number that results serves as a strong output control; indeed, the budget number (a projected profit goal) for each hotel becomes an uncontested benchmark of organizational and individual success.

Although we ground this analysis in literature on organizational control (Brenner and Ambos 2013, Ouchi and Maguire 1975, Turner and Makhija 2006), the control literature does not fully attend to how different forms of control can operate together as a dynamic system (i.e., output, process, and normative control). Organizational ritual offers a compelling theoretical lens for analyzing *how* these forms of control are intertwined. Ritual provides a language for analyzing the emotional and performative aspects of human behavior within the constraints of a clearly defined sequence of stages. In so doing, ritual allows us to precisely examine how people transform numerous disparate inputs into a single robust output control and become committed to upholding the resulting number. Building on Islam and Zyphur (2009), we define organizational ritual as (1) a repetitive and highly organized set of sequential activities that are reenacted on an annual basis separate from, and in parallel to, everyday work activities; (2) a set of activities that are collectively performed by emotionally invested individuals; and (3) a process that acts to reaffirm latent meanings and organizational values.

Beyond showing how normative and process controls intertwine in service of a robust output control, the analytic lens of ritual draws our attention to the broader significance of budgeting. We find that budgeting inculcates individuals with organizational values around the objectivity of numbers and potential for continuous organizational growth. In sum, these data suggest that it is through the ritualistic *doing* of budgeting that individuals and collectives come to have faith in the process, internalize the outcome, and affirm organizational values around the authority of numbers. These insights add to theories of organizational control by outlining how different forms of control work together to establish strong output controls. Beyond such transactional findings, we reveal the role of rituals of quantification in instilling organizational values and perpetuating impossible ideals.

Organizational Control

Output Controls in Budgeting

The literature on organizational control has a long history detailing how management motivates individuals to work in service of the organization. Control "align(s) employee capabilities, activities and performance with organizational goals and aspirations" (Sitkin et al. 2010, p. 3). Process, output, and normative control are presented as broad categories of control utilized to accomplish this objective (Brenner and Ambos 2013, Eisenhardt 1985, Ouchi 1979, Turner and Makhija 2006).

For budgeting, the most obviously relevant category is output control—control based on numerical goals whose accomplishment indicates an individual or unit's success. Output controls are a set of targets (such as production volumes or schedules, profits, or customer satisfaction levels) by which unit performance is assessed (Cardinal 2001, Eisenhardt 1985, Ouchi and Maguire 1975, Snell 1992). Such numbers are often translated to individual-level output controls that direct worker activity toward the accomplishment of a clearly specified goal. Employees judged via output controls are assessed solely by whether a particular target is met (Thompson 1967, Turner and Makhija 2006), not by how that target is met. For example, scholarship has found that when restaurant managers were given a target for food margins, individual managers developed different ways to reach that objective; one manager focused on selling best-selling items and another the most expensive items (Ahrens and Chapman 2004, 2007).

The well-known challenge for output controls is malfeasance and unintended consequences that result from unclear, overly difficult, or ambiguous standards of performance (Kerr 1975, Ridgway 1956, Simons 1995). Prior research suggests people often manipulate goal-setting activities and/or exhibit undesirable behaviors in their attempts to attain the rewards tied to achieving a particular goal. For example, rewarding salespeople solely based on output quantity discourages actions in the long-run benefit of the organization (Ouchi 1977). Following the earlier example, the numerical target may lead restaurant managers to reduce the quality of ingredients to improve short-term margins. Research on organizational control highlights the limitations of output controls for monitoring individuals and the conditions under which outcome controls are more likely to be effective (Anderson and Oliver 1987, Cardinal 2001, Eisenhardt 1985, Turner and Makhija 2006).

These broader issues of malfeasance are also seen in the literature on the sociology of quantification and critical accounting literatures. Here, scholarship finds that organizations may misrepresent or change behavior to accomplish a narrow goal. For example, a university seeking a better ranking in a news magazine may, in fact, game the system and meet a numerical metric by misrepresenting employment figures rather than actually placing more students with employers after graduation (Espeland and Sauder 2007, Espeland and Stevens 1998, Hopwood 1972, Miller and Power 2013). Thus, output controls and accounting practices (i.e., numbers acting as quantitative metrics more broadly) are subject to manipulation when they are put into practice. Scholarship in critical accounting, strategy, and organizational governance has similarly found that numbers provide opportunities for compromise, controversy, cooperation, conflict, and decision making (Ahrens and Chapman 2007, Denis et al. 2006, Fauré and Rouleau 2011, Michaud 2014). Such insights reveal the degree to which numbers are political sites of action rather than seemingly objective markers (Espeland and Stevens 2008). In this research on the sociology of quantification, the critical accounting literatures, and in the control literature, there has been minimal attention paid to where numbers come from, how they are produced, and the process of production. Without more insight into the origin of output controls, it is hard to know under what conditions numbers are effective in directing organizational and individual behavior.

Process and Normative Controls

Whereas output controls influence performance toward a goal without prescribing how to achieve the goal, process controls delineate a set of behaviors rather than an outcome. The budgeting *process*, then, equates to a set of process controls. Budgeting consists of a set of stages that participants engage in and specifies what activities should happen at each stage; budgeting thus outlines how work should be accomplished.[2] Also called behavioral or structural control, process control entails formalization and is characterized by a set of clear steps, tasks, or procedures followed to achieve an intended outcome (Cardinal 2001, Turner and Makhija 2006). Theories of bureaucracy suggest that process controls constrain behavior according to standardized rules and procedures, and, in fact, formalization of rules and procedures can be coercive (Adler and Borys 1996, Edwards and Edwards 1979, Taylor 1913). But this is not necessarily the case, and when process controls dictate formalization of the workflow (rather than of the work itself), individuals are provided operational autonomy in how to solve a problem (Bailyn 1985). More importantly, this work does not specify what leads individuals to move from one stage to the next.

The third type of control, normative or social control, has spawned a large and somewhat independent research focus. In an attempt to enlist the effort of the individual in service of the organization, normative control shapes the underlying beliefs and values of individuals through socialization (Van Maanen 1979b; for a rich discussion of the bodily limitations of socialization, see Michel 2011). Organizational rituals, as processes that shape how people think and feel, are theorized as one avenue through which normative control is wielded in organizations (Kunda 1992). For example, the ritual practices associated with many different types of presentations in an engineering firm—top management presentations, training workshops, career seminars, work group meetings—teach employees the correct "mindset" and what they should consider "proper and possible" (Kunda 1992, p. 93). This work does not conceptualize ritual as a clear set of delineated stages. Rather, the language of ritual is used to highlight how belief and commitment can be instilled through public performance. More broadly, work on organizational culture (Kunda 1992, Martin 1992) as well as identity (Alvesson and Kärreman 2007, Anteby 2008) outlines how a shared sense of organizational priorities and a clear organizational or occupational identity fosters organizational control.

In a related vein, concertive or peer control describes how peers (rather than supervisors) can shape coworkers' beliefs and actions to the benefit of the organization or team (Barker 1993, De Jong et al. 2014). A downside of normative and concertive control is that deep, internalized engagement and commitment can result in stress and burnout (Kunda 1992, Michel 2011) as well as the possibility of resistance from employees (Alvesson and Kärreman 2007, Ezzamel and Willmott 1998).

Although there is a long history of scholarship examining each type of control independently, recent work has increasingly focused on systems of control that rely on multiple types of control simultaneously (Simons 1995). For instance, output and process controls are found to act as complementary levers to improve the decision speed of business units (Kownatzki et al. 2013). The quantitative empirical work suggests all three types of control can complement each other, and all may be necessary for a system of control to be achieved (Cardinal 2001, Kreutzer et al. 2015). A small stream of qualitative work has found that normative control is a particularly important underlying thread of the control system (Brenner and Ambos 2013, Stanko and Beckman 2015) and that the relationship between types of control changes over time (Cardinal et al. 2004, Huising 2014).

Yet across this work is a lack of attention to the empirical detail of how different types of controls operate together in practice. Broadly speaking, the control literature has focused on understanding the effects of relatively static systems of control rather than how different forms of control work as a dynamic system. Given that budgeting itself operates as a form of process control, and the intensity of the process suggests that it is a site of socialization or normative control, it is worth investigating how various forms of control come together in service of producing a robust output control.

Organizational Ritual

Elements of Ritual

Using the analytical lens of organizational ritual provides deeper insight into how different forms of control intertwine in practice, creating a single output control and reaffirming the latent values of the organization. Although organizational scholars have elaborated on the distinctions between ritual, rites, ceremonials, and other terms (Trice and Beyer 1984), we follow recent research and use "ritual" as an umbrella term (Islam 2014, Islam and Zyphur 2009, Smith and Stewart 2011).

Three broad elements figure into how ritual is understood by anthropologists and sociologists and make it a constructive lens for analyzing budgeting. First, rituals are characterized by repetitive and organized activities that take place outside of daily life and guide participants on a journey (Grimes 2000, Islam 2014, Islam and Zyphur 2009, Turner 1969). Second, engaging in ritual is a visceral and emotionally charged experience that engenders a sense of "communitas" or social bond between individuals involved (Islam and Zyphur 2009, p. 118; Turner 1969). It is in the intense experience of "performing" ritual that people take on a deeper commitment to the process, the outcome, and the meaning of the ritual to the collective. As anthropologist Barbara Myerhoff states, "Not only is seeing believing, doing is believing" (Myerhoff 1977, p. 223). This "doing" of the steps of budgeting captures both the performative and emotional aspects of engaging in ritual. Finally, scholars emphasize that when they are successful, ritualistic processes inculcate individuals with the shared norms and latent values of the collective (Islam and Zyphur 2009, Turner 1975). These are the deep meanings of the organization and of society writ large. It is argued that organizational rituals construct and reaffirm social meanings, promote stability, and reduce uncertainty (Smith and Stewart 2011, Trice and Beyer 1984).

Taken together, these elements explain the transformative effects of ritual. Scholars have theorized how structured activities and intense engagement outside of daily life can affect participants' sense of self and social reality. Rituals involve a tripartite structure where first individuals let go of their formerly held beliefs, move into a period where these understandings are ambiguous, and end when beliefs are reinvested with truth by the social group (Islam and Zyphur 2009). This middle period is often described as a "liminal" period where social status is temporarily suspended, individual identities and roles are set aside, and a sense of collective solidarity or "communitas" is achieved (Islam 2014, Turner 1969). For example, recent scholarship discusses how strategy workshops can be evaluated according to the ritualistic nature of the workshop: strategy workshops are removed from everyday activity, draw on liturgy to legitimize the activity, and encourage collective commitment and a suspension of normal social status (Johnson et al. 2010). While not all meetings can be usefully described as rituals, this research found that the most successful and transformative strategy workshops occurred in a prescribed form, encouraged emotional commitment of participants, and thus most reflected the definition of organizational ritual.

Organizational Rituals and Budgeting

The classic perspective on budgeting takes a purely instrumental perspective, conceptualizing budgeting as a rational decision-making process. Much of this literature revolves around the question of whether or not the process is worthwhile to organizations given the time-intensive nature of budgeting and the potential for gaming and corporate malfeasance (Hope and Fraser 2003, Jensen 2003, Libby and Lindsay 2010, Marginson and Ogden 2005). These critiques of budgeting highlight many of the concerns raised about output controls in general (Kerr 1975, Ridgway 1956, Simons 1995). Emerging as a response to this perspective, scholars began to focus on the symbolic nature of budgeting as a process that reproduces relations of power, satisfies the emotional needs of participants, manages uncertainty, and reproduces organizational and cultural ideals—regardless of instrumental outcomes (Brunsson 1990, Covaleski and Dirsmith 1983, Olson 1970, Perez and Robson 1999).

Such work labels budgeting as an organizational ritual. However, in emphasizing the symbolic aspects of budgeting, this scholarship neglects to fully examine how rituals of budgeting operate in practice or whether budgeting can elicit both symbolic and instrumental outcomes—reaffirming the values of the organization and producing a robust output control. This overall lack of attention to the dynamics underlying budgeting is surprising given that some of the earliest work in management explicitly called for attention to the human factors associated with budgeting (Argyris 1952). Yet we still know very little about how the ritualistic stages of budgeting unfold to engender *both* symbolic and instrumental outcomes.

Budgeting has also been referred to as a common organizational routine (Feldman and Pentland 2003, Rerup and Feldman 2011) and satisfies the definition of "repetitive patterns of interdependent organizational actions" (Parmigiani and Howard-Grenville 2011, p. 413). Indeed, "routine" accurately describes the budgeting process as a standard operating procedure (Cyert and March 1963), as well as having the collective and performative nature of routines (Feldman 2003, Feldman and Pentland 2003). Yet this language does less to highlight the importance of the ordering of the budgeting stages, the emotional aspects of performing budgeting, or the symbolic and value laden aspects of the process. We find that ritual brings into relief these aspects of budgeting that are critical to understanding the power of the emergent output controls and the effect on the organization writ large. Thus, we use organizational ritual as an analytical lens for understanding the power of budgeting at SLH.

Research Setting

Silver Lake Hospitality was a prosperous hotel management company headquartered in southern California in 2012. Hotel owners (property owners) contracted with SLH to run all of the day-to-day operations of an individual property. Responsibilities of SLH included hotel branding, sales and marketing, website design, property furnishings, food and beverage menus, maintenance and upkeep, and all local property staffing.[3] The 35-person corporate office of SLH included nine vice presidents and senior vice presidents across key functional areas (e.g., sales, operations, marketing, finance). These corporate executives supervised the relevant functional managers at the local properties, and these property-level middle managers also reported to a general manager (GM) of their property, who was ultimately responsible for running his or her hotel. SLH hired the staff for all of the properties they managed, and the salaried middle managers often moved between SLH managed properties regardless of hotel ownership. The middle managers at the property level who thrived at SLH viewed employment in the company as a long-term career. During this study, SLH was in a time of major expansion. When research began, SLH managed around a dozen hotel properties. As this research concluded, they were managing over 30 hotels with several new deals on the horizon.

The business model of SLH required a close relationship with property owners to maintain and expand their contracts. At the end of each calendar year, SLH presented each hotel's owners a "budget" number to be achieved by that hotel in the upcoming year.[4] The budget number is an annual net revenue projection for the next calendar year. SLH was aggressive in the budget number, and owners received monthly updates on the property's progress toward reaching the annual budget number. SLH as a whole received financial bonuses from owners for meeting these budget numbers at the end of the year (as well as a management fee), and these rewards were distributed throughout the organization. SLH's ability to "make their numbers" was used a selling point when seeking new management contracts as well as being a metric important for retaining contracts. They prided themselves on their "accuracy variance"—having the actual budget number closely track the projected budget number. By all accounts, SLH was quite successful and saw substantial growth in the number of properties managed.

Throughout this period of growth, we found SLH to be an intense and collegial environment. Several of the managers we interviewed were extremely loyal to SLH because the company had seen them through difficult personal times and/or worked to keep them during financial downturns. However, the atmosphere was also one of hard work, constant scrutiny on numbers, and perpetual uncertainty as to how each property would perform. There was a prevalent sense that if someone was not "numbers driven" or able to "make their numbers," they would not work out in this firm. Indeed, the majority of interviewees brought up the numbers-driven nature of the firm, and just as many emphasized the culture of collegiality.

The budget number in particular loomed large at SLH. As we describe below, budget numbers were often invoked to justify decisions, progress toward budget was made visible through formal practices, and making budget was a constant topic of informal conversation and angst. Given the powerful role of the budget number, and overall focus on numbers, SLH was the ideal setting to examine how output controls are developed in practice and the relationship between the process of creation and eventual authority enjoyed by key numbers in organizations.

Data and Methods

Data for this study were collected via two phases of inductive ethnographic methods (Becker 1998, Lofland and Lofland 1995, Spradley 1979, Van Maanen 1979a). Specific research techniques included on-site observations, semistructured interviews, open-ended interviews, surveys, photography, and document gathering. The research team was made up of three researchers (including the two authors of this article) who all spent time deeply engaged in the field. The approach for this study was open-ended and inductive, informed by a broad interest in how organizations exert control over employees and how such reach extends beyond the workplace. A focus on the role of numbers in the organization emerged during the first phase of research as people described the culture and distinctive features of the organization. The importance of the budgeting process at SLH was raised spontaneously in response to questions about performance evaluation and was offered as an explanation of why this is "the best company I've ever worked for."

The first phase of research consisted of six months of qualitative research at the SLH corporate headquarters and six hotel properties managed by SLH between January and June of 2012. During this time, we shadowed 21 different salaried employees for a full day of work (5 of these employees were shadowed multiple times), and we spent an additional 30 days observing meetings and corporate events at both the property and corporate levels. We conducted semistructured interviews with 75 salaried employees and 16 employee spouses. Of these interviews, 58 were with property-level employees, and 17 were with corporate headquarters employees. Interviews typically lasted about 60 minutes (ranging from 45 to 90 minutes). These interviews were guided by a predefined but evolving set of questions that covered areas such as corporate culture, bonus structures, job responsibilities, and work–life balance. We also gathered numerous documents throughout the fieldwork, including employee newsletters, bonus spreadsheets, weekly performance reports, incentive plan documents, employee evaluation forms, PowerPoint slide decks, and market metrics reports. Taken together, these multiple sources of data revealed the ways that the budgeting process operated and was woven into numerous facets of organizational practice.

In this article, we present data from 13 employees, of whom 11 were deeply engaged in the budgeting cycle at five different properties and 2 shared important observations about the budgeting process. In addition to interviewing each of these informants (many several times), we spent 12 days shadowing these specific managers in the organization. These 13 employees represent the corporate office and properties of various sizes. (For confidentiality, we refer to employees

Table 1. Details of Informants

Name	Title	Location	Tenure	Budget cycles	Data sources
Noah	CEO	Corporate	12 years	1	Office
Olivia	Regional sales director	Several properties (including 2/3)	12 years	2	Office/home
Sam	Regional director of revenue	Several properties (including 2/3)	4 years	1	Office
Nicole	Regional director of revenue	Several properties (including 5)	4 years	1	Office
Larry	General manager	Midsize Property 1	5 years	1	Office
Kristi	Director of sales	Midsize Property 1	new	1	Office
Catherine	Director of sales	Small Properties 2/3	4 years	1	Office/home
Seth	Director of sales	Large Property 4	4 years	1	Office/home
Talia	Director of catering	Large Property 4	6 months[a]	1	Office
George	Director of events	Large Property 5	1.5 years	2	Office/home
Nina	Director of sales	Large Property 5	3.5 years	1	Office
Natalie	Sales associate	Large Property 5	6 months	0	Office
Stone	Events associate	Large Property 6	7 years	0	Office

[a]Talia was at this property for 19 years before SLH took over management. She was retained by SLH.

by title, not property; see Table 1 for details.) These properties represent the locations where we spent the most time, and these individuals are the middle managers at the property level most intensely involved in the budgeting process—directors of sales and revenue as well as directors of events and catering in the larger hotels. Although we were not able to attend budget meetings with corporate executives, we witnessed people in the office working on budgeting related tasks, listened in on budgeting conversations between corporate and middle managers, and listened to employees as they recounted budget meetings that had occurred earlier in the day. These data reflect how the budgeting cycle manifested across properties of varying sizes, amenities, and revenue streams.[5] Each property held its own budget negotiations; thus, the similarity in the experience of the budgeting cycle across these different types of properties speaks to the strength of these findings.

We gained additional information about budgeting in the second phase of research, as part of a larger ethnographic investigation of 9 employees (and their immediate families) outside of the workplace from August 2011 through July 2014 (for details, see Mazmanian et al. 2016). Four of these employees were deeply involved in the budgeting process (see Table 1). With each employee, we completed 14 home visits over 6–12 weeks with a series of follow-up visits over 18 months. Visits were complemented by a series of semistructured interviews, and researchers spent a total of 60–80 hours with each family. The 4 (of 13) employees for whom we have these dual vantage points (at home and at work) provided proportionally more of the reported data as a result of the feelings of frustration, exhaustion, competency, and solidarity about the budgeting cycle that were revealed in these intimate spaces. Many of our home visits occurred during the budgeting cycle and provided an opportunity to hear about the process from a unique vantage point, when individuals were relaxing at home and decompressing at the end of the day.

Data Analysis

We analyzed the data using grounded theory building and multiple iterations of coding (Strauss and Corbin 1998). We adopted a practice lens and examined how the stages of budgeting were given shape and meaning through situated enactment and reenactment (Nicolini 2012). In interrogating the practices and contextual meanings that emerged from engaging in various budgeting activities, we provide insight into how organizational processes are constituted and constitutive through practice—in essence, *how* budgeting operates (Feldman and Orlikowski 2011).

When first reflecting on the daily work practices observed during our engagement, it became clear that people at SLH spoke in the language of numbers. From this observation, we culled from field notes and transcribed interview transcripts discussions of numbers through an inductive open coding exercise. In this first stage of coding, we identified the many instances, and numerous ways, in which numbers were discussed and used in the organization. This included meetings where numbers were enrolled to make decisions; reports, handouts, and performance evaluations in which numbers were assessed and reported; and conversations with employees about numbers. It was common for spreadsheets to be displayed on the screen and manipulated in real time during meetings, and we regularly observed employees calculating then cutting and pasting numbers from one spreadsheet to another in their offices.

In a second round of open coding, we parsed how numbers were discussed in the data. For example, we coded for the properties of number, the origin of numbers, and the stories told about numbers. In writing memos, we began to note how various key numbers (budget, forecasting, sales) were created, and we saw that numbers were used to make strategic decisions and justify positions. Codes in this second round included categories such as "language of numbers," "emotional frustration around numbers," "reifying numbers," and "challenging numbers." In this round of coding, "proceeding according to a ritual" was created to describe the habitual yet sacrosanct routines around creating numbers. The observation that the process of creating numbers was both structured and experienced as intense and exhausting inspired us to look closer at the budget process. We took seriously what was initially a descriptive code about a process "proceeding according to ritual" and went to the literature to better understand ritual as an analytical lens. Learning that ritualistic processes incorporate both a procedural and emotional/performative element gave us direction in our next round of coding.

In the third round of coding, we began to focus our coding on budgeting as the numbers around which all other numbers were derived. To understand how the process worked, we detailed each of the activities in the budgeting process chronologically and examined the emotional and performative experience of engaging in these activities. We found that the budgeting witnessed at SLH mapped onto the broad definition of ritual (i.e., organized, repetitive activity focusing attention outside daily life; Islam and Zyphur 2009). In examining the process of budgeting, it became apparent that the eventual budget number was anything but clear at the beginning of the process. By the time the budget number was established, the same people who were aware of the numerous inputs and contortions that went into making the number saw the outcome as reified and reasonable. As we tried to understand the role of the process in instilling the output with such authority, we also turned to the literature on organizational control. We separated our data into two distinct phases: "creating the budget" (as the process of constructing the budget number) and "living under" (as the budget number exerted control over daily decisions). By analyzing the workplace data while still conducting ethnographic engagements in homes, we had the opportunity to probe these preliminary understandings with participants who were still available to the research project.

In the final round of coding, we examined the chronology of budgeting using a temporal bracketing strategy (Langley 1999). Temporal bracketing allowed us to structure our data to observe similarity of action within a stage, and the stage as an analytic unit can be compared across distinct budget cycles. Although people iterated through the stages, the temporal bracketing strategy revealed distinct breakpoints. Using the stage as the analytic unit, and the definition of ritual that we developed from the literature, we observed that each stage involved a different type of performative work and emotional engagement. We identified the work being done, with respect to the evolving budget number(s), in each stage.

Findings

The budgeting cycle at SLH resulted in a net revenue estimate (the budget number) used to assess property success. From this budget number, individual salespeople were given monthly and quarterly sales goals (e.g., for booking groups, events or walk-in business). These are the robust output controls used to assess organizational and individual success.

We found that the analytical lens of organizational ritual helped explain how these numbers took on authority and asserted control in three ways. First, through engaging in a ritualized series of stages, people transformed disparate inputs about potential future growth into a single numerical output. Second, the performative and emotional elements associated with the stages of budgeting were key to accepting the legitimacy of the final budget number, peoples' role in the process, and the budgeting process itself. Finally, the budgeting cycle served to reaffirm latent belief in numbers as objective tools that legitimate action in this organization. As such, the budgeting cycle reaffirmed organizational values around the authority of numbers as yardsticks, drivers, and engines for company growth. We describe the budgeting cycle as a ritual of quantification.

Section I: The Budget Number

The Budgeting Process at SLH

Unlike top-down budgeting processes, the budgeting process at SLH began with middle managers in the individual properties. Each revenue-generating unit in a property (catering, events, room sales) developed a projection of revenue in the early fall that was aggregated, over a period of six to eight weeks, into a single net revenue number for the hotel that accounted for projected expenses. In other words, each property engaged in a "budgeting cycle" that resulted in a final "budget number" (as referred to throughout this article). Beginning with an intense period of analysis, individual managers developed a budget number for their particular unit. They examined historical "actuals" from the past year, forecasted future business from expected trends and local knowledge, and incorporated anticipated corporate expectations for yearly growth. Each member of the property management team worked from his or her functional expertise; for example, the sales manager created an overall sales

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number, and then the catering manager developed the catering budget from that base.

Each middle manager then crafted a narrative around his or her provisional number, which they then tested, adjusted, and rehearsed with coworkers and the general manager at their property. Together, individuals then aggregated unit projections into a single property projection, made further adjustments, and finally presented their property budget number to corporate executives in a series of budget meetings. Budget meetings comprised the management team of the individual property (middle managers and the hotel's general manager) and the corporate executives (vice presidents of sales, finance, and operations, as well as the chief executive officer (CEO)). Generally two to four budget meetings were held for each property. Each property management team held its own budget meetings with the corporate executives to establish the budget for that particular hotel.

Budget meetings were intense and contested. Although growth was built into the provisional budget projection, property managers and corporate executives debated the accounts of growth and how much growth was reasonable to expect. If executives were not convinced by the property derived numbers and narratives, managers were asked to go back and reanalyze the data (to "find" more growth potential and come back with a higher revenue estimate), and a new meeting would be scheduled. After animated dialogue, discussion, and debate in the meetings, the CEO established a budget target for the coming year. This single number replaced all earlier provisional numbers. The budget number served as a net revenue estimate, a promise SLH made to the owners of the property about what they would achieve in the calendar year. Once the CEO presented the number to the owners and they agreed to the budget number, SLH managed the property with that goal etched in stone as an output control for the calendar year.

The new budget number took effect January 1. The GM was charged with "making budget" for the hotel property as a whole. To make budget, revenue targets for departments were translated into individual sales goals (such that if everyone made their number, the property revenue projections would be met). If the revenue-generating departments were not achieving their targets, the GM would "manage the middle of the page" by cutting down on operating expenses (e.g., food costs and office expenses) in service of meeting the aggregate budget number.

The Budget Number as Output Control

The comments, assertions, and everyday actions of middle managers made it clear that the budget number served as a robust output control. Not only was the number nonnegotiable, any contestation that came out during the budgeting cycle was not revisited after January 1. During a conversation at his home, we asked Seth, a director of sales, if he would, a year later, remind his boss that the provisional number he brought forward to the budget meetings (not the number actually decided upon) proved correct. He did not miss a beat: "No way. Never. Never . . . . It becomes gospel." George, a director of events, explained, "Once it's done everybody moves past it and says, 'Okay. It is what it is.' "

The number (i.e., "gospel") was prioritized over other possible metrics of success, such as profitability, growth, or customer satisfaction. The budget projection was the number that mattered for assessing end-of-year performance of the property as a whole. For example, one evening around her kitchen island, Olivia, a regional sales manager, made an offhand comment about how badly her hotels were doing. After multiple follow-up questions about what she meant by this assertion, she became somewhat exasperated:

> No. You don't get it. They [each of her hotels] are still up year over year [they have made more money than last year]. But . . . it doesn't matter. They [owners and corporate executives] want to know that you are going to meet the bar, what you had said you were going to do [budget].

A hotel not performing to budgeted expectations was a poorly performing hotel, regardless of other metrics.

As noted above, the budget number was broken down into monthly and quarterly goals for individuals and departments. The progress toward overall departmental goals was examined each month by creating an evolving daily "forecast" or a plan for the rest of the calendar year. These forecasts were distinct from the analyses created during the budgeting process; such analyses were abandoned when the cycle concluded and the final budget number was established. Starting from the established budget number, the same managers who participated in the budget process created new forecasts on a monthly basis that reflected their evolving plan to meet their goals for the year. Sitting at her desk at work, Nicole, a revenue manager, walked us through the process on her large computer monitor:

> So what we do on a monthly basis is we go in and we forecast again. So for instance, this front screen here, it'll show me by month, we look a lot at what we're changing forecast over forecast. *Because once the budget is written it's written. Locked in*. And then we do our monthly . . . . So this now is our current forecast, which we just went over a little bit ago, we're making some changes, versus our plan that we locked. So right now we're down about 1,700 room nights between group [sales of room blocks to groups] and transient [customers who purchase a room on their own]. And we're down about $90,000 right now to our [budget] plan. So we missed it really bad right here. So we're trying to make it up here.

Nicole's description highlighted the "locked-in" budget number. While post hoc forecasting gave managers agency to renegotiate proximate individual goals and experiment with changes in pricing and market, it was always in service of the fixed budget number to which everyone was held accountable.

Tracking success against the hotel's budget goal was continually reasserted in small organizational practices. Managers received daily email "flash reports" that documented daily revenue compared to the overall budget goal. When attending a human resources (HR) retreat, we witnessed HR managers introducing themselves to their counterparts in other hotels with the following overview of their property: "The [hotel X] has been doing okay. The occupancy is 77.2% year to date, whereas budget is at 76.2%. Revpar [revenue per available room] is $95.55, $1.76 down from budget." The relationship between these numbers and the agenda for the meeting (discuss new HR software, recruitment practices, workers' compensation claims, and new laws about background checks) were not obvious. But the role of numbers, budget in particular, as a language of the organization was clear. These seemingly mundane ways in which people tracked and marked progress against the budget number revealed the authority of the output control in ongoing organizational practice.

Budget projections also drove everyday behavior at SLH. One evening after dinner, Olivia recalled her frustration at getting an email from her superior asking whether the hotel sales team was doing all they could to make budget. Olivia described how her efforts to make budget were the focus of every single sales meeting: "I'm on these people; we're talking about it every day. Who are you calling? What are you working on? . . . We tried everything we could try . . . . And we ended up blowing that budget away." In line with this description, we witnessed people making sales call after sales call in the office, responding to sales-related emails after 10 P.M. while watching TV with a spouse, and working themselves to exhaustion to make their numbers. Simultaneously, we observed general managers cut expenses to meet the budget projection, particularly as the year-end approached. Such measures included requesting that everyone stop printing in color and purchasing new office supplies, issuing a delay to regular pool maintenance, and demanding that all salaried employees take vacation time (paid for from a separate reserve account).

Notably, even if the final budget number was significantly higher than the provisional budget number first proposed by a middle manager during the budget cycle, she still did everything in her power to realize that number. For example, Talia, a director of catering, shut her office door one day to express frustration about what she called "unreasonable goals." But rather than give up or resort to malfeasance, she buckled down and declared,

> The solution is for me to do more selling on my own because I can pick up the slack of when people are underperforming . . . it won't matter that [Harry] should have [given them a lower budget goal]. I need to work more days. I have to sell.

Efforts to "make your numbers" came with significant personal cost. Natalie, a sales associate who had just taken another job because of this environment, recounted an atmosphere of fear and panic in the end-of-quarter stress she witnessed among colleagues trying to make their numbers:

> It was the last five days of the month, I've never seen people act so scared [of losing their jobs] in my life. From [Martha] to [Ellen] that were so close [to making their numbers], they were literally harassing people. [Martha] calling doctors on the emergency room floors to sign $9,000 for their holiday party. I'm—I don't—I can't work like that.

Natalie was not alone in feeling overwhelmed by the stress of the difficult goals. George said it simply when explaining how the hotel worked:

> People get fired. People lose jobs . . . . If you are not a strong individual it will eat you up, and chew you up, and spit you out, and say, "Next!" And it's done that to many people. A lot of young individuals go there, and they get eaten up. [Why?] Like, because it is a dog-eat-dog hotel . . . . Because everything comes down to numbers.

Catherine, a director of sales, described being "actually sick, like physically ill, for three days" during a particularly challenging budgeting cycle. And reaching those numbers proved to be difficult. She released stress by channeling the frustration about the current year into marshalling evidence that she could use in the next budget cycle. Catherine explained her strategy—she would "jot down things [Sam, the revenue manager] says" about a piece of business or "track numbers and patterns" to have detailed information about current trends. Catherine continued, "I'll write it on a post it note . . . throw it in my budget file" and then, in the next budget cycle, "I can go back to that and say, 'Well, look. We didn't sell out over those dates. We should have taken that piece of business that we didn't bid on because we needed it.' " Catherine thus amassed a wealth of data to help her in the next budget cycle.

As for the current budget year, Catherine acknowledged a disappointing quarter one evening by saying, "Not that it's any less depressing, but what are you gonna do. They [the current budget numbers] are there." Rather than attempt to game the system, Catherine focused her energy in preparing for the next budget cycle while resigning herself to (and still trying to make) the current numbers. The output controls carried weight—she put effort toward developing the budget number and committed herself to trying to reach it.

Section II: Creating the Budget Number

The ritualistic practice of budgeting created a robust output control. In brief, it was in and through the individual and collective practices of unfreezing from the current status quo, constructing numerical data, crafting compelling narratives, collectively synthesizing those narratives, and openly contesting and negotiating the budget projection that the final number took on the character of a robust output control. Table 2 outlines how each of these stages of budgeting contain ritualistic elements that figure into how people transform multiple divergent inputs into a single numeric output control. Table 2 also delineates how process and normative forms of control come together in this ritual of quantification. In each of the budgeting stages, employees enacted a set of activities that encouraged commitment to the outcome. The intense emotions experienced in each stage encouraged the movement from one stage to the next. Figure 1 visually represents the ritualistic stages through which people develop and reify the final output control and shows how normative and process control are intertwined to create output control.

Table 2. Ritual of Quantification

Stages of ritual (Executing process control)	Ritualistic elements in practice (Enacting normative control)	Evolution of numbers (Developing output control)
Preliminary stage: Annual unfreezing Middle managers step away, emotionally and cognitively, from daily work to begin the annual process of creating the following year's number.	*Performative*: Beginning the budgeting process reminds people to be open and comfortable with uncertainty. *Emotional*: Separation from current year's numbers allows for optimism and engagement with the process of creating next year's number.	The current year's budget number is set aside, and openness for the next year's forecast is sanctioned.
Stage 1: Constructing data Middle managers gather numerous disparate inputs, translate them into comparable metrics, and "layer in" estimates for each day of the year.	*Performative*: Collecting inputs and engaging in "analysis to paralysis" encourages individuals to believe the data are accurate and projections achievable. *Emotional*: Exhaustion that follows intense data collection and analysis enables individuals to let go of one stage and move to the next.	Grounded understandings of past and future are translated into a quantified form that can be manipulated and analyzed.
Stage 2: Crafting narrative Middle managers build a plausible narrative of growth, take into account expectations of continuous growth, and adjust projections accordingly.	*Performative*: Articulating the narrative invests it with certainty and intensifies commitment to the proposed numbers. *Emotional*: Anticipating the expectations of others results in a gearing up for defending one's projections in more open arenas.	Individuals use logic to massage quantified data according to various interests and adjust projections.
Stage 3: Collective synthesis Managers rehearse, verbalize, and adjust narratives with peers. Collectively developing an aggregated property projection in anticipation of open contestation.	*Performative*: Collective engagement in a shared narrative inspires buy-in, ensures a united front, and establishes shared accountability. *Emotional*: Collective engagement in developing plausible narratives fosters communitas and an "in it together" mentality.	Peer discussion solidifies a defensible narrative about the number and grounds it in the collective viewpoint.
Stage 4: Open contestation A series of meetings with corporate executives take place in which managers present, justify, and argue for budget projection. The meetings continue until corporate executives are convinced by the numbers.	*Performative*: Debate and defense of projections intensify confidence in the data. Having voice validates the legitimacy of the process and outcome. *Emotional*: Impassioned persuasion heightens emotional engagement in the process and commitment to the outcome.	Contestation requires new narratives of additional growth and moves data further from initial origins.
Final stage: Output control The CEO acknowledges discussions, provides justification, and asserts the final number, effectively freezing a new output control.	*Performative*: Final declaration releases the number from construction and allows it to stand as an independent, unquestioned governing mechanism. *Emotional*: Exhaustion from the budgeting cycle makes people resigned and willing to accept the CEO's final decision.	The final number is established. Origins of the number and process of creation is swept away and not revisited.

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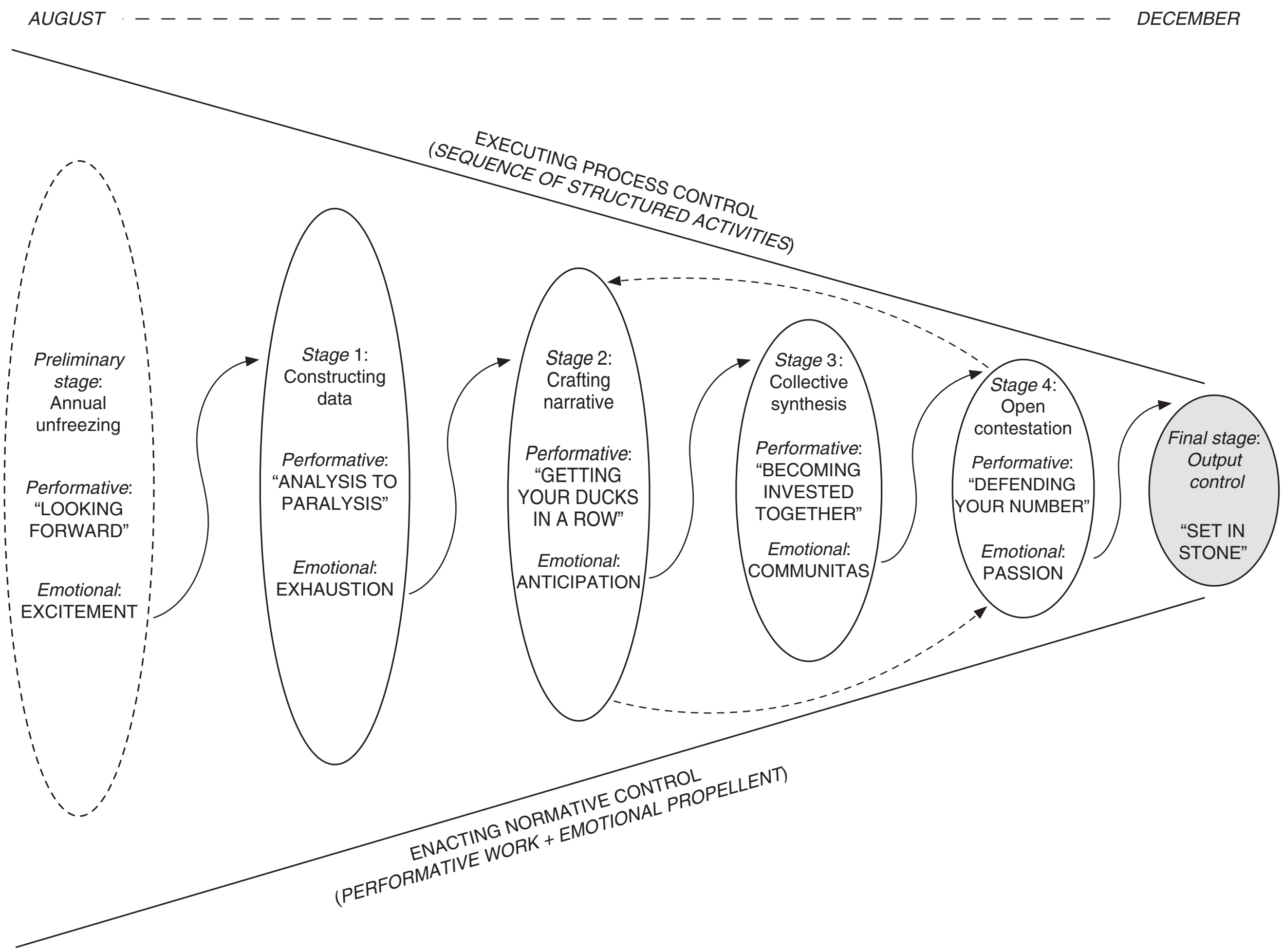
Figure 1. Ritualistic Stages of Budgeting



Preliminary Stage: Annual Unfreezing

We observed property managers stepping outside their daily activities of selling rooms and running events to engage in the task of budgeting. Corporate executives expected middle managers in the individual properties to be fully committed to the process. As Sam, a revenue manager, related, "I know I cannot go [on vacation] September to November because that's budget season." As the budgeting cycle began, middle managers released the rigidity and stress associated with trying to hit current budget targets and opened themselves up to a new budgeting cycle.

The budgeting cycle required a different orientation to the numbers than the unwavering certainty that managers' experienced toward the current output control. Both George and Olivia described the current budget as a given. But, when reflecting about the origins of the various inputs, George ruefully acknowledged, "I mean there is some guessing"; Olivia described budgeting to one of her managers as "taking what you've done, figuring out what is going to repeat, and kind of making some guesses on what is going to happen." These words conveyed a necessary openness at the onset of the budgeting process. From a performative perspective, the act of dedicating time and attention to budgeting required individuals to open themselves to uncertainty and distance themselves from the immediate and reified numbers that they were working toward on a daily basis.

Managers experienced excitement or anticipation as they began the budgeting process. During a conversation at home, Catherine emphasized that she was "ecstatic about the upcoming [budget process]" even though she was frustrated about her current year's numbers. She continued, "I am really looking forward to the budgeting process this year . . . . It's hard to argue a point without my own information. Well, now I have an entire year of my very own information." She had her "own information" because she had been at the property for a full year in her role. The prior year, when she was new to the property (although not to SLH), she had to rely on data from a prior management company. Beginning the budgeting cycle anew provided an emotional release from the stress of attempting to make her current goal and allowed for optimism about the future. This emotional release reduced the possibility of resistance and burnout that can be typical in systems with strong normative controls. The annual possibility of affecting the output controls in one's favor for the upcoming year counteracted the stress of living under such controls in the current year.

Yet Catherine's attitude toward budgeting was more outwardly enthusiastic than many of her peers. By contrast, Seth displayed cynicism rather than enthusiasm about the upcoming year. In discussing the fact that his property had had a stellar year (and gone beyond budgeted expectations), Seth hoped to transfer to another property and leave someone else with the challenge of budgeting after this recent success. Driving to his son's soccer tournament, Seth explained,

> We blew it out of the water. Everybody at SLH got a big payday. Everybody is partying . . . . Now we come back the next year. The thing is, where do we go from here? There is always expected X amount of growth [built into the projection for next year]. Seven percent growth, 8% growth. [*Interviewer: What can you do*?] You just transfer. You make sure you transfer before you have to do the new budget. Get the hell out. Let somebody else worry about that great increase.

Seth's comments revealed an understanding that continual growth was difficult to accomplish, but they did not reflect his actual behavior. Seth stayed at this property for multiple years after making this statement and was fully engaged in each new budget cycle. However, Seth's comment reflected the importance of separating from the prior budget year's expectations when beginning a new budget cycle. The ritualistic element of annual unfreezing encouraged people to let go of the success or failure of this year's budget while also ensuring that those developing the following year's budget had firsthand knowledge of current operations.

Stage 1: Constructing Data

The first bounded stage in the ritual of quantification involved gathering and analyzing data in service of creating an initial revenue projection. Data included personal connections, industry trends, knowledge of upcoming events in the city, data from the current year, and what was already on the books for the following year. These inputs varied in terms of confidence; sales already on the books for the following year were fairly certain, while projected growth resulting from a new city event was less so. For example, Nina, a director of sales, whispered behind the closed door of her office that she recently had drinks with a friend who worked at a competitor hotel. Along with general catching up, the two women each shared their hotel growth projections. This information was highly uncertain (and confidential), as the percentage growth her friend would end up obtaining was unknown. However, it played a role in Nina's own predictions for the market. Inputs also varied in terms of quantification; some inputs were already in numerical form, while others took the form of intuition or a "tip" from a friend at the convention center or a competitor hotel. Seth came home frustrated after learning from a "buddy" at the visitor's bureau that an annual major convention was changing locations. This information did not come in a quantified form but carried a high degree of certainty. As such, Seth had to figure out how it would affect his projections. Seth explained,

> This year we were expecting to have had the [major convention], which does four weekends and fills the city. It creates compression [so hotels can raise prices]. So, I assume we are going to sell out those four weekends. All of a sudden they say, "We are going to [another city] this year." Now you got four empty weekends you are like, "Holy shit! Now what do I do?"

As managers gathered, quantified, and aggregated these disparate inputs, they began to develop intuitions and understandings about their market—and, as George acknowledged one evening, they engaged in some "WAG—wild-ass guessing" about the mix of business that they could project on any given day. The act of translating inputs into quantified future projections affected how people oriented to the inputs. George took us through this process:

> So you are looking at your history . . . . You try to read, and you try to educate yourself as much as possible, and then at the end of the day you have to . . . you have to put the pencil down and say, "Hey, enough is enough. I've done enough analysis." Like [Nina] says, "Analysis to paralysis."

George's emphasis of "analysis to paralysis" (a favorite phrase of many) revealed a basic assumption critical to the *constructing data* stage of the ritual: working and reworking projections would, in essence, transform the data into something that was clear, actionable, and accurate. Here, we see the performative aspects of the ritual in action. The inherent uncertainty and nonquantitative nature of many of the inputs was masked through analysis. This became clear as George continued, "We're done looking at the history. We're done looking at the papers. I'm done rubbing this crystal ball. It's time to put numbers on a piece of paper." In essence, George was expressing the constitutive role of "performing" analysis and inscription. For it was through the act of "putting numbers to paper" that George began to orient to his projection as reasonable and valid. Catherine, a director of sales at a different property, revealed a similar faith in the analysis for producing a valid projection, recounting her process from her couch at home:

> I couldn't say it was a good number without doing the day by day. Layering it in. Going through all the analysis . . . . As much as I would like for it to be just a random number I picked out of the sky, it's not.

"Layering it in" is a term used to describe the detailed analysis that Catherine engaged in. She went through all 365 days of the year on an Excel spreadsheet and entered her projections for what the hotel would sell in each market for each day of the following year. While such layering was continually massaged throughout the budget process, and reworked as forecasts were revisited on monthly and quarterly bases throughout the following year, Catherine relied on this activity to give her a sense of accuracy in her initial projections. This performative work, which was time intensive and required deep analytical engagement, provided a sense of certainty toward a logical (and eventually defensible) outcome.

Such analysis was also exhausting. As George noted from home after a grueling budget cycle, he would stay up until 2 A.M., and it was "killing his eyesight":

> It's the emotional stress. It's the fatigue in the head, you know, the brain. It's that. It's all that. I'd much rather just run a shift at a restaurant for 14 hours straight than do budget analysis for weeks. It's just so draining. It's just so draining.

The emotional and physical exhaustion that came with collecting and analyzing data until "paralysis" served another purpose; the "drain" that George described enabled individuals to break from their detailed understanding of the origins of the data, and any lingering hesitancy about the accuracy of various inputs, to move forward to the next stage of the ritual. The exhaustion and effort associated with these tasks propelled managers to move beyond analysis, accept the accuracy of their initial projections, and begin to massage those projections according to various anticipated interests.

Stage 2: Crafting a Narrative

Next, managers began to craft a plausible narrative of growth. Such narratives combined the grounded projections that emerged from initial analysis with their sense of how much growth senior management was going to expect. The work in this stage involved producing a logical and credible account of where the additional growth would happen. As managers massaged their initial projections in accordance with conjectures of how others would react, they moved the data further from their initial origins. Returning to Seth, the director of sales who learned that an expected convention was leaving the city, we see how this worked. Seth needed to anticipate where he might be able to bump up his number despite this projected loss (he "knew" management would expect him to make up the 1,000 rooms associated with the convention). He described this process:

> I know I am going to have to pick up 1,000 [rooms] for July, but I don't really know what weekend it is going to be. I figure it's going to be a weekend. So I pick . . . I try to be as logical as possible. Like it's not going to be 4th of July. What other things are going on? If there is a big citywide [event], and I think there is going to be compression in the market, then I might pick that, you know?

In building the argument, Seth came to believe in its accuracy.

Constructing a narrative required managers to be fluent in articulating where proposed numbers came from and how they came to be. For example, Catherine imagined a potential conversation with the CEO (while sitting on her couch at home) as she developed her narrative:

> So, he might say "Okay. If you tell me this much, why does that make sense?" And what do I say back? "Okay. Well, here are the dates where I would have to put additional group business. And here is why that business is not going to happen." Or, "Yes. At this point we would love to have some Sunday/Monday groups. But since we haven't had a Sunday/Monday group for an entire year, and I don't know where to fabricate that. I can't put that in. So that eliminates that." Or, "Here is my maximum number of rooms that I would even offer a group during these time frames where groups ask for the most rooms." So I have enough to go back and forth so that I don't have to say, "Hmm. No, you are crazy" without being able to say why.

Catherine's articulation of a narrative was a form of performative work (even as she was "performing" in her head) that invested the narrative with a veneer of truth. Performing the narrative made the future seem achievable while simultaneously intensifying her commitment to the proposed numbers. George similarly emphasized his commitment to his projections: "You have to be able to defend your number, you know? And you better have your ducks in a row so you can present it. So, if I feel that the number they're giving me is BS I can absolutely . . . say 'This is why.' " Likewise, Olivia emphasized the need to "overprepare [for the budget meetings] . . . [so] you have everything there so that when you get asked a question, you answer it."

Such activity also involved an emotional shift as managers moved from the exhaustion of analyzing data to the expectation of sharing and defending projections in more open arenas. After dedicating a great deal of time and energy into creating a detailed breakdown of possible growth, they began to anticipate others' reactions in the next stage of the ritual. They believed in the projections they constructed and were ready to share them. At this point, the budgeting cycle moved to its next phase, and individuals began to work together to create collective narratives.

Stage 3: Collective Synthesis

In the next stage of the budgeting cycle, managers at the property level (e.g., the director of sales, catering, revenue management) informally rehearsed and

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verbalized their narratives with each other. Up until this point, budgeting had generally been an individual process. Now all of the managers in one hotel came together, aggregated their unit projections, and crafted a collective narrative for the property. Collective synthesis involved preparing a coherent projection that would be seen by the top executives as reasoned, logical, and grounded in objective data. Sitting at her desk, Nicole explained,

> I'm responsible for transient and then [Nina, director of sales] does group [sales]. We collaborate. We're very good at getting together and talking it out. Let's talk about where you're going with it, where I'm going with it, how it is going to come together. We meet as a team and then the team has the opportunity to ask their questions, poke holes in it, figure out maybe what doesn't look right from 30,000 feet. *We get very invested in it* because we do a day-by-day forecast. So I go, I segment by day for 365 days. So it's a very intense process.

Being "invested in it" came from performing the budgeting activities together. This statement underlies both the normative control and social solidarity that emerge throughout budgeting. Collective synthesis served to encourage managers to share accountability for the projections they were about to bring to the open budget meetings with corporate executives.

Recalling her difficulty mentoring a new director of sales, Olivia discussed her role in helping her employees develop a clear narrative. She recounted her words to the new employee as follows:

> You need help with understanding the big strategic look at the numbers and how to present them, and how to, you know, present yourself when you are sitting in a budget meeting, and . . . those are the things that you and I need to work on together because you already got the sales stuff down.

In developing a collective narrative, middle managers were also experimenting with their numerical fluency and projections in front of a safe audience (each other). In another example, Catherine recounted a conversation with her revenue manager earlier that day where they combined their estimates for group and transient (individual) sales:

> So we went through it together, and we bump rate up (nightly cost) over a couple of little periods. And he was like, "Well, you are not going to get to that rate that we originally talked about . . . ." So then he adjusted transient to absorb that rate difference . . . . And we got something that looked ok.

Catherine and her colleague marshaled evidence for numbers they collectively thought would "fly" with senior management. They developed a shared narrative that they both felt was reasonable and could stand behind. Aligning narratives required that property managers communicate their perspectives and negotiate a shared goal. Together they took the first step at crafting a single output control for the entire property. At the same time, they further distanced the provisional property-level projection from the various grounded inputs that fed its creation. Performing this activity increased each individual's buy-in and commitment to a single plausible narrative. Such interactions also fostered a sense of communitas and emotional connection to one another. This emotional connection once again propelled people into the next stage—as they took comfort and support in knowing that others would have their "back" in the open meetings with corporate executives.

The importance of such solidarity became apparent when we witnessed it break down. Lisa, a new director of catering, did not fully understand the stakes involved in the budgeting process at SLH, and she did not meet with other managers to adjust her initial projections and establish a joint number. This violated the collective effort of budgeting. As a result, Lisa's peers did not stand by her in solidarity in the budget meetings with executives. Asked about the tension witnessed at the office, in the privacy of his living room, George recounted what happened when Lisa went to their immediate supervisor, Nina, with her anticipated number:

> She did an increase of 2% [growth from current year's actual revenue] . . . . And [Nina] was like, "You are smoking crack." She basically told her, "This is a f——g waste of your time." And when [Nina] told me, I'm like, "It's stupid." I said to [Lisa], "It is not going to fly." I said, "You are not going to get a 2% growth to fly . . . . I have worked for this company for awhile. I have gone through multiple budgets . . . . You might as well go back and start finding revenue now."

Instead of working with her colleagues to massage her projected number and establish a collective narrative, Lisa submitted her projection and then simply did not show up for the budget meeting with senior leadership. Not surprisingly, George and Nina did not support Lisa in her absence. George went on:

> So, [in the budget meeting] [Lisa] just isn't in the room. No one knows where she is. And the [corporate executive] is like, "What about catering?" and [Nina] says, "We are not ready to discuss it." And he is like, "Just give me what the growth is." And she is like, "It's 2%." And he is like, "Why the f—k does she think that would be accepted in this company? . . . And if she thinks that is going to fly, she better start looking for a new job." . . . I mean he just laid her out without her being in the room. And I'm like, "Oh my God!" and I looked at [Nina] and I am like, I am like, "Yeah. She's dumb for putting 2%. Eat her up!"

Without collective synthesis, George did not feel emotionally invested in Lisa's success at SLH or obligated to support her. Clearly, preparing the collective narrative together did more than establish a collective number. Such interaction created the conditions for a united front. Property managers who had been through the process understood budget presentations were often hotly contested. They rehearsed with each other to anticipate these debates. It is worth nothing that George's willingness to abandon Lisa during this interchange was specific to Lisa, and it contrasted with the allegiance he felt to others at his property. For example, his loyalty to Nina was strong. As he said one night after putting his kids to bed,

> Honestly, I don't think I would have stayed [at SLH] if it wasn't for her. And I think she would probably say the same thing. If we didn't have each others' backs and we weren't so supportive of each other this would be a different job. You know?

Once developing a sense that the projection brought forward by the team was accurate and achievable, the shared emotional connection enabled them to move into the budget meetings.

Stage 4: Open Contestation

Armed with a collective narrative, each managerial team (at the property level) then participated in approximately two to four (and up to six) budget meetings with corporate executives. In these meetings, property management teams presented both the aggregated and department-level budget projections. Corporate executives asked questions, interrogated the logics underlying the narrative, and challenged managers' analysis. And while they often asked managers to revisit and increase their projections for a subsequent meeting, executives were also open to what the managers had to say and would shift their expectations through the course of the debate. In relating the differences between SLH and other hotel management firms, Sam emphasized how unique he found the exchange in budget meetings:

> At SLH you really can talk to them [corporate executives] and say, "Okay, here is what I think. And this is why we wrote it that way." And it's not just them going, "We want that number." So I really think it's that your opinion counts. That's what I totally appreciate [about this place]; you can actually talk to people. And it's not like their mind is already made up.

Noah, the CEO, described these interchanges with less color than some. But the nature of the interchange as a collaborative effort was clear in his description of the meetings:

> So the general manager and the director of sales and the director of revenue [and others] will work on the revenues together. And then they'll bring them [projections] up to present to us. We'll approve it, we'll poke at it, we'll massage it.

These exchanges operated as spirited performances that served to persuade corporate executives (and managers) that the data and analysis were sound. Each round of incorporating corporate feedback and "finding" a new percentage of growth required managers to develop new narratives they could defend. Repeated budget debates thus continued to move the budget projection further from its initial origins. Such debates also forced managers to take a definitive stance on their projections. "Performing" this stance through passionate debate in a more open arena served to reinforce beliefs about the accuracy and veracity of the projection. For example, Catherine described from her couch at home the detailed back-and-forth where she presented her rationale and detailed understanding of the local market:

> You present where these numbers came from and why and whether they are up or down versus last year. Any major fluctuations, you explain that. And then they come back to you with, "Well, why would your rate only go up a dollar if you are driving more in the corporate market segment, and corporate is up year over year?" . . . So, I say, "Well, yes, that's true, except for the fact that we are losing this major account that is at our highest rates, and we are going to be filling that in with lower rated business, so the room night would go up, but the rate is going to come down." It's that kind of explanation.

Managers took these negotiations seriously and provided impassioned and detailed explanations of the logic underlying their projections in the budget meetings. For example, one evening George came home giddy. Asked about his day, he gave an animated recounting of an interchange between himself and a corporate executive in a budget meeting:

> They are asking for too much. You know, they came to me and said, "Hey, we want 12% growth." And I'm like [sarcastically], "Tell me how. Educate me. Tell me how I can get to 12%, guys." Because apparently I'm just the stupid one. I gave my whole spiel to [Nash, a corporate executive] and I said, "Here is where we think we are going to be." And he challenged me on a couple things . . . . And he said, "I think you are lying." He's like, "I think you just want me to drop the number." I'm like, "No, [Nash]. Do the numbers. I just spent an hour showing you the numbers. Here is why I think that." And then he backed off a little bit . . . . I've worked with him long enough to know, he puts his pants on just like I do. His title doesn't make him more of a man than me. I am not going to stand down to him. Especially not in that meeting . . . . That's [Nash] being the Napoleon that he is. He is just trying to get me to crumble.

George went on to describe how he "won" the contest in this budget cycle. He was able to answer all of the CEO's questions, and, according to George,

> In the end he [Noah] said, "Okay. You win. You are off the hook. I trust you." Uh-huh. After the analysis, and

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> after what we presented, he had no choice but to agree with us.

George's pride in himself was palpable. It was clear that, in addition to rock-solid logic, managers were expected to demonstrate their fluency with numbers with impassioned persuasion. George observed others "quaking in their chair . . . sweating" as they tried to defend their numbers. Such exchanges combined emotional and performative elements of ritual and solidified managerial engagement and commitment to the number and process.

George went on to give his perspective on the role of the meeting with top executives:

> He [Noah] is going to push you to make sure that you have done the analysis. He is going to push you to make sure that you can defend your number, and that you can . . . that you believe in your own number. Because at the end of the day, the budget should be obtainable with a stretch, and still possible to achieve.

Such performative commitment and emotional engagement in the numbers extended beyond the eventual output control that emerged from these debates to the entire budgeting process itself. In other words, managers came to believe that the process of analysis and contestation was legitimate. In the space of the meeting, corporate executives and property managers met on middle ground and, through intense back-and-forth, attempted to convince each other of their expertise and knowledge. Thus, referring to when she "loses" a budget "battle" (by getting a larger budget number than expected from the CEO), Catherine asserted (without noticeable sarcasm) that "I assume that they are basing it [the final number] on something, whether or not it makes sense to me."

Performing in a budgeting meeting also provided middle managers with a voice before the most senior executives in the firm. Numerical fluency was critical to one's reputation and advancement opportunities at SLH. The voice of managers in the budget meetings provided a critical opportunity for individuals to express themselves, build their reputation, and be heard in a manner that facilitated acceptance of the outcome and the process. The importance of managerial voice in the budget meetings became clear when it was undermined. Catherine, the same director of sales who expressed optimism about the budget meetings, later experienced a meeting where the sanctity of the budget meeting was compromised and open contestation not enacted. For an unknown reason, the SLH corporate executive team invited the owners of a new property into a budget meeting. This change in audience dramatically affected the atmosphere and expectations of the meeting. Catherine described the scenario during an evening in her home (described in our field notes):

> And, at some point, [Noah] says to her, "How are you feeling about these numbers?" And she was really uncomfortable with the numbers that were being suggested for [Hotel X] and thought they were too aggressive. So, when [Noah] turned to her in the group meeting, she said, "Well, I'm still pretty uncomfortable with them." And he says, "On a scale of 1 to 10, where are you?" and she says "Five." And he says, "Five? That's really low." [Noah] pushed her a bit and she stuck with it.
>
> She says to me, "I'm honest. I'm going to tell you what I think." So, they go around the table and see what other people think. [Olivia] says, "Seven." [Catherine] describes it as everyone "hung her out to dry." At the end, [Noah] gave her a chance to change her vote and she said, "No. I'm going to stick with five."

Expecting that budget meetings were a safe space for pushback, Catherine spoke her mind: "I was pushed, [and I was] constantly saying, 'These numbers don't make sense. I don't think this is going to happen.' " However, the owners in the room changed the atmosphere of the budget meeting such that it was no longer an appropriate venue for debate. Catherine continued, "Afterwards I said to Olivia, 'Okay, I probably wasn't supposed to say I was a five, was I?' And she was like, 'Probably not.' " While Catherine engaged in the kind of debate she understood to be acceptable in budget meetings, the CEO was unwilling to allow the temporary instability of the hierarchy usually accorded in budget meetings because the hotel owners were in the room. It is worth noting that the company learned from this experience. Catherine later shared,

> You know, it's not a conversation that can be had in front of owners because then it looks like we are not all on the same page. And unfortunately, well, fortunately, I think that's what we as a company are learning, is that we need to have our conversations first and then have a presentation to the ownership group once we are all on the same page.

After this episode, the owners were kept away from budget meetings, and once again these meetings became a space for contestation and debate. The debate and opportunity for impassioned persuasion propelled people to accept the final outcome.

Final Stage: Output Control

The budget cycle concluded when the CEO established the final budget number for the upcoming year—in effect, freezing the output control. As described earlier, managers did not question the budget projection once it was established. For example, when asked whether he would vocally criticize a potential budget number in the middle of the budget process (November), George said, "Yeah, sure!" But when asked if he could go to his boss in January with such a complaint, he was adamant, "Nope. Forget it. It's done." Catherine concurred, "In the end, I lost that battle. And can I go back and go, 'Oh, look! I was right'? I won't because I know

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they would all also stare at me and be like, 'Really? Really? You are going to go there right now?'" The budget number was released from its creation to stand as a final output control.

With the ritual of quantification complete, the budget number served as the output control for the upcoming year. As Nicole explained, "Because, once the budget is written, it's written. Set in stone. We lock it as a team. We all feel good about it." And even if people did not feel "good" about the number itself, they let go of the process. Olivia described the collective stance: "By the end of the process, I would say they're resigned. They're kind of just done. It's like, 'OK, this is approved now let's just move forward' . . . I mean, everything is measured against it. But it's not questioned." Exhaustion from the budget cycle made people willing and resigned to the final number.

The details, logic, and uncertainties of the budgeting cycle were swept away and forgotten once the property-level budget number was established. George explained, "Here's the part that if you are not in the industry will absolutely drive you bonkers. Once you are done with the budget, and you start on January 1, you rarely look at the budget again." George qualified that by "looked at" he meant that the number was never challenged or questioned. He asserted that the number was "tattooed on his head" for the entire year (and thus "looked at" regularly as a benchmark and motivator for action).

George's acceptance of the budget number as output control was striking. He recounted a year in which his boss argued with corporate executives to get his property managers their bonuses when the hotel missed the budget goal by less than 1%. Surprisingly, George viewed this action negatively, even though he benefited financially. When probed at home, George described the action as undermining the reputation of the property and the manager:

> Well, the thing that I know is, we absolutely did not hit our bonus last year. We fell short by about a half a percent . . . . And corporate said, "Alright. You guys didn't hit it." And that's the way it should have been. But then [the GM] fought the battle, and fought the battle, and fought the battle, and . . . basically pleaded the case about why we didn't make it . . . . So he took that to one of the owners of the company . . . and [Noah, the CEO] . . . . And they turned it down again. Well, he wouldn't give up. So he basically strong-armed [a corporate executive], and he said, "Fine. We are going to pay it out at a percentage." But what I know, that a lot of people don't know, is that he was spoken to after making that decision. He was told that it was a bad call and basically, "You took money out of the owners' pocket to pay to those people." And basically said, "This will never happen again." So he knows he cannot go back to that. He cannot have that conversation ever again in his career.

This attitude was particularly noteworthy because George was the same manager who had no trouble disagreeing vehemently with his boss and was so proud of his "win" in the meeting. But, like Catherine, he knew that such pushback could only happen in the appropriate time and place (the budget meetings). Once the ritual of quantification was complete, the budget number became a powerful output control that stood as an independent governing mechanism for an entire calendar year. George was not alone in this stringent attachment to the budget number. As Kristi, a director of sales at a different property, asserted,

> If we don't make budget, we don't make bonus. Period. Yeah. Which makes sense. In some companies they are a little bit more lenient, but it makes sense. If the owners don't get what they were told they were gonna get, then why should they pay salespeople? I get it. So my job is to really make sure that we're on target for our goals . . . if the total hotel doesn't make it, if my team doesn't make their goals, I don't get it. I don't get rewarded. Which is fair. As a director, you need to make sure that you're, you know, not just looking after yourself, but also making sure that your team is producing in the way that they should be.

After the intense process, which Nicole described as "eating, sleeping, and drinking budget," each property concluded its budget cycle for the year. By participating in the bounded stages of budgeting (a form of process control) and engaging in the performative and emotional elements of the ritual (a cornerstone of normative control), managers simultaneously participated in creating and coming to accept the resulting output control. The normative control worked with the process control to propel people through the budgeting cycle and people became attached and committed to the outcome. Figure 1 represents how the ritualistic stages of budgeting lead to a robust output control.

Section III: Broader Outcomes of Ritual—Reaffirming Latent Values

Performing analysis and engaging in debate (with numbers as the relevant currency in both activities) embedded latent values of the organization in the minds of middle managers in the organization. The time, sweat, and (metaphorical) tears of those directly engaged in budgeting served to ensure commitment to the output control. It further instilled a belief in quantified metrics as the means to measure progress, delineate action, and determine truth.

For example, when asked to articulate how he knew his numbers were accurate, George evocatively asserted a connection between performing analysis and constituting "real" numbers. In his words, "They [his initial projections] are real because we have spent oodles of hours on the analysis to get to that number. They are real because we can defend them."

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In bringing together the analytic endeavor with the open defense before corporate executives, George is, in essence, imbuing the performative aspects of budgeting with the power to reify numbers. This faith translated beyond those directly involved in analysis and debate. Natalie, a sales associate not involved in budgeting, observed the intense analysis: "They made it seem like they literally had scientists in here trying to figure it out. They ran a million reports. It was crazy." The time and energy spent on budgeting supported a latent belief in numbers as powerful tools and specifically in the power of budgeting to map the future.

Beyond any single budget number, the budgeting cycle reaffirmed and solidified latent organizational values around the sanctity and power of numbers in organizational life more broadly. Stone, an event associate also not involved in budgeting, emphasized the role of numbers in the everyday experience of working at SLH:

> SLH is just so numbers driven . . . it seems that everybody's just so focused on numbers. They're not focused on how they are getting there and how the people are getting the numbers, how they are feeling about getting the numbers. They're just thinking, "Numbers. Numbers. Numbers. Numbers."

A facility with numbers allowed people to defend a position in a language that appeared objective and rational. As Catherine asserted, "I would say all of the exact same things that I would say to [Sam, a colleague] to [Noah, the CEO] because they are numbers. It's numerical. And it's a numerical company." Catherine was comfortable contesting the CEO's position because she used the language of numbers, and such episodes, in turn, reaffirmed the latent belief in numbers at SLH writ large. Fluency in numbers thus became a critical skill for establishing individual reputation and moving up in the firm.

With such pervasive quantification, numbers also became a seemingly neutral tool for simultaneously ensuring growth and dealing with people who did not meet expectations of growth. The allegiance to numeric measures allowed SLH to take on an almost schizophrenic culture of being both "hard charging and results oriented" and "like a family," according to interviewees. Nicole explained her allegiance to SLH: "I mean, I think that's the other reason why I think we're all so successful is because we're not micromanaged. They really believe in us, so then you believe in yourself more." However, such "belief" was measured quantitatively. Members could hold positive feelings about the organization and each other while leaving negative assessments to be determined by numbers. As George noted, "Everything comes down to numbers . . . . And then that exposes people, and people just go crazy." It is key that George emphasized that the *number* "exposes people," not the organization or one's fellow employees. Similarly, when asked to describe SLH, Olivia asserted, in the same sentence, "It's like, 'Okay, it's about results and we want you to hit these results,' but there is a culture piece of it and treating people with respect and just being the best person you can be. There is a big piece of that as well." Utilizing quantitative metrics to judge performance depersonalized individual assessment.

In addition to holding individuals accountable to a specific number, the budgeting cycle provided a measure of certainty that growth was possible (because it happened every year), numbers were objective (because they were "locked in"), and their organization was benevolent (because the numbers not the organization made people "crazy"). The budgeting cycle promoted a broad acceptance that continual growth was possible. We regularly heard the same individual vacillating between assertions that reaching his or her numbers was truly impossible and expressing pleasure and, as deadlines drew near, proud amazement when budget numbers were met. As described earlier, Seth griped in the spring about the impossibility of reaching the budget goal after "blowing it out of the water" by $20 million the prior year. Seth's hotel was now pushing to meet a budget goal that was 7% higher than the actuals from the prior stellar year. While it seemed nothing short of impossible to Seth in the spring, his team ended having an unexpectedly good fall, and they made it happen.

When a hotel achieved or surpassed a budget projection, the sales team was celebrated loudly and with much fanfare. The annual sales meeting brought together sales people from all SLH properties and made a show of calling out hotels that "made budget." The sales team of each celebrated property was asked to come on stage, and each salesperson in the team was publicly handed a bonus check in front of all of his or her colleagues. While individual properties regularly did not make budget, public celebrations of success directed focus on those that did. Such recognition perpetuated the assumption that making budget was possible and expected by corporate executives. This, too, valorized the intense work environment where individuals sacrificed and struggled to make their numbers. The possibility that growth in hotel revenue might be stagnant (or even reverse direction) was not publicly acknowledged.

Discussion and Conclusion

In addressing the question of how key numbers took on authority at SLH, we find that the annual budget cycle acted as a ritual of quantification that served to transform a set of disparate inputs into a robust output control. In contrast to literature that finds that output controls are regularly manipulated and undermined, we find that this ritual of quantification engendered output controls that were treated as governing (by both those who created them and those who were subject to them). A ritualistic analysis of budgeting revealed how the development of robust output controls was interconnected with other forms of control; the stages of the ritual exerted process control, and the performative and emotional components in the budgeting cycle supported normative control (with emotions propelling people from one stage to the next and performative action instilling commitment to the process and the eventual outcome). Thus, the intertwining of these three forms of control—process, normative, and output—engendered a powerful budget number that was accepted as reified and reasonable.

The lens of ritual further reveals how budgeting established and maintained core values of the organization around numeric authority and continuous growth. SLH venerated numbers as objective and authoritative metrics for directing behavior and aligning organizational actions. The firm operated on a model of continuous expansion, with each budget cycle starting from the premise that property revenue would grow substantially—year after year after year. Managers were expected to build a percentage of growth from current actual revenue into their projections. Thus, while the precise percentage of growth expected for the following year was hotly contested and argued in budget meetings, the idea of growth itself was not questioned. The collective focus on budgeting annually reestablished the power of the budget number to direct behavior and reaffirmed the possibility of continuous growth.

Yet this examination is of one organization, and we do not know with certainty that it was the ritual of quantification that produced robust output controls. One important boundary condition to this ritual of quantification may be the external accountability to owners at SLH. It would be worth examining whether similar dynamics occur when there is less accountability, or even accountability to public markets that have a more opaque owner.

Contributions to Organizational Control

The literature on organizational control has not seriously examined the dynamic nature of different types of control and how these forms of control interrelate in practice. Nor has it examined the origins of output controls as critical to understanding the nature of their authority—or lack thereof. We argue that the authority of output controls is dependent on the interweaving of process and normative controls to direct and align action in service of the organization.

Of course, output controls also have power because their accomplishment is celebrated and rewarded in the organization, in particular by financial rewards. But such incentives to achieve output controls cannot fully enlist people in creating output controls that are difficult to achieve. Thus, this research provides a critical link necessary to explain circumstances under which output controls wield authority—even over (or, perhaps, particularly among) those who participate in their creation. We found that by involving middle managers in the creation of the output controls for which they would ultimately be held accountable to, and by moving them through a set of stages where the nature of their relationship to the number changed (from analysis to narrative to collective synthesis), these mangers became willing to accept and abide by the final output controls. The budgeting cycle at SLH reveals how normative and process controls can support the creation of robust output controls. This raises the possibility that output controls are less effective on their own, and it highlights the importance of examining the *creation* of systems of control to understand their effectiveness (Cardinal 2001, Kownatzki et al. 2013, Kreutzer et al. 2015).

We further contribute to the literature on organizational control by incorporating the lens of organizational ritual into our understanding of how systems of control operate in practice. By definition, a ritual has set stages that dictate particular activities. This is process control. A ritual also induces emotions and deep engagement that encourages participants to internalize a belief structure. This is normative control. In examining the budgeting cycle, these elements of the ritual that anchor a control system are clearly observed, and we can see how normative control mechanisms move people through the budgeting cycle. The ritual itself interweaves process and normative control. In mapping ritual to systems of organizational control, this research provides scholars with the tools for deeper analysis of how systems of control enlist the hearts, minds, and identities of those within them.

It is important to highlight the unintended and hidden costs of budgeting for employees. The emotional labor, in which employees are asked to engage their minds as well as their hearts (Hochschild 1983), results in illness, exhaustion, and burnout. Michel (2011) points to the physical limitations of organizational control. Even the release valve of a "next year"—to escape the difficulty of this year's numbers by engaging in the process of creating numbers for the next year—was not enough for many managers, who left the organization because of the intense stress. "Making your numbers" in this organizational context was exhausting because employees were striving to make *current* output goals while simultaneously engaging in the intense process of creating a *future* set of output goals. Creating and then living under the budget numbers is a difficult task, and we reveal some of the physical and emotional costs of this particular system of control.

Contributions to Organizational Ritual

We are not the first to suggest that budgeting can reinforce organizational values (or to call budgeting a ritual). We are indebted to the critical accounting scholars who have explored how accounting practices such as budgeting have ritualistic elements (Czarniawska-Joerges and Jacobsson 1989, Olson 1970, Perez and Robson 1999) and serve as a mechanism for social control (Olson 1970). This literature emphasizes that ritual works to construct social meaning and reaffirm latent values, and we find this insight to be one of the key benefits of adopting the language of ritual. That said, nowhere in current scholarship do we find a detailed examination of how different elements of ritual align with forms of control and come together as a system of control. Kunda's (1992) assertion that organizational ritual is a form of normative control and Olson's (1970) awareness that budgeting can act as a ritual of social control highlight some aspects of the relationship between ritual and control. The research presented here, however, provides a detailed account of how ritual can enhance organizational control by showing how process and normative control intertwine in service of output control. The power of ritual takes on a new hue when seen through the lens of control.

In their conceptual model of the organizational ritual process, Islam and Zyphur (2009) suggest that ritual episodes serve to simultaneously satisfy an organization's need for stability and for transformation. Our analysis of budgeting as a ritual of quantification provides empirical weight to this insight by elucidating *how* budgeting served a both transformational and stabilizing role for the organization. On the one hand, the budgeting ritual maintained stability by enlisting middle managers in creating key metrics for which they were held accountable and instilling in these same managers the beliefs in numbers as impartial, dispassionate, and objective tools for delineating action and assessing success. The collective solidarity that emerged from the intensity of the process further bred faith in both the process and the outcome. Participants were, in essence, annually resocialized to the values of the organization, which enhanced organizational stability.

On the other hand, budgeting also facilitated a transformation of both the individuals involved in the process and the various numbers around which the ritual was enacted. Individuals were shaped and changed by the emotional and performative experience of budgeting. Not only did they become committed to both the process and the outcome of budgeting, they were given a chance to establish themselves as numerically fluent and organizationally competent in front of the highest executives. The numbers too were transformed, as the entire ritual facilitated the evolution of numerous disparate inputs into a single reified and governing number.

Finally, rituals serve to venerate social values and instantiate ideologies in everyday practice (Grimes 2000, p. 336). These deep meanings and beliefs are what make budgeting a ritual rather than a routine, and this can be seen in the examination of other organizational rituals as well. For example, Dacin et al. (2010) outline the role of formal Cambridge dining rituals in upholding traditional values and maintaining the British class system. Similarly, Pentland (1993) explores how the day-to-day interactions of audit teams instill macro beliefs of stability and trust in the economic order and, in so doing, ensure macro stability through micropractices. In our case, the act of budgeting reaffirms a belief that numbers represent objective truth (despite the fact that their uncertain origins are known to the managers creating them). This undergirds a belief in continuous organizational growth and often serves to make that growth a reality.

Contributions to Quantification in Organizations

The budget process at SLH provides much needed insight into the origins and power of key financial metrics in organizations. While Quattrone (2015) offers a compelling description at the field level of the emergence of accounting practices and unfolding rationality in the Jesuit order, empirical analyses of where numbers come from and how they take on authority in everyday organizational practice is largely missing in management studies. Our work aligns with Quattrone's insights while explaining how the budget number, as a key financial metric, comes to act a robust output control through a ritual of quantification. This connects back to the macro level because, in venerating and putting into practice a myth of continuous growth, SLH uncritically pursues certain lines of action and reflects a taken-for-granted assumption in capitalist enterprises writ large.

Yet growth is an accomplishment, not a fact. We show how an orientation to continuous growth is embedded into the budget process. The intense focus on numerical analysis and "finding" growth encourages middle managers to orient to the future in a specific way and in so doing makes growth happen. As Perez and Robson (1999) note, the value of "accounting talk" for organizations is "in affirming an important organizational ideology that the future is knowable and programmable" (p. 387). And, in reviewing the origins of managerial techniques around "standard costs" (a cost determined in advance that could be compared against actual costs) in the early 1900s, Miller (2001) states unequivocally that "at the heart of standard costing was the ambition to shape the future" (p. 384).

These data reveal how, through the creation of a key financial metric, a ritual of quantification (budgeting) can cultivate an explicit orientation to expansion and continuous growth. However, budgeting is only one example of a ritual of quantification. Depending on the organization, forecasting, strategic planning, and new market analysis (to name a few) can act as rituals of quantification. Rituals of quantification are thus microprocesses that support the capitalist enterprise through mundane organizational processes by creating numbers that appear natural and objective. As such, they are a critical component of the "accounting complex" that Miller and Power (2013, p. 558) discuss in great detail. This article can be seen as a direct answer to these authors' call for the development of a body of work that illustrates how accounting representations work in practice. By simultaneously inducing people to create and commit to their own instrument of control ("making" the budget number) and then acting as a yardstick to measure their success (have you "made" your numbers?), budget numbers are a powerful mechanism through which the "economization of organizational life" is inhabited and given life by individuals within organizations (Miller and Power 2013, p. 558).

This leads us to the importance of budgeting as a ritual of *quantification*. The fact that numbers enjoy broad power in Western society as sources of "truth" and "rationality" highlights the unique role of quantified metrics in this ritual. Numbers are often used in organizations as seemingly objective tools by which interests are advanced yet justified with a professional, precise, and depersonalized language (Michaud 2014). Political and social processes are masked by numbers (Denis et al. 2006, Lampland 2010). And budget numbers, in particular, are argued to "provide an apparent 'hard' facticity to complex, conflictual, and ambiguous situations" (Perez and Robson 1999, p. 386).

Particularly in our modern world, where quantification is paramount and numbers are a common language, the process by which numbers are established demands attention. Across the board, scholars of calculation and quantification acknowledge that the power of numbers is tied to the practices through which these numbers are developed and given authority (Verran 2010). However, empirical understanding of how key financial figures come into being in the context of ongoing organizational practice is sorely lacking in current management scholarship. Greater attention to rituals of quantification will allow us to unpack the dynamics by which numbers come to hold authority in organizations, provide insight into how such processes operate in practice, and reveal how beliefs that underlie capitalistic enterprise are supported by organizational processes.

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Endnotes

[1] All proper names are pseudonyms, including the name of the firm and names of individuals.

[2] Process control also includes technical control (Orlikowski 1991), the technical infrastructure put in place to coordinate and dictate how work happens.

[3] Capital improvements were overseen by SLH, but owners funded and approved capital projects outside of the budget process.

[4] We also observed SLH obtain new property contracts. In these instances a budget was immediately developed for the remainder of the current calendar year.

[5] One of our middle managers handled two smaller properties and reported to a general manager who similarly handled both properties. Each property, however, had a separate budget projection and different owners.

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