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Explaining the Selection of Routines for Change during Organizational Search

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Abstract

We examine how organizations select some routines to be changed, but not others, during organizational search. Selection is a critical step that links an exogenous trigger for change, change in individual routines, and larger processes of organizational adaptation. Drawing on participant observation of an initiative to improve perioperative efficiency in seven Ontario hospitals, we find that organizational roles shape selection by influencing both politics and frames in organizational search. Roles shape politics by defining the role-specific goals of the people who have authority to change a routine. Organizations will not select a routine for change unless at least some elites—people with role-based authority—frame the existing routine as negatively affecting their role-specific goals. Roles also shape individuals' frames. Because people are only partially exposed to interdependencies between routines in their day-to-day work, they may not be fully aware of the diverse impact that an existing routine can have on their goals. Proponents for change can use strategic framing to focus attention on interdependencies between routines to get elites to better see how an existing routine negatively affects their goals. They can also change elites' goals by using strategic framing to focus attention on new and broader goals that the change in routine would promote.

Keywords: work, search, routines, hospitals and health care, conflict and cooperation

Organizational routines are a key mechanism by which organizations can change, adapt, and maintain stability over time (Nelson and Winter, 1982; Feldman and Pentland, 2003; Becker et al., 2005; Pentland et al., 2012). Routines are recognizable, repetitive patterns of interdependent action that govern work processes in organizations (Feldman and Pentland, 2003).

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Research over 20 years has articulated a practice perspective on routines, theorizing how routines change. This literature shows that the lived experience of an organizational routine, including flexibility in how it is used, can be a source of change in the routine and thus the organization (e.g., Feldman, 2000; Feldman and Pentland, 2003; Howard-Grenville, 2005; Pentland and Feldman, 2005; Parmigiani and Howard-Grenville, 2011; Salvato and Rerup, 2011). It has developed the idea that individual routines could be generative systems, in which the dynamics within a routine could trigger change endogenously. In conceptualizing the individual routine as a generative system (Pentland and Feldman, 2005), the source of change comes from experience—feedback, observation, and trial-and-error—in enacting the routine.

Change in a routine can also be triggered by an exogenous event. Cacciatori (2012) examined challenges experienced in an effort to alter the bidding routine in an engineering firm in response to an environmental shift—a change in government contracting procedures. Zbaracki and Bergen (2010) examined change in the pricing routine in a manufacturing organization in response to an industry shift—a competitor's move to cut prices. Others have similarly explored intentional change with a trigger exogenous to the individual routine (Feldman, 2003; Lazaric and Denis, 2005; Reynaud, 2005; Bapuji, Hora, and Saeed, 2012), as well as intentional efforts to maintain or replicate routines (Szulanski, 2000; Bruns, 2009; D'Adderio, 2014). Researchers outside of the literature on the practice perspective on routines have also pointed to diverse triggers that can lead to changes in work and thus in routines, including regulatory shifts (Kellogg, 2009) and technological change (Barley, 1986; Edmondson, Bohmer, and Pisano, 2001).

Researchers who examine exogenously triggered efforts to change routines focus on the dynamics of the change process (Feldman, 2003; Bruns, 2009; Zbaracki and Bergen, 2010; Cacciatori, 2012). They do not consider how the exogenous trigger led to efforts to change that particular routine. Missing from this research is the idea that organizations accomplish their work through a large number of interdependent routines, which interact in complex and often unpredictable ways that make it difficult to identify which routines should change to respond to some exogenous trigger. Researchers who studied exogenously triggered change in the past have immediately jumped from the trigger to the dynamics of an individual routine. Conceivably changes to other routines could have helped the organizations respond to exogenous shocks or pressure. Why were these particular routines selected for change? Because of the focus on processes within individual routines, we still have limited knowledge of the process that links an exogenous trigger with a specific response—some routines being selected for change but not others. The selection of routines for change—in defining which routines change and why—is a critical determinant of the content and direction of organizational change. As a result, knowledge of how routines are selected for change is key to understanding the process connecting exogenous triggers for change, change in individual routines, and broader processes of organizational change and adaptation. The objective of this study is to illuminate this selection process.

SELECTING ROUTINES FOR CHANGE IN ORGANIZATIONAL SEARCH

The concept of organizational search offers a potentially useful framework for thinking about how an exogenous trigger can generate efforts to change some

routines and not others. Organizational search is a process by which organizations seek out new ways of operating that organization members believe would better allow them to achieve performance goals (March and Simon, 1958; Cyert and March, 1963; Levinthal and March, 1981). The search literature does not focus attention on organizational routines, but as a process by which organizations can embrace new ways of doing things—described as organizational features, activities, alternatives, or policy choices (Levinthal, 1997; Gavetti and Levinthal, 2000; Siggelkow, 2002; Siggelkow and Rivkin, 2006; Gavetti and Rivkin, 2007; Winter, Cattani, and Dorsch, 2007)—theories of organizational search can be extended to explain why some routines are selected for change while others are not. If we consider routines as organizational features, the literature on search would highlight that the trigger for organizational search is not necessarily endogenous to the individual routine. Instead, search is oriented to improving performance relating to an organizational goal that in most cases could reasonably be linked with a wide range of individual routines (Cyert and March, 1963). Goal-directed organizational search can be triggered by performance feedback (e.g., performance that is above or below an organization's target for a specific organizational goal) or by the availability of slack resources that give organization members time, money, or materials to explore doing things in new ways (Cyert and March, 1963; Levinthal and March, 1993; Greve, 2003a). This trigger, exogenous to the individual routine, nevertheless can lead to an intentional effort to change a specific routine. We draw on the literature on search to understand how.

Using theories of organizational search to understand exogenously triggered change in organizational routines focuses our attention on the selection of which routines to change as a critical step that is missing in prior research. Cyert and March (1963: 102) highlighted that a theory of search requires ''a mechanism (a) for generating alternatives and (b) for choosing among those generated.'' If we were to use models of organizational search to think about how organizational routines might change, it would unfold as follows. Organizational search would be triggered either when performance is below an organization's target or when slack resources give an organization the ability to experiment and explore opportunities to better meet a goal. In either case, search is oriented toward improving performance relating to an organizational goal that is affected by multiple organizational routines (cf. March and Olsen, 1976; Reynaud, 2005). The search literature highlights that these multiple alternatives are interdependent. Extending this insight to think about routines suggests that one routine's impact on the goal depends on how it interacts with other routines. It further suggests that the complexity of an organization's system of interdependent routines would make it hard to know which routine would have most impact on the organizational goal that is the focus of search. As a result, once triggered, search involves identifying and selecting potential changes in individual interdependent routines (March and Simon, 1958; Cyert and March, 1963; Levinthal, 1997; Gavetti and Levinthal, 2000; Greve, 2003b; Sitkin et al., 2011).

Focusing attention on organizational search as a process by which routines may change highlights that the selection of routines for change is a missing step in prior empirical studies in the literature on organizational routines that examine exogenously triggered change. For example, in examining an effort to change the budgeting routine to better meet the goal of building strong

communities, Feldman (2003) did not explain why the university housing division did not attempt to change other routines that could strengthen residence hall communities. Similarly, Cacciatori (2012) did not consider whether there were alternatives to altering the bidding routine that could have helped the engineering firm better win government contracts. We can even see the selection of routines for change as a missing step in research that does not, but could, discuss organizational routines. For example, in different studies, Kellogg has considered surgical departments' efforts to respond to concerns about surgical residents' long working hours and patient safety by making changes in how they do handoffs between shifts of residents (Kellogg, 2009), how they allocate ''scutwork'' (Kellogg, 2011), and how they change staffing schedules (Kellogg, 2012). A search-based theory of change in routines would focus our attention on the question of how each individual hospital came to select certain practices or routines for change at the start.

In this study, we ask how organizations come to select some routines for change and not others in the context of organizational search. We focus on the question of selection because it is an important but under-researched step linking an exogenous trigger with an initiative to change a particular routine, and we focus on the influence of organizational roles because they help define the work people do and thus the routines they enact—and may seek to change.

Potential Impact of Roles on Selection

In examining the selection of routines for change, prior research on organizational roles in shaping coordination, communication, and change provides insight into how roles may be important in the process (e.g., Barley, 1986; Abbott, 1988; Wenger, 1998; Golden, Dukerich, and Fabian, 2000; Edmondson, Bohmer, and Pisano, 2001; Carlile, 2002; Bechky, 2003a, 2003b, 2006; Okhuysen and Bechky, 2009). A role is a bundle of expected behaviors and responsibilities associated with a social position or formal place in an organization's structure. Among other things, organizational roles can help define the work that people do, the identity they embrace, the autonomy and control they have over their work, and their authority or influence over others.

Prior research highlights three ways that roles can be important in shaping organizational life and in guiding the selection of routines to change. First, researchers have highlighted that roles define individuals' role-based authority. Abbott (1988) defined jurisdictional authority as a form of occupational role-based authority over decisions and particular types of work. Others have explored how individuals in diverse occupational roles negotiate their jurisdictional authority (Carlile, 2002; Bechky, 2003a; Reay, Golden-Biddle, and Germann, 2006; Huising, 2014), how the support of individuals with jurisdictional authority can affect the implementation of new practices (Edmondson, Bohmer, and Pisano, 2001; Kellogg, 2011), and how differences in authority and status can affect coordination across roles (Bechky, 2003b, 2006; Kellogg, 2009; DiBenigno and Kellogg, 2014). A common insight across this work is that roles, in structuring who has jurisdictional authority over different tasks and decisions, are critical in shaping both how work gets done and how it is changed.

Second, roles can be important in shaping organizational politics by defining individuals' role-specific goals. Cyert and March (1963: 40) suggested that roles

may be important in shaping how individuals prioritize goals, noting for example that ''for the safety engineers [safety] is an important goal most of the time. Other parts of the organization rarely even consider it.'' Others have since shown that individuals in different roles, or with different occupational backgrounds, may prioritize different goals in ways that shape their actions (Ocasio and Kim, 1999; Golden, Dukerich, and Fabian, 2000; DiBenigno and Kellogg, 2014).

Third, a long history of work has established the influence of organizational roles, particularly occupational roles, on interpretive frames. A frame is an interpretive schema that enables individuals to organize and make sense of the complex stimuli of everyday life (Benford and Snow, 2000). A wide range of factors can influence frames, including contextual features of a situation, an individual's political ideology or work biography, and an individual's exposure to a multiplicity of messages over time (Benford and Snow, 2000; McAdam and Scott, 2005; Kaplan, 2008; Nigam, Huising, and Golden, 2014; Giorgi and Weber, 2015). Researchers have also consistently shown that interpretive barriers across occupations can be a barrier to coordination and knowledge sharing (Dougherty, 1992; Carlile, 2002; Bechky, 2003b; Okhuysen and Bechky, 2009; DiBenigno and Kellogg, 2014). These interpretive barriers have their roots in differences in work practices that inform individuals' occupation-specific knowledge, as well as differences in expertise, language, and identity (Barley, 1990; Carlile, 2002; Bechky, 2003b; DiBenigno and Kellogg, 2014; Loewenstein, 2014).

Research on routines has also explored the impact of roles in shaping dynamics within individual routines. Zbaracki and Bergen (2010) extended Nelson and Winter's (1982) work conceptualizing routines as political truces to show how role-based politics, between individuals in sales and marketing roles, shaped competing proposals for how a pricing routine should change in a manufacturing firm. Cacciatori (2012) similarly showed how role-based politics in an engineering firm informed actions that individuals engaged in and the artifacts they used to shape change in a firm's bidding routine. Researchers have also considered the impact of roles in shaping people's interpretive frames of a routine. As Feldman and Pentland (2003: 101) noted, ''Each participant's understanding of a routine depends on his or her role and point of view.'' Subsequent work has explored how individuals' roles can shape their differing interpretive frames of both the nature of an individual routine and its outcomes (Feldman, 2004; Turner and Rindova, 2012).

In this paper we examine how occupational roles affect the selection of routines for change, focusing on the importance of roles in defining people's authority, goals, and interpretive frames. The impact of roles on selection is different from their impact on dynamics within a single routine because selection takes place in a work system of multiple, interdependent routines (Levinthal, 1997). The impact of roles on selection is shaped by the interplay between roles and interdependencies between routines in two ways. First, an existing routine's impact on people's role-specific goals depends on how the existing routine interacts with interdependent routines (Cyert and March, 1963; Levinthal, 1997). Second, people's boundedly rational frames of how an existing routine affects their goals will be shaped by their partial, role-specific experience with the system of interdependent routines in their day-to-day work.

We draw on participant observation of search processes in seven organizations to specify mechanisms by which organizations select routines for change during organizational search. The search processes that we observed were offline, or removed from organizations' day-to-day work (Gavetti and Levinthal, 2000)—involving external facilitators, called coaches, meeting with diverse organization members in a series of interviews, meetings, and action-planning sessions in Ontario hospitals to hash out specific changes in routines to improve perioperative efficiency (i.e., efficiency of the surgical process). Our analysis brings to light the powerful influence that organizational roles have in shaping the selection of routines for change.

METHODS

Empirical Context

Our theory-building efforts draw on participant observation of a government initiative designed to increase the efficiency of perioperative care, which includes the continuum of care before, during, and after surgery. The program, named the ''perioperative coaching program,'' involved a process of facilitated search in which external facilitators (the ''coaches'') met with a range of individuals involved with perioperative care, which incorporates pre-surgical assessment, scheduling surgeries, matching cases with staff and resources, anesthetic and surgical care in the operating room (the OR), and post-surgical recovery. It represents the full set of production processes for surgical procedures and involves the work of surgeons, nurses, anesthetists, and administrators.

During the visits, coaches facilitated efforts by members of the hospital perioperative teams to identify and commit to changes in routines that they believed would advance the goal of perioperative efficiency. Ontario's Ministry of Health created the coaching program as part of its initiative to reduce surgical wait times. The program was voluntary and free, giving all hospitals in the province the option of requesting a coaching team visit but not requiring a coaching visit. The coaches themselves were outsiders to the hospitals being coached but insiders to the health care system. Each coaching team was made up of physicians, nursing managers, and administrators involved with perioperative care in other hospitals in the province. They were unique in that they were not traditional consultants, or government inspectors, but ''peers'' who were invited to play a role in facilitating a process that would allow hospitals to improve performance (Sherrard, Trypuc, and Hudson, 2009; Nigam, Huising, and Golden, 2014). Each visit involved 1½ to 2 days of interviews and focus groups with stakeholders in the perioperative program followed by 1½ to 2 days of action planning, in which diverse stakeholders prioritized problems and goals and committed to steps that they would undertake—involving change in routines—to improve efficiency. We complemented our observational data with analysis of documents produced through the individual hospital coaching visits that concerned the routines selected for change.

Our data differ from data typically used in the practice perspective on routines, which typically involves observation of an individual routine over an extended time period (Feldman, 2000; Howard-Grenville, 2005; Rerup and Feldman, 2011). Instead, we observed search processes across multiple organizations over a relatively short time period. Our empirical data are well suited

for developing theory focused on how organizations come to select routines for change during organizational search for three reasons. First, the coaching visits were clearly examples of goal-directed organizational search. All of the hospitals voluntarily requested the coaching visit to identify new ways of organizing that would increase performance relating to the goal of efficiency. Second, the trigger for change was external to individual routines. Hospitals requested a coaching visit as a way to respond to increased institutional pressure to improve their efficiency. This institutional pressure typically operated in conjunction with performance feedback that led key organizational actors to perceive that they were not meeting efficiency goals (e.g., in each hospital we regularly heard comments that efficiency could be improved). In all cases, the goal of increased perioperative efficiency was potentially shaped by a large number of routines involved with delivering perioperative care. Third, the coaching visits involved selecting routines for change. The program was designed to help organizations make choices about which routines to change by helping them identify routines that might inhibit efficiency, select a handful of problems worth addressing, and commit to new routines.

Data and Analysis

Our research draws on observation by the first author (''the observer'') of seven coaching team visits. His observation involved participation in a conference call between coaching team members and hospital staff prior to the facilitation visit, observation of activities formally scheduled as part of the coaches' visit, and informal socializing and conversations among coaching team members. The observer was able to use a laptop to type field notes in real time during most of his observation time, allowing him to gather rich field notes with direct quotations and close paraphrases of much of what was said. The excerpts presented below are quoted directly from our field notes, corrected for grammar and spelling.

Our first phase of coding and analysis was exploratory and inductive, involving narrative analysis of each coaching visit (Strauss, 1987; Langley, 1999). We analyzed our field notes by breaking down each visit into units—representing each formal meeting in the coaching visit or time segment of informal interaction—and coding each segment to identify what happened during the search process that may have influenced how routines were selected and which routines were selected for change. Based on this, we constructed narrative summaries for each visit that focused on when and how issues were raised and by whom, how issues were talked about or framed, who supported making specific changes in routines to resolve problems raised, and whether the engagement with the issue over the course of the coaching visit resulted in a specific commitment to change a routine. It was through this first round of analysis that we came to focus on the importance of roles in shaping selection and the importance of framing. We found that roles influenced how individuals framed problems and solutions and the political dynamics that unfolded during search, ultimately shaping selection.

In our second phase of analysis, we returned to the field notes to identify specific cases of proposed changes in routines articulated during the coaching visits. Given our interest in explaining selection, we looked for proposed changes that were selected as change commitments and proposed changes

that were not selected. We focused on one broad activity—routines governing the use of the operating room (OR)—for more systematic analysis. This broad activity involved routines for allocating OR time, scheduling specific types of cases to locations or times, or determining what types of cases can be performed in the OR at all. We focused on routines governing the use of OR resources for three reasons. First, this activity was an important focus of all seven coaching visits that we observed. Routines governing the use of OR resources catalyze all other activities in the surgical process because they affect the allocation of expensive health care resources: surgeons, nurses, and surgical space. As a result, these routines directly address the issue of how the perioperative process could be made more efficient. Second, given our emerging focus on the importance of organizational roles from our earlier analysis, we focused on this activity because it involved multiple organizational roles. Surgeons, anesthetists, administrators, and nurses in all seven hospitals identified problems with routines for determining the use of OR resources. Third, there was variation in the outcomes of proposed changes in routines governing the use of the OR—some were selected as change commitments while others were not. This variation gave us a good empirical basis for developing theory to explain selection.

We identified six routines relating to the use of the OR: (1) routines allocating surgical blocks—segments of regularly occurring OR time during which a surgeon operates on patients, (2) routines scheduling surgical blocks across a week, (3) routines for booking surgical cases within a surgical block, (4) routines for treating urgent or emergency surgical cases after regularly scheduled hours, (5) routines for treating urgent surgical cases during regularly scheduled hours, and (6) routines for treating minimally invasive procedures outside of the OR. Across the seven hospitals we observed 25 cases in which one of the six routines described above was discussed as a possible change commitment. Table 1 describes the seven hospitals included in our analysis (by their pseudonyms), each of the 25 proposed changes in routines, indicated by a unique case number, and whether the routine was selected for change.

To analyze the search process for each of the 25 cases described in table 1, we compiled and coded all information related to each case. We coded who came to focus attention on a problem, how they framed it as linked with the current organizational routine, whether and how individuals framed a proposed change in the existing routine, who initially expressed support for or opposition to proposed changes, and whether and how people's frames changed. We also coded our field notes and project documents to determine whether a proposed change was or was not selected as an organizational change commitment.

As we iteratively compared and contrasted our codes across our 25 cases, we uncovered a few key findings that formed the core of our account of the selection of routines for change. First, we found that the selection of routines for change was ultimately a political process shaped by who had role-based authority to change a routine. Routines were selected for change only if at least some of the people with jurisdictional authority to make decisions to change the routine—always including some surgeons or anesthetists—supported change. Second, we found that people's support for change was significantly driven by the goals that they focused attention on as important to performance during the coaching visit, and by whether they framed the existing routine as a problem in achieving these priority goals. Third, it became clear that individuals'

Table 1. Summary of Research Sites, Proposed Changes in Routines, and Outcomes

Size	Proposed Changes in Routines
	Brew (rural community hospital)
Medium: 7,000 operations per year in 3 operating rooms	1. Change in routine for treating urgent cases by creating regularly scheduled trauma time. 2. Change in routine for scheduling blocks by day of the week to consolidate in-patient surgeries early in the week. 3. Failed change in routine for deciding which cases can be done after hours. 4. Failed change in routine for allocating OR time to individual surgeons.
	Eagle (rural community hospital)
Small: < 2,000 operations per year in 2 operating rooms	5. Change in routine for deciding which cases can be done after hours to minimize non-emergency surgeries. 6. Change in routine for treating urgent cases by creating regularly scheduled trauma time, thereby minimizing after-hours surgeries. 7. Failed change in routine for doing minor procedures (e.g., vasectomies) by moving them out of the OR. 8. Failed change in routine for scheduling blocks by day of the week to smooth out demands for nurse staffing. 9. Failed change in routine for booking cases within surgical blocks. 10. Failed change in routine for allocating OR time to individual surgeons.
	Lake (rural community hospital)
Medium: 7,000 operations per year in 5 operating rooms	11. Change in routine for doing caesarean sections by moving them from the OR to the Obstetrics Unit. 12. Failed change in routine for booking cases within surgical blocks. 13. Failed change in routine for allocating OR time to individual surgeons.
	Mayberry (rural community hospital)
Small: < 2,000 operations per year in 1 operating room.	14. Failed change in routine for doing minor procedures (e.g., vasectomies) by moving them out of the OR.
	River (urban community hospital)
Medium: 10,000 operations per year in 10 operating rooms on 2 sites	15. Change in routine for treating cystoscopy patients by reducing anesthesia use and moving them out of OR setting. 16. Change in routine for deciding which cases can be done after hours. 17. Change in routine for treating urgent cases by creating regularly scheduled trauma time. 18. Change in routine for scheduling blocks by day of the week to smooth out demand for inpatient beds. 19. Change in routine for allocating OR time to individual surgeons. 20. Failed change in routine for doing dental procedures by moving them out of the OR.
	Royal (suburban teaching hospital)
Large: 15,000 operations per year in 7 operating rooms	21. Change in routine for scheduling blocks by day of the week to smooth out demand for inpatient beds. 22. Change in routine for treating endoscopy patients by moving it out of the OR and expanding capacity. 23. Change in routine for treating urgent cases by creating regularly scheduled trauma time.
	Academic (urban teaching hospital)
Large: 24,000 operations per year in 27 operating rooms on 3 sites	24. Change in routine for scheduling blocks by day of the week to smooth out demand for inpatient beds. 25. Failed change in routine for deciding which cases can be done after hours.

initial frames of whether an existing routine was a problem that hampered performance were boundedly rational in a way that was role-specific. People's frames were shaped by the work they did, which was significantly defined by their occupational roles. Fourth, we observed that strategic framing by initial proponents for change, often including the perioperative coaches, could get more people to frame an existing routine as a problem and hence could build additional support for change. Fifth, the members of the coaching team, based on their experience and overall perspective of the organization, could create big-picture frames (e.g., frames that integrated diverse perspectives from within the organization) that could challenge role-specific frames. These frames better approximated the routine's impact on organizational members' goals than the role-specific, parochial frames of organizational insiders.

Building on these findings, we then recoded our data for each of our 25 embedded cases to develop and empirically assess our ultimate model of selection. At this point, we dropped case 9 because we could not make a clear judgment about the set of elites who had authority over the routine. We collaboratively coded each of the remaining 24 cases for the five themes that emerged through our analysis and the specific concepts (e.g., elites, elites' initial frames, impact on elites' initial goals, strategic framing to focus attention on interdependencies, etc.) described in the presentation of our findings. Because our data are on the ''off-line'' search process, we do not have direct observations from daily practice on how, for example, one routine affects either another routine or role-specific goals. By observing the search process, however, we were able to collect detailed accounts, grounded in different roles, of how a given routine might affect various organizational goals. This allowed us to triangulate among perspectives. We identified people's role-specific goals by what was explicitly articulated as important in the search process, by the absence of explicit attention to some goals, and based on attributions by people in other roles. We used our collaborative discussion of our individual coding to come to an informed judgment. We validated our judgments of a routine's impact on people's role-specific goals with members of the coaching team who, in their private interactions, regularly discussed the interdependence of routines and how change in one routine might ripple through to other routines to affect diverse goals. They often engaged in these discussions based on their experience in their own hospitals and with the aid of hospital documents, such as the OR schedule, the list of cases done recently after hours, or the nurse staffing schedule. This increased our confidence about the implications that changes in one routine had for related routines and that the big-picture frame more accurately represented the implications of a change than any individual organizational members' frames. Nevertheless, we necessarily exercised judgment in analyzing and coding the cases and engaged in collaborative discussion to ensure our interpretations were empirically grounded.

FINDINGS

Influence of Elites

The search process was a political process shaped by the extent to which elites—people who occupied roles that gave them authority to make decisions about a routine—supported change. Because who has authority can differ

across routines (e.g., obstetricians, nursing managers, and anesthetists for one routine vs. surgeons for another), the set of elites is specific to a given routine. The elites' goals and their frames of how changes to a routine would affect their goals shaped the search process and which routines were selected to be changed, although their initial goals and frames could be influenced by strategic framing during search.

Elites' initial frames were the perceptions they brought to the search process of whether and how a routine affected their goals. They were a critical determinant of their early support for selection. Elites supported selecting a routine for change if they considered the existing routine to have a negative effect on their goals. Because individuals in multiple roles often shared authority over a routine, different elites prioritized different goals and had different initial frames. Changes to a routine could influence elites' goals either directly or indirectly by creating ripple effects in related routines. Elites' initial frames were bounded by their role-specific knowledge. Despite the fact that routines are interdependent and changes in one routine will have implications for related routines, elites often did not see or understand these connections and ripple effects. They had narrow, only partial experience with the organization's system of interdependent routines in their day-to-day work. In some cases, because of their only partial exposure to interdependencies between routines, elites could not see that a routine negatively affected their goals, even if others in the organization could.

In contrast to elites' initial frames, which tended to have a narrow and partial view of routines and their interdependences, an existing routine's direct and indirect impact on elites' initial goals could be captured by a big-picture frame that integrated the viewpoints of diverse organization members. In our research setting, the coaches (the external facilitators) were able to draw on their conversations with a range of people to develop a big-picture frame, approximating the routine's true impact on elites' initial goals.

In some cases, people who did not have authority to select a routine for change were able to use strategic framing to turn at least some elites' initial opposition to selection into support. These non-elite proponents for change used two strategic framing tactics. First, and most commonly, proponents used strategic framing to focus attention on interdependencies. Because elites were only partially exposed to the organization's system of interdependent routines in their day-to-day work, they often were not able to see the full impact of an existing routine on their goals. Strategic framing that focused elites' attention on interdependencies could get them to better see how the existing routine, in conjunction with interdependent routines, prevented elites from achieving their goals. When successful, this tactic brought elites' final frames closer to the coaches' big-picture frame of the routine's impact on elites' initial goals, turning at least some elites' opposition into support.

More rarely, proponents for selection used strategic framing to focus attention on new goals. In the two cases in which this happened, the new goals were broad goals widely valued in the setting (e.g., patient care quality), though not always salient in the discussion of individual routines. In making new, widely valued goals salient, proponents got elites to focus attention on these broad goals and to frame the existing routine as a barrier to achieving them. A routine's impact on elites' final goals reflects elites' big-picture frames, informed by their discussion of the issue with people in a range of roles, of the

impact of the existing routine on their revised goals. In turning at least some elites' initial opposition into support, or failing to do so, these strategic framing tactics shaped the selection of routines for change.

We present the data in two parts. First, we show that with elite support (i.e., support of people who have authority to make decisions about an individual routine), organizations selected routines for change when at least some elites saw a link between change in an existing routine and improved performance in achieving their goals. Organizations rejected proposed changes in routines when no elites framed change as advancing their goals. We observe 12 cases (cases 3, 4, 5, 7, 8, 10, 11, 12, 13, 14, 20, 25) in which elites, depending on a quick assessment of the implications of change on their goals, either accepted or rejected proposals that a routine be selected for change without strategic framing. These cases demonstrate the important role of elites in the search process. The consent of at least some elites determines whether a routine is selected. These cases also demonstrate the political nature of the search process. Elites give consent, allowing a routine to be selected for change, when they view it as advancing their goals. Second, we show how non-elites can influence which routines are selected for change by using one of two strategic framing tactics. In eight cases (cases 1, 6, 17, 18, 21, 22, 23, and 24), non-elite proponents for change were able to gain at least some elites' support for selection by focusing elites' attention on the interdependence between routines in a way that brings their initial role-specific frame closer to the big-picture frame of the routine's impact on their goals. In cases 15 and 16, non-elites attempted to strategically frame changes but failed to win the consent of the elites. We also observed two cases (cases 2 and 19) in which strategic framing generated elite consent by focusing elites' attention on new goals.

Importance of Elites' Frames and Goals in the Search Process

Elites' frames of whether a routine had a negative impact on goals that they cared about determined whether it was selected for change through organizational search. In all cases, the routines selected for change had the consent of at least some elites who shared decision-making authority over a routine. Routines that were considered during the search process but not selected were rejected by all or most elites. For example, members of the perioperative team discussed the possibility of moving caesarean procedures out of the OR at Lake Hospital (case 11). In this case, obstetricians, anesthetists, and the nursing manager for obstetrics (OB) were elites, sharing collective authority to make changes in the routine. Obstetricians and anesthetists had clinical authority to perform caesarean deliveries. The nursing manager, with the obstetricians and anesthetists, shared authority to decide whether or not the routine changed because she managed all training and staffing of the nurses who would support caesarean procedures. The obstetricians and anesthetists had been in favor of this change for some time but were blocked because the previous nursing manager for obstetrics opposed the change. In a discussion about high caesarean rates, the new nursing manager signaled her support for a change, commenting, ''I come from a hospital where all sections are done in the OB department. It's a model I'm more comfortable with.'' Because the new nursing manager supported the change along with other elites, the routine was selected for change. More broadly, elites consented to selecting a routine

for change when they framed the change as having the potential to help them fulfill their goals.

In contrast, elites rejected changes when they judged that change would not advance their goals. For example, surgeons have an interest in maximizing the number of surgeries they can fit into their OR block. In most hospitals, doing more surgeries increases surgeons' incomes and enhances their ability to treat their patients in a timely manner. As a result, in many hospitals, surgeons want the autonomy to book which surgeries and how many surgeries they perform during their block. Their goal is maximizing throughput within their block. At Lake (case 12), surgeons had the authority to book their own blocks, and because they (to varying degrees) prioritized the goal of throughput, they booked tightly, providing a low estimate of how much time each surgery would take. As a result, their scheduled blocks often ran longer than expected. The OR manager described the current routine, some of its impacts, and her assessments of the surgeons' goals in response to the coaches asking how cases were booked:

OR manager: [Cases are booked based on] assigned times of surgeons. [*Coaches laugh out loud.*]
Coach 1: Who assigns the times?
OR manager: The surgeons assign it.
Coach 2: That is going the way of the dodo bird. . . .
Coach 1: It has to be demoralizing to the nurses to know they're working a room that always runs late.
OR manager: They are always the same people [who run late].
Coach 2: It's always [*identifies surgeon*].
OR manager: OH MY GOD!!! He is an offender and does not want any of his time touched! . . . I think they want as many cases in as possible for fear that they will be poor. . . . I don't think some are aware of the turnover time. . . . They want their time!

In addition to the OR manager, other administrators—including the director of perioperative care and the vice president of clinical care—framed a link between the existing booking routine and problems in achieving various goals that were important to administrators and nurses. They highlighted that tight booking caused blocks to run over and incurred overtime staffing costs, preventing nursing managers from meeting their budgeting goals. They also emphasized that when shifts consistently ran over, tight booking could create burnout among nursing staff, affecting nurses' work–life balance goals and potentially administrators' goals for retaining nursing staff. In contrast, when the coaches asked, surgeons consistently framed the existing routine as well-functioning and then changed the subject to focus attention on a different issue, unrelated to booking, that they saw as a truly pressing problem. As a result, despite the fact that changing the existing routine could increase efficiency and solve problems experienced by nurses and administrators, the routine was not selected for change.

Although elites determined the outcome of the search process, interactions among elites and non-elites during search had the potential to influence elites' consent. The discussion of surgical block allocation at Eagle (case 10) provides an example of how non-elites could have influenced some elites to select this routine for change but did not because they failed to see an opportunity for

strategic framing. At Eagle, a small rural hospital, collectively the general surgeon and four anesthetists had the authority to change the block allocation routine. In practice, however, the surgeon decided how to allocate blocks, claiming five full OR blocks a week. This required that the anesthetists have a regular presence in the OR for a range of procedures. The surgeon prioritized the goal of safety and preferred to do even minor surgeries with the resources and support of the OR. The chief of staff described the surgeon as ''incredibly anxious. . . . He believes every patient has an angry family and a lawyer.'' Beyond safety, the surgeon prioritized throughput as a goal and wanted to maintain control over the functioning of the OR. This was evident in his disregard for the surgical services committee that was technically responsible for scheduling. One of the coaches highlighted this, noting, ''I can say why [the committee is not effective]. Because it is not in the surgeon's interest to have it work. He has the run of the whole OR.''

The surgeon's practice of claiming five full days of OR time was inefficient and inconvenient for everyone in the organization but the surgeon. Because of its interdependence with other routines, including staffing routines for nursing care in the OR, the block allocation routine created downstream problems for both administrators and nurses. In addition to the general surgeon, visiting specialist surgeons also practiced at Eagle. As a result, there were a number of days when the OR nurses were unnecessarily stretched thin working with two surgical schedules, i.e., one slate for the visiting specialist and one for the general surgeon. The existing block allocation routine also negatively affected the anesthetists, who prioritized the goal of limiting the time they spend in the OR. Anesthetists at Eagle were primary care physicians with additional training in anesthesia. As a result, they had to balance the demands of being in the OR with their need for time in their community-based primary care practices. Commenting that they ''would be happy not being here [in the OR] till six each night,'' the chief of anesthesia described the challenges that members of his group faced in balancing their dual responsibilities. At the same time, they prioritized maintaining collegiality with the general surgeon. As the anesthesia chief described it, ''We are a one-room school and have to keep everybody happy.'' Nevertheless, anesthetists never directly framed a link between the existing block allocation routine and their own challenges in limiting their time in the OR or spending more time devoted to their community practices. Hence their initial frames were not supportive of change.

Given that the anesthetists were not realizing their goals yet shared authority as elites to change the routine, they could have been convinced during search to push for change in the block allocation routine. This might have been possible if the nurses and administrators, for example, got anesthetists to frame the connection between the block allocation routine and the anesthetists' routines for staffing and managing their primary care practices. This would not have convinced the surgeon, but as we discuss further below, routines could be selected for change in cases in which conflict among elites leads to mixed support for selection. Though the anesthetists preferred to limit their time responsibilities in the OR in order to devote time to their community practices, it is not clear if their lack of attention to the block allocation routine reflects that they were unaware of the effect of block allocation on their goals or that they placed a higher priority on the goal of maintaining collegiality. In either case, the

anesthetists' frames of the impact of the block allocation routine on their goals did not change. As a result, their final frame remained unsupportive of change.

It is unclear why non-elites, nurses, and administrators at Eagle did not attempt to influence anesthetists' frames of how the existing block allocation routine had a negative impact on their goals. In two of 11 cases in our study in which elites' final frames uniformly did not link the existing routine with problems in achieving their goals, including the block allocation routine at Eagle discussed above, the existing routine's negative impact on elites' initial goals suggests that there was potential for using strategic framing to gain at least some elite support. In all 11 cases, elites' uniform opposition prevented selection. In one case—discussion of moving caesarean deliveries out of the OR at Lake—uniform support among elites led to the routine being quickly selected for change. These relatively simple cases, in which elites' initial frames were either uniformly favorable or unfavorable for selection and did not change during search, highlight the importance of elites' frames and support for change in driving selection.

Strategic Framing Dynamics in the Search Process

In contrast to the cases described above, we also observed more dynamic search processes in which non-elites were able to influence elites' initial frames and goals. In the cases described below, strategic framing in the search process helped build elites' support for proposed changes in existing routines. When elites' initial frames suggested that they did not see a link between the existing routine and problems in achieving their goals, non-elites could employ strategic framing either to change elites' initial frames of the impact of the existing routine on their goals or to change elites' goals.

To better see how and when strategic framing was effective, it helps to identify patterns of elites' changing frames and goals across cases. Table 2 presents elites' initial frames and the routines' effect on elites' initial goals—judged primarily using the big-picture frames developed by the coaches—for each of the 24 routines included in our analysis. Proposed changes in routines that were not selected for change are shown in bold. To allow for cross-case comparisons, we categorized elites' initial frames as favorable for selection, mixed, or unfavorable for selection based on whether elites framed the existing routine as negatively affecting their goals. For example, we coded the elites' initial frames as favorable for selection at Lake (case 11), where the nursing manager, obstetricians, and anesthetists all initially framed the existing routine

Table 2. Elites' Initial Positions on Proposed Changes in Routines*

	Initial Frames		
Impact on Initial Goals	Favorable for selection	Mixed	Unfavorable for selection
Favorable for selection	11	22, 23	17, 18, 21, 24
Mixed		5, 15, 16, 19, **20**	1, 3, 6, **10**
Unfavorable for selection			**2, 4, 7, 8, 12, 13, 14, 25**

* Numbers indicate the case numbers for individual routines depicted in table 1. Cases in bold represent proposed changes in routines that were not selected as change commitments.

Table 3. Elites' Final Positions on Proposed Changes in Routines*

	Final Frames		
Impact on Final Goals	Favorable for selection	Mixed	Unfavorable for selection
Favorable for selection	*2*, 11, *17*, *18*, *22*, *23*	*21*, *24*	
Mixed		*1*, 5, *6*, 15, 16, 19, **20**	**3, 10**
Unfavorable for selection			**4, 7, 8, 12, 13, 14, 25**

* Numbers indicate the case numbers for individual routines depicted in table 1. Cases in bold represent proposed changes in routines that were not selected as change commitments. Underlined and italicized cases represent proposed changes in routines for which elites' frames or goals changed over the course of the search process.

of doing caesareans in the OR as negatively affecting their goals. At Eagle (case 10), we coded elites' initial frames as unfavorable for selection because neither the surgeon nor the anesthetists framed a link between the existing block allocation routine and problems in achieving their goals. If some elites initially framed the current routine as a problem that hampered performance and others did not, we coded elites' initial frames as mixed.

We coded a routine's impact on elites' initial goals as favorable for selection when we judged—relying on the coaches' big-picture frame—that the existing routine negatively affected elites' initial goals. We coded it as unfavorable for selection when we judged that the existing routine did not negatively affect elites' goals or was consistent with their goals. We coded it as mixed if the existing routine negatively affected the goals of some elites but not others.

Table 3 shows how elites' initial frames and initial goals changed or did not change during search. We present elites' final frames and the impact on elites' final goals as either favorable for selection, mixed, or unfavorable for selection. As with table 2, proposed changes in routines that were not selected as change commitments are shown in bold. We underline and italicize the cases in which strategic framing altered the elites' frames or goals in a way that either transformed uniform opposition into mixed or uniform support or transformed mixed support into uniform support. Cases in which elites' frames changed to become more favorable for selection, because at least some elites newly came to frame the existing routine as a source of problems in achieving their goals, moved leftward across rows. Cases in which elites' goals changed to become more favorable for selection, because elites framed the existing routine as a source of problems in achieving the new goal, moved upward and leftward.

Comparing tables 2 and 3 shows that elites' initial frames or their initial goals changed in at least nine out of 24 cases, resulting in all nine routines being selected for change. In these cases, elites initially rejected the selection of these routines for change, but later in the search process at least some elites consented to these routines being selected. Elites' preferences, and ultimately the selection of routines for change, were influenced by the use of strategic framing. Below we show how the dynamics identified across tables 2 and 3 were accomplished as non-elites crafted frames that drew the attention of elites to the interdependencies between routines or altered their goals.

Strategic framing to focus attention on interdependencies. The most common framing tactics involved non-elites attempting to change how elites framed the effects of the routine on their goals. They did this by focusing attention on interdependencies between routines that elites may not have been aware of to convince them that the current routine negatively affected their goals. In cases in which strategic framing to focus attention on interdependencies altered elites' initial frames, getting them to see how the existing routine had negative impacts, elites came to support selecting the routine for change.

Non-elites at Royal (case 21) used strategic framing to change elites' initial frames about the importance of changing the routine for scheduling surgical blocks by focusing attention on interdependencies between the block scheduling routine and routines for managing access to inpatient hospital beds. This resulted in surgeons and anesthetists coming to appreciate how the existing routine exacerbated the problem of surgical cancellations.

At Royal, surgeons and anesthetists were elites for the block scheduling routine, having collective authority to change or maintain the routine through their participation on the surgical services committee. Both surgeons and anesthetists prioritized the goal of minimizing cancellations on the day of surgery, which happened for scheduled inpatient surgeries when there were no available inpatient beds. Minimizing cancellations would give surgeons and anesthetists predictability in their ability to use the OR for scheduled cases, which would allow them to efficiently allocate their own time to work in the OR and better meet the needs of their patients. Both surgeons and anesthetists prioritized minimizing same-day cancellations as a critical goal, though some surgeons also had a goal of maintaining convenience in scheduling. They often had preferences about the day of the week that their block was scheduled, which could be driven by the fact that they also had scheduled surgical blocks at other hospitals. That said, surgeons and anesthetists were both very clear that surgical cancellations was their biggest issue. The chief of orthopedic surgery emphasized this during the first meeting in the search process:

> The biggest problem for us is that we don't have protected surgical beds. We had huge cancellations [due to the lack of available inpatient beds]. . . . From a surgical perspective and morale, they are pushing us to do joints and do more and then slam the brakes on us. It's a kick in the pants from a morale point of view.

The current scheduling routine exacerbated the problem of surgical cancellations. On some days when multiple surgeons who specialized in inpatient surgeries had their scheduled blocks, surgeons would have to cancel surgeries if there were not enough available inpatient beds. There were other days on which multiple surgeons specializing in outpatient procedures—which did not require inpatient beds—had their scheduled blocks, and available inpatient beds could go unused. Hence the impact of the existing routine clearly and negatively affected surgeons' and anesthetists' priority goal of minimizing cancellations.

Yet surgeons' and anesthetists' initial frames did not link the scheduling routine, bed availability, and surgical cancellations. Elites' inattention to the link between the scheduling routine and the problem of cancellations was likely rooted in their lack of direct experience with interdependencies between routines in their day-to-day work. Because surgeons work within a single OR

block, they are not exposed to routines for monitoring the post-surgical resource demands across multiple ORs on a given day. Although surgeons seemed unaware of a potential link between the scheduling routines and surgical cancellations, they were well aware of the effect of the scheduling routine on their own work schedules across their office and other hospitals. As a result, they were happy to schedule blocks based on precedent and preference. Coordinating the resource demands for surgeries across multiple ORs and the bed demands across programs, however, is central to the work of administrators, and they did frame the scheduling routine as a source of cancellations. As a result, administrators, surgeons, and anesthetists had different initial frames of whether and how the routine for scheduling surgical blocks affected their shared goal of avoiding surgical cancellations.

Non-elites proactively and strategically focused attention on the interdependence between the scheduling routine and bed management routines for the elites. When a cross-functional group of administrators, nurses, surgeons, anesthetists, and external coaches began their discussion of the block scheduling routine, both administrators and the coaches used strategic framing that focused attention on the link between the scheduling routine and surgical cancellations. The OR manager pointed to the possibility of a connection in response to a comment by a surgeon that there was variability in surgical cancellations, commenting, ''But it is Thursday. If it is going to happen any day, it will be Thursday.'' One of the coaches picked up on her comment: ''The OR schedule has more inpatients some days than others. You just said if you cancel, it would be on Thursday. Is there an opportunity to even [the] flow?'' In response, a number of surgeons questioned the feasibility of changing the routine and expressed doubts as to whether the block scheduling routine was truly a problem. In the midst of the conversation, the director of hospital services drew a direct link between the block scheduling routine and cancellations, noting, ''It is an issue. There is variability. . . . Some days we have 4 [inpatient] cases [scheduled] and some 14. That kind of variability causes problems.''

The administrators' strategic framing efforts were successful in altering the initial frames of some elites. Although a number of surgeons questioned whether changing the block scheduling routine was feasible, or truly a cause of surgical cancellations, the chief of anesthesia began to recognize a potential link, interjecting, ''For example on Monday we have ENT [ear, nose, and throat] and plastic surgery. If we can move one of the inpatient services to that day instead of the two [which are both day patients], that would even out the flow. It's a little simple step.'' The chief of anesthesia's tentative support was enough to motivate some surgeons to speak up in favor of looking at the issue. It was also enough to get the chief of surgery to agree to collect data to explore more formally whether the block scheduling routine could be modified to minimize surgical cancellations. As a result, there were enough elites whose final frames linked the existing scheduling routine with the problem of surgical cancellations for the routine to be selected for change.

Coaches played a key role in focusing attention on interdependencies to build elites' support for changing the routine for treating urgent cases during regularly scheduled hours at River Hospital (case 17). At the time of search, River had no routine for accommodating urgent surgical cases during scheduled hours. As the chief of surgery described it, ''There are no open blocks. We tried, but utilization was hit and miss and some people didn't want to adjust

their schedule.'' As a result, the existing routine involved treating all urgent cases in overtime hours, which involved paying nurses 50 percent more per hour. Surgeons, anesthetists, and nursing administrators were elites for this routine at River. Together, they had the authority to provide nurse staffing and anesthesia coverage for blocks reserved for urgent cases (nursing administrators and anesthetists) and to use an open block for urgent care to treat urgent cases (surgeons). Interestingly, nobody in the organization saw how interdependencies between current routines for handling urgent cases, and other routines—including routines for staffing the ORs with registered nurses or for regularly doing urgent cases after hours—absorbed resources that could be used to expand the amount of OR time. By limiting the amount of OR time available, the current routine negatively affected all elites. The coaches were able to see the interdependencies between routines and their impact on limiting the amount of available OR time. In the absence of any elite support for change, they used strategic framing to focus attention on interdependencies between routines to convince elites that the current routine was a source of problems. For example, in a mixed group including administrators, surgeons, and anesthetists, coaches pointed to slack in the OR staffing schedule by highlighting that nurses started an hour before the first OR case at River, while they started a half hour before the first case in their own organizations. They went on to show that adjusting multiple, interdependent routines could create more OR time:

> **Coach 1:** If every night you do four hours of urgent cases . . . you can do it in [regularly scheduled] day blocks. . . .
>
> **Coach 2:** You may need to rejig your nursing staffing . . . but you can take urgent cases and work them into your regular day. . . . There are gaps [in the staffing schedule when nurses are underutilized].

While acknowledging that the current routine prevented the organization from expanding the amount of OR time, a few surgeons and anesthetists pointed out that creating scheduled urgent time might cause other problems. The chief of surgery then interjected, ''. . . as a group we have to sit down and say where we want to do it [put scheduled time for urgent cases]. Open a block in one day . . . a daily block from 4 till 8. . . .'' In response, other surgeons and anesthetists vocally pledged their support, while the director of perioperative care volunteered to be on a task force that would work out details of a solution, resulting in the routine being selected for change.

Strategic framing to focus attention on new goals. Non-elites also built support for their preferred changes by encouraging elites to draw a link between a routine and a broad organizational goal. To the extent that strategic framing makes salient new goals that elites come to prioritize as important, non-elite proponents for change can win elites' consent, though this type of strategic framing was rarer in our data. We observed strategic framing that focused elites on adopting broader organizational goals as their own in just two cases—Brew (case 2) and River (case 19). In both cases this occurred when non-elites framed changes as solutions to problems in achieving broad organizational goals, making new goals salient, and at least some elites came to

recognize the importance of the organizational goal and became motivated to select the routine for change.

At Brew the director of perioperative care, an administrator, used strategic framing to focus attention on the organizational goal of health care quality and related it to the more specific goal of developing and maintaining the surgical skills of nurses on the inpatient surgical floor and to the routine for scheduling surgical blocks. He proposed modifying the scheduling routine in a way that would allow nurses on the inpatient surgical floor to primarily treat surgical patients, instead of treating a mix of surgical and internal medicine patients as they currently did. Surgeons in this case were elites, with authority to change the scheduling routine. Initially surgeons did not frame the existing routine for scheduling surgical blocks as a source of problems. As a result, they were not motivated to make changes in the scheduling routine to improve skill development. Moreover, because a big-picture view would not have identified negative effects on the goals surgeons identified as important (e.g., having adequate block time, improving the OR's physical space), there was limited scope for gaining surgeons' support simply by focusing attention on interdependencies between routines.

The director of perioperative care at Brew focused attention on the goal of improving nursing skill development by linking it with the broad organizational goal of health care quality, making the quality goal salient. He framed the problem of ''[internal] medicine patients in our [surgical] beds'' by noting that it ''is hard to keep the nurses specialized [in treating surgical patients] with all of the medical patients'' and noted that nurses' inability to specialize could hamper quality. He framed a solution of adjusting the routine for scheduling surgical blocks so that surgical inpatients would be on the floor only on weekdays. He could then modify staffing routines so that surgical nurses staffed the inpatient floor on weekdays and nurses from internal medicine could staff the floor on weekends. In using strategic framing that focused attention on the broad goal of quality, the director focused attention on interdependencies between routines, emphasizing that changing the scheduling routine would allow them to create a situation in which surgical nurses could primarily treat surgical patients and hence maintain their specialized skills. Once administrators focused the chief of surgery's attention on these interdependencies, making the broad goal of quality salient to surgeons, the chief of surgery came to support changing the routine.

Efforts by the coaches and administrators to focus attention on the organizational goal of addressing community health needs had a dramatic effect at River Hospital. Non-elites at River drew a link between the block allocation routine and the goal of meeting community health needs. At River, surgeons and dentists were collectively elites, sharing authority to allocate blocks through the OR committee. Surgeons and dentists had conflicting initial goals that shaped their motivations to change the block allocation routine. Historically, a significant proportion of OR time in the hospital went to dentists who had been practicing at community hospitals that had since been merged into River. The chief of surgery and other surgeons wanted to decrease the amount of time allocated to dentists to increase capacity for their own patients, whom they viewed as higher priority than dental patients. The relatively large group of dentists did not want to give up its OR time, and the chief of surgery and other

surgeons did not want to engage in conflict and hence did not publicly identify problems associated with the existing routine.

The coaches, picking up the private concerns raised by the chief of surgery, used strategic framing to influence physicians' perceptions. They framed a link between the block allocation routine and the broad organizational goals of meeting community health needs, making salient this new goal, which was consistent with some surgeons' goals of increasing time for surgeries that they viewed as more urgent (e.g., cancer surgeries). Rooted in the principles of public health, the goal of meeting community health needs was different from the goal initially articulated by the chief of surgery, who wanted more time for his own higher-priority patients. This broad goal was also presumably valued by dentists and the OR committee as a whole. The coaches noted that the provincial government was increasingly holding hospitals accountable for defining and achieving strategic priorities that effectively met community health needs. They initiated a public discussion of the routine with a mixed group of physicians and administrators:

> **Coach 1:** In the 21st century, hospitals run based on priority programs. It is not like in the old days when [medical] departments did what they wanted. . . . Key to the whole piece is strategic planning. You have a mandate [from the provincial government] for some priority programs. It should be made clear through the whole hospital what those priority programs are. . . . What [you need] for the present is to align everything with that. Most important is resource allocation. Money should be given to the priority programs. . . . Medical staff and nursing should support the priority programs. . . .
>
> **Coach 2:** This is what informs all decision-making, or needs to. It facilitates decision-making when looking at OR time. . . .

The coaches' introduction of the issue was followed by a debate among physicians, the chief of surgery, and the CEO. Two surgeons, for example, spoke up in support of collectively revisiting the block allocation routine and proposed collecting and sharing data that could be used to better assess the routine:

> **Surgeon 1:** We need to know what priority programs are and what percentage of resources is spent on priority programs. It will be painful for all, but at least we'll have the numbers.
>
> **Surgeon 2:** We do not have the information now. We do not know if the OR [block] allocation reflects [name of recent strategic plan].

In response to the ongoing debate among physicians, Coach 1 encouraged physicians to define a collective goal for meeting community health needs and to develop a shared understanding of the criteria by which that goal would be assessed:

> A starting point is to ask ''what are the block allocations within services and what happens in those blocks?'' . . . get a sense of how all services are provided in the operating room. . . . I talk about the OR because it is an expensive place to do stuff. . . . You need clear criteria [for allocating blocks based on community need] and everybody to play by the same rules. . . . You need to understand what the criteria are . . . and all need to agree that that is the shared vision of care for our community.

In pushing the physicians to come up with a vision for the care needs of their community, her aim was to encourage them to see a relationship between the block allocation routine and a collective goal focused on the health needs of the community and to break the pattern of basing block allocation on historical use.

The coaches' strategic framing efforts began to transform the elites' goals. Surgeons and dentists were still conflicted, and the chair of the OR committee, a dentist, did not concede that dentists had too much OR time in the organization. The strategic framing, however, made the new overarching goal of meeting community health needs salient. It further pushed them to define collectively what meeting community health needs actually meant. Because the goal is one that is normatively appropriate in the hospital setting, the chair of the OR committee did not openly contest the idea that resources should be allocated to best meet community needs. Ultimately, with vocal support from the chief of surgery and some individual surgeons, the organization made a commitment to change the routine, despite the fact that administrators and the chief of surgery informally said that they anticipated changing the routine would be difficult in practice.

Search Processes: Patterns in the Selection of Routines for Change

Our comparative case analysis offers three central findings that allow us to theorize about the selection of routines for change and identify patterns of stability and change. First, underscoring the political nature of selection, our findings demonstrate that elites' goals and their framing of the connection between changes in routines and their goals determine which routines will be selected for change. If a routine does not cause performance problems relating to the goals of elites, directly or through interdependent routines, it is unlikely to be selected for change. Out of the eight cases in our data in which elites' initial goals were not impeded by a routine, only the one at Brew described above resulted in a change commitment. This happened because non-elites were able to focus surgeons' attention on the broad goal of health care quality and show that the existing routine for scheduling surgeries caused problems in achieving high-quality nursing care on the inpatient surgical unit.

Second, our comparative case analysis highlights that elites' frames of the effects of a routine on their goals are parochial compared with a big-picture frame that integrates diverse viewpoints. As highlighted in table 2, of the 16 cases in which an existing routine negatively affected the goals of all elites or some elites, making change in the routine favorable for at least some elites (e.g., for a selection or mixed), elites' initial frames were less supportive of change in ten cases (cases 1, 3, 6, 10, 17, 18, 21, 22, 23, and 24). Elites' role-specific exposure to routines, which limits their awareness of interdependencies between routines, was an important factor in shaping both elites' parochial frames and which routines elites selected for change. For example, at Royal (case 21), surgeons' lack of exposure to downstream routines for post-anesthesia recovery and admission to inpatient beds, as well as their lack of exposure to organization-wide bed-management routines, prevented them from seeing how the existing routine for scheduling blocks was contributing to surgical cancellations. Overall, our analysis shows that bounded rationality rooted in partial exposure to the interdependencies between routines can prevent actors from seeing alternatives that would advance their goals.

Third, our comparative case analysis shows that strategic framing in organizational search can be consequential in shaping the search process and which routines are selected. Comparing tables 2 and 3, elites' final frames became more favorable for selection than their initial frames in eight of the 24 cases included in our analysis (cases 1, 6, 17, 18, 21, 22, 23, and 24) due to strategic framing that focused attention on interdependencies between routines. Moreover, as we highlighted above, strategic framing made new goals salient in two cases, at Brew (case 2) and at River (case 19).

Changes that resulted from strategic framing mattered in shaping which routines were selected for change. In most of the cases that we observed, strategic framing likely played a role in removing barriers to change that had inhibited change prior to the search process. Both at Royal (case 21, discussed above) and at River (case 18), clinical administrators had discussed a long-standing desire to change the scheduling of surgical blocks by day of the week to reduce surgical cancellations. At River, a clinical administrator, in talking with the coaches about her desire for change in the routine, immediately shifted to talk about barriers, observing:

> We know Wednesdays are horrific. . . . Looking at [changing the block schedule] sounds easy, but we cannot just say you need to move to a different day. Physicians may be working in a different hospital, have a fracture clinic, endoscopy time. It impacts lots of other departments. It's a real conundrum figuring out how to spread out [resource demands from surgeries on Wednesdays] more evenly without creating another problem.

Strategic framing by the coaches, and eventually by clinical administrators themselves, to focus attention on the causal link between the scheduling routine and surgical cancellations likely removed these barriers by directly engaging with and gaining the support of elites—in both of these cases, surgeons—for change.

While our analysis highlights the importance of strategic framing, it also shows that the effects of strategic framing are limited. Our coding shows that elites' final frames were less favorable for selection relative to their final goals in four cases (cases 3, 10, 21, and 24). For example, at Royal (case 21), the proposal to change the routine for scheduling blocks by day of the week had only mixed support among surgeons and anesthetists at the conclusion of the search process, despite the fact that surgeons and anesthetists were vocal in stating that surgical cancellations were their biggest problem. Our findings on the limits of strategic framing are consistent with the idea that bounded rationality is an endemic feature of organizational life (March and Simon, 1958) and with research highlighting the challenges of communication that can bridge or overcome role-based perspectives and biases in perception (Carlile, 2002; Bechky, 2003b).

Taken together, our analysis highlights three broad patterns of stability or change in organizational routines in organizational search. First, we found cases in which the impact of the existing routine on elites' initial goals, combined with elites' relatively accurate frames of these impacts, led to elites' relatively uniform opposition or support. In these simple cases, discussion of the routine was minimal, and we did not observe changes in elites' frames. We also observed more complicated processes in which the outcome of search was

shaped by two types of strategic framing. The second pattern involved non-elites using strategic framing to alter elites' frames of how an existing routine affected their goals. This was the primary mechanism by which strategic framing led to selection. The third pattern involved the rare cases in which non-elites used strategic framing to change elites' goals. In some of these cases, strategic framing to influence frames or goals was able to mobilize elites' relatively uniform support for change. In many cases, strategic framing resulted in routines being selected for change through elites' conflict. Interestingly, in most cases in our data in which elites held either conflicting goals or conflicting frames of how an existing routine affected their goals by the end of search, the routine was nevertheless selected for change. This was the case with discussions of the scheduling routine at Royal (case 21) and the block allocation routine at River (case 19) discussed above.

DISCUSSION

Our aim was to develop theory on the social interactive processes and mechanisms by which organizations select routines—or alternative courses of action more broadly—for change in response to a triggering phenomenon or event. We identified the selection of routines for change as a key step linking a trigger for change that is exogenous to an individual routine with change in any given routine. In doing so, we focused on the importance of role-based politics, role-based frames, and strategic framing processes in shaping selection.

By focusing on selection and highlighting the centrality of organizational roles and strategic framing in shaping it, we extend research on organizational routines in three ways. First, we generate new insight into how role-based politics can shape change in organizational routines. Prior research has identified politics as important in shaping routines (Feldman and Pentland, 2003; Feldman, 2004; Lazaric and Denis, 2005) and has shown that role-based politics can influence the tactics that people draw on to influence change (Zbaracki and Bergen, 2010; Cacciatori, 2012). We extend this work by identifying two key variables explaining how role-based politics shape selection: jurisdictional authority and role-specific goals. We show that role-based jurisdictional authority, more than just influencing tactics, defines the set of elites with the power to enable or block change in routines. We further show that role-specific goals significantly shape which changes elites will support.

Second, we generate new knowledge of how role-specific frames that cut across routines can determine whether routines persist or change. Prior research on routines has theorized that people's understanding of how an individual routine functions—their abstract idea of what the routine is and how it works—is important in determining whether and how it changes (Feldman, 2000; Feldman and Pentland, 2003). Implicitly, and with some recent exceptions (Parmigiani and Howard-Grenville, 2011; Spee, Jarzabkowski, and Smets, 2015), researchers have conceptualized the abstract idea of a routine as people's understanding of the entirety of a routine as an analytically distinct unit, set apart from other routines or a broader organizational context (cf. Feldman and Pentland, 2003; Pentland and Feldman, 2005). In contrast, we show that people's role-specific frames are informed by their day-to-day work, which both cuts across routines and can involve experience with only part of any given routine. This focus on role-specific frames, rather than on people's abstract idea of

a routine, allows us to better understand how roles matter in shaping stability or change in the context of a system of interdependent routines.

Third, in examining the role of strategic framing in shaping selection, we show that factors other than direct experience can influence people's understandings of a routine. Prior research on routines posits people's direct experience, which comes from performing a routine, as the prime determinant of their understanding of how a routine functions and of its effects. In highlighting the role of strategic framing, including strategic framing by the coaches, we show how a broader range of influences, such as the vicarious experience of others, can influence individuals' understandings of a routine.

These extensions to the literature on routines open up new avenues for future research. While we underscore the importance of role-based politics, more research is needed to fully understand its effects. Because we look at a relatively short window of time, our study may exaggerate the power of elites. A longer time frame may give non-elites opportunities to acquire new resources or sources of influence that they can draw on to achieve change (Bechky, 2003a; Howard-Grenville, 2007; Huising, 2014). Future work can more fully explore the power and limits of jurisdictional authority in shaping the dynamics of stability and change within and across routines over time.

Future work can also explore the effects of both role-specific frames, which imperfectly map onto individual routines, and strategic framing. We view our focus on the importance of role-specific frames and strategic framing as a complement to rather than a replacement for prior research that highlights the importance of abstract understandings of individual routines grounded in direct experience. Future research can more fully unpack the relationship among the three to develop richer knowledge of how role-specific frames that cut across routines, strategic framing by people with and without direct experience working in a routine, and abstract understandings of individual routines interrelate and how these interrelationships influence stability and change in routines over time.

Our study extends research on organizational search in three ways. First, we identify role-based politics as a source of structural inertia in search. Much contemporary research on search focuses on cognitive barriers stemming from people's bounded rationality as the main constraint to performance improvement through organizational search (Levinthal, 1997; Gavetti and Levinthal, 2000; Gavetti, 2005). To the extent that the contemporary search literature does consider politics as a barrier to performance improvement, it posits either that politics and resistance generally are sources of inertia (Hannan and Freeman, 1984; Greve, 1998, 2003b) or that political interests motivate people to filter information (Gavetti, 2005; Siggelkow and Rivkin, 2006). We theorize a specific mechanism, driven by how roles shape jurisdictional authority, goals, and frames, that can be a source of structural inertia (Hannan and Freeman, 1984). In doing so, we add to the relatively limited body of work specifying how political barriers can prevent organizations from adopting performance-enhancing changes through search.

Second, we generate new knowledge about how the multiplicity of goals can shape processes of organizational search. Despite the fact that the multiplicity of goals is a core insight developed in the behavioral theory of the firm, much contemporary research theorizes search as a process oriented toward a single goal: performance (Levinthal, 1997; Gavetti and Levinthal, 2000).

Research that does consider multiple goals has largely focused on the determinants, processes, and effects of sequential attention (Ocasio, 1997; Greve, 2003a, 2008; Gavetti et al., 2012). Complementing this work, we show that elites' choices to support or oppose selecting an alternative for change are driven by their boundedly rational frames of how selection would affect their role-specific goals. Moreover, we show that a specific change that may advance achievement of one goal can have positive, neutral, or negative effects on other goals. Distinct from any objective effects of interdependency, different people can have different frames for understanding whether and how the same two goals are interdependent. Taken together, our findings show that the multiplicity of goals across roles, combined with people's frames of how routines are interdependent, is central in shaping decision making in search.

Finally, our findings generate new knowledge of what influencing tactics may be effective in organizational search. We identify two strategic framing tactics by which proponents can build support by either making new goals salient or altering people's frames of how a given alternative will affect the goals they care about. In doing so, we develop initial insights into the persuasion tactics that are likely to be effective in gaining support for a particular course of action.

These contributions to the literature on organizational search suggest a number of avenues for potential future research. More research can explore the relationship between jurisdictional authority over a single routine and dominant coalitions. Cyert and March (1963) theorized the dominant coalition as the set of people whose support is critical to the functioning of the organization as a whole. They proposed that organizations make trade-offs, in the form of resources and policy commitments, across issues and decisions to maintain the support of a dominant coalition. Future research can help us better understand whether and how elites leverage their jurisdictional authority over a given alternative to advocate for stability or change in other domains in which they have less jurisdictional authority.

Researchers can also more fully explore the effects of different forms of interdependence between goals. For example, goals can be independent, complementary, or in conflict, and different patterns of interdependence between goals can lead to different search processes—i.e., search processes for purely independent goals can be delegated to different organizational units or specific occupational groups. Interdependent goals that are in conflict can lead to search driven by sequential attention to goals. Additional work, potentially using formal models, can also explore the relationship between different patterns of interdependence and different search processes and outcomes.

More work is also needed to understand the range of factors that influence people's perceptions of how goals are interdependent. The multiplicity of goals in organizations is well documented and common (Cyert and March, 1963; Greve, 2008; Bidwell, 2010; Gavetti et al., 2012). Our findings show that people's roles influence their understanding of whether and how goals interrelate, but this is likely just one of many influences. Future work can more fully examine when and how different people adopt different frames of whether and how goals interrelate and can explore how these different frames shape their choices in organizational search.

Our hope is that our work will stimulate robust theorizing on the process by which organizations select alternatives or courses of action. The literature on

routines does not theorize how an exogenous trigger is linked to efforts to change or maintain a specific routine. Other research, for example research on the changing organization of work, similarly jumps from an exogenous trigger, such as a change in laws or a new technology, to specific struggles over the redefinition of work roles and practices without theorizing selection processes (Barley, 1986, 1990; Kellogg, 2011). Research on search, however, does offer insight into which alternatives may be selected. Cyert and March (1963) argued that organizations will first select an alternative that is local or similar to current practices or an alternative that has been successful in the past. Only later will organizations broaden their scope of search to consider either more distant alternatives or alternatives that affect vulnerable parts of the organization. Subsequent research, largely using formal models, has elaborated on these insights to develop our knowledge of how different types of search can lead to different performance outcomes, but it has focused more on the performance impacts of different search processes than on enriching our knowledge of the process by which alternatives are selected.

We develop theory to explain how organizations select routines for change in the context of organizational search. Our research was inspired, in part, by the rich empirical studies in the contemporary literature on organizational routines that take seriously the idea that practice—people's lived experience with their work—is critical in shaping how routines persist or change over time. We theorize the selection of routines as alternatives in a context with a specific set of features that serve as boundary conditions. The selection processes that we observe had specific triggers—the increased salience of the goal of efficiency due to a policy shift combined with perceptions within each organization that performance was below aspirations relating to the efficiency goal. Our theorizing is also based on a specific type of search—a reasonably short process of search that was off-line. Finally, we theorize based on a highly professionalized organizational context, in which role-based jurisdictional authority may be more relevant and entrenched than in other, less-professionalized contexts. These boundary conditions offer a solid base for theorizing, but they also suggest that ours is just a first step toward developing adequate theory to explain how routines, or organizational alternatives more broadly, are selected for change.

Though we examined problem-driven search that was triggered in part by a policy shift, future research can explore how selection processes might differ when triggered by technological change. In contrast to a policy shift that was linked very clearly to the single goal of efficiency, the link between a technology shift and specific goals can be more indeterminate. In addition, while we examined processes of off-line search, work can also examine selection in the context of trial-and-error search. Future work could build on the initial insights developed in the behavioral theory of the firm and extend it with more fine-grained theorizing and better unpack how organizations choose between different ''local'' alternatives. Differences in lived experience within organizations, however, can lead to differing conceptions of what ''local'' means (cf. Feldman and Orlikowski, 2011). In some ways, all of the proposed changes in routines considered in our research setting were local in that somebody knew about each alternative based on his or her prior work, professional knowledge, and knowledge of how things were done elsewhere. Despite all being local, some alternatives were clearly more selectable than others. In our settings, organizations selected a wide range of alternatives so long as at least some elites

consented. In trial-and-error processes, in which organizations sequentially select a single alternative, the dynamics of selection will likely differ. Proponents may differ in their preferences for which local alternative should be selected first, while opponents, including non-elite proponents, may have more avenues for preventing the selection of what they perceive to be an undesirable alternative. Finally, while many research settings are professionalized, future work can also nevertheless explore selection in less professionalized settings. In other settings, such as project-based organizations or hierarchical corporations, political boundaries and frames can be driven less by occupational differences and more by individuals' idiosyncratic experiences or their career histories (Kaplan, 2008; Dokko and Gaba, 2012).

Conclusion

This paper developed theory to explain how organizations select routines for change, with the aim to inspire broader theorizing about processes of selection. More and better cross-fertilization from research on routines and research on search is a promising route toward better theorizing selection. Research on organizational search and on routines both have social and intellectual roots in the Carnegie school of organizational research (Cyert and March, 1963; Levitt and March, 1988; Gavetti, Levinthal, and Ocasio, 2007; Gavetti et al., 2012). The two literatures, however, have developed largely independently, with limited cross-fertilization.

Research on organizational routines has developed a rich body of grounded theorizing of contextually situated practices. In doing so, it has come to theorize more micro-process accounts of evolution, change, and persistence in individual routines. While developing rich knowledge of what happens within routines, how they remain stable or change over time, and how the evolution of routines is informed by people's work and lived experience, the routines literature has become less connected with more organization-level phenomenon. In contrast, the search literature has come to focus on more macro-level phenomena relating to organization-level goal setting, performance, and adaption. It has advanced our theoretical understanding of when and how organizations adapt and change but has become less connected with people's day-to-day work and less grounded in the situated experience of organizational life. As a result, accounts of both predictors of search performance and factors that shape the search process can feel abstract. Integrating the two creates the potential for developing theories of selection and of organizational search more broadly that are connected with people's day-to-day work and grounded in their situated experience. At the same time, this integration can reconnect the routines literature with its roots in the Carnegie school, allowing us to develop a more comprehensive view of the processes and mechanisms connecting change in organizational routines with larger processes of organizational adaptation and change.

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