

De-Fusing Organizational Power Using Anonymity and Cognitive Factions in a Participative Strategic Planning Setting

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Abstract When an organization is facing disruptive change or the need for new capabilities to fit new conditions, the creation of a democratic strategic plan can be useful. However, strategic plans typically only reflect the beliefs and values of their architects; not all stakeholders. To include the beliefs of all stakeholders requires a participative environment. Due to the potential deleterious effects that organizational power may have in a participative setting, anonymity and cognitive factions is proposed to reduce the possible negative effects associated with power in a participative strategic planning setting. Group support systems have been shown to protect relationships and retain the social order in these settings. In this specific case, through the use of a group support system that supports anonymity and cognitive faction identification, we found that the sources of power typically found and used to drive group decisions in an academic setting did not drive the content of the strategic plan.

Keywords Anonymity · Cognitive factions · Organizational power · Participative strategic planning · Group support systems

1 Introduction

Decentralized strategy making is a decision structure that enables influential ideas to emerge from employees at lower hierarchical levels in the organization. The literature

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describes it as either a process that embodies an employee's continuing promotion and selling of ideas to top management until they become part of the organization's formal strategy (Dutton 1995; Dutton and Ashford 1993; Dutton et al. 1997) or their involvement in the strategy making process itself (Floyd and Wooldridge 1992, 1996, 1997) which is referred to as participative planning (Andersen 2004). While employees will continue to promote and sell their ideas that result in emergent strategy, the use of participative strategy making has become more prevalent in organizations today and merits further investigation as to how to maximize the benefits of engaging employees in formal strategy making.

Participative planning processes are important as they cause more market views and organizational perspectives to be considered in strategic decisions, which should lead to better decision outcomes (Amazon 1995; Denison 1984, 1990). This is due to the generation of cognitive diversity that can increase the fit between the strategic plan and the organization's performance by: (1) promoting a broader set of opportunities to evaluate (Burgelman 1991), (2) encouraging critical evaluation (Jehn and Mannix 2001) and (3) reducing the likelihood that groupthink will occur (Janis 1982). It can also increase decision acceptance (Jehn 1997) and consensus (Markoczy 2001), thus increasing the likelihood that members in an organization will embrace and implement the plan. Ansoff and McDonnell (1990) recommend an interactive process that facilitates the inclusion of information and beliefs from employees from all parts of the organization.

But, the results of linking bottom-up participation and performance have been mixed. One reason explaining the mixed findings centers on whether democratic and negotiating processes are used to discuss and resolve the issues. Simons et al. (1999) found that the group must actively debate the issues in order to benefit from diversity. So, to optimally benefit from a participative planning approach, the literature recommends that strategic planning processes need to be structured in order to generate diverse beliefs *and* include constructive debate (Eden and Ackermann 2013).

While the exchange and discussion of diverse beliefs have been linked to strategic planning effectiveness (Hambrick 1994, 2007; Jackson 1992), the question of which beliefs emerge in the strategic plan warrants more investigation. Studies have shown that the most powerful team members often shape the content of the plan (Eisenhardt et al. 1997). Since the influence of power on the plan itself can result in decisions that promote the most powerful constituents and not necessarily the best interests of the organization, ways of controlling the impact of power should be further explored, especially within the context of a participative planning process.

We investigate whether the use of a group support system (GSS) that reveals beliefs in an anonymous manner as cognitive factions can lessen the influence of the most powerful constituents on the content of an actual strategic plan. Cognitive factions are subgroups of individuals that have shared beliefs that can be differentiated from the shared beliefs of other subgroups. In this case, the GSS supports the creation of individual cause maps that can be aggregated together based on the shared beliefs represented in the individual maps to form cognitive factions. Explicitly capturing and representing the diverse beliefs of different cognitive factions has been shown to be useful in a strategic planning setting (Tegarden et al. 2009). Furthermore, the GSS provides a mechanism for supporting anonymity during two vital stages in the

strategic planning process: identification (uncovering of diverse beliefs) as well as reconciliation (e.g., debate and agreement) of the diverse beliefs (Eden and Ackermann 1998, 2013). A GSS that combines and groups similar beliefs as cognitive factions and uses an anonymous process to generate and represent beliefs is expected to reduce the influence of power in a strategic planning process. In doing so, we hope to shed light on how to practically implement a participative planning process which can control the deleterious effects of power on the resulting strategic plan. By keeping the diverse beliefs anonymous by the use of cognitive factions, we evaluate and compare the influence of the most powerful participants on the strategic plan.

In sum, this study investigates whether the impact of the most powerful constituents' set of beliefs can be reduced using a GSS that generates anonymous cognitive factions in a participative planning process. Our primary contribution is to demonstrate that the use of anonymity in both brainstorming and cognitive factions can diffuse power. Our paper is organized as follows. In the Background and Propositions section, we develop a set of propositions that are grounded in the strategic decision-making and planning, group support systems, and organizational power literatures. In the Research Design section, we describe the steps in a strategic planning process that was conducted in a multi-disciplinary academic department at a major university in the eastern United States. The Analysis section illustrates the process used to link the individual beliefs that were elicited during the strategic planning process to the actual content of the strategic plan and uses these results to evaluate the propositions. Finally, the Discussion section reviews the results, their implications, and the limitations of this study.

2 Background and Propositions

2.1 Individual Beliefs and Strategic Planning

Research has consistently shown a strong link between the beliefs of a strategic planning member and his or her strategic thinking and choice (Box et al. 1991; Hambrick 1994, 2007; Jackson 1992; Schwartz 1992). These beliefs can result in very idiosyncratic individual differences among strategic planning members (Ackermann and Eden 2011; Johnson et al. 1998). For example, decision makers in different functions, specializations, and work groups can hold different beliefs that drive their individual decision-making (Daniels et al. 1994; de Chernatony et al. 1993; Johnson 1987, 1988; Laughlin 1991; Prahalad and Bettis 1986). At the same time, functionally specific frames of reference can be fractured by personal belief systems (Dearborn and Simon 1958; Handy 1985). Throughout this research stream, there is little doubt that when making decisions, each strategic decision maker will draw upon a variety of frames of reference (Hodgkinson and Johnson 1994) including those related to career backgrounds, tenure and education (e.g., Gunz 1989; Gunz and Whitley 1985; Hambrick and Mason 1984; Whitley 1987). These diverse frames of reference are assumed to be beneficial in a participative planning process. We review the organizational determinants of power and then expand our discussion about how the use of a GSS can reduce the influence of power on the results of a participative planning process.

2.2 Organizational Determinants of Power and Participative Strategic Planning

A reality of most organization life is the impact of power. Since strategic decision making groups are composed of group members with different beliefs, the pursuit and use of power is inevitable (Pfeffer 1981, 1992). In the context of group decision-making, research has shown that power inhibits the direct expression of ideas (Gruenfeld 1995; Gruenfeld and Preston 2000; Holtgraves and Laskey 1999; Hosman 1989) as well as social reasoning (Kipnes 1972; Nemeth 1986; Woike 1994). Studies also suggest that the mere presence of the more powerful agents evoke deference even when there are no overt attempts to persuade (Copeland 1994; Petty and Cacioppo 1986). Power is defined as an individual's ability, or perceived ability, to influence another (French and Raven 1959), including the ability to influence strategic choices (Finklestein 1992). Two common sources of organizational power (i.e., structural and horizontal) and their impact on the participative planning process are discussed briefly below.

2.2.1 Structural Power

Structural power, the most commonly studied type of individual power (Finklestein 1992; Pfeffer 1981), is based on formal organizational structure and hierarchical authority (Brass 1984; Hambrick 1981; Tushman and Romanelli 1983). Individuals are said to have structural power when they have (1) a legitimate right to exert influence over others (Weber 1947); (2) perceived control over valuable resources (Pfeffer and Salancik 1978), or (3) the ability to administer rewards and punishments (Dornbusch and Scott 1975). This form of power is similar to authority, i.e., power that is derived from institutionalized roles or social arrangements (Weber 1947).

While Bacharach and Lawler (1980) assert that possessing authority is a dichotomous condition: a person either does or does not have authority to act; authority can be ambiguous in university settings since collaborative decision making is common (Bess and Dee 2008). Traditionally, in academic departments, structural power comes from two sources: the position of department chair and rank (i.e., promotion and tenure status). Chairs typically are boundary spanners who are responsible for scheduling, assigning faculty to committees, and allocating the department's budget. Through these and other actions, department chairs can directly and indirectly shape the content of a strategic plan. At the same time, tenured faculty members, especially the more senior faculty members, are seen as powerful forces that have the power to block or resist initiatives that conflict with their preferences (Chu 2010). In this case study, structural power is operationalized by the rank of and the number of years of service (tenure) of each faculty member. Essentially, the higher the rank and the greater the tenure of a faculty member, the greater the amount of structural power the faculty member possesses. Decision making at this level would be consistent with traditional centralized (top management) strategy formation; those who have structural power will have more influence on the strategic plan outcome.

2.2.2 Horizontal Power

Horizontal power stems from the lateral relationships across units or sub-units at the same or similar levels in an organization. In universities, horizontal power is exercised between colleges, departments and even sub-units within departments that house multiple disciplines (Bess and Dee 2008). Strategic decision makers will often form coalitions with other like-minded individuals in order to control decisions (Cyert and March 1963; March 1962). Given the career backgrounds and education differences within a strategic decision making unit, it is inevitable that multiple coalitions are formed that will vie for dominance through the acquisition of power (Pfeffer and Salancik 1978), especially when preferences conflict as is the case when resources are limited and where conditions create a zero-sum game situation (e.g., Gunz 1989; Gunz and Whitley 1985; Pfeffer 1981). Given that universities continue to be faced with additional budget cuts, increasing rivalry among organization constituents for the fewer resources is inevitable.

Strategic contingencies theory (Goltz and Hietapelto 2002; Hickson et al. 1971; Hinings et al. 1974; Salancik and Pfeffer 1977) describes the theoretical underpinnings of the horizontal distribution of power among subunits in an organization. Specifically, subunits gain power when other subunits depend on a specific subunit for information, services or resources. In this study, horizontal power is operationalized by the discipline in which the faculty resides. The discipline to which a faculty member was assigned is based on the faculty member's career background, education, and teaching and research interests. The power of each subunit (discipline) is derived from a complex variety of sources, e.g., research excellence, income generation (grants), reputation, student's starting salary, etc. (Jarzabkowski and Wilson 2002; Salancik and Pfeffer 1974). Subunit dependencies among the department's disciplines arise from four contingencies that predict the underlying sources of variation that determine which organizational subunits will be most powerful (Hickson et al. 1971). We discuss these four contingencies and how it relates to academic discipline power in this study: scarcity, uncertainty, workflow centrality and nonsubstitutability.

A subunit that is in a position to obtain resources that are critical in the functioning of the larger organization is likely to acquire and maintain power due to scarcity (Pfeffer and Salancik 1974; Salancik and Pfeffer 1974; Schick et al. 1986). Of the three disciplines that comprised the members of this faculty, two derive power from their strong relationship with companies that hire graduates and donate money to the department. These two disciplines also have separate accreditation, giving the department greater visibility within the college and university. However, even though the research reputation of the faculty members of the third discipline is greater than these two, the department has traditionally viewed the research produced by these two disciplines to be more relevant and important towards meeting the goals of the department. Uncertainty associated with enrollment in the three disciplines also differs, with the same two disciplines having greater certainty regarding enrollment, thus resulting in more power both within the department and college. In contrast, the third discipline's enrollment fluctuates with economic downturns and upturns. During the time frame of the development of the strategic plan, economic recession caused a decline in enrollment of the third discipline, thus exacerbating the power differences among the disciplines.

The three disciplines also had differences regarding workflow centrality, another driver of power differences. One discipline dominated the department regarding centrality of the workflow due to the importance of their curriculum, their relationships with donors and recruiters and their academic research standing. The role of the second and third disciplines was to support the primary discipline, giving more power to the primary discipline in the department. The final dimension, nonsubstitutability, is the ability for another subunit to substitute the service provided. In the case of this department, the third discipline competed directly with another department for essentially the same students, whereas the other two disciplines offered unique degrees. The underlying drivers of subunit power differences noted above should result in the acquisition, maintenance and use of horizontal power in this academic department.

To summarize, there is compelling evidence to suggest that there are structural and horizontal power differences among the faculty and among the discipline sub-units and these power differences can impact the choices made in the strategic plan. Each participant was associated with (1) one of three subgroups reflecting three levels of hierarchical power based on rank and tenure and (2) one of three disciplines reflecting 3 levels of horizontal power. Even though the basic premise is that power is expected to affect the content of a strategic plan (the more powerful based on structural power and horizontal power), we propose that the influence of the more powerful members will be less when anonymity and cognitive factions are employed through the use of a GSS. We develop our logic based on research evidence and theory associated with the use of GSS technology.

2.3 Beliefs of Cognitive Factions and Strategic Planning Content

Ideally, a participative strategic planning process should include as many stakeholders as possible that are affected by the results of the plan (Bryson et al. 2004). In this study, we use a process that systematically uncovers cognitive factions (cognitive diversity that is anonymous), i.e., subgroups comprised of individuals that have similar beliefs about a problem domain that differ from other subgroups (Tegarden et al. 2009). A critical precursor to uncovering cognitive factions is each decision maker's willingness to express his/her beliefs. Research has shown that under conditions of anonymity, individuals are more willing to express opinions that are incongruent with the group (Baltés et al. 2002; Valacich et al. 1992). And, anonymity "should reduce the impact of implicit reference group norms and of group members' social approval of one another..." (Siegel et al. 1986:162). In our case study, the use of structural and horizontal power is expected to be diffused when ideas generated are anonymous and similarities of beliefs represented as cognitive factions are also anonymous. The GSS is designed to mask the differences in power among the participants and explicitly provide a broader range of beliefs due to the inclusion of the less powerful constituents in the group.

In field studies using GSS, group members have reported that anonymity encouraged open and honest discussions and reduced organizational politics including the fear of embarrassment, disapproval, or sanction of a poorly-received remark (Diehl and Stroebe 1987; Jablin et al. 1977). Anonymity also promotes idea generation and

objective evaluation of inputs (Hiltz et al. 1989; Nunamaker et al. 1987). Furthermore, supporting anonymity through the use of GSS technology upholds a more democratic decision process (Siegel et al. 1986; Watson et al. 1988). This is especially true, with regard to power relationships, when the group of participants is made up of individuals that participate in actual or perceived superior/subordinate roles (Wilson et al. 2010). Therefore, anonymity supported by GSS technology offers a low-threat communicative environment (Diehl and Stroebe 1987; Eden and Ackermann 2013; Jablin et al. 1977) that promotes a broader range of beliefs to be considered in the generation of a strategic plan.

In addition, anonymity associated with cognitive factions helps to separate the people from the problem; a principle promoted by Fisher and Ury (1981) for successful negotiation. Cognitive factions are representations of one or more individuals that have similar beliefs. Aggregating similar beliefs in an anonymous manner helps to protect egos as well as provide the means to control the more powerful constituents in a participative planning process (Ackermann and Eden 2011) and to promote discussion of a broader set of ideas and beliefs represented in the cognitive faction belief structures. By structuring the beliefs into cognitive factions, anonymity is also reinforced and enables individuals to understand what the differences are across cognitive factions rather than with the individual participants. In other words, cognitive factions increase the ability to separate the people from the problem when using this information to develop a strategic plan.

The impact of structural power should be reduced as anonymity separates the ideas from the individuals giving the less powerful members the ability to express their ideas. As previously noted, the department members with the greatest structural power can block or prevent ideas from surfacing due to their right to influence, control over resources, and ability to administer rewards. The use of anonymity will enable greater expression of ideas because the most powerful do not know who is the source of the ideas being generated. Horizontal power can also be reduced with the generation of cognitive factions. The groupings derived in the cognitive factions have also been separated from the source, giving all subunits the opportunity to express their ideas. While the cognitive factions may tend to align with the existing subunits (Tegarden et al. 2009), the explicit separation of identifiers with the cognitive factions will reduce the more powerful subunits ability to politic or push for their solution. In addition, cognitive factions will also generate similarities that may not align with the coalitions that represent the different disciplines in the department.

In summary, utilizing uncovered anonymous cognitive factions increases the breadth of beliefs used in a participative strategic planning process. We propose that when cognitive factions are used in the planning process, the elements of the strategic plan will reflect the diversity of beliefs across the cognitive factions and not just the most powerful members of the group since the ideas are separated from the individual and subunit sources. We specifically propose that:

Proposition 1a *The use of cognitive factions and anonymity will reduce the impact of the beliefs of the more powerful individuals (rank and tenure with the organization) as reflected in the content of a strategic plan.*

Proposition 1b *The use of cognitive factions and anonymity will reduce the impact of the beliefs of the more powerful coalition (discipline) as reflected in the content of a strategic plan.*

3 Research Design

There is broadly dispersed strategic power in the decentralized, political structures of public universities (Hackman 1985; Pfeffer and Salancik 1974). University faculty and administrators design institutional and academic change (Clagett 2004), and craft and achieve short and long term objectives (Edge 2004) through the use of strategic planning. This study focuses on the participative strategic planning process of a single academic department that was comprised of 23 tenure-track faculty members, 17 of whom participated in this process. The department offers undergraduate, masters, and Ph.D. degrees, all of which have multiple specializations, supports a regional professional conference, and has a large donor base and endowment fund. A brief description of the strategic planning process is summarized below.

3.1 Step 1—Capture the Diverse Beliefs of the Members of the Department

Like most departments in academia, this department was facing increasing demands and a reduction in resources. To address the uncertain environment that the department faced, the department head adopted a GSS-based process that would capture the diverse beliefs of all of the department faculty members. The researchers and the department head created the framing statement that drove the process (See Table 1). The framing statement addressed issues related to the current position of the department, the future direction of the department, and the constraints the department faced that could negatively impact the ability of the department to move forward. Table 2 outlines the six-step process used to capture the diverse beliefs of the faculty members in the department (see Sheetz et al. 1994, 1999; Tegarden and Sheetz 2003; Tegarden et al. 2003, 2005, 2009 for a detailed description of the process employed in strategic planning contexts).

To insure the anonymity of the faculty member, all information captured by this process is associated only with a participant number that is used to log on to the system. The first step in the process, elicit brainstorming ideas, captured (anonymously)

Table 1 Framing statement

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- (1) What does it mean to be a world class (Top 20) XXX^a department?
 - (2) What are the factors that influence the success and/or failure of a world-class department?
 - (3) As a department, what are our strengths and weaknesses?
 - (4) What present and future constraints do we face that could keep us from being a world-class department?
 - (5) What should we do to become a world-class department in the next five years?
-

^a XXX was substituted for the name of the specific department to protect anonymity

Table 2 Cause mapping procedure to elicit diverse beliefs

Activity	Description
1. Elicit brainstorming ideas	Elicit characteristics, ideas, and/or issues that contribute to addressing the department's strategic issues contained in the framing statement. Comments are shared among all participants in an anonymous manner as they are entered
2. Identify strategic factors	Participants verbally suggest names and definitions of strategic factors that group ideas by similarity. Participants discuss and debate factors until consensus is reached
3. Classify brainstorming ideas into strategic factors	Each individual participant anonymously classifies each and every brainstormed idea into one of the strategic factors
4. Rate strategic factors	Each participant anonymously rates each strategic factor on a 9-point scale, from important to extremely important
5. Define causal relationships between strategic factors (create individual cause maps)	Each participant anonymously identifies causal relationship among the strategic factors. Each causal relationship is assigned a direction (positive + or inverse -) and a strength from 1 to 3 for a scale of -3 to +3, from strong negative influence to strong positive influence of one strategic factor on another strategic factor
6. Derive cognitive factions and essential theme maps	Researchers cluster individual cause maps to identify cognitive factions. Based on the cognitive factions identified, researchers create a cognitive faction and an essential theme map for each faction (Tegarden et al. 2009)

the ideas brainstormed by the faculty members. Each idea was displayed on each faculty member's screen in the order in which the idea was received by the system. The second step, identify strategic factors, used the brainstormed ideas to collectively define the strategic factors used in this study. This was accomplished by having each faculty member scroll through the list of brainstormed ideas and to verbally suggest a strategic factor that could be used to classify, based on the similarity of the ideas, each of the ideas. When a faculty member suggested a new strategic factor, the facilitator wrote the proposed strategic factor name on a chalkboard and it was discussed by the group. This verbal process was continued until the faculty members believed that the strategic factors identified did indeed represent the matters that needed to be addressed to accomplish the creation of a new strategic plan that would focus on the issues contained in the framing statement, i.e., consensus was reached as to the set of strategic factors to be included. Given that this process was not anonymous, to ensure that all faculty members were capable of participating in this step, the facilitator paid great attention to the power relationships among the faculty members in the department. Once all the factors were identified, discussed and accepted, factor definitions were created by the group. Table 3 lists the names and definitions of the twelve factors identified.

During the third step in the process, classify brainstorming ideas into strategic factors, the faculty members then individually and anonymously assigned each of the ideas into one of the twelve strategic factors. This step provided some validity in that these twelve strategic factors reflected the ideas generated. For further validity

Table 3 Participant identified strategic factors and idea count by strategic factor

Strategic factor name	Definition	Brainstorming idea count
1. Curriculum/programmatic emphasis	Ph.D., master's, integration of disciplines, degree options ^a	29
2. Faculty development/support	Flexible assignments, conferences, mentoring, training, continuing education	9
3. Outside research funding	Sponsored research, grants, consulting, corporate and agency funding	7
4. Quality of students	Recruitment of quality students, all students	12
5. Research emphasis	Faculty collaboration, quality and quantity of research, continuous focus	26
6. Resources	Cash/funding/non-financial resources, state and outside development funding	11
7. Reward structure	Recruiting faculty, retention, salary and non-financial rewards, promotion and tenure	10
8. Service	Contributions to Dept, College, University, Profession, and Society	4
9. Strengths of Dept	Diversity of Interests, Department Disciplines, ^a Low pressure Environment	10
10. Teaching	Importance of teaching, course delivery, course development, integration with research	10
11. Technology support	Equipment/computers, labs, projection systems, software, databases for teaching, research, and service, technical support for technology	3
12. Visibility	Profession, Academy, Students, Employers, State and University Administration	12

^a Specific degree options and disciplines were generalized to protect anonymity

purposes, the researchers separately performed a content analysis of the 143 ideas that were assigned by a majority of the faculty members to a specific strategic factor. The content analysis results provided some additional validity to the assertion that the faculty members had come to a shared understanding of the meaning of the strategic factors.

Fourth, the faculty members then independently and anonymously rated the importance of the strategic factors toward addressing the issues contained in the framing statement. In this case, the faculty members reached a moderate level of agreement (Kendall's $W = .432$, $X^2 = 80.812$, $p = .000$). Along with the idea classification and the content analysis of the ideas classification, the rating of the importance of the strategic factors provides additional validity that the faculty members had developed a common understanding of the strategic factors.

The primary purpose of the first four steps in this process was to develop a common understanding among the faculty members as to the meaning of the identified strategic factors. Based on this common understanding, during the fifth step, each faculty mem-

ber independently and anonymously created an individual cause map that represented their individual beliefs of the cause-effect relationships among the twelve strategic factors. To create a cause map, a faculty member add cause-effect relationships to their evolving map by selecting a strategic factor as an origin for the relationship, a strategic factor as a destination for the relationship, a causal influence (positive or inverse), and select a strength of the relationship (strong, moderate, or slight). At any time during this individual map creation process, the faculty member could add more relationships, edit a relationship, or delete a relationship. Once the faculty member believed that the map represented their individual beliefs, they would submit the map to the system.

Finally, the purpose of the sixth step is to aggregate the individual cause maps into cognitive factions. The cognitive factions were identified based upon the similarity of the causal relationships among the strategic factors contained in the individual maps. The cause maps were aggregated into three cognitive factions using Ward's agglomeration clustering method and the squared Euclidean distance measure. Ward's method was chosen to minimize cluster overlap, to increase the coverage of cases, and to improve the handling of outliers (Aldenderfer and Blashfield 1984). Furthermore, the squared Euclidean distance measure, due to the underlying algorithm of Ward's method, is the only valid distance measure (see footnote 3 in Tegarden et al. 2009). Clustering the individual maps together to form cognitive factions is only possible given that the faculty members had come to a common understanding of the individual strategic factors, the maps only contained cause-effect relationships among the strategic factors, and the faculty members understood the meaning of a cause-effect relationship. Without this basic common understanding, using this simple aggregation process would not be reasonable (Tegarden et al. 2009).

3.2 Step 2—Report the Results of the GSS session to the Department

A department meeting was held to report and discuss the results of the GSS session. Before the meeting, a report was provided to the faculty members of the department that contained the 12 strategic factors and definitions, the 143 brainstormed ideas placed into each of the strategic factors, each and every anonymous individual map, and the three anonymous cognitive faction maps. During the meeting, the members of the department discussed these results. The discussion primarily dealt with how to interpret the results from the GSS session. At all times during this discussion, anonymity of the results was enforced. Therefore, at no time did any department member know the source of the brainstormed ideas, the individual maps, or faculty membership associated with the three cognitive factions. The outcome of the meeting was to accept the results from the GSS session as is, i.e., there were no suggested changes.

3.3 Step 3—Use the Anonymous Results to Create the Strategic Plan

The departmental strategic planning committee was charged by the department head to use the results from the GSS process as a basis for the department's strategic plan.

Table 4 Strategic plan section descriptions

Strategic plan section	Strategic plan section description	Number of section elements
Alumni and employer relations	Foster relations with alumni, employers, and friends	19
External funding	Increase financial support from alumni, friends, firms, and corporations in the form of annual unrestricted giving and endowment necessary to support strategic objectives of the department	17
Master's program	We seek to prepare students for professional careers with specializations in assurance and financial services, taxation, and information systems	66
Ph.D. program	We seek to prepare students for academic careers in research and teaching	48
Research	We seek to improve the disciplines of accounting and information systems by conducting quality research and disseminating the results	53
Service program	We seek to deliver outreach services to accounting and information systems professionals and educators	21
Undergraduate programs	We seek to prepare students to enter accounting and information systems professions with the practical skills and conceptual knowledge of business, information systems, and accounting	86

The department head and four faculty members made up the committee membership. The faculty members came from the two most powerful structural and horizontal power subgroups, i.e., there were no members from the least powerful subgroups. One faculty member moderated and critiqued the evolving plan while the other three faculty members wrote the plan. The department head only intervened when necessary to ensure that the plan was comprehensive. The final strategic plan consisted of seven sections and 310 elements that covered academic programs (undergraduate, masters, and Ph.D.), research, outreach/service, alumni/employer relations, and donors/endowment funding.¹ Each section contained a set of distinct elements that included description, objectives, measures, goals, and action plans. The description of each plan section and the number of elements for each section are reported in Table 4. The number of elements associated with the different sections of the strategic plan varied considerably. For example, there were 17 elements in the External Funding section compared to 86 elements in the Undergraduate Program section.

3.4 Step 4—Report the Plan To and Gain Final Approval From the Members of the Department

Finally, the strategic planning committee disseminated the strategic plan to the faculty members and a faculty meeting was called to discuss the plan. During the meeting,

¹ The strategic planning committee, not the researchers, identified the 310 elements of the plan.

the committee presented, explained, and clarified the elements of the plan while the faculty members discussed different aspects of the plan. By the end of the meeting, the department faculty members voted and unanimously endorsed the plan.

4 Analysis

To investigate whether the use of anonymity and cognitive factions reduce the impact of the more powerful faculty members have on the content of the strategic plan, we link the beliefs of the individual faculty members to the actual strategic plan content. After linking the beliefs of the individual faculty members, we analyze our research propositions. The linking processes and proposition analysis are described below.

4.1 Linking Individual Beliefs to the Strategic Plan Content

To ascertain the amount of influence each power subgroup had on the content of the strategic plan, each of the individual brainstorming ideas was linked to the content of the strategic plan using two methods. First, the brainstorming ideas were linked directly to the sections of the strategic plan via a classification process. Even though each of the ideas were generated and associated with an individual faculty member, anonymity was supported using an anonymous participant identifier (P1, P2, . . . , P17), therefore each idea was associated only with the anonymous identifier (e.g., P1 might have generated ideas 1, 13, 22, 45, etc.). Furthermore, the rank/tenure and discipline of each individual was associated only with the anonymous identifier, e.g., P1 could have been associated with the Chaired rank/tenure-based structural power subgroup and the Discipline-2 discipline-based horizontal power subgroup. Second, each of the brainstorming ideas was also linked indirectly to the strategic plan sections via their classification into the strategic factors during the GSS session and a second independent classification process. We describe both linking processes below.

4.1.1 *Directly Linking Subgroup Beliefs to Strategic Plan Sections*

To determine the level of influence each structural and horizontal subgroup (rank/tenure and discipline) had on the actual strategic plan, two coders independently classified each brainstorming idea into one of the sections of the strategic plan (see Table 4). They were also given a “not applicable option” (i.e., the idea was not associated with any of the sections). The coders were given a copy of the strategic plan sections (see Table 4), the strategic plan elements in each section (not reported in this paper), and a coding form that contained the 143 ideas from the GSS session in a randomized order. The two coders submitted their classifications to a facilitator who identified where the coders agreed and disagreed. Next, the facilitator returned the updated coding form to each coder. The updated forms indicated where the coders agreed and disagreed. The coders were then asked to reclassify the disagreements. Each coder knew where they had classified the ideas in the previous round, but did not know where the other coder had classified it; only that they had disagreed. By the end of the fourth round, the coders had agreed with the classification of 99 of the 143 ideas (69.2% agree-

ment, Krippendorff's $\alpha = .649$). Based on this level of agreement, the facilitator carefully reviewed the disagreements and found that in many cases the coders were switching their idea coding between a set of the sections and/or the not applicable option. Based on this discovery, the facilitator lifted the restriction that required the coders to only classify a idea into a single section and allowed them to classify an idea into multiple sections. Furthermore, the facilitator had the coders meet face-to-face to resolve their differences. By the end of this session, the two coders agreed with the final classification of all ideas; some of which were indeed associated with multiple sections of the plan. The ideas that fell into this type were primarily ideas associated with the Curriculum/Programmatic Emphasis strategic factor and the Undergraduate, Master's, and Ph.D. Programs sections.

To determine the level of influence each subgroup (rank/tenure and discipline) had on each of the strategic plan sections, we counted the individual brainstorming ideas that were generated by members of each structural and horizontal subgroup that were placed into a strategic plan section. We assumed that the greater the percentage of ideas generated by members of a subgroup that were coded into a section of the strategic plan, the greater the influence the subgroup had on the strategic plan section. For example, if members of subgroup A generated 60% of the ideas that were placed in strategic plan Sect. 1, we assumed that subgroup A influenced the content of the strategic plan Sect. 1 more than the other subgroups combined.

4.1.2 Indirectly Linking Subgroup Beliefs to Strategic Plan Sections Via the Strategic Factors

To provide additional validity of our results, we linked the subgroups to the sections of the strategic plan in an indirect manner. This was accomplished by (1) using the brainstormed ideas assignment to the strategic factors from the GSS session and (2) using a content analysis of the strategic plan to link the strategic plan elements to the strategic factors. As with directly linking the beliefs to the strategic plan section, we counted the individual brainstorming ideas that were generated by members of each subgroup that were placed by a majority of the participants into a strategic factor. And again, we assumed that the greater the percentage of ideas generated by members of a subgroup, the greater the influence the subgroup had on the strategic factor.

Next, a content analysis of the strategic plan was conducted to link the elements of the plan to the strategic factors. In this case, two coders independently linked each strategic plan element to a strategic factor. The coders were given three documents: the strategic factors and their definitions (see Table 3), the 143 brainstorming ideas from the GSS session (not reported in this paper), and a coding form that contained the elements of the strategic plan. The coders independently classified each of the 310 elements to one of the twelve factors. Again, they were also given a "not applicable option" (i.e., the element was not associated with any of the factors). The two coders submitted their classifications to a facilitator who examined their agreements and disagreements. Next, the facilitator returned the updated coding form to each coder. The updated forms indicated where the coders agreed and disagreed. The coders were then asked to reclassify the disagreements. By the end of the fourth round, the coders had agreed to the classification of 266 of the 310 elements (85.81% agreement,

Krippendorff's $\alpha = .846$). At this time, the facilitator had the coders meet face-to-face to resolve the differences. During this session, the two coders agreed with the final classification of all elements.

Table 5 reports the final classification. It illustrates the extent to which the sections of the strategic plan were related with the strategic factors—the count in each cell represents the number of elements from each section that were linked to a strategic factor. For example, of the 19 elements in the Alumni and Employer Relations section of the strategic plan (see the 2nd column of Table 5), one was linked to the Resources factor and the remaining eighteen were linked to the Visibility factor. All strategic factors were associated with at least one section of the plan.

In this case, we estimated the magnitude of influence that a subgroup (rank/tenure and discipline) had on a section by multiplying the relative weight of influence each subgroup had on the generation of ideas for each factors by the percent influence each factor had on each section. For example, if subgroup A generated 70% of the ideas placed in strategic factor 1 and if 50% of the elements of strategic plan Sect. 1 were placed in strategic factor 1, then we assume that subgroup A's estimate of influence on strategic plan Sect. 1 via strategic factor 1 would be 35% (70%*50%). Subgroup A's total estimate of influence on strategic plan Sect. 1 would be the summation of its influence via all of the strategic factors.

4.2 Propositional Analysis

We analyze the propositions by assessing both the direct and indirect influence each structural and horizontal power-level subgroup had on the strategic plan. To accomplish this, we associated the ideas generated by an individual faculty member with each faculty member's structural and horizontal power subgroup. For example, if faculty member 1 was associated with the Senior structural power and Discipline 1 horizontal power subgroups and he/she generated eight ideas, then those eight ideas were considered to be associated with the Senior structural power and Discipline 1 horizontal power subgroups. The association of the faculty member with the different power subgroups were self-reported. Again, as stated previously, anonymity was assured through all associations to a specific faculty member through a unique anonymous participant number.

4.2.1 Structural Power (Rank/Tenure) Beliefs

Proposition 1a stated that: *The use of cognitive factions and anonymity will reduce the impact of the beliefs of the more powerful individuals (rank and tenure with the organization) as reflected in the content of a strategic plan.* As noted earlier, the faculty members were associated with three rank/tenure subgroups: Chaired, Senior, and Junior. The Chaired-High Power group was comprised of the most powerful members of the faculty and included the chaired professors and the department head. The Senior-Moderate Power classification included the Full professors and Senior Associate professors. Finally, the Junior-Low Power classification included newly tenured Associate professors and untenured Assistant professors. In this study, there were

Table 5 Strategic factor influence on the 310 strategic plan section elements cell contents: strategic plan section element count, percent of section elements by strategic factor

Strategic factor From cause mapping process	Strategic plan sections						
	Alumni and employer relations	External funding	Master's program	Ph.D. program	Research	Service program	Undergraduate program
1. Curriculum/programmatic emphasis			20, 30.30 %	5, 10.42 %			40, 46.51 %
2. Faculty development/support			2, 3.03 %		3, 5.66 %	2, 9.52 %	2, 2.33 %
3. Outside research funding					10, 18.87 %		
4. Quality of students			34, 51.52 %	12, 25.00 %			14, 16.28 %
5. Research emphasis				21, 43.75 %	24, 45.28 %	2, 9.52 %	
6. Resources	1, 5.26 %	15, 88.24 %	2, 3.03 %	2, 4.17 %	5, 9.43 %		2, 2.33 %
7. Reward structure					1, 1.89 %		
8. Service			1, 1.52 %		2, 3.77 %	10, 47.62 %	1, 1.16 %
9. Strengths of the department							1, 1.16 %
10. Teaching				6, 12.50 %	4, 7.55 %		8, 9.30 %
11. Technology support			1, 1.52 %		1, 1.89 %		
12. Visibility	18, 94.74 %	2, 11.76 %		2, 4.17 %	3, 5.66 %	7, 33.33 %	1, 1.16 %
Not classified			6, 9.09 %				17, 19.77 %
Total strategic plan elements	19	17	66	48	53	21	86

three faculty members in the Chaired classification, five in the Senior classification, and nine in the Junior classification.

Based on our results of coding the beliefs (Brainstorming Ideas) directly into the strategic plan sections and associating each idea with the individual that generated it, this proposition is supported (see Table 6). In fact, on the average we see that the Chaired-High Power subgroup only had about a 26% average influence on the sections of the strategic plan, the Senior-Moderate Power subgroup had about a 39% average influence, and the Junior-Low Power subgroup had approximately an average level of influence of 35%. The only section that was dominated by the Chaired-High Power subgroup was the Alumni and Employer Relations section (50%). The Senior-Moderate Power subgroup dominated the Master's Program (67%) and the Undergraduate Programs (58%) sections while the Junior-Low Power subgroup dominated the Ph.D. Program section (52%).²

Based on the idea categorization performed by the faculty members during the GSS session and the coding of the elements of the strategic plan sections by our coders, this proposition was supported again. Table 7 reports the number of ideas generated by participants within each Rank/Tenure subgroup. For example, the Chaired-High Power subgroup generated most of the ideas for the Resources (#6) factor (see Resources row under the Chaired column). Consequently, they had the greatest influence on this factor since participants in this subgroup generated 46% of the brainstorming ideas. The Senior-Moderate Power subgroup had the most influence on the Outside Research Funding (#3) factor (see Outside Research Funding row under the Senior column) with 57% of the ideas generated from members of this subgroup. The Junior-Low Power subgroup had the greatest influence with many of the factors as noted by the relatively higher percentages compared to the other subgroups (see the Junior column).

To estimate the magnitude of influence that a Rank/Tenure subgroup had on a section using the idea classification and element coding, we performed matrix multiplication of Table 5 by Table 7 to calculate the estimate of influence values that we use as an indicator of the magnitude of influence as reported in Table 8. The amount of influence was computed by multiplying the relative weight of influence each subgroup had on the generation of ideas for each factor by the percent influence each factor had on each section. For example in Table 5, by multiplying 5.26% (Table 5 Resources row under Alumni and Employer Relations) by 46% (Table 7 Resources row under Chaired) and adding the product of 94.74% (Table 5 Visibility row under Alumni and Employer Relations) and 25% (Table 7 Visibility row under Chaired) we estimated that the magnitude of influence of the Chaired-High Power subgroup on the Alumni and Employer Relations section was approximately 26%. Using this computation, we see that all three Rank/Tenure subgroups influenced the content of the Alumni and Employer Relations section (see the 2nd column of Table 8). In this case, the Junior-Low Power subgroup had considerably more influence on the Alumni and Employer

² Given the way in which we are calculating the influence values, great care should be taken in interpreting these percentages; it is better to simply use them as "ballpark" or qualitative estimates. For example, we feel comfortable in stating that the Chaired-High Power (26%) subgroup had less influence than either the Senior-Moderate Power (39%) or Junior-Low Power (35%) subgroups. But, given the relatively small difference between the Senior-Moderate Power and Junior-Low Power subgroups, it is questionable whether they are really different.

Table 6 Rank/tenure sub-group direct influence on strategic plan sections

Rank/tenure	Strategic plan section						Average influence (%)	
	Alumni and employer relations (%)	External funding (%)	Master's program (%)	Ph.D. Program (%)	Research (%)	Service (%)		Undergraduate programs (%)
Chaired <i>High power</i>	50	30	11	12	26	29	26	26.29
Senior <i>Moderate power</i>	25	30	67	36	31	29	58	39.43
Junior <i>Low power</i>	25	40	22	52	44	43	16	34.57

In some cases, ideas were assigned to multiple strategic plan sections

Table 7 Brainstorming idea generation by rank/tenure cell content: brainstorming idea count, percent of total brainstorming ideas by sub-group category

Strategic factor where majority placed the brainstorming ideas during the cause mapping process	Chaired <i>High power</i> (%)	Senior <i>Moderate power</i> (%)	Junior <i>Low power</i> (%)
1. Curriculum/programmatic emphasis	3, 10	6, 21	20, 69
2. Faculty development/support	1, 11	3, 33	5, 56
3. Outside research funding	0, 0	4, 57	3, 43
4. Quality of student	2, 17	2, 17	8, 66
5. Research emphasis	2, 8	6, 23	18, 69
6. Resources	5, 46	2, 18	4, 36
7. Reward structure	2, 20	2, 20	6, 60
8. Service	0, 0	2, 50	2, 50
9. Strengths of dept	3, 30	4, 40	3, 30
10. Teaching	0, 0	2, 20	8, 80
11. Technology support	0, 0	1, 33	2, 67
12. Visibility	3, 25	3, 25	6, 50

Relations section than either the Chaired-High Power or the Senior-Moderate Power subgroups. In fact, on average, the Junior-Lower Power subgroup had more influence than the Senior-Moderate Power subgroup and it had more influence than the Chaired-High Power subgroup.³

4.2.2 Horizontal Power (Discipline) Beliefs

Proposition 1b stated that: *The use of cognitive factions and anonymity will reduce the impact of the beliefs of the more powerful coalition (discipline) as reflected in the content of a strategic plan.* As described earlier, participants are assigned to one of three discipline-based subgroups. This classification was based on the career backgrounds, education, and teaching and research interests of the individual faculty members. To ensure anonymity, we refer to the Discipline subgroups as Discipline-1, Discipline-2, and Discipline-3. Given the nature of the disciplines in this department, it was determined that the Discipline-1 subgroup was more powerful than the Discipline-2 subgroup and that the Discipline-2 subgroup was more powerful than the Discipline-3 subgroup. This ranking was based on the relative impact of classes taught and research topics investigated with regard to the academic and professional disciplines within the department. The discipline-based ranking was discussed with and validated by the department head. There were five faculty members in Discipline-1, seven in Discipline-2, and five in Discipline-3.

³ As in the previous influence value computations, great care should be taken in interpreting these percentages; it is better to simply use them as “ballpark” or qualitative estimates.

Table 8 Rank/tenure sub-group indirect influence on strategic plan section via strategic factors

Rank/tenure	Strategic plan section							Average influence (%)
	Alumni and employer relations (%)	External funding (%)	Master's program (%)	Ph.D. program (%)	Research (%)	Service program (%)	Undergraduate programs (%)	
Chaired <i>High Power</i>	26	44	14	12	10	10	9	18
Senior <i>Moderate Power</i>	25	19	18	21	31	37	17	24
Junior <i>Low Power</i>	49	38	59	67	59	52	54	54
Other			9				20	4

Reported percentage represents amount of influence based on Tables 5 and 7

Table 9 Discipline sub-group direct influence on strategic plan sections

Discipline	Strategic plan section							Average influence (%)
	Alumni and employer relations (%)	External funding (%)	Master's program (%)	Ph.D. program (%)	Research (%)	Service (%)	Undergraduate programs (%)	
Discipline-1 <i>High Power</i>	50	30	22	12	10	0	16	12.86
Discipline-2 <i>Moderate Power</i>	25	20	11	16	28	29	16	20.71
Discipline-3 <i>Low Power</i>	25	50	67	72	62	71	68	59.29

In some cases, ideas were assigned to multiple Strategic Plan Sections

Table 10 Brainstorming idea generation by discipline cell contents: brainstorming idea count, percent of total brainstorming ideas by sub-category

Strategic factor where majority placed the brainstorming ideas during the cause mapping process	Discipline-1 <i>High Power (%)</i>	Discipline-2 <i>Moderate Power (%)</i>	Discipline-3 <i>Low Power (%)</i>
1. Curriculum/programmatic emphasis	8, 28	11, 38	10, 34
2. Faculty Development/Support	3, 33	3, 33	3, 33
3. Outside Research Funding	1, 14	2, 29	4, 57
4. Quality of Student	1, 8	3, 25	8, 67
5. Research Emphasis	7, 27	8, 31	11, 42
6. Resources	6, 55	2, 18	3, 27
7. Reward Structure	2, 20	4, 40	4, 40
8. Service	1, 25	1, 25	2, 50
9. Strengths of Dept	4, 40	6, 60	0, 0
10. Teaching	1, 10	5, 50	4, 40
11. Technology Support	0, 0	0, 0	3, 100
12. Visibility	5, 42	2, 16	5, 42

As with the Rank/Tenure subgroups, using the results of coding the beliefs (Brainstorming Ideas) directly into the strategic plan sections and associating each idea with the individual that generated it supported this proposition (see Table 9), i.e., the use of anonymity and cognitive factions reduced the impact of power. With this analysis, the power was not only reduced, it was reversed, i.e., Discipline-3 had more influence than Discipline-2 and Discipline-2 had more influence than Discipline-1. On the average, the amount of influence of the Discipline-3 subgroup was about 59%. Furthermore, the only strategic plan section that the Discipline-3 subgroup did not dominate was the Alumni and Employer Relations section. This lone section was dominated by the most powerful subgroup: Discipline-1.

The results from the matrix multiplication of the idea categorization performed by the faculty members during the GSS session and the coding of the elements of the strategic plan sections by our coders provides additional support for this proposition. Table 10 reports the number of ideas generated by participants within each Discipline subgroup, whereas Table 11 reports the results of the matrix multiplication of Table 5 by Table 10. In this case, we find that the least powerful discipline had the greatest average influence: Discipline-1 had 30%, Discipline-2 had 25%, and Discipline-3 had 41% (see Table 11). In fact, Discipline-3 had the greatest influence on all but two of the sections: Alumni and Employer Relations and External Funding. Even though the most powerful discipline (Discipline-1) had the greatest influence on both the Alumni and Employer Relations and External Funding sections, it only dominated the External Funding section. Moreover, in the case of the Alumni and Employer Relations section, Discipline-3 essentially had the same amount of influence as Discipline-1 (41 and 43%, respectively).

Table 11 Discipline sub-group indirect influence on strategic plan section via strategic factors

Discipline	Strategic plan section							Average influence (%)
	Alumni and employer relations (%)	External funding (%)	Master's program (%)	Ph.D. program (%)	Research (%)	Service program (%)	Undergraduate programs (%)	
Discipline-1 <i>High power</i>	43	53	16	22	26	32	19	30
Discipline-2 <i>Moderate power</i>	16	18	26	31	29	23	29	25
Discipline-3 <i>Low power</i>	41	29	47	47	42	45	33	41
Other			9				20	4

Reported percentage represents amount of influence based on Tables 5 and 10

5 Discussion

As reported above, we found support for the propositions. This suggests that the most powerful members and coalitions did not dominate the content of the strategic plan, i.e., the use of anonymity and cognitive factions de-fused both the structural and horizontal power in this academic department. In this section of the paper, we discuss the implications of these findings.

The strategic planning process in this case study employed anonymous brainstorming and anonymous cognitive faction material in the development of a strategic plan. By supporting anonymity, the variety of the comments was encouraged in a non-threatening environment (Diehl and Stroebe 1987; Jablin et al. 1977). Through the use of cluster analysis, the anonymous cognitive faction belief structures provided a way to influence the strategic plan in a non-power based manner (Tegarden et al. 2009). By separating the contributions from the contributors, a more objective evaluation of the ideas and the strategic factors is possible (Hiltz et al. 1989; Nunamaker et al. 1987). This can be very important when an organization is facing the level of uncertainty and risk that was faced by this department (Bryson 2004).

Support for Proposition 1a was found. The beliefs and values associated with the individuals with the most structural power (Chaired faculty members) had substantially less influence on the contents of the plan than either the Senior or Junior faculty members (see Tables 6, 8). Given the individuals that are associated with each of these groups and the time period in which this data was collected, the focus of the groups is not surprising. For example, the Junior faculty was highly concerned with changing expectations on the promotion and tenure requirements. This led them to be highly motivated in assuring that ideas that addressed these issues would be included in the plan (see Table 7). In this case, the Junior faculty generated 85 of the 143 ideas. These included issues related to the increasing research emphasis of the university (including a new emphasis on externally funded research) without a corresponding decrease in teaching and service responsibilities, the quality of the students being recruited, and the changing reward structure that would focus exclusively on research be included as input to the strategic planning process. Given that (1) the strategic planning committee was only given the results of the GSS sessions as they were related to the overall group and to the cognitive factions and (2) the committee members were only from the Chaired and Senior subgroups, it seems that the anonymity associated with the cognitive factions did indeed de-fuse the power associated with the structural power (rank/tenure) dimension (Brass 1984; Tegarden et al. 2009; Tushman and Romanelli 1983).

Similarly, support for Proposition 1b was found. Our results indicate that the least powerful discipline (Discipline-3) influenced the content of the plan to a much greater level than the other two disciplines (see Tables 9, 11) in every section except the Alumni and Employer Relations and External Funding sections. Given the relationship of faculty in Discipline-1 with the department's alumni, employers, and donors, it is not surprising that they influenced the content of these sections. However, given the little interaction that the faculty members in Discipline-3 had with the alumni, employers, and donors, what was surprising was (1) the level of influence that Discipline-3 had on the Alumni and Employer Relations section was essentially the same as Discipline-1

and (2) that Discipline-2, which also had substantial contact with the department's alumni, employers, and donors, seemed to only have minimal influence over the content of either of these sections. As such, the only section that Discipline-3 did not either highly influence or dominate the content was External Funding. In many ways, Discipline-1 and Discipline-2 can be viewed as a single discipline. In fact, all "outsiders" always view them as a single discipline. Whereas, Discipline-3 has rarely, if ever, been viewed as part of the same discipline with Discipline-1 and Discipline-2. In fact, in most universities, Discipline-3 is located in a completely different department. Consequently, the level of influence over the content of the strategic plan attained by Discipline-3 was completely unexpected and completely different than in the past. Furthermore, given the zero-sum game situation (e.g., [Gunz 1989](#); [Gunz and Whitley 1985](#); [Pfeffer 1981](#)) that the department faced and that the committee members were only from the Discipline-1 and Discipline-2 subgroups, these results are even more surprising. So, as with the structural dimension of power (rank/tenure), the horizontal power (discipline) dimension seems to have been de-fused through the use of the anonymity-driven brainstorming and cognitive factions ([Pfeffer and Salancik 1978](#); [Tegarden et al. 2009](#)).

As in all case studies, there are set of limitations. First, one should be very careful in attempting to generalize beyond the data. The data used in this study is somewhat dependent upon the GSS-driven data collection method used. However, our approach can be easily adapted to other approaches that support anonymity. Second, the analysis performed in this study was done in a post-hoc fashion, i.e., the original data collection was not performed with this study in mind; it was collected for actual strategic planning purposes. Third, validity issues can be raised with our approaches to measure influence. However, given that both approaches provide similar results, that we are only using them to indicate the magnitude of influence, and that, on the face of it, it seems to capture the actual influence, we believe the approach has merit but needs further development and validation. Fourth, since the framing statement used drove the entire strategic planning process, a different framing statement could have different results.

5.1 Implications for Power and Strategic Planning Literatures

This case study provides descriptive details about whose beliefs and values were incorporated in an actual strategic plan. Given the direct and indirect ways that power can impact decisions, reducing the impact of power in strategic planning settings is an important aspect to consider. This study reinforces that strategic planners should explicitly manage power effects through anonymity and GSSs ([Dennis et al. 1991](#)). This literature also recognizes that task conflict, disagreement about which alternatives and views are the correct course of action ([Eisenhardt et al. 1997](#); [Jehn 1997](#); [Pelled et al. 1999](#)), can enhance decision-making outcomes and that the more powerful constituents can reduce the use of task conflict by limiting contributions from the less powerful individuals in face-to-face settings. So, reducing the impact of power *while* increasing task conflict may be important to control in strategic planning settings when the status quo beliefs are insufficient for what lies ahead. As noted by [Ackermann and Eden \(2011\)](#), a GSS that utilizes anonymity can protect relationships

and retain the social order. Furthermore, the explicit use of tools and processes that promote anonymous cognitive factions to increase task conflict (Tegarden et al. 2009) may also reduce the detrimental impact of power. The need to reduce this impact is warranted when an organization or sub-unit is faced with disruptive change or when a different set of capabilities is called for in order to fit new conditions. In such situations, a more democratic or participative approach to strategic planning may provide valuable information that stimulates task conflict that otherwise may be omitted. In other words, a strategic plan that simply reflects the status quo may not be suitable. In this study, we explored how the use of a GSS that provides anonymity in brainstorming and the generation of cognitive factions promoted a more participative strategic planning process. While further research is needed to generalize the results found in this study, the joint use of anonymity and cognitive factions merits further investigation for managing power in strategic planning settings.

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