The Mindsets of Medical Education Leaders: How Do They Conceive of Their Work?  
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Abstract

Purpose  
How a leader perceives his or her organization affects that individual’s decision making and beliefs about the best way to influence it. The goal of this study was to understand how medical education leaders conceive of their work.

Method  
The first author interviewed 16 medical education leaders in the Faculty of Medicine at the University of Toronto from June 2005 until February 2006. The sample represented different practice contexts to ensure a diverse overview of experiences. Using the theoretical framework of Bolman and Deal, the authors examined and described the perceptual frames through which these leaders perceive their endeavors. Transcripts were analyzed and then mapped onto Bolman and Deal’s four cognitive lenses (i.e., frames).

Results  
Fourteen of the 16 leaders used all cognitive frames. The human resource perspective was favored by all participants, followed closely by the symbolic (14/16) and political (14/16). Although most attended to the structural frame (14/16), only three placed any significant emphasis on it. In addition to identifying and describing the elements of this typology for medical education leadership, a new frame emerged of human resource organizational development, and empowerment.

Conclusions  
This study uniquely contributes by supporting the utility of the Bolman and Deal typology in the medical education context and supports the value for leaders to reflect on their organizational work from a variety of perspectives (including the frames). Medical education leadership development programs need to attend to enhancing the awareness of these perspectives.

Institutional Issues

• The core premise of the structural frame is the importance of clear, well-understood goals, roles, and relationships for organizational performance. Clarification of lines of authority and development of clear structures appropriate to task and environment are essential. Leaders need to design a structure to facilitate goal achievement and encourage specialization as a way of raising performance. They are encouraged to exercise appropriate forms of coordination and control to ensure that the efforts of individuals and units are integrated to achieve effectiveness. Problems arise when the structure does not fit the situation.

Each of these frames highlights significant possibilities but is incomplete in capturing a holistic picture. Ideally, managers must combine these frames into a comprehensive approach.

Although there is a vast literature on leadership theories, behaviors, practices, and values, there has been little work that has specifically focused on the mindsets of medical education leaders in how they conceive of their work. Bland et al.,7 in the only direct study of this issue, examined effective medical education leadership for curricular change. They found consistent use of the human resource frame and weak support for leaders’ use of at least two perspectives. Souba and Day6 identified that academic medical center leaders (deans and CEOs) described their complex leadership challenges as financial, structural, cultural, and role related. Bolman and Deal,4 in a study of school principals, found that political and human resource frames were predictive of success as a leader and manager, that use of the symbolic frame was related to effective leadership, and that use of the structural frame was related to effective management. Integrative thinking styles, organizational awareness, and the ability to use a variety of mindsets to make sense, decide, and take action are increasingly recognized as essential to effective leadership in education, medicine, and business in these complex times.10–15

Building on these studies, our study attempts to advance the understanding of whether medical education leaders use multiple perceptual frames to understand their work and, if so, to describe and examine the frames through which those leaders perceive their daily endeavors and understand how they use those frames. To our knowledge, this is the first study of this kind for medical education. We hope that our findings may inform the design of medical education leadership development programs.

Method
Participants
One of us (S.L.) interviewed 16 medical education leaders in the Faculty of Medicine at the University of Toronto. The sample was purposefully selected to represent different practice contexts (e.g., undergraduate, postgraduate, and others) and departments to ensure a diverse overview of experiences. These participants were in educational authority positions such as departmental postgraduate training directors, undergraduate course directors, education vice deans, or directors of research and development units in education. They were responsible for leadership, coordination, and development of large-scale education-related programs in the faculty of medicine at multiple hospital sites. The study was approved by the University of Toronto health sciences research ethics board. The number of participants interviewed was determined by using the saturation approach: New participants were added to our sample until the variety of opinions and judgments expressed was fully fleshed out (i.e., no more new opinions and judgments were expressed).16 A preliminary analysis was thus conducted after each interview. All leaders who were approached consented. The data were collected from June 2005 through February 2006.

Five pilot interviews were conducted to develop the questions for the semistructured interviews. A semistructured approach to interviewing was used to address the fact that some of the participants and the interviewer already knew each other. We hoped that a greater depth of information and understanding might be generated because of this interrelational knowledge and that there would be greater familiarity with and understanding of the context and technical language of participants.17,18 During the semistructured interviews, participants were asked to elaborate on their perspectives, roles, and functions. We used a qualitative approach derived from Schön’s work on reflective practice. Like Schön, we hoped that practitioners would be able to describe the metaphors and theories they use when they “think on their feet” as well as the experiences and understandings generated when they reflect afterwards. Each interview was audio-recorded, and the interviewer recorded field notes on the process. Those who were interviewed were not primed in any way by the Bolman and Deal typology. They were asked to respond to such questions as:

• How do you think your organizations really get things done?
• What do you think is/are the biggest barrier(s) to make things happen in an organization?
• When things are not moving along in your organization, how do you analyze or dissect that?

Analysis
We thematically analyzed transcripts of the in-depth semistructured interviews, supplemented by the interviewers’ field notes, to reveal emergent themes. The focus was on identifying excerpts that described participants’ various understandings of their organizational work. Using content analysis, we independently reviewed these interview transcripts and developed and assigned codes. After reviewing a few interviews, we compared our code assignments and discussed differences until we could reconcile the differences and revise the codes. This method was reiterated until 100% agreement was reached on a coding framework. These codes were then clustered into themes. Each interview was reviewed for the occurrence of each of the different themes in order to weigh the relative importance of the theme for the group of participants. Consideration was given to any differences that may have occurred as a result of the variability of the education contexts of the leaders. Themes were then mapped onto the theoretical framework of Bolman and Deal. Analysis focused on the four cognitive lenses (stated earlier) through which participants could view their leadership issues.

Results
The mean age of the 16 participants was 52 years (39–67); 10 participants were men. Participants had been in their
current leadership positions for an average of 5.6 years (0.5–14). Of the four who had been in their positions for two years or less, they had been in a previous education leadership position for a minimum of six years. Fourteen had been selected for their current positions by a competitive peer-review process.

Fourteen of the 16 leaders used all cognitive frames to some extent and often applied them beyond the formal boundaries of their educational units, such as deliberations about government or public agendas (see Table 1).

The human resource frame was favored by all participants and was followed closely by the symbolic (14 out of 16) and political (14 out of 16) frames. Although most attended to the structural frame (14 out of 16), only three had any significant emphasis on it. Two participants did not attend to the structural frame at all. The political and human resource frames were unanimously emphasized by the continuing education and research/development education leaders. All undergraduate and postgraduate education leaders emphasized the symbolic and human resource frames. These leaders also often considered the students as members, not just customers, of the educational organization.

In the following text, we describe, within the four frames, the themes that these leaders attended to (summarized in Table 2) and how the leaders articulated each theme’s perspective for their various medical education contexts. We present quotes from some of the participants to illustrate their views.

The human resource frame

_It is important to value, support, and care for faculty and students._

Students and faculty need to feel valued, cared about, advocated for, supported, and developed. This creates trust and safety, which enables creativity and risk-taking in their contributions.

I want people to come to me as soon as there is any kind of problem or issue, because I might be able to help with it or do something about it, rather than have someone quit, or leave, or get burnt out, or just give up.

It would be to your detriment as a leader to not recognize them for their abilities to contribute to a project.

Think carefully about the alignment of faculty interests with organizational needs in order to engage the faculty.

These leaders thought very carefully about the alignment of faculty interests with the organizational agenda in order to engage them.

It is figuring out who the person is, where they are heading, what their aspirations are academically and then trying to find them things to do within the organization that meet their goals.

There is the strategy of aligning what I need with what they have to accomplish.

The political frame

_Recognize, understand, and engage with stakeholders’ interests in order to be informed, advocate, and cultivate support._

These leaders recognized the importance of recognizing and engaging with the diverse interests of stakeholders in order to advocate, scan for opportunities, and cultivate networks of support.

So you get a chance to plug into a bunch of different sources...listening for and identifying opportunities for connecting the interests of individuals around a given idea or project.

I try to find out as much about the department and how people are supported and some of the dynamics...to find out as much as I can about the way they operate.

_Identify and leverage diverse sources of power._

Participants tried to recognize, identify, influence, and leverage a diversity of sources of power.

I hadn’t realized that there was a power structure within the... that two of them were more powerful than the other two and I had to align myself.

There is power in curriculum time, because that leads to funding. There is power in institutions...so I have to be prepared [by understanding these kinds of power].

_Appreciate the complexity of resource and political issues as underpinning tensions in educational work._

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**Table 1**

**Medical Education Leaders’ Cognitive Perspectives, University of Toronto Faculty of Medicine, 2005–2006**

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<thead>
<tr>
<th>Leadership context (no. of leaders)</th>
<th>Cognitive framework</th>
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<tr>
<td>Human resource</td>
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<td>Major</td>
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<td>Continuing education/professional development (3)</td>
<td>Major</td>
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<tr>
<td>Research/development (2)</td>
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* This study examined how 16 medical education leaders perceived organizational work. The table illuminates the degree to which they attended to Bolman and Deal’s four cognitive frames: human resource, political, symbolic, and structural. Major attention was attributed to a frame if it was mentioned more than once and discussed in depth. Minor attention was attributed if this frame was only mentioned once and discussed superficially.

† The frame was never mentioned.
<table>
<thead>
<tr>
<th>Perceptual frame</th>
<th>Description of themes</th>
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| Human resource  | ● It is important to value, support, and care for faculty and students.  
                   ● Think carefully about the alignment of faculty interests with organizational needs in order to engage them. |
| Political       | ● Recognize, understand, and engage with stakeholders’ interests in order to be informed, advocate, and cultivate support.  
                   ● Identify and leverage diverse sources of power.  
                   ● Appreciate the complexity of resource and political issues as underpinning tensions in educational work. |
| Symbolic        | ● People need a vision or direction to engage with in order to commit.  
                   ● People will interpret meaning from your behavior, programs, policies, and rituals. Credibility is important.  
                   ● Appreciate that there are histories, traditions, and belief systems that can impede or enable change. |
| Structural      | ● Structures can be barriers or enablers.  
                   ● Clarity of roles and responsibilities helps performance. |
| Interpersonal and work style<sup>*</sup> | ● Assess interpersonal and work style to understand how to socially situate people in the organization so that they work in their areas of strength. |

* This study examined the perceptual frames through which 16 medical education leaders perceive their organizational work, using the perceptual frames in the typology of Bolman and Deal: human resource, political, symbolic, and structural. Within each perceptual frame, participants identified specific themes of importance in their leadership work.  
* Not described in Bolman and Deal’s typology.

Complex resource issues, including personnel, time, facilities, or funding, were appreciated as underpinning some of the tensions in educational work. Leaders also understood the necessity of attending to the political forces and agendas that constrain the work.

Not all of their money goes to support the residents; I have to be cognizant of the fact that they don’t appreciate some of the other things that happen in the division quite so much.

It is important to be aware that there will be external groups that have expectations and sometimes you just have to meet those. If you can align them [with your own agenda], good.

You have to know the system within which you are working, be that their departmental system or the hospital, and something of the constraints [that exist in the system].

The symbolic frame

**People need a vision or direction to engage with in order to commit.**

For people to engage, commit, and support, they have to know where they are heading.

If you don’t have a vision, decisions are much harder to make, justifications are much harder to come by, getting consensus in a group is much harder.

Our job is to be able to articulate ideas well, to be able to express a vision that allows people to see enough of themselves and their interest in it to be able to join in.

**People will interpret meaning from your behavior, programs, policies, and rituals. Credibility is important.**

Participants consciously tried to create programs, structures, and policies that articulated the values and beliefs of the organization. They also articulated and tried to embody them in their actions and attitude. Credibility derived from authentic practice as an educator was deemed essential.

Leaders illustrate their beliefs when they are chairing something. . . . [They illustrate] what is important and what is not . . . how they think about the people, how much they respect them or don’t respect them or welcome their input.

Student reports in this meeting tend to be left to the end when you are kind of running out of time. . . . Talk about power, or hidden messages: [doing this] conveys that we don’t really think you [the students] have anything useful to contribute.

I was walking the talk. I was excited about it and I was going to help everyone achieve it and be as excited about it as I was . . . like [helping everyone] come along.

I think that credibility is a fairly natural outgrowth of a track record . . . [of emphasizing] that I understand what you are going through because I have either been through it myself, or am currently going through it too; [this] is really important. You almost want immunity to the “You’re just in the administration, you don’t understand” [attitude].

**Appreciate that there are histories, traditions, and belief systems that can impede or enable change.**

Their leaders appreciated that the histories, traditions, and belief systems about how things are done and what works can significantly impede or enable change and that, therefore, these elements must be understood.

I think it is a question of believing that the status quo or steady state is fine . . . it is the way we have always done it.

They had a deep history of things that had not gone well and where they didn’t want to waste their time . . . so they looked at what I was proposing as looking quite similar to something [that had already failed] and they were not going to have any part in it.

The structural frame

**Structures can be barriers or enablers.**

In a big department like this, finding ways to make as many cross-connections between individuals and between the separate units is important . . . we found out that not everybody is linked.

So why isn’t this department moving? It could be the chairman. . . . Sometimes it is the committee structures. . . . Sometimes it’s the ground level.

**Clarity of roles and responsibilities helps performance.**

Some people need [for you to] write down on a piece of paper what the expectations are, [with] the output and evaluation at the end.

**An additional frame: Interpersonal and work style**

Although the Bolman and Deal human resource frame advises that leaders need
to support individuals and their alignment with the organization’s goals, it does not address the leader’s role in understanding how people relate to and work with each other in their work environment. Our participants frequently mentioned assessing the interpersonal and work style of individuals as a critical aspect of their (the participants’) work. They did this informally by consulting with colleagues and peers as well as by examining their own experiences with individuals, in groups and individually. They looked at the individual’s previous experience (if they knew about it) with attention to their interactions in their community and context. They used this information to decide how to socially situate them in the organization. They reflected on how the individuals worked with other people, their unique strengths and perspectives, and the significance of this information for how they functioned in groups. The participants felt challenged to balance the need for a diversity of individuals’ perspectives and styles with the group members’ ability to collaborate and get the job done.

There are certain people who have great ideas, great skills in an area, but I really feel they would [have] a negative impact in certain committees or on certain projects, just because of the way they deal with things, so I would prefer to use them in consultation [as a consultant to me or others who can guide their work or input].

I give the greatest thought to who are on committees . . . who are going to be able to work together, respect each other, but still have divergent views that are going to contribute to some new thinking.

You have to understand who to bring into the right positions to create the team . . . and the more complex the organization, the more you have to have the team structure to be able to function. So bringing the right people in, creating the right relationships [is crucial].

Discussion

Our data lend support to the possibility that Bolman and Deal’s typology may be useful to understand how leaders in our medical education context understand their work. The human resource, political, and symbolic frames predominated the thinking of these medical education leaders, with the structural lens used less. Of note is the inclusion of students in undergraduate and postgraduate education as contributing members as well as consumers of the organization. In addition to these frames, our participants also reflected on the interpersonal and work styles of individuals in order to make decisions about how to use and place them most effectively in the organization. We find it very interesting that this additional frame emerged. It highlights a need to pay attention to what may be an absence in the typology and an important leadership function.

Our findings support the utility of this framework and contrast with those from the study by Bland et al, which found consistent support for the human resource frame only. This can be explained by differing methodologies and contexts. The Bland et al study explored participants’ reactions to predetermined statements that reflected the frames, whereas this study sought participants’ conceptions in an open-ended way. Bland et al examined leadership for a specific project rather than the usual work of leaders. Our leaders’ frames align with the academic leaders’ values noted in Souba and Day’s study. Their leaders were preoccupied with financial, structural, cultural, and role issues. The leadership values of integrity, trust, and vision were rated as the most essential, and those values correlated strongly with respect, inspiration, meaning, and fulfillment. These notions resonate strongly with our findings of the symbolic aspect of leadership behaviors and the human resource importance of aligning the individual’s interests and passions.

Our study is limited in a number of ways. Because this is a study in a large Canadian institution, one cannot assume that the findings would be the same in different institutions and countries. Additionally, in this study we asked leaders to communicate their recollections of their leadership practices. Argyris has suggested that espoused theories may not align with the theories in use that are enacted in the moment. Further studies would benefit from direct observations of and discussions with medical education leaders during their daily activities. Additionally, it would be interesting to look at specific educational contexts in depth (undergraduate, postgraduate, continuing education, etc.) to determine whether there is any context-specific differential use of these frames.

Conclusions

This study helps demonstrate the utility of the Bolman and Deal typology to foster understanding of the work of medical education leaders and to expand the typology to include the perspective of assessing the interpersonal and work style of individuals. Similar to findings about leaders in the business and educational worlds, our study supports the value for medical education leaders to reflect on their organizational work from a variety of perspectives, including the frames described above. It behooves medical education leadership development programs to incorporate curricula that develop, or at least draw awareness to, the existence of the frames.

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References

Locked-in: Listening to Save a Life

My resident warns me, “Your new patient has been in the ICU for 18 days. Better read up on her.” Soon I learn that these 18 days have been a continuous sine wave of near death, pain, suffering, and physical debilitation. Takotsubos, sepsis, and near intraabdominal exsanguination, all on top of her baseline crippling rheumatoid arthritis and refractory achalasia, have put her in a severely malnourished state.

As an overwhelmed third-year student, what am I supposed to do? How can I possibly help someone with such a complex diagnosis? I quickly begin doubting my usual confidence in performing a simple H&P and wonder if I can do anything at all for this woman.

I enter a room roaring with noise—oxygen humidifier, air cushioned bed, suction tube, television, secretions, all blending into a constant gurgling, wheezing cacophony. Her joints appear grossly deformed and contracted, her toes necrotic and gangrenous, her lips cracked and caked with dried orange mucus. Her breath is pungent; it’s unforgettable.

I ask her a few questions, but her voice is incomprehensible. Her husband, sitting in the corner, quickly becomes my escape. For the next three days, he is my sole source of information. He is everyone’s oracle into this woman’s desires and life. The ICU team, my pulmonary team, the nurses, even the palliative care team have placed her husband in control of whatever is to happen next. Why not? She is delirious and incapable of thinking clearly or communicating with us. He is the one who has pushed for her to be saved over and over again, convinced that she would want to keep on fighting.

Something is wrong with this situation, though. Is it pure luck or simply a medical student’s luxury of excess time that drives my uneasiness with this situation? From the husband’s denial of his wife’s prognosis to the sister voicing her opinion that the patient would never want these extraordinary measures to continue, something is not right. I am compelled to question the prevailing diagnosis and subsequent treatments.

I ask her husband to leave his permanent post by her bedside, turn down the humidified oxygen, put my ear within inches of her mouth, and ask her my first question.

She speaks! With labored breathing over her tenacious secretions, she gasps, “Help me! Please help me!” Breath by breath, she struggles to give voice to words that have been trapped for far too long.

“Please help my husband. I love him . . . please help him to let me go.” Finally, with an ear to really listen, she desperately shares all that she has strength for.

What have we been doing this whole time? Among the deafening noises, there is a conscious human being begging for attention. I, we, have abandoned her from day one. She is locked-in. She has been locked in by all of us. Here is a dying woman, suffering in silence, against her will. This is a human in need of people committed to taking time, making time, to listen. She needs people ready and able to restore her life and dignity to its rightful owner. I am not going to abandon her again. Not this time.

How often do we create locked-in patients? Trach collars, ventilators, sedatives, anesthesia, head and neck surgeries . . . . How often is it not our patient’s inability to communicate, but our inability to listen, that causes his or her wishes and desires to go unheard?

According to her wishes, aggressive support is suspended, pain relief is provided, and she dies peacefully a few days later. For the first time in my life, I have saved a life. No drugs, no needles, no scalpel.

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