Teamwork: A Systems-Based Practice

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"Talent wins games, but teamwork wins championships."

Chapter 27

-Michael Jordan

We decided to present this chapter in the form of a narrative. We chose narrative as our medium for expression with the hope that we could bring the intrapersonal and interpersonal dynamics of teamwork more effectively to life. We also chose it because it is our belief that individuals and teams create and shape themselves from their stories (1). We wanted to illuminate the influence of individual and collective beliefs, personality preferences and values on team functioning and behavior. Our chapter is written from the perspective of a chief perfusionist as she travels between operating rooms that are encountering various issues related to teamwork. The issues may seem familiar. The lessons, we hope, will be instructive.

"Shelby, Dr. Ivan wants you to come to room 1 right away."

Simultaneously with this message from Emma Parker, the cardiac charge nurse at the university, Shelby's pager began beeping and carried a text message; "Room 1. Now."

"Darn" thought Shelby. She knew exactly what was going on. She could have predicted it and probably prevented it. As chief perfusionist at the university, she made the assignments. Dr. Ivan was a very respected cardiac surgeon, but he had been at the university for 26 years and he resisted change. Today, she had assigned Charlie to work with Dr. Ivan. She thought it would show confidence in Charlie to assign him to an experienced and respected surgeon. It was a relatively straightforward case-one easily within Charlie's abilities. Charlie was the newest perfusionist on her nine-person staff. He was impeccably trained and had 3 years of additional experience working with a private practice in a neighboring city. The private practice was a good group and they did a lot of things differently than the university. Dr. Ivan had trained two of their surgeons. Charlie brought the enthusiasm, idealism, and creativity of youth to the university practice. Dr. Ivan hated it.

As she entered the room, she could sense the tension. Dr. Ivan was ranting. "Charlie, you've got to empty out the heart better. Go up on the vent. Are you sure you put the one-way valve in properly? I can't see a thing. You need to get some help."

"Dr. Ivan, I'm here. What's the problem?" Shelby announced her presence.

"Shelby, Charlie needs help. I'm trying to replace this aortic valve and he can't keep the LV vent working."

Dr. Ivan went back to his work. Shelby walked over to an obviously distressed Charlie. She gave him a compassionate look—one that communicated that she was on his side and yet, simultaneously emphasized that she was not going to be condescending of Dr. Ivan—she was a resource for problem solving, not a reinforcement to fortify a position. In hushed tones she asked him about the case and what his perception of the situation was.

"It doesn't seem to matter what I say or do with Dr. Ivan," Charlie whispered. "His vent is probably in a poor position, but when I suggested that he reposition it, he growled at me and told me to increase the suction. Then he thought I might have placed the valve in backwards. I checked that first thing. It's fine. The case is actually pretty uncomplicated from a perfusion standpoint. I think it's difficult surgically and harder than he expected. Thanks for coming. Dr. Ivan just doesn't have any confidence in me."

"Dr. Ivan," said Shelby. "Everything looks pretty good back here. I think Charlie is doing everything he can. Could the vent be in a bad position? Perhaps you could adjust it to see if we can get better drainage."

"Thanks, Shelby. I'll try adjusting the vent. I need to be able to see better. This is really a small root and I'm struggling."

Despite the fact that all of Shelby's face, except her eyes, was covered by a surgical mask, Charlie had no difficulty interpreting the look that she flashed at him (2). It immediately relaxed him. She understood his frustration and the inequity with which he was being treated. His "chief" understood and supported him, even if Dr. Ivan didn't.

"This is much better," boomed Dr. Ivan. "We should be able to get this case done now." "The vent drainage looks much better here, sir." Charlie wanted to be sure to let Dr. Ivan know that he was still perfusing the case. "Thanks for adjusting it—it helped a lot." Although her mouth was covered, Charlie could see that Shelby was smiling and suppressing a laugh.

As Shelby left the room she knew that she would have to sit down with both Dr. Ivan and Charlie to talk about the case. As much as she dreaded those meetings, she knew that in this case, addressing these issues "head-on" and in person was the most effective way to help create change (3-6). She had to do it or it might never be possible for Charlie and Dr. Ivan to work together. The biggest problem with these meetings was trying to get a surgeon like Dr. Ivan to agree to meet with perfusionists. Dr. Ivan viewed medical organizations as being hierarchical, with the surgeons at the top. Shelby wasn't exactly certain where he placed perfusion on his organizational chart but she was fairly confident it was in the cheap seats. As long as he equated the value of an individual to their "title" or "role", he would be hard to work with. Shelby had just completed a year-long training in leadership development and performance improvement (7) and she was pretty sure that the most successful organizations were not hierarchical, but rather dynamic, with different members assuming leadership roles as the circumstances warranted. She hoped that she could slowly help change the university cardiothoracic service into that kind of organization (8-11).

As a part of her course work, she had read an article in the journal, *Surgery*. She recalled that the researchers discussed patient safety in operating rooms and they found that patient safety was threatened when there were "problems in communication and information flow" (12). She made a mental note to get a copy of the article for Dr. Ivan. It would provide a nonthreatening focal point for the dialogue with Dr. Ivan that centered around an issue that she knew was important to him—the safety of his patients.

She was thinking about this meeting as she directed herself through the adjoining "pump room" into operating room 2-the "peds room"-where Dr. Somers was operating on an infant. Of her nine perfusionists, five shared the pediatric caseload. Today, Gus Labonte was doing the case and was being assisted by Deb Ponders. Shelby always assigned two perfusionists to the pediatric cases, especially the neonates and infants. Shelby liked the days she didn't actually do cases because it gave her the opportunity to be available for problems, like the one she had just dealt with between Dr. Ivan and Charlie. It also provided her with time to walk around and observe the "system" in which they all worked. Shelby was fascinated by systems. Her recent course work had included information on systems theory, including the use of narrative in creating cultural meaning and collective norms. As teams improved understanding of how the different members related to shared team goals and values, their performance in times of duress improved. In particular, she was attracted to the principles of emotional and social intelligence as they contributed to team leadership (2,13,14). Just recently she had reviewed an article on the leadership characteristics of surgeons and she was gratified to learn that others in the medical community were drawing similar conclusions (15). All of these thoughts passed through her mind, as she enjoyed observing the team interactions in the pediatric room.

She was particularly attracted to the systemic and humanistic perspectives of Virginia Satir (10,11,16,17). Satir believed that system (or team) growth and esteem are heavily influenced by the adoption of a belief system that values the worth, integrity, and capabilities of three essential elements in each system: (a) one's self, (b) others, and(c) the system context, which is the entire environment within which the team (or individual) functions. System congruence refers to the ability of individuals within the system to match internal experience to external experience. A congruent system is comprised of individuals who have taken the time to develop self-awareness. This means they know and connect to their personal attributes and core values; and they have also developed awareness that their own personal experiences (stories or narratives) which create meaning and truth for themselves are unique to them and therefore do not necessarily provide the same meaning or truth for others. Individuals who have developed self-awareness have the ability to check in with themselves and act in ways that are consistent with who they are as people. They have learned to know and manage themselves (11,14,18). (She smiled as she recalled one of her teachers telling her that she wouldn't be able to manage others if she couldn't manage herself). Additionally these individuals are able to relate to and value their colleagues as separate and unique individuals. They seek to "explore" the experiences of others in order to understand the meaning and truth that those events have for them (19). In congruent systems, individuals are able to manage their relationships with others and create shared meanings. Finally, the individuals in congruent systems know that it is important to honor and value the needs of the larger system context and they understand that sometimes (but not always) these demands conflict with the needs of the individuals within the system. Individuals within congruent systems are free to disagree because there is respect for individual differences. Blame for behavior ceases to be the focus. Rather, the system works as a whole through a connected, interactive process to understand how to effectively address problems and find viable solutions. By having permission to express conflict without blame, and differences of opinion without criticism, contempt or condescension, members of congruent systems avoid the pitfalls of "false harmony" (5,9,16). Shelby found this way of thinking very useful in her job. She would have



Promotes high self and system esteem

FIGURE 1. In congruent systems, there is awareness of self, other, and context. What this means is that although each individual element may take on different priority in various circumstances, the importance of each is acknowledged and equally valued. We show each element in a pie chart with equal "value" portions, to indicate that they each have importance and, over time, each needs to be "counted" (10). Systems that understand this dynamic promote high self (and system) esteem. On congruent teams, we can respond from a position of caring for ourselves, for other people, and with an awareness of the present context (situation). Congruence does not mean that decisions are easy or that we will always be happy and without problems; nor does it imply that we are always agreeable to every decision. It does mean that we have freedom to express our feelings honestly and without blame or criticism; and that we are open to hearing the feelings and needs of others, without a requirement to grant those wishes. And it means that the present context is acknowledged and understood without denying its impact on the people in the system. Congruence is very difficult. Not all systems (teams) are congruent all the time and the incongruent stress responses (described in Fig. 2-6) will be manifest at some times with all teams, even those that function well. Developing awareness of this triad is a helpful first step. Words that describe congruence include awareness, acknowledgment, ownership, management, enjoyment, centeredness, harmony, and spirituality. People in congruent systems feel alive, creative, unique, competent, healthy and they have high self-esteem (10).

to give further thought to how she could coach Charlie and Dr. Ivan to shift from a dynamic of "blame" to one of "solution" through a process of respect and value for self, other, and context. System congruence paired with system esteem, means communication expressed honestly with respect for self, other, and context (Fig. 1) (5,10,11,20).

As Shelby observed the interactions between the members of the pediatric team, she was impressed with how well they communicated. The surgeons, anesthesiologist, nurses, and the perfusion team seemed to truly enjoy working with one another. They often met outside the operating room as a group and they made an effort to get to know one another as people. They talked and they joked in a friendly manner. None of the comments were sarcastic, demeaning, or cynical. The team members seemed to be genuinely fond and respectful of one another. Despite the relaxed atmosphere, Shelby knew that they were

all involved in a very complex case, and they remained focused on the context of the situation. She rarely had problems with the pediatric team. If only she could get them the support they needed from the hospital. There were equipment items that would make their job easier. but her budget continued to be cut. In fact, the hospital administration questioned the need for two perfusionists on each of these cases. This was a cost that was becoming increasingly difficult for Shelby to justify in her quarterly. often heated, conversations with the hospital administrators. It struck her as ironic that one of the reasons the university had such a successful pediatric program was because of the support provided to the team. And as the support was removed or made unavailable, this wonderful system might begin to falter. This was a perfect example of her interest in systems. She wondered why there seemed to be little priority to improve things that worked. It might be because those systems seemed to be less needy than the ones that didn't work, so they were often ignored, or had resources shifted away from them when they really needed the same constant attention to growth that all systems require. Her husband, who had an MBA, told her often how investment in the future was a critical part of successful organizations (21-23). Focus on immediate cost containment is important, but it can be detrimental when it leads to decisions that will have drastic long-term outcomes (24). In business school, he participated in a very robust simulation of a competitive marketplace and the winning teams all understood these concepts. Ironically, by focusing on short-term budget constraints, he failed to invest in his personnel so they could be successful in the long run, and ultimately his team performed poorly. It was one of his most important lessons and one he promised himself he wouldn't have to relearn. He and Shelby often talked about how medical centers failed to understand the value of their personnel and what they could accomplish if they were given appropriate support. Instead of trying to simply survive in the system, they could be creatively contributing to its growth and outcomes. He found it ironic that on her budget statements, her personnel, who acquired more experience and knowledge with each case, were considered to be an "expense" whereas her equipment, such as the pumps which would become obsolete within a few years, were considered an "asset" (25).

There were no interpersonal problems here in the pediatric room. Shelby knew that even when this team was stressed, its members still treated each other with respect while they worked together to solve the problem (26). Rather than worry about failing, this group just did "the best they could" and when they failed, they rarely assigned blame. They learned and moved on. In times of stress, this group organized itself to deal with the context, but did not obliterate the value of teammates feelings (27–30). They moved fluidly among valuing self, other, and context so that each of these aspects of the system received attention and support, as it was needed. This was a congruent system.

As Shelby left the pediatric room, she reflected on some of the other principles she had learned from reading about teams and systems. In successful "high tech" organirations (11), leadership is interactive and dynamic, rather than hierarchical. Leadership will generally prepare the individual/team through providing guidelines, information. and simple rules but will then relinquish control and trust the team to create the outcome. This was called the "seed" model by some of the authorities she had studied, since it was similar to a farmer providing the proper environment in terms of soil, water conditions, and planting date, but once the seed was in the ground, he had to "let go" and let it grow. Shelby thought it unfortunate that the hospital administrators had not instituted a dialogue with her group so that the perfusionists, physicians (cardiologists, anesthesiologists, and surgeons), nurses, and hospital administrators could collectively craft viable solutions to the financial problems experienced by the organization. She knew that an interactive process between all groups would acknowledge that they all had similar goals and she also recognized that, while a system may be greater than the sum of its parts, it couldn't be separated or understood independent from them. Individuals comprise and create system dynamics (congruence or incongruence) at three system levels: (a) macro or institutional/national level, (b) mezzo or program level, and (c) micro or individual/dyad level (21,31-33). System congruence (from a perspective of valuing self, other and context) is the ability of the system to match goals and intentions (internal values and beliefs) with system behavior and output (external operations). Just as a pebble thrown into a pond is able to produce reverberations throughout the pond, change at any level of a system can produce ripples throughout the system (4,10,11). Shelby wondered if the executive administrators realized the impact and reverberations they would create throughout the system if they withdrew support from this highly effective pediatric cardiac team, and she was reminded of a recent German study of surgical teams showing detrimental effects throughout the hospital system when these teams are out of balance (34). The qualities of emotional and social intelligence in the pediatric cardiac room were consistent with what she remembered from her reading about another team referenced in Daniel Goleman's book, Working with Emotional Intelligence (13). He described a study which found that interpersonal skills and compatibility of group members was critical to successful group performance. The social effectiveness of the group mattered most. Effective teams know how to connect and interact with one another and this is as much a priority as skill and talent (35). Shelby thought, "this team certainly seems to have developed the emotional and social intelligence it takes to be successful

and their working relationship is sending positive effects throughout the entire system."

Shelby walked across the hall into room 3. The cardiac program at the university had four rooms. Rooms 3 and 4 were occasionally used for nonpump cases such as lung surgery, but today all four rooms were being used for heart cases and her team was busy. Room 3 was occupied by Dr. Blazer, who was trying to perform a coronary artery bypass graft (CABG) off-pump. Although he was excellent and usually successful, Shelby's team still needed to be available and ready in case he needed to "convert" the procedure to one using bypass. Dr. Blazer had a national reputation for off-pump cardiac surgery and was often asked to speak at national meetings on the topic. He had a reputation at the university for blaming and complaining. No one enjoyed working with him. When things went well, it was always because of his great ability. When they went wrong, it was because of the referring physician, the resident, the anesthesiologist, the perfusionist, or the patient. Sometimes all were at fault. Behind his back, the residents said Dr. Blazer's motto was: "Consolidate the glory, diffuse the blame."

Things were not going well in room 3. At least, not if Dr. Blazer's demeanor was the barometer. He had Ed Pfeiffer, the oldest and most experienced perfusionist, on the defensive and he was not letting up.

"Dammit, Ed. I need you guys to be set up and ready to help me here. Why the Hell isn't the pump primed? This guy dies and it's your damn fault!"

"I'm sorry, sir. I'm working as fast as I can. The posting said, 'pump standby' and I didn't know you wanted the pump primed." Ed lowered his voice to a soft mumble. "Last time I was primed and ready and you yelled at me because I was wasting resources and you wondered why I did that and didn't I know how you usually didn't need bypass." Ed was working feverishly to prime the pump, de-air it and keep the system functional. He obviously needed help and hadn't had time to call for it.

Shelby ran over to help her colleague. She smiled at Ed and said: "Need help?"

She remembered the last time Dr. Blazer fussed at Ed when he had primed the pump. Dr. Blazer's ego was wounded. Why did they prime the pump? It was a standby case. Didn't they realize that he rarely needed to convert to bypass? But this patient wasn't doing so well. It was apparent from the tension in the room and the low frequency, bradycardic sound of the pulse oximeter that Dr. Blazer might need to use the pump for this patient. Unfortunately, Dr. Blazer was a poor communicator. He could have warned Ed about his concerns for this patient and indicated sooner the need to prime the pump (28,36–38). Or if this was a sudden turn of events, he needed to support Ed while he tried to get him some help. Dr. Blazer was prone to panic when things went poorly and he incapacitated his team with his fear. His team, on the other hand, didn't know how to help him because he was resistant to their help and to admitting vulnerability by needing it.

The airline industry used to have this problem when all responsibility was placed on the pilot. As the industry experienced difficulties in the 1980s from both crashes and "near misses," they began to lose the public trust. This made for poor relationships and poor business. In response, the Federal Aviation Association (FAA) became interested in Six Sigma-the concept that they could reduce errors to as low as 3/1,000,000 opportunities (39-41). In order to achieve this, they created the concept of Cockpit Resource Management (CRM) (42) whereby all members of the crew were not only empowered and permitted to speak up, but doing so became a requirement. This created a culture quite different than the hierarchical structure found in many cardiac operating rooms. Instead of the pilot being completely dominant, with other members inhibited to speak up, communication techniques were emphasized and valued. At any given time, the person with the most information became the most important member of the team and it was their responsibility to share this information. When lives are at stake, it is critical to communicate information that includes all members of the team, especially when unexpected events occur (43). Shelby couldn't help but wonder how these organizations had created change that led to improved outcomes whereas such change was so slow to come into medical organizations. And it was only a few years ago that the Institute of Medicine (IOM) had published their investigation of American medicine and found a high number of medical errors, connected to perhaps as many as 98,000 deaths each year (44), (or more-maybe 225,000 deaths/year if errors of omission were counted with errors of commission (45)). They indicated that this had led to erosion of public trust in the medical profession and it was soon thereafter that the American Council for Graduate Medical Education (ACGME) had developed its Outcomes Project designed to help reduce these errors by creating curricula that emphasized interpersonal communication (among other elements) to enhance professionalism and improve practice through systems-based practice.

Recently, the university had adopted a strategy to bring Six Sigma to the health care sector. Shelby and her team had received some training about what this would require. Sigma was the mathematical symbol for standard deviation and Six Sigma referred to six standard deviations from the "norm" found on a bell-shaped distribution curve. As the curve extended out further, it approached baseline and at six standard deviations from the mean, there was very little deviation from the baseline. In organizational dynamics, Six Sigma referred to the number of errors that would be found per million opportunities [defects per million (DPM)] and predicted the long-term capability of the system with respect to how many of the population

TABLE 1	The Sigma Levels for Measurable
	Improvement

mprovement		
Sigma Level	Defects (Errors) Per Million (DPM)	Long-Term Capability
2	308,537	69.2% (uncompetitive)
3	66,807	93.3%
4	6,210	99.45%
5	233	99.98%
6	3.4	99.9997% (World class)

would be "protected" from error. The more errors, the lower the long-term capability and the less competitive the program. More than a mathematical expression of quality, Six Sigma was becoming a belief system that committed organizations to a strategy for measurable improvement. Shelby remembered the tremendous improvement with respect to DPM that occurred as organizations approached Four Sigma and better (Table 1). Compared to Six Sigma, medicine was operating at the 2 to 3 sigma level. Medicine, and especially cardiac operating rooms, were not even close to performing at the Six Sigma level. Yet.

Dr. Blazer saw Shelby and said, "About time we got some help in here. Hurry. I don't know if I can keep this patient alive much longer." Shelby knew it was not the time to get into a debate with Dr. Blazer. She wanted to tell him that it was his anesthesiology colleague who was helping to keep the patient alive for him and that soon it would be she and Ed, but she bit her tongue. In this context the most important person was the patient. She knew that Ed needed to get the pump primed and the lines up to the table as fast as possible. Later, she would once again have to talk with Dr. Garcia, the chief of the division of cardiac surgery (and her medical director), about Dr. Blazer. Dr. Blazer, despite his national reputation and his skill, was so destructive to team dynamics that it was likely that Dr. Garcia would need to intervene. Now was not the time for that. With Shelby's help, Ed got the pump primed quickly. During this time, the anesthesiologist stabilized the patient and Dr. Blazer proceeded with his off-pump surgery.

With the situation now under control, and his stress relieved, Dr. Blazer adopted a change in attitude. "Well," he chortled, "looks like it was a false alarm. I've got things pretty stable up here and I think we can do this without having to pay for perfusionists. It won't be long until you guys will need to find another line of work. People like me are gonna put you out of business."

Shelby could think of a lot of things she wanted to say to Dr. Blazer, but this was not the time or place. The context of patient care took precedence and although she would need to let him know how it felt to be so publicly devalued after working so hard to help him, there was no reason to inflame him and take his focus away from what he was doing. This, too, would need to be dealt with later, and Shelby felt up to it.

Shelby was reminded of a principle from systems thinking that encourages the use of leverage to create system change (32). She was also aware that individuals have different motivational value systems. Approaching Dr. Blazer about respecting other team members was probably not the right lever and may not appeal to his particular motivational value system. Maybe he would respond to the effect his behavior had on patient care and outcomes and the impact this would have on his reputation.

Perhaps some day Dr. Blazer would be open to learning about his impact on the system and then he would be available for change. People change when they are ready. She looked forward to that day and recalled the words of one of her mentors: "When the pupil is ready, the teacher will come." Until then, his resistance would only exacerbate the problem. Shelby knew that very few of the cardiac team members had been taught effective tools for dealing with stress (26) and that under stress most individuals resort to a different and less congruent motivational value system. Their goal frequently becomes personal survival and they are unable to check in with themselves while considering the needs of others or the context. From this chaotic place it is difficult for them to consider the needs of other team members. She knew that she would have to find a way to connect with Dr. Blazer as he presented in the present moment. Eventually, she hoped he could be influenced to consider his disruptive behavior and develop more effective strategies for managing his stress. She was aware that the detrimental effects of stress were being studied through a variety of venues and modalities and she was intrigued by the possibility of introducing the work of Jon Kabat-Zinn (46), and Heartmath (47), to the cardiac teams. She also thought it might be helpful for the team members to do their own individual StressMaps (48). Until then, the system would have to find a way to accommodate Dr. Blazer's strengths and minimize his limitations.

Shelby was considering all this when she got a text page from a colleague from her leadership training course. He was e-mailing her a copy of a recent study on cardiac teams that had been published in the Harvard Business Review (49). "Interesting", Shelby thought, "teamwork is getting the attention of business." She decided it was time for a break. Maybe reading this article would give her new insight or reinforce some of the things she'd already been learning.

The article confirmed that interdependence and effective communication contribute highly to cardiac team success. Sixteen cardiac teams were studied as they struggled to learn a new technology. The authors found that the most successful team was one with an engaged surgeon leader who selected team members for team cohesiveness and included all team members in the process of learning. This leader, while less experienced surgically than

a comparable team leader, worked hard to include all team members and he was an active participant in team processes. This contrasted with a less cohesive cardiac team in which the more technically experienced surgeon leader chose members according to seniority and showed little involvement in team dynamics and learning. The authors identified three essential qualities of effective cardiac teams: (a) the teams were designed for learning and learning was valued, (b) team leaders were able to frame challenges in ways that motivated team members, and (c) the team leaders created an atmosphere of psychological safety. Finally the authors made three suggestions for cardiac surgeon leaders: "be accessible, ask for input, and serve as a fallibility model" (admit your mistakes). Shelby and her husband had spent time learning from John Gottman about what helped improve relationships between couples and he referred to this same principle. He called it "accepting influence" from each other (30,50,51). Gottman had described the four major factors that destroyed relationships, and he termed these the "four horsemen of the Apocalypse." They included criticism, contempt, defensiveness, and stonewalling (which is, in effect, being resistant to someone else's opinions or influence). Contempt was especially prevalent in the ineffective teams and had its roots in the inability of the team leader to appreciate and value the unique talents of each team member.

Shelby liked the article and it reminded her of her thoughts from earlier in the day about the pediatric cardiac team. Team effectiveness and interdependence are frequently related to emotional and social intelligence, which can create an environment where it is safe to express oneself, to learn new things, and to be creative. Team interdependence requires that individuals know themselves, including their unique attributes, core values, and personal motivators. It means that individuals must develop the courage to behave in ways that are consistent with their own unique attributes, values, and drivers. Concurrently they must take an interest in their colleagues through honoring their colleague's personal values, attributes, and motivators. They must work to understand their team members by developing the capacity for shared meanings, shared responsibility, shared values, and shared goals at the interdisciplinary team level.

As she walked over to room 4, Shelby was glad she had taken a short break. Her job could be stressful and taking time for herself to reflect helped her stay focused. She was glad she had a great staff and that she was able to teach them some leadership styles that would serve them well in their futures (14,19,22). One of these attributes was the permission to take time for reflection and she was already feeling more relaxed and centered around her responsibilities and her ability to interact congruently with her colleagues. Room 4 contrasted with room 3. Dr. Stephen Whyte, the youngest and newest cardiac surgeon on the faculty, was finishing up a case. Things had gone pretty well and the patient was off bypass. Shelby's perfusion colleague was cleaning up the pump and Shelby was surprised to see that the pump circuit's lines had already been passed off the table, although chest closure was not complete. The perfusionist, Sandy Collins, was also young and relatively new and probably didn't know better. Dr. Whyte was joking with the staff, talking about a movie he had recently taken his kids to see, when the patient's blood pressure took a nosedive and the heart fibrillated. Why, thought Shelby, is every room such an adventure today?

Whereas moments before the mood in the room had been light, there was now tension as Dr. Whyte was cranking open the chest and the nurses were frantically untangling the defibrillator paddles and cables from the electrocautery cords and cell-saver suction tubing. Dr. Whyte was performing open chest massage, taking care not to disrupt any of his carefully placed coronary grafts.

"Charge to 50!"

"Clear!" The patient's body jolted a bit on the table. The electrocardiogram (ECG) tracing returned to a few conducted beats and quickly deteriorated back into ventricular fibrillation.

"Give Lidocaine."

"Already have."

"I'm sorry. I should have known that you would have done that." Dr. Whyte was apologizing to his anesthesiologist—a feature that probably related to his days as a resident at the university working with the same anesthesiologist who had been a professor for years.

"Sandy, what's the story on the pump? I see the lines are off the table. I must have told you to take them. How long until you can give me something?"

"Charge to 50, again. Clear."

This time the rhythm returned. Slowly. The experienced anesthesiologist began to pace the heart with the epicardial wires that Dr. Whyte had placed and the patient's blood pressure returned to normal.

"Give some epi,"

"Already have, Steve," responded the anesthesiologist.

"There I go again, telling you your job. Sorry." Steve Whyte was clearly deferential toward the anesthesiologist.

Steve looked at Sandy. "Sandy, it's not your fault that the pump lines were off the table. We couldn't have predicted this." He knew that he had not told Sandy to take the lines and when he noticed her doing it out of the periphery of his awareness, he hadn't said anything to stop her. He was missing an opportunity to create a great leaning experience because he was too concerned with making Sandy feel upset. The patient was once again stable and the crisis was over. But it was almost a disaster and Shelby felt that this was an appropriate moment to intervene.

"Hello, Steve. It's Shelby (Shelby had worked with Steve during his residency training and a first name relationship was natural). I was just walking through and saw what happened. Thank goodness you got the patient resuscitated so quickly. Strong work. You know, we have a policy that the pump lines shouldn't be removed from the sterile field until the patient is ready to be undraped. In the future, if you ask us to, we should say no, and if you see us doing it you should feel free to stop us. Same goes for everyone in the room. Dr. Jones, she addressed the senior anesthesiologist, or Sydney (she looked at the scrub nurse) or John (she looked at the circulating nurse). any of you should also feel free to stop this if you ever encounter it in the future. We may not be able to prevent these sudden decompensations, but we can sure help each other do a good job."

"Should I put up new lines to the table?" asked Sandy. She was addressing the question to Shelby, but was hoping to get direction from anyone in the room.

Shelby looked at Stephen Whyte. "What would you like from us?"

Stephen Whyte had learned a lesson this morning and yet he still had trouble asserting himself. "Oh, I don't know. Hate to waste the money and make Sandy go to all the trouble. Seems things are OK now and"

"Put up the lines" interjected Brian Jones, the anesthesiologist. He appeared mildly annoyed by Steve's indecisiveness. "We might have made one mistake, but we don't need to compound it by making the same mistake again."

"You are right, Brian," Steve again deferred to his senior anesthesiology colleague. "Sandy, give us some new lines as soon as you can. Brian, I appreciate your helping take such good care of me. I'm still kind of new at this and need all the help I can get." Steve then looked at the staff in the room and said, to everyone, but no one in particular. "Sorry, gang. I'm still learning this business and I'm glad we didn't need the pump again or I would really have screwed us."

Shelby was helping Sandy splice some new, sterile lines into the circuit. She felt badly for this team. She got a sense of a lack of self-confidence from the people in the room. It was different than the blaming in Dr. Blazer's room, but it felt just as "icky." Everyone, except Brian Jones, was afraid of making one another feel bad (5). Heck! This patient might have had a totally avoidable poor outcome. They should feel bad. Not about themselves as people, but about making poor decisions and failing to adhere to an established protocol. Thank goodness they hadn't needed to go back on bypass. Putting up new lines for a patient who had just fibrillated and who might do it again seemed to be the right thing to do. What felt bad was the lack of team congruence in the room. Dr. Jones was in touch with the context (good patient care) and appropriately insistent on having new lines. Steve Whyte didn't seem to know what to do except what everyone else wanted. He probably understood the context but was more concerned about pleasing everyone in the room to keep them happy. Sandy was just feeling awful about her mistake and it didn't make her feel better that Dr. Whyte hadn't acknowledged it as such. The nurses knew that they had known better but had just wanted to comply with someone in authority. This room, thought Shelby, is in chaos. This isn't a team. It is a mix of scared individuals. She made a mental note to send them the research on cohesion and confusion in the operating room (52). It would provide a starting point to discuss their roles, communication, and what was required for genuine team dynamics.

Again the work of Virginia Satir crossed her mind and she pondered the connection between team cohesion and team congruence. Room 4 represented a different challenge than room 3. Just as Satir believed that cultures of blame create system incongruence and low system esteem, placating cultures also create low system esteem and also compromise patient care (by eliminating the value of self from contributing to choice making). Room 4 was as incongruent as room 3. It was as if the members of the team were too timid or concerned that speaking up about what they perceived as incorrect decisions might upset someone, and that keeping people happy was a higher priority than sharing their own opinions and feelings-what was "real" for them. It is such a difficult halance. Shelby thought, to be able to say out loud what one thinks or feels, and to do so without criticizing, blaming, insulting, or placating. The "secret" is the ability to have compassion for oneself and to truly care about and develop empathy for fellow team members. When team members have that level of trust and safety with one another, they are able to deal with the problem in a way that also values the people in the system. She recalled her metaphor of a pebble thrown into a pond. It was very empowering to imagine that anyone, regardless of their "title" or "role" can create "ripples" throughout the pond that is their system. It is possible to take the lead from any position (53). In this case, Dr. Jones was able to take a leadership role, although this occurred long after the potentially life-threatening error was recognized. The team had forgotten that patient care was the goal and were behaving as if being likeable was the goal. Because of complacency or fear of offending others, no one was willing to take responsibility for the patient. Satir would say that this team was unable to honor context-patient care-and by doing so, they made it seem irrelevant. In addition, many members of this team had learned to placate others and devalued themselves in the process.

As Shelby once again entered a small room between rooms 3 and 4 that served as part pump room, part "dugout" for all the perfusion staff and, with her corner desk, part "chief perfusionist" office, she reflected on the morning. She needed to talk with Dr. Ivan and Charlie. She needed to talk with Dr. Blazer, but probably it wouldn't do any good and she would need to discuss him further with Dr. Garcia. It was unlikely that Dr. Blazer would change and they would all have to figure out a way to work with him. Mostly, she wanted to work with her team so that they would have a way to better understand these challenges that occurred daily in their work. She recognized her role as a leader. Rather than thinking she could fix everything, it was her hope that she could help create insight in individuals as they developed greater compassion for themselves, and greater appreciation, understanding and empathy for others. This would help them tap into their own wisdom as to how they might fix the problem. Perceived within the framework of systems theory and with some appropriate coaching and support, these experiences would constitute an endless array of learning opportunities. If they were not viewed in this way, she knew the team would ultimately deteriorate and she would need to constantly recruit replacements, who would eventually end up on the same path-out of the university.

In the university setting, she thought, we have such an enormous opportunity to be role models. We can demonstrate the ways teams can function and this will eventually lead to change in this field (24). We can teach people that they might not have all the answers, but that with each other's support, they can enjoy the process of learning. They don't have to be perfect (6,9,13,22).

All health care teams and organizations have difficulties communicating from time to time and frequently these difficulties are approached in a linear "cause and effect" process. These teams and/or organizations run into difficulty when they try to solve nonlinear/complex problems with linear solutions. For simple problems, like keeping the lines on the table until the chest is closed, a linear cause-and-effect approach (with defined protocols) works well. On the other hand, if there are system dynamics such as placating where no one accepts the responsibility of leadership then the problem will reoccur disguised in a different context. In other words, if the team in room 4 doesn't learn a more effective way to communicate they might solve the "lines on the table" problem only to have it replaced with another problem. One could say the same for the hospital administrators that want to cut costs. They may cut the costs of a team that is functioning effectively and cause it to be less effective/efficient, thereby costing the hospital more in the form of patient morbidity and mortality and ultimately a reputation for poor quality care (21). The issue of quality is as important as the issues of cost and access and how it is addressed will help redefine American Health Care (23,54).

In cardiac operating rooms, Shelby reflected, we can easily get overwhelmed by context. What we do together, as teams of individuals who possess different skills and perspectives, can be overwhelming. Each day, as we prepare for "battle," we don the accouterments of our profession—the mask, the headgear, the costume, the lances—and prepare to battle the great foe of heart disease. It is a noble effort and we win most of the battles. Our technology has armed us with enormous capabilities and our knowledge, which is passed along to generations who follow, continues to grow. What we have yet to master is our strength in numbers—our power as a team (55). There is a Japanese saying that "none of us are as good as all of us." Successful teams have learned that. Whether it is in sports, business or families, the ability to trust and depend on the abilities of others is critical to having the best outcomes.

In organizations there are two kinds of systems; mechanical and complex adaptive. The equipment we use exemplifies a mechanical system, for example, cardiopulmonary bypass pumps, anesthesia machines, surgical instruments, and elevators that we use to transport patients. If we push the button on the elevator to take us to the fourth floor and it takes us to the fifth floor, we get an elevator repair person to identify and fix the problem. The nature of our interactions with mechanical systems is to "interrogate, judge, and fix." Complex adaptive systems are different. They are all around us and they can be difficult to comprehend because they are influenced by variations in individual biology, perspectives, beliefs, and values. They include the disease systems we encounter, which are unique to every patient. They include the members of our teams and those personal attributes that make each member unique as well as the financial challenges that we face within our organizations. Unlike mechanical systems, these systems cannot be approached with an "interrogate, judge, and fix" model of problem solving, because that model excludes key information needed to address these very complex problems. In these circumstances, it is more appropriate to use an approach of "explore, understand, connect." We can do this by asking questions to mine for information that helps us understand the uniqueness of each situation or challenge. Rather than constantly telling and coercing people to adopt our view, or assuming we always know the correct thing to do, we can utilize this approach to create a culture of appreciation and genuine teamwork. When they utilize the communication tool of "explore, understand, and join", (as opposed to "interrogate, judge, coerce and tell") a process for creating interdisciplinary interdependence that appreciates similarities and respects differences can be developed (19,56). Shelby truly believed that if this process were supported, surgery, anesthesiology, cardiology, intensive care, perfusion, and nursing would create effective, functioning teams and high-quality patient care where all individuals would be valued.

Shelby imagined that this would be a system that supported creativity from within as a way to harness the strength inherent to diversity and a system in which the definition of leadership would include a concept of "followership" (19,22,53,56,57). Experts on relationships have noticed that successful teams always exhibit a unique characteristic: the presence of far more positive interactions and statements than negative ones. John Gottman, a noted psychologist and researcher in Seattle became famous for his uncanny ability to predict which couples would divorce and which ones would stay married. Among many things, successful couples had a ratio of positive to negative experiences of at least 5:1 (30,50,51). In researching teams, Losada and Heaphy (58) analyzed three aspects of teams conversations: (a) positivity versus negativity (P:N), (b) inquiry (exploration for solutions to problems) versus advocacy (fix problems through coercion), (c) (I:A) and, (d) other versus self comments (O:S). The results were provocative:

- High performing teams had an average P:N ratio of 5.8 to 1 (strikingly similar to what Gottman discovered in couples relationships!) and were balanced (1:1) in I:A and O:S.
- Medium performing teams were only slightly more positive than negative (P:N = 1.8–1) and slightly weighted toward both advocacy (2:3) and self oriented conversation (2:3). This might be interpreted as a precursor for blaming.
- Low performing teams were highly negative (P:N = 1-20), more advocacy oriented (I:A = 1-3), and very self oriented in their interactions (O:S = 1-30).

Furthermore, Shelby recalled that these researchers found that the positive:negative (P:N) ratio was the key driver in influencing the other two ratios. To maintain a healthy 1:1 balance between internal focus and team deliberation/external environmental scanning, and a healthy 1:1 balance of between questioning each other to achieve understanding versus asserting one's own opinions and positions, team members needed to create a culture that emphasized positivity over negativity (22).

Shelby reflected on the concepts of Dan Wile (59) in his work with couple relationships. He, like Gottman, had discovered that people tend to create one of three states in relationships. In effective relationships individuals *turn toward* one another, thereby creating a friendship relationship which is based on congruently honoring the needs of one's self, others, and the context. Ineffective relationships are characterized by individuals *turning away* from one another, which creates a "stranger" relationship, or from turning against one another, which creates an enemy relationship. Shelby thought she had observed all these communication patterns among the cardiac teams today.

Shelby was frustrated as she reflected on what she knew about medical education and training. "It has not served us well," she thought. "We have developed in a culture that emphasizes perfection (9). If we aren't supposed to struggle or fail as we try to master the new skills and ideas that create change and progress, then how can we learn?" There have not previously been courses in medical school or residency training that have emphasized team function. We train separately in our own silos and in many institutions. we work separately in our own divisions, with our own profit/loss statements, our own morbidity and mortality conferences, and our own subspecialty clinics. We choose mentors in our own disciplines, attend conferences that only invite speakers from that discipline and align ourelves according to our chosen specialties. In some cases, we compete with our colleagues over the care of patients. Our residents rotate within their own specialties and medical students are assigned to a variety of clerkships that focus on the patient from a single subspecialty perspective. "Every system is perfectly designed to give the results that are observed" and so it is apparent that our cardiac systems have not been designed to foster teamwork. If we add in the enormous magnitude of what we engage in every day-the incomprehensible responsibility for the life of another human-a life that might end despite our best efforts, it is not surprising that we have insulated ourselves from each other. It takes courage to be vulnerable with team members-to share our apprehension that even as we strive to do our best, the outcome may not be favorable. And that even more daunting, something we do (or don't do) might influence a bad outcome (9). It requires trust and true selfesteem to willingly link ourselves to the actions of a team. This ability to bond with a team is found at the highest level of leadership and success (60-62). Great leaders create an environment that fosters this interdependence and provides support for team members when they struggle (14).

Shelby knew all of this and yet she, too, found these daily trials to be challenging. The challenge came from the variable stress response patterns that her team members exhibited. It was important to Shelby to learn about this as she attempted to help create an environment that could elevate the entire team and provide a quality experience at numerous levels. One of the important tips that Shelby had learned about teams was the importance of having compassion-not only for others in her system, but also for herself as she continued to learn. Compassion, she thought, was probably the keystone for dealing with the kinds of problems she witnessed this morning. Compassion for learners and compassion for herself as she tried to think of ways to teach what she had spent time learning (55). Compassion leads to appreciation and appreciation is the first step toward exploring and understanding the perspectives of others (57).

When the dynamic and fluid acknowledgment (which she liked to think of as congruence) between self, other, and context becomes disrupted (or incongruent), then the system or the team is in jeopardy. *Ignoring* the needs of the self, in an effort to respond to context and to constantly please others, leads to *placating* (Fig. 2) (10,17). That is what she saw from Steven Whyte. Placaters can't feel good



Placating carries the seed of genuine caring

FIGURE 2. When the needs of the self are habitually ignored or not acknowledged, the system experiences placating. Placaters are those who consistently and predictably disregard their own feelings of worth, hand their power to someone else, and say yes to everything. They are represented in this diagram as honoring the other person and the context of their interaction while blocking out (not honoring) their own true feelings. As they ignore their own needs, feelings or thoughts, they begin to get angry and feel depressed. Placaters are nice to others, even when they don't feel nice. They lie to please others. They rush to rectify any kind of trouble. They are uncomfortable when there is conflict or problems. At an extreme, they will take the blame for things that go wrong, even if they have to go to exaggerated lengths to find evidence for their errors. Placaters handle stress by telling themselves, "The way to keep myself alive and keep peace is to say yes no matter what I feel or know to be right" (10). Eventually they may explode with anger. Placaters often feel that they are overwhelmed by always taking care of others and of the needs of the context and they wonder when will there ever be space for them and for their needs (which is why self is blocked out in this diagram). A typical "placater" response on a cardiac surgical team is the individual who is always afraid to go out of town and have a vacation because others in the system want them around, or because there is always a problem they can't leave. By not sharing what is real for them, placaters create "stranger" relationships. When balanced against other system needs, placating does carry the seed of genuine caring.

about themselves-they spend too much time making their feelings and needs unimportant-the team doesn't benefit from the unique skills and talent these individuals possess. Placaters are too caught up in trying to keep everyone happy and avoid conflict. It is a sign of low self-esteem and Shelby made a note to spend some time talking with Steve so that he could become more aware of how this response to stress reduced his potential value to the team. Interestingly, all of the patterns of incongruent coping carry a seed that can be valuable when tapped into appropriately. Placaters understand how to genuinely care about others. She made a mental note to refer Steve to an article on nontechnical skills for surgeons (63). It provided information on the importance of personal growth as an adjunct to surgical leadership and she hoped that it might help Steve understand the detrimental effects of his placating style.



Blaming carries the seed of healthy self assertion

FIGURE 3. When the needs of others are constantly ignored or not acknowledged, the system experiences blaming. Blamers are often extremely insecure and protect themselves from appearing vulnerable to failure and from being "exposed." As they become so focused on their own needs, they eradicate the needs and feelings of others, who become the recipients of their blame. It becomes the "fault" of others that a bad thing happens, since it is too risky to examine their own role. Blamers are often described as hostile, tyrannical, nagging, or violent. They vociferously express the attitude: "I'll beat you to a pulp. If it weren't for you, we wouldn't be in this mess." They tend to refuse help and disagree with suggestions-anything that might come from others (10). Blamers create "enemy" relationships and they are often found to be contemptuous of others (an element that ultimately destroys relationships). Blamers fail to appreciate the efforts and gifts that others contribute to a system (which is why "other" is blocked out in this diagram) and are intensely fearful that a problem might be linked to something that they did (or did not do). Blamers point a finger at the others (without realizing that their other three fingers are pointing at themselves-try pointing a finger at someone and notice your other three fingers!). The antidote to blaming is self-accountability. Blaming, when balanced against other system needs, does allow for healthy self assertion.

On the other hand, there are the instances when others become unimportant and the focus is entirely on self and on context (10,17). This leads to blame (Fig. 3) and this was the behavior exhibited by Drs. Blazer and Ivan. Their disregard for others created an environment that was toxic for team interaction. It felt terrible to Charlie and Ed to be blamed and demeaned. They no longer felt that their opinions and knowledge "counted" and they couldn't participate in helping solve problems. Blame is a stress response that Shelby had witnessed often in her training and she now understood it to also be a symptom of incongruence. Others need to count and the best way she could teach this to Dr. Blazer was to help him develop awareness of when he was feeling stressed, scared, and out of control. Once he developed an awareness of what he was doing and how detrimental it was for his team, he might be able to learn some techniques to "soothe" himself and regain control of his extraordinary skills (9,25,27,29,47,57). She imagined it would be rewarding to help Dr. Blazer and the rest of his

team explore ways they could help each other create a more well-balanced team. Blamers often appear to have contempt for others on the team and they create *enemy* relationships. Contempt, or self-righteousness, can be devastating to relationships. The antidote for contempt is appreciation—finding something in each person to admire and appreciate. Without the ability to learn appreciation, blamers often become isolated and alone. After all, who wants to work with people who don't appreciate you (or who are incapable of seeing you) for your strengths. Like all stress responses, there is a positive element to the stance when applied in an appropriate circumstance. Blaming, or the ability to count self before others, carries the seed of healthy self-assertion.

When *context* is *ignored*, team members can become *irrelevant* (10,17). She saw this in Steve Whyte's room before the patient deteriorated. All the team members (with the possible exception of Brian Jones) were ignoring the context of a patient who was still vulnerable. They had stopped paying attention to the needs of the patient and almost had a disaster. When systems become unbalanced by *irrelevance*, the people remain but the context disappears (Fig. 4). Shelby recognized the danger of this approach in



Irrelevant carries the seed of creativity

FIGURE 4. When the needs of a particular context become overwhelming, it is tempting to ignore that context and to "check out." The relationships between people begin to exist without attachment to context and in this sense, the system becomes irrelevant. In Satir's model (10), self and other are also discounted. However, in the health care environment, we think that more often, it is only the relationships that seem to count and the context is blocked out (which is how we show it in this diagram). People exhibit irrelevance when they joke in order to divert attention from something bad that has happened or that may be happening. Occasionally there is value to this, but more often, it diminishes the importance of a context that needs urgent or thoughtful attention. When the context issues are particularly disturbing, irrelevance can interfere with important decision making. It is like "fiddling" while Rome burns. Irrelevant relationships can be enemy relationships because it can be very exasperating to relate to someone who never takes the situation seriously, especially when there are serious situations. Irrelevance, when balanced against other system needs, does allow for creativity and fun.

a cardiac operating room. She needed to teach the entire team the value of context. The ability to remove from the pressures of context, or to become irrelevant, carries the healthy seed of creativity and fun.

As Shelby ruminated about this, she smiled. Context. That seemed to be the causative factor for most problems in stressful situations. She so often saw people get so caught up in what they felt was the important context that they forgot they needed to harness the help of the people in the system to achieve that goal. It seemed as though the hospital administration's sole context was their financial bottom line. How often they forgot that the data points on their spreadsheets represented contributions from real people. Their attempts to cut costs at the expense of team function ironically worked contrary to their mantra, "Patients come first." "When a system allows the needs of its staff to be valued," thought Shelby, "the patients will end up doing better. That is really the way to put the patients first." It seemed so strange that in "putting patients first," the way the hospital seemed to emphasize (which meant counting only the patients and their context) the staff could often feel so devalued and unimportant that they had nothing left to give to the patients.

Shelby knew that the hospital administration was under financial pressure, but failing to acknowledge the needs on their staff would create more of what they were trying to avoid-poor quality and unsafe systems. [She remembered that frequently the hospital administration's focus on context, which excluded taking into consideration the values, perspectives, and needs of the employees within the system, created a system without regard to the needs of individuals within the system. Forgetting to value the individuals comprising the system was called super reasonable (Fig. 5). You don't count. I don't count. The only thing that counts is this goal.] This is termed super reasonable because it is a lot like communicating with a computer. The only thing that matters is the facts-the data. There is no room for human need or input. Some people liken this to a military system where the only thing that matters is that the mission is accomplished, irrespective of the human loss. It doesn't feel very good to work in a system that discounts your personal contribution and your own unique and important needs. In medical systems, where the needs of the patient sometimes become overwhelming, that context can take on gargantuan proportions, squeezing out any space for the people in the system (Fig. 6). This stifles the ability of people in the system to be creative and feel valued.

When a system becomes super reasonable, it is at risk for people leaving. Shelby loved her team and she didn't want that. In super reasonable systems, communication can break down as people stop recognizing the need to talk to each other and harness their individual strengths (35). Care of the patient is of central importance, and it cannot be provided consistently and genuinely by people who have not



FIGURE 5. When the needs of context become dominant, then there is a risk that the needs of the people in the system may become undervalued. The system, over time, functions only at the level of data, which is why this response is called super reasonable. All actions and choices are predicated on logic and the feelings of the individual team members don't seem to matter. Medical systems are prone to be super reasonable because of the potentially huge implications of the medical context and also because medical training tends to teach an aloof, detached, analytical process of reasoning, often guided by rigid policies and protocols that further invalidate human variability. As choices become more objective, people no longer feel as if they matter, which is why both self and other are blocked out in this diagram. Recent research on emotional and social intelligence verify that this process for decision making is not optimal, especially in complex human systems. Certainly a degree of objectivity and analysis is imperative to good decision making and good patient care; however, when this objectivity is not integrated with a genuine sense of compassion and empathy for one's self and others, decision making and patient care suffers. An over-valuing of context and environment leads to relationships in which the end justifies the means. Individuals who constantly place context first justify manipulating and controlling others, since a context only-based goal will usually warrant this. This Machiavellian approach to relationships counts out the experiences of others in order to justify the end. When the context is the only thing that is valued, the needs, values, and perspectives of those comprising the system are ignored. This point is beautifully illustrated in the movie, Wit (64), in which a patient struggling with cancer ceases to be an individual with needs, but instead becomes a subject for research. She can't get her needs met and those who are caring for her are left confused and conflicted. In other words, the needs of the research context have become more important than the needs of the patient/individual and her caregivers because context/research science has taken on paramount importance to the researchers. Valuing context above the needs of individuals overwhelms the system, people feel compelled to do what they do until they finally "burn out" (from not being able to have their own needs met). It is difficult to survive in a super reasonable organization because it is so difficult to deny the objective "truths". Everything is based on intelligence, reason and principles. Actions must compulsively conform to policy or to code. Feelings are not valued and in some cases are condemned. It is super reasonable when the provider caring for a patient who dies is asked to immediately go on to the next task, such as picking up the next patient, without being given some time to process the experience they have just had. Super reasonable relationships are "stranger' relationships because people in these relationships feel isolated and withdrawn. Context, when in balance, carries the seed of balanced judgment.





FIGURE 6. In the health care environment, the context can be overwhelming and really squeeze out the space for relationship. This diagram demonstrates that even when the self and other are considered in some medical systems, they only have potential for minimal value. Team members need to reclaim their space in these systems.

been supported in caring for themselves and for each other. You can't give what you don't have. She ruminated that Brian Jones might have been more helpful to Steven Whyte had he communicated what he was doing in advance and in doing so, demonstrated a more apparent commitment to help his younger colleague. By focusing only on his personal role in patient care and ignoring Steven's panic, Brian was a bit super reasonable when he should have engaged a colleague in need. Shelby was aware that team-building opportunities had a positive impact on enhancing communication and satisfaction (65–68). She believed that Brian and Steve could learn to be congruent communicators with a little coaching and support.

Only by depending upon and trusting one another can we achieve the level of care we aspired to when we chose our professional specialty, whether that was surgery, anesthesiology, nursing, perfusion, cardiology, or intensive care. There is so much unrealized potential to help each other once we create a culture in which people are willing to accept help. We can teach this willingness to be helped (36). We can model collaboration and congruent communication.

As she reflected on the events of the morning, Shelby realized that the various members of the cardiac team had all responded in their own unique and personal ways to stress. Her hope was to help them be more aware of what was happening within themselves as well as what was happening around them. She knew that they couldn't eliminate stress. Her hope was to help each member of the team learn how to cope with stress and to help others cope with stress. Another critical strategy is to accept help from others in order to relieve one's own stress. If the team could develop *awareness*, then it could move from "unconscious incompetence" to "conscious incompetence", which was the first step toward change and growth. She was excited about the prospects for creating a common language and value system as well as the ability of each team member to recognize that adhering to these values represented the core of good teamwork. With learning and practice, the conscious incompetence could slowly transform into "conscious competence." That would be exhilarating, and she planned to stick around to see that happen. As exhibited by the pediatric team, perhaps over time other teams could also achieve the fluid and congruent "unconscious competence" that comes when teamwork permeates the fabric of an organization. Imagine how wonderful it would be to work in an environment like that

Author's note: Shelby is a metaphor and not based on a real person. She represents the best in all of us. We also recognize that none of us is congruent, especially when stressed, at all times. It is our hope that Shelby epitomizes what we all try to be as leaders and that awareness of a common language, as outlined in this chapter, can help us each move closer to that goal.

SUGGESTIONS FOR IMPROVING YOUR WORK TEAM

Improving Self

- 1. Keep a journal. In the journal, spend some quiet reflection time to record your thoughts about events that affect you or the members of your team. By expressing your thoughts in writing, you will solidify them and make them more available to your "conscious self." Think about how you felt and how team members might have felt during an event or an interaction. Think about what you might do differently the next time. Were you congruent—aware of the conflicting needs of yourself, others and the context?
- 2. Get a coach. Most institutions have resources for mentoring and coaching. It may be available from another, more experienced member of your program, or it may be available through other resources. One author (RU) has had several valuable "coaches" over the years and their perspectives can be invaluable as you learn to view events in ways that are not immediately apparent to you.
- 3. Meditate. Spend some reflective time with yourself. Remember that time "with yourself" is different than time "by yourself." Take a walk in the woods, or by the shore. Sit in a quiet spot. Be still. There is no way to do this "wrong." Your mind will take you where it needs to go.
- 4. Keep a personal database. Change and growth is only possible from acknowledgment of the status quo. The memory is a poor database, but a record of your results in important endeavors can help eliminate the impressions that linger from the "last case." Keep track

of information you want to know about yourself. How long does it take you to start central lines? Set up the pump? What is your mortality for certain operations? Decide what is important to know and record it. It will help you will know what is real for you and serve as a baseline for change and growth.

- **5.** Go to workshops on teamwork and personal growth. You spend time going to meetings on cardiac care, and as you learn, you get new ideas and you grow. Commit to grow as a person and as a team member. There are numerous excellent courses. Make a commitment to learn about yourself. Learn about your strengths and how to enhance them (35,69).
- 6. Do a personality inventory. It is best to do this under the direction of a professional. These can include the Myers Briggs Type Indicator (MBTI) (70), the Kiersey Bates Temperament Sorter (71,72), the Strength Deployment Index (SDI) or the Essisystems StressMap (48). These tests can be extremely useful for learning about yourself. There is likely to be someone at your hospital or in your city who can do this for your team. The information, if developed in collaboration with a knowledgeable supervisor, can be enormously informative and for some is "life changing."
- 7. Learn to "check in" with yourself and self-soothe under stress (47). Learn to recognize the signs of stress and ask for support from your colleagues or offer support to others who may be under stress. Try not to take stress responses from colleagues personally and engage in dialogue (while not under stress) about ways to improve difficult situations.
- 8. Read. Learning to work on teams is not an innate gift. Leadership and relationship skills are learned and competence requires practice. There are numerous excellent articles and books suggested in the references to this chapter.

Improving Team Relationships (Understanding Others)

- ^{1.} Make a list of the members of your team. After each name, write down the qualities they have that you value about them. In your journal, write a narrative about a time each team member exhibited one of their unique gifts and write about how that helped the team. Try to imagine how you can put them in positions to use those qualities more often to the advantage of the team.
- 2. Share spontaneous appreciation with a team member when they do something that is meaningful to you. Appreciations are a powerful way to break down contempt, which can kill team harmony (30). It is helpful if the appreciation is given "in the moment" that you "catch someone doing something right" (73). When giving appreciation, try to focus on including three elements. First, be direct. Address the person by name

as you look them in the eye. Second, be specific. Refer to an actual event or action. Third, be nonattributive. Talk about what their action or statement meant to you as opposed to presuming what it was coming from in them (57). As an example, the following is a nondirect, nonspecific, attributory "appreciation." "Guys, you are all doing a great job. You are all really trying hard and I appreciate it." A much more powerful appreciation would be: "Ed (direct), when you were so quick to get the pump set up for me when I thought this patient was crashing (specific and in the moment), it helped me feel more comfortable that I had a backup if something happened (nonattributory). I really appreciate that."

- **3.** Under the direction of a trained facilitator (available through personnel services at most larger organizations) or through a coach or outside consultant, have a retreat for your team.
 - **a.** At the retreat share information with each other regarding the various unique individual characteristics of the various team members. You will learn a lot about each other and if properly done, the entire experience can be very nonthreatening, informative and a lot of fun.
 - **b.** Explore as a team the answers to questions such as (22):
 - If you were the counselor at a camp to teach children to be team players, what and how would you teach them?
 - What inspired each team member to enter a career in medicine? Spend time sharing with each other your stories of how you came to be a team.
 - Tell me about a time you were recognized and celebrated. How did you feel? How did it affect the rest of your day?
 - c. Get a deck of playing cards and have each team member draw a card without looking at it. After each person has a card, have them place it in a headband (facing outwards) so that everyone except them can see their card. Spend 15 minutes interacting with each other in a manner determined by the hierarchy of the cards with 2 being low and an ace being high. Each person should interact with the members of the team related to their roles as described by the cards and not by their true roles on the team. After 10 to 15 minutes, people can return to their seats and the facilitator can help process the experience with them.
- **4.** Reward team members who have improved team function with a "site visit" of their choice. When they return, have them share with the rest of the team what they observed. What did they like that they would like your team to adopt? What did they appreciate about this team that you are all on?
- 5. Have a trained observer spend time in your operating room watching how the team interacts and then process

this with the team in an environment where team members can be relaxed and open to teaching.

- 6. Try to eliminate sarcastic or teasing "humor." Although not necessarily intended, this kind of humor can feel hurtful to the recipient. Use humor that is kind, noncritical and nondemeaning.
- 7. When you have a conflict with a member of your team, don't ignore it. Get help from someone to help mediate this conflict—perhaps a trained facilitator or coach who is aware of how your team is committed to growth. Conflict is an important tool for identifying problems that can be solved, as long as you are "hard on the problem and soft on the people."
- 8. Improve communication before, during, and after cases. Create processes that transmit information to the operating room needed by the entire team so that they can set up properly for each case. During the case, begin a communication by calling a person by name, so that they are aware that there is a communication being directed at them. Make certain that there is some form of verbal acknowledgement that your communication was heard. Assume that if you don't get an answer, you weren't heard. For example:

"Gus, begin warming."

"Warming begun."

This simple communication prevents an error with the surgeon thinking that the patient is being warmed simply because he asked. Occasionally, the perfusionist may not have heard the request.

Improving Context

- 1. Have a team journal club to discuss new thoughts related to your field. Meet at regular intervals and share information that is relevant to the team. Try to avoid having one team member (e.g., the surgeon) become the repetitive leader and voice at every meeting.
- 2. When team members go to national meetings, spend time "debriefing" what was presented with the rest of the team. This can be done at a lunch or dinner.
- **3.** Develop clinical practice guidelines that can standardize treatment of specific problems. This will help eliminate variability, increase efficiency, and help team members feel better prepared to anticipate what needs to be done next.
- **4.** Go on site visits to other programs as a team. See how they work and copy things that would help your system. Appreciate (amongst yourselves) the things your team does that you like better than what you see at the site visit. Share your thoughts with the team when you return.
- 5. Make learning a core team value. Ask yourself and the team what you would like to learn in the next year. Discuss what you will each need to do to learn this and how you can support each other during the learning

process. Remember to have compassion for yourself (and for your team members as you "struggle" to learn and to do new things). When possible, invite colleagues from other institutions to come and help teach you the new things you want to learn.

6. Remember that the team comes first. If you take care of the team and treat each other with the caring and respect that you each deserve, that will be passed on to the patient and they will be the recipients of the kind of care you want them to receive.

The above list is not exhaustive. Developing teamwork is a process, not a destination. Enjoy the journey. It's the one you get to experience, with the people who have signed on to be there with you. It doesn't get any better elsewhere—only different.

KEY POINTS

- Data confirms that overall patient outcomes are linked to team function as much as they are to the knowledge and skills of individual providers.
- High-level team function requires learning, practice, and mentoring, much like acquiring any skill.
 - Understanding and managing the dynamics of intra- and interpersonal interaction is critical to creating an environment in which team function can achieve its potential.
- Congruent teams recognize and value the dynamic interplay between the needs of individuals (self), others (team members, patients, other members of the system) and context (the specifics of the situation i.e., requiring the team's attention).
- Shifting from a pattern of telling and coercing team members to one of exploring and questioning to learn about and understand team members can help create a team in which participants feel valued, creative, trusting, and engaged.
- The chapter includes several suggestions for improving the overall team functional capacity of your cardiac surgical teams.

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