



Adapting to Complexity: Learning from our Challenges

BY JANET BICKEL, MA

“The world is constantly being co-created by the interplay of what is within us and what is around us.”

—Parker Palmer

“Change is good, you go first.”

—T-shirt caption

Do you occasionally fantasize about taking a breather from change? Complexity, ambiguity, and the pace of change only keep increasing. How can we make friends with complexity, rather than wishing it would just stop?

Let's begin with our mental models and preconceptions because they significantly influence what we perceive. For the past two centuries, our dominant organizational model has been the machine—companies are “built to last,” blueprints are drawn and designs imposed, and people are “replaceable parts” on charts. Describing organizations this way—as if they were complicated machines—produces a focus on their predictable and controllable dimensions, creating unrealistic expectations. If the intended results are not achieved, anxiety and blame divert attention away from the work.

Because most challenges today include many unpredictable and uncontrollable variables, the machine model does not often apply. For example, winning a clinical translational science award, creating high-functioning teams, merging two departments, and mentoring troubled students are better understood as complex rather than just complicated processes—that is, there are more competing truths than “right” answers, “parts” are inseparable from the whole, and patterns of relating are under continuous construction.

Complexity Science

Complexity science offers an alternative to the machine model. A few decades ago biologists, anthropologists, economists, management theorists, and many others began to notice that systems as apparently diverse as stock markets, ecosystems, immune sys-

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tems, termite colonies, and hospitals shared some patterns of behavior.

Some characteristics of complex adaptive systems (CASs) are as follows:

- ❖ Order flows from interactions, not from central control.
 - ❖ When interactions among agents are enhanced, so are adaptability and creativity.
 - ❖ Small changes may produce big effects.
 - ❖ Cause and effect are mutual, and each whole is greater than the sum of its parts.
- For instance, a physician is a CAS and also an agent in a department that is a CAS and an agent in an academic health center, which is also a CAS, and so on.

Options for intervening in such changeable systems include sharing information and mistakes, appreciating diversity as a critical source of information, paying attention to what's emerging, and building on what works, as opposed to “sticking with plans” (see Resources below for more on complexity science).

Working in Complex Adaptive Systems

As CASs, academic health centers are constantly evolving, and therefore something novel is always emerging. If novel challenges make you uncomfortable, the discomfort is not in your imagination. As Suchman has explained, uncertainty is actually dysphoric. When we believe we are failing to fulfill others' expectations or we anticipate humiliation, we experience a drop in opioid levels in the brain, going into a state of intrinsic narcotic withdrawal. Recognizing that this is happening can help us accept the temporary discomfort and hence expand our “comfort zone.”

Uncertainty is not a sign of incompetence.

Being able to “not know” for a while helps us stay engaged, see other perspectives, and recognize more complex realities. So resist the urge to deny uncomfortable states or to act your way out of them. Instead, try to become more fully present, so that you can discern clues about the adequacy of your mental models and see how you may be contributing to negative patterns. For example, when someone challenges you, is your knee-jerk response defensive? What are you assuming that might not be true? What might you be overlooking? How can you reduce defensiveness in yourself and others?

Try to remain curious not only about your internal responses, but also about your institution. Genuine curiosity is harder than it sounds because we internalize the cultures of which we are a part; customs shortly become “normal.” Humans have a strong bias in favor of their established habits, and organizations have a strong bias in favor of the status quo. These prevent us from noticing data contrary to our expectations. So share observations, consider alternative explanations, experiment with different lenses.

When disagreement and uncertainty are high, anxiety increases and is contagious. Such maladaptive responses have no clear point of origin but operate as a widening web. “Groupthink” is a collective anxiety reaction such that the group suppresses the expression of individual differences and loses access to creativity and new information. Anything any member of the group can do or say that is not anxiety-driven can help to calm the system—this might be considered “pocketing the hot potato.”

When uncertainty is high, gathering more quantitative data or studying precedent often do not help facilitate agreement. Richer *qualitative* information about what key people are currently experiencing and detecting may be more valuable. So ask open-ended questions that encourage others to explore their thoughts and feelings. Examples of such questions include:

“Would you like to give me an example or tell me more about that?” and “What conclusions do you draw?” Instead of interrupting with your own views, give the other person space, perhaps reflecting back your understanding of what he or she is saying.

Skilled listening—that is, staying open to what the other person may see that you do not—gets much better results than the more common “automatic” listening, i.e., sorting into the categories of right/wrong or familiar/unfamiliar. Even though you may feel as if you don’t have the time for this, in the long run such generative listening can save you time. When you accurately attune to others, you enhance your insight into their values and motivations and into what they are not saying. And having felt fully heard, they will be more open to your views, thus opening the door to learning and partnership.

Another increasingly important quality is the ability to make decisions with little information in less time with few precedents. Rather than trying to get everything right the first time, design small actions that will quickly give you feedback; then you can correct your course, moving forward bit by bit until the big picture becomes clearer.

These days, most physicians and scientists, and certainly all administrators, must also be able to adjust flexibly to diverse situations. Perhaps a quiet demeanor is most effective in a meeting with the dean; a half hour later, a negotiation with a colleague necessitates an assertive approach; next comes an encounter with a grieving staff member who needs your empathy. To improve your flexibility in matching your style to situational demands, monitor which shifts give you the most trouble and develop insight into why they do.

Getting Out of Our Own Way

Instead of exercising flexibility, often we constrict ourselves. For instance, many physicians and scientists show strengths in perseverance, self-reliance, and perfectionism. But if overdone, these characteristics may interfere with collaborating, delegating, and detecting new realities.

Fatigue also contributes to brittleness and neophobia (fear of the new). So when you’re running on empty, postpone handling complex situations until you’re fresher, if at all possible.

Some personality preferences may also



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get in the way of adapting. The Myers-Briggs Type Indicator can be a helpful tool here. For instance, if you take in information primarily through your senses (as an “S” for Sensing), you probably struggle more with complexity and uncertainty than those who notice first what might be (as an “N” for Intuition). This is also true for those who prefer a planned and organized life (as a “J” for Judging) over a spontaneous and flexible orientation (as a “P” for Perceiving). If you have both of these preferences (as an “SJ”), you are likely good at logistics and are proud of your reliability and practicality. But in situations when agreement and certainty are lacking, a preference for order and stability may reduce your effectiveness. Although we can’t change our innate preferences, we can recognize what gives us trouble, work to stretch ourselves, and partner with people who have strengths that we do not.

Finally, take a lesson from aikido: position yourself so that no energy is lost to friction or opposition. For example, if someone has a tight hold on your wrist, trying to get free by resisting may actually reduce your options. If instead you shift your focus to the parts of your body that are unconstrained, you discover opportunities for action. Remember this freedom next time you feel imprisoned by a person or circumstance.

Conclusion

Organizations thrive only to the extent to

which their members are fully engaged. Information flow, diversity, and connectivity contribute to organizational resilience and creativity.

Organizations are *conversations*, not machines; we influence our environments by the way we participate in them, by our patterns of interaction, by how we do our work.

Uncertainty, change, and risk are unavoidable. Increasing our comfort with complexity involves active receptivity to both our inner and outer experiences. Holding plans and desired outcomes lightly helps us see what is trying to emerge. Staying curious and flexible and setting realistic expectations also reduces shame, so we sweat less behind our masks. And when the big picture is unclear, we can create small positive actions from which we learn.

Because we are not very good at imagining a future substantially different from the present, even when the pace of change tells us that it will be, we need to help each other with these adaptations. Sharing our questions is a good place to start. The puzzles that we face are certainly too complex to figure out and manage alone. ❖

Resources

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