



Growing Complex

Jennifer Garvey Berger

A Great Need

--Hafiz

Out
Of a great need
We are all holding hands
And climbing.
Not loving is a letting go.
Listen,
The terrain around here
Is
Far too
Dangerous
For
That.

I spend a lot of time on airplanes, and at most immigration lines I'm faced with that little box that asks about my profession. In this modern world, those shifting titles are harder to fit into ten carefully capitalized letters. I coach leaders in complex organizations around the world. I write books about how adults grow and change, how to lead in a complex and volatile world. I design and facilitate leadership programs. I speak at conferences. And in the box I always write the same seven block capitals: TEACHER. Customs officials often ask, "What year do you teach?" When I answer, "grown ups," they cock their heads at me to see if I'm kidding. "What do grown ups need to learn?" they ask, warily searching my face for a trick of some sort. Teaching kids is a service; teaching grown ups is weird.

Yet when I went back to graduate school twenty years ago, it was not with my senior English students in mind. I was thinking more about my colleagues, the adults who stayed each year in that public fine arts magnet school as the students cycled in and out. I had learned in my years

in the classroom that when the adults aren't learning and growing, there are significant implications on the young people. So, to help the kids, I went back to learn more about the adults. The more I learned about adult growth and development, the more amazed I got. On the one hand, learning about the way I

myself was growing and changing opened up new possibilities for me because this was the most immediately applicable theory ever. More immediately, learning these theories changed who I was as a person, offering me not just a way to understand other people but a way to make sense of my own life and support for my own growth. On the other hand, I was dismayed by the discovery of how rarely these theories make it out of graduate school courses and into the lives and minds of regular grown ups who teach and learn and parent and work. It was as if I had found a new map that would help us find our way through the mists and swamps of our adult lives, and almost no one had access to it.

This was a problem twenty years ago; it is a crisis now. As our lives become more volatile and complex, and as the demands made upon us by the world increase, there are almost no places where we can reliably get support as grown ups to master this new curriculum of the adult world. Schools and universities work for some and fail others as they launch us into the adult world. Once we're launched, though, we are finding that key changes in the last couple of decades are bringing us challenges that schools never even considered. We are interconnected enough that dubious behavior in one financial system in one country can lead to a Global Financial Crisis; we are digital enough that massive numbers of jobs will be lost over the next 20 years, and we are influential enough that we are changing the climate in ways we don't understand and now can't control. Most schools and universities don't even attempt to help us cope with this raging complexity. In this increasingly complex world, we are all together in the same boat, lost on the same stormy sea.

So now the key question of my career, and the one I'd like you to join me in asking is about us grown ups. Let's turn the spotlight on us as adults and wonder: what are *we* learning? How are *we* growing? And how can we create institutions—schools and universities, yes, but also offices and shop floors—where the learning and growth of adults is taken seriously? In this essay I'll introduce you to a theory of adult growth and development, muse about the implications of that theory for us and our lives—and the lives of the executives and soldiers and migrant workers and computer programmers and all of us. And I'll offer my perspective on why this matters more than ever in our increasingly complex world. Then, perhaps most importantly, I'll offer some ideas about what we can do about the disconnection between what the way we tend to think about the world and the demands that world makes upon us.

Growing complexity

For a while it looked like we humans could be the masters of the universe—or at least the planet. We drilled into the ground to find gold, gems, and the lifeblood of our developing societies: oil and coal. We dammed rivers to get energy while we protected our cities and farmland. We built buildings so tall we called them “sky scrapers”—wonderful feats of engineering that set in place a global competition for the highest heights. We put golf courses in Dubai and toasty underground tunnels in Montreal. We created economic systems of ever-faster trading, social systems that network us in real time across the planet, and environmental systems that pump oil through endless pipelines or on massive ships to serve the needs of energy-hungry people on the other side of the planet.

And now perhaps we have overreached. We have tried to control the uncertainty of the world and we have added vast amounts of complexity—many more interacting parts moving more quickly than any human has ever had to deal with before. We are so productive that we have swelled to seven billion on our way to ten billion. We are so connected that we are overwhelmed with information, which is being created so fast that we need bigger and bigger cloud-based computers to simply hold it (never mind our paltry little human brains). We are so energy hungry that we are burning our natural resources and raising the temperature of the planet, creating a problem with so many moving parts that there is no telling how to address it. And the list continues. Many people have adopted an old military acronym to describe all this, talking about the VUCA world: a world that is more Volatile, Uncertain, Complex, and Ambiguous than ever before.

In most—or maybe all—other times in human history, we have made sense of even large disruptions as those things that move us from one steady state to the next steady state—the disruptive force (of a World War, say) being the shaky bridge between two stable worlds. Now, though, it looks to most people like the bridge we're on now is not headed to some kind of new stable state but that change and disruption *are* the new state: it's a shaky bridge that stretches into the future as far as the eye can see.

In my own life, I can see the ways this unfolds. Even just a couple of decades ago, I likely would have found that my initial career (teaching) and my initial home (Washington DC) were a stable foundation for my life. I might have been able to predict, when I got my teaching certificate and wedding band in my early 20s, that my life would unroll in front of me in fairly obvious ways, one step leading to the next (barring accidents or illnesses or violence which humans have always found unpredictable). The fact that I now work with the leaders some of the largest companies in the world and live in a cottage overlooking the harbour in Wellington New Zealand would have seemed nearly impossible. But today, moving around the world or switching careers again and again is ordinary. These interlocking choices—where one choice point leads to a different set of choice points and then another—mean that our stories don't make sense until afterwards; we could never have imagined ahead of time the forks in the roads we would travel.

These new pressures don't just require more of the same sort of thinking; they require different forms of thinking, different forms of mind to make sense of it all. Let me explain what I mean.

We all know that different people think about the world in different ways. We know that there are cultural differences, personality style differences, gender, class, age differences. There are dozens of theories to help us parse and make sense of all of this. Many people recognize Piaget's (1953) ideas about child development, about the ways kids learn to see and re-see the world as they first try to assimilate new information and then finally have to accommodate their own way of understanding the world in the face of information or emotions that simply won't fit their earlier schema. That process—of first trying to fit the data to our own sensemaking and then (and only under some duress) shaping our sensemaking to fit the data—happens in all sorts of ways, all through our lives. But the modern world means we are bombarded with more data than ever, our sensemaking is constantly under duress, and our capacity to accommodate is stretched. Ten years ago when I was in hiring conversations for senior

leaders of government departments, ideas like “strategic thinking” and “emotional intelligence” topped the list of requirements. Now “learning agility” or “ability to cope with change” are frequently the top. Piaget didn’t investigate the ways we as adults would not only have to learn to deal with abstractions but learn to deal with the way those abstractions moved *us* around, the way our sensemaking was challenged to change enormously over time.

Happily, the next generation of developmentalists did look at those questions. Researchers like William Perry (1968), Robert Kegan (1982, 1994), William Torbert (2004), and Mary Belenky and her colleagues (Belenky, Clinchy, Goldberger, and Tarule 1997) found clear patterns in the way men and women from a wide variety of (mostly western) backgrounds and ages grew over time to have a more complex sense of the world. They noticed that while Piaget had stopped studying development as children became adults, growth was still on-going, and that the growth—while experienced uniquely by each individual—had some discernible rhythms. Through various forms of research and a wide variety of populations, they found that adults seemed to move beyond “formal operations” (where teenagers can use abstract reasoning and talk about their thinking) in predictable patterns, and that their capacity to see and understand the world continued to change throughout the whole life span—not just in their thinking about problems, but in their thinking about themselves, their emotional responses, and their relationships to others.

I began to consume these ideas when I was 26, very far from thinking about leadership and complexity and what the world might need. Twenty years ago, I was still so fresh from the classroom that I peered over the shoulders of the high school students who lounged around Harvard Square to see what they were reading. My attention was still captured by young people; I hadn’t yet learned to be captivated by our adult development journey because, like most of us, I didn’t know this journey existed. When I first learned about these theories, the idea that there were phases to my unfolding adult life was a revelation. I didn’t know then that simply understanding these adult developmental ideas would itself be developmental for me. In the years since, I have become increasingly convinced that *understanding* the terrain helps us walk it with more grace and less pain.

This seems like a big deal, because adult life can be painful and bewildering. In Bob Kegan’s adult development class, before we learned a single thing about the theory, I wrote about how confused I was—not as a student so much, but as a person. It wasn’t the increasing complexity of the outside world that was creating my confusion; it was the increasing complexity of my personal life. Newly pregnant, I was finding the transition to motherhood in my identity more unsettling than the physical transition that was taking place inside me. In my first paper in Kegan’s class—a reflection about a transition we had made in our adult lives—I wrote about the ways the current transition to motherhood felt both real and unreal to me as I worried that I was playacting my life. I wrote, “I felt, in fact, the way I had felt at other major moments of my adult life—like a fraud, a fake who would be soon discovered. I wondered who would first realize that I wasn’t really pregnant at all—just a little girl playing pregnant just as I had played teacher and was now playing doctoral student” (Berger, 1997).

In this little snippet, you can see many things, but particularly salient to our conversation about adult growth and development is my focus on how I'm doing in the eyes of others—and the angst that comes with it. That first exploration of adult development would help me see that feeling like a fraud wasn't a personality trait or a character failure; it was a natural part of growing into myself. Adult development theory tells us that nearly all adults have spent at least some of their lives feeling like a fraud, looking over their shoulders to see if others think they are doing it right (whoever the "others" are and whatever "it" might be), and relying on the voices, opinions, and theories of others to form a clear guide to life.

In fact, one of the hallmarks and great achievements of the transition to adult life is the ability to take the perspectives of other people (or theories, societies, religions, etc.) inside us and use those as the guide to our lives. It is perhaps one of the crowning achievements of humanity and has helped us subordinate our own interests for the good of collectives. We are neurologically wired to care deeply about other people; our brains "mentalize" as Matthew Lieberman (2013) calls it as we try to imagine the thoughts and reactions of others.

Before we could peer inside the brain, we could see these patterns in adult meaning making. This growing orientation to others is such a natural part of the adult world that it shows up in all the different theories of development. Bob Kegan (1994) called it the "socialized mind," Belenky and her colleagues (1997) wrote about "received knowledge," and Torbert (2004) called this phase the "diplomat." Whatever you call it, the contours are the same: an internalization of the voices or theories or signals from outside of you to give meaning and shape to your life. This is a grand achievement over the more self-focused and self-centered earlier stage where the voices of others are externally held rather than an internal force. It takes the internalization of those voices to be able to orient to something larger than yourself, and to be able to create flourishing societies where abstractions like loyalty and generosity make sense.

The socialized mind was probably perfect for much of human history—as we had relatively clear boundaries, and clear roles to play (Berger, 2012). Humans lived in smaller, more homogeneous societies, and there were clear rules and clear leaders. In Jane Austen's society, the roles of women and men in the gentry and in the fields was crystal clear to all—and so were the obvious punishments for breaking those rules. One or two or three hundred years ago, I probably would have had a better sense that I was getting my own transition to motherhood right (or wrong), and I probably would have known what lines to speak in my adult life. Life back then might have been full of rules and societal limitations, but it would also have been a life filled with simple and straightforward feedback about who I was supposed to be and how to correctly play that role (and massive feedback loops of disapproval if I strayed outside the lines).

In today's more complex world, there are far more choices and less clear feedback about whether you're doing it right. In my graduate school paper, I write that I might, "...at the end of this [pregnancy], discover that parenthood is just acting, too. That all of adult life is just about pretending to be grown-up, pretending to know what you're doing, hoping you're getting your lines right." When you are constantly

looking outside yourself for the right answer, much of your life is about guessing what will please others rather than creating something new for yourself. The fear I have that the future will stretch out in this confusing and somewhat painful way is palpable in the pages of this early paper. At 26, I was wondering: Would I ever feel confident on the stage of the adult world?

And now, twenty years later, these pressures are heightened dramatically. The questions about doing it “right” and following a clear path forged by those before you are simply unanswerable for a rapidly growing number of people. From Kenya to Kansas, the increasing urbanification, the constant interconnections, and the shifting of economies and professions means that for most of us, there are far fewer scripts to follow. These days, in my research and practice, I find that the socialized leaders I work with—in universities, governments and businesses—tend to experience pain and disorientation because of their constant search to play by the rulebook that no longer exists. No matter how smart or capable these leaders are, they are overwhelmed by the multitude of voices and perspectives around them. Searching out the right script to follow isn’t so much a difficulty as an impossibility for many of us in this VUCA world.

Adult development theories let us know that after we have been so immersed in trying to figure out the rules of the society we are a part of, many adults (not all), begin to stop looking around to see if they’re doing it the way they should, stop hoping they’re getting their lines right. These growing adults turn inside themselves and begin to pick up the pen to write their own scripts. No longer feeling like imposters or like actors stumbling to guess the right blocking on the stage, they begin to feel more like playwrights or leaders in their own right. Kegan called this phase “the self-authored mind,” Belenky and her colleagues called it “procedural knowledge,” and Torbert called it the “achiever” action logic. In all of these summaries, you have someone who is now more like the person William Ernest Henley described in his poem, *Invictus*:

It matters not how strait the gate,
How charged with punishments the scroll,
I am the master of my fate,
I am the captain of my soul.

Learning about this possibility was incredibly helpful to me, and the more I understood about the way people made sense of their worlds, the more I could push against the edges of my own. As I deepened my studies of adult development, I learned to interview people to “score” the way they were making sense of the world, probing for the different possibilities and searching for what people could see (what Kegan calls “object”) and what they were blind to (what he calls “subject”). I learned to become deeply curious about not just what people were doing with their lives but the way they made sense of those choices. I saw the beauty and the possibility in all of the different ways we made sense of our choices,

and I also began to understand which ways of making sense were more complex than others and thus gave the person more range of action and reaction.

I began to practice this interview technique on myself as I walked home from campus each day to my young family. As much as I could, I would score my own sensemaking, and notice which parts of it were more socialized (a lot) and which parts were more self-authored (a little). And then I'd imagine what a self-authored response might be. This little game I played with myself was very useful in testing and solidifying my knowledge of the theory, but it turned out to be just as useful in coaxing my own self-authored form of mind into existence. I was carefully, step by step, question by question, learning how to be the captain of my own soul. As my life was getting more complex and overwhelming, life was creating a developmental curriculum for me, and I was using the theory I was learning and the doctoral context I was in to support myself to begin to learn this new curriculum. By the time I was a university professor at 34, I no longer felt I was playacting my life but writing it myself. I loved the sense of clarity about my path, and I relished the sense of control over my own destiny.

For most adults, this self-authored mind is the pinnacle of their developmental journey, and it is in fact what most self help books hold up as the best possible way to see the world (even though most self help books tell you to be self authored without telling you how to get there, as though just *hearing* the idea would transform us). In the modern world, where there are so few places adults can turn to for clarity about the Right Answer (about what profession to pursue, whom to partner with, what success might look like), being able to craft that answer for oneself is a massive achievement. It is this form of mind that lets us remove our self-esteem and sense of well being from the hands of others (to whom we are looking for judgment in the Socialised mind) and be our own judge. Marcia Baxter-Magolda (2001, 2009), in a groundbreaking longitudinal study, followed college students for more than two decades, and found that those who reached this self-authored stage earlier reported less stress and more successful relationships at home and at work.

The goal of the self-authored mind is to write the most perfect story—the most perfect self—imaginable. It is to tinker and edit and work on the self until it is able to handle the biggest range of situations and conflicts. But as Piaget found with the children he studied, sometimes the world gets too complex to simply assimilate new information, and so it is even for the robust self-authored mind. In a bewilderingly complex world, where the lines between cause and effect can seem dotted or even erased, a self-authored self sometimes needs to morph to accommodate the raging interconnectedness and volatility of the world.

Particularly for those people whose lives or roles require making sense of massive amounts of uncertainty or ambiguity, the self-authored mind itself might not be quite enough. One colleague likened the quest of leading in today's complex world to trying to catch tadpoles in a pond. Just as you think you have a clear handle on it, somehow they all slip through your fingers—or grow legs and jump away. Developmental theory points to yet another transition beyond the self-authored self and into something we might more colloquially think of as *wisdom*: the move beyond a sense of yourself as the master of

your fate and into a sense that we co-create our lives with one another and with the contexts around us. Kegan wrote about this as the “self-transforming mind,” Belenky and her colleagues described it as “constructed knowledge,” and Torbert wrote about a series of steps in “post-conventional” action logics.

For me, the most bewildering disruption in the life I thought I was authoring came 16 years after those early walks across campus: a diagnosis of breast cancer at 43.

Over the weeks as I wrestled with the diagnosis, the surgery, and then the chemotherapy, I began to understand what a gift it would be to *not* try to assimilate all I was learning into a self-authored meaning system but to actually begin to abandon the meaning system itself. Although I had taught, researched and written about adult development for years, it was only facing my own crisis that I really understood *personally* (rather than theoretically) the benefits of a meaning making system that was less about trying to write the story and more about being transformed by the way the story of my life was unfolding. Once again, knowing about adult development theory gave me a pathway toward my own growth. I had at first a cognitive and then an increasingly embodied sense of how a new form of mind could make sense of the changes in my life and my body and my sense of control in a new way. A blossoming self-transforming mind could keep me from hating the changing of myself and instead see those changes as a part of my developmental journey. One week after my first chemotherapy treatment I wrote,

“In the last months, I have looked at my poor battered body and wondered again and again when I will get my life back. ... But many of these changes are irreversible—I will never ever be the way I used to be. I have crossed into new terrain, and parts of the old world are long behind me. I am learning that I do so much better without looking backwards. I think lots of our changes are like this—our deep desire to really go through unscathed, unchanged, to have the life we were used to. I feel that urge deep in my bones (especially today as my bones hurt so much) and I have come to find that question more poisonous than the chemo, and with no appreciable benefits....

“I will not be who I was. I will not return to normal. I will not move on and forget about this time. And if I could do all of those things, wouldn’t it be sort of tragic? Because boy has there been pain and misery on this path, just as there are on the paths of all of those who face changes they did not choose (which is all of us, right?). Wouldn’t it be a shame if this path of pain was a kind of loop track, dumping me off at the beginning of the journey, undisrupted and pretending I had never left home as I waited for the scars to fade? This path is taking me into a new place, and each loss is a sign of a piece of me I cannot carry into the future world. And I believe—I really believe—that each of us will be better next than we used to be. This is not in a blind “everything happens for the best” sort of way, but in a deep belief in the human spirit to take pain and loss and metabolize them into development and compassion and love. Right now, my body is working overtime to be new; it is nearly a full-time job. I will try to be present in the unfolding of it, holding the amazing delights of the moment when the pain stops and the world feels peaceful

again, the joy of laughing over a cup of tea with a friend. I am becoming something new and unexpected.” (blog entry 30 March 2014)

As at least some of my sensemaking system was growing into a self-transforming mind, I was discovering the flexibility and spaciousness this way of making meaning of the world brings to us in times that are uncertain and confusing. You can read my focus on an unfolding becoming rather than on arriving at a particular (self-authored) destination. I was beginning to see in a more personal and practical way how our self-authored sensemaking system can fail us when there is too much uncertainty and too much is out of our control. With its focus on personal agency, the self-authored meaning system offers us a sense that we are the masters of our own destiny. When we are not, in fact, the masters of our own destiny in key ways, the self-authored meaning system can hold us back.

The self-transforming mind has neither the (sometimes brittle) concern with the external world of the socialized mind, nor the (sometimes futile) determination to tame that world of the self-authored mind. Instead, the self-transforming mind can see the inherent paradoxes of the world, can make sense of the interweaving complexity, and can adapt in agile ways to the new demands of a changing context. The need for this has been sporadically true whenever humans have faced uncertainty and volatility in their lives—illnesses like mine, random acts of violence, natural disasters—but the overwhelming experience of our day-to-day lives has gotten more settled over time as technology and medicine have reduced some of the ambiguity and volatility of the lives of humans across much of the planet. While our external guides and clear rulebooks have all but disappeared, an individual’s sense of agency and her capacity to really shape her future has been growing steadily. In Austen’s time, the socialized mind would help you internalize and live inside the strict societal rules; in the last century, more people took much more into their own hands—breaking out of the social systems that had held their families for generations, immigrating to new places for a better life, seeing opportunities (and facing challenges) their parents couldn’t have imagined. This meant that more of the power—and responsibility—for our choices rested with us, and thus required our own capacity for self-authoring. With all these new choices, it seemed that self-authored mind would be enough to climb out from being over our heads. But that may well be changing.

William Anderson (1997) claimed that while the focus of some developmentalists was on helping people grow from the socialized to the self-authored mind in order to handle a confusing modern world, the real story was the need to support people to grow self-transforming minds to deal with the bewilderingly post-modern world. He posits that those who are celebrating their growth to the self-authored mind will find “that they are trying to catch a train that has already left the station, and perforce be required to inhabit social orders much more pluralistic and changeable, and not always comfortably distinct from the world beyond their borders” (p.170). When I first read those lines nearly twenty years ago, the idea that the world needed self-transforming leaders made me want to take a nap. After all, I was struggling into the self-authored mind myself and learning what a hard journey that was, even with the supports I was unusually lucky to have. Besides, it seemed an overblown claim—how could the world be changing so

much, growing so much in complexity, that we would need people to push out beyond the self authored shores?

Yet now it would seem that the significant shifts in a leader's ability to lead transformative change seem to arrive with a self-transforming mind (Joiner & Josephs, 2006, Kegan and Lahey, 2009, Rooke & Torbert, 1998). While the research on this is still in early stages (and will always be hard since leadership itself is a complex issue that resists cause-and-effect conclusions), it makes sense that those with a self-transforming mind could have an advantage in complexity for at least two reasons. First of all, they are self-transforming, always looking to question and transform their own thinking and assumptions. This makes them more welcoming of the diverse ideas and perspectives than others tend to be. Secondly, they have a big enough perspective that more patterns are available to them; they see more interconnections and thus see more possibilities for creative solutions.

I think this idea of adult development broadens out the educational remit, beyond K-12 or even tertiary education. It says that education is necessarily a life-long concern, and that the changes in our meaning-making after we leave school are as important to the conditions of our lives and our worlds as those that happened while we were in school.

It may be that this is the biggest educational challenge of our time: reconceiving the very notion of education so that we all understand that education wasn't a thing that happened to young people to be used later in their lives. Education and the continual renewal and stretching of our forms of mind is a necessary life-long pursuit in the VUCA world.

Adult development theories offer us a way to make sense of the different ways we might interact with the complexity and uncertainty of the world, and they also offer a picture of how we are interacting with them collectively. Kegan and Lahey (2016) offer a meta review of studies that suggest that around half of adults surveyed have not fully arrived at the self-authored form of mind yet. And less than 1% have fully arrived at the self-transforming form of mind. John Dewey (1916) long ago pointed out the critical need for education to help us create a thriving democracy. If our development takes our entire lifetime, we will need to think in new ways about what education is and what its boundaries are. We need a curriculum that people can continue to engage with over the course of their lives, one that takes the everyday events people have in their lives and uses those events to catalyze growth, in much the same way my knowledge of adult development supported growth in my life as my external circumstances demanded it.

This calls to all of us—leaders, coaches, educators—to consider that growing complex and supporting others to grow more complex is a key part of our work. No longer can we assume that adults will arrive at any place fully formed in their thinking and needing just job experience to get them ready for their next promotion. We all need to be thinking about making and remaking not only our knowledge but our sense-making, not only our experience but our ways of experiencing. As we understand the interweaving between the complexity of the world outside us and the complexity of our development inside us, we will become better able to support one another to do the difficult work ahead of us, and to grow

complex enough to address some of the massive challenges that will shape the future of our organisations, our communities, and our species. Using complexity theories and adult development theories together gives us a map and a compass. Now we have to help one another make our way through the brambles and into new possibilities. The terrain around here is far too dangerous for us to do otherwise.

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