

Inventing Better Problems

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Einstein said something profound about solving problems: "The significant problems we face today cannot be solved at the same level of thinking we were at when we created them." His thought contains two powerful ideas: that our thinking actually creates problems and that solutions entail different levels of thought.

Having spent many years leading organizations, I am convinced that we tend to see problems as external events. We stroll peacefully down a country lane, perhaps whistling a happy tune, and suddenly problems start shooting at us like bullets or, in the case of significant problems, missiles. Think back to your last adventure with a flat tire. You probably did not experience the incident as a problem created by your own thoughts. Or remember the last time you sat at your computer staring at the blue screen of death. Did you wonder how you had created this problem yourself? Unlikely. The same can be said generally of health, business, political and financial problems. To borrow a phrase from Hamlet, we often see our most pressing difficulties as "the slings and arrows of outrageous fortune." We are victims of an unfair assault, not perpetrators of self-inflicted wounds.

Do problems often call forth our deeper levels of thinking? Experience convinces me that serious problems forcefully

dictate a reflexive level of thinking required for short-term solutions. In real (as opposed to theoretical or conjectural) life, problems seem to have steel jaws, and we feel caught between their teeth. As we jack up the car, or search for system discs while pounding furiously on an unresponsive keyboard, we feel quite trapped. Exploding deficits demand sharp cuts, poverty begs for support, fallen power lines pray for resurrection. Too often, problems behave like vengeful totalitarian dictators. They will have their say and their way, no matter our wishes. This is the gut-level experience of problems within organizations, especially inside complex systems, true from the nuclear family to the major corporation or government agency.

Over the past 30 years, enlightened movements in learning organization theory (Society for Organizational Learning n.d.) and appreciative inquiry (Appreciative Inquiry Commons n.d.) have suggested that leaders think critically about problem-solving processes, calling for alternatives. As if turning our instruments back upon themselves, we have approached problems with problem-solving itself. The list of complaints against problem-solving practice is substantial and well-conceived.

Problem-solving seems to focus unnecessarily on deficits and needs. It tends to look backwards in time, seeking causal factors and agents. It becomes focused on blame, accountability and punishment even when these play little or no role in generating solutions. Problem-solving can be overly reactive and limited by immediate circumstances.

After all, knowing that you ran over a nail does not fix your tire. Finding the evil computer genius whose malevolent virus destroyed your operating system will not make it work again. Knowing that you ate too many frosted donuts will not unblock your arteries. This is familiar ground for practitioners of learning organization theory. Problem-solving is not the same as creating.

But Einstein's aphorism invites deeper analysis. What does it mean to suggest that our thinking creates problems? If the act of defining a problem creates an implied narrative about how the world is supposed to function, then the very process of perceiving a problem implies not simply analysis but a normative worldview. The deficit thinking at the core of problem-solving depends upon positing an optimal state. Comprehending a gap requires context, a reference to a complete system, an organic whole that is often unstated, undefined or tacitly assumed. The idea of a missing tooth assumes a complete set. A problem in parenting implies a better practice for parents. The blue screen of death presupposes a functioning operating system.

When we see our world as a set of problems, this approach brings a broad range of imagined systems and organic wholes into play. Our work then becomes focused upon restoring these systems to functionality or completeness, the way a middle-aged man might attempt through hours at the gym to produce a Ryan Gosling-like six-pack (with commensurate futility!). Our over-

appreciation of slender movie stars and athletes is what transforms a little flab into a problem!

But such background assumptions about optimal systems and organic wholes threaten to lead organizations to persistent stagnancy and even reversal of progress. Why?

We often employ problem-solving approaches even though the systems we imagine that we are remedying either don't exist or are woefully deficient. When a leaking dike becomes a sieve, plugging it is impossible. The systems that we attempt to fix are often inherently dysfunctional. Even on their best days, they should be scrapped rather than mended.

Consider a big, thorny existential example: the problem of pain. Google this phrase and you will find thousands of instances, likewise with the problems of suffering, evil and death. In the West, we tend to feel a deep sense of indignation about these problems, giving rise to countless projects and social movements aiming to "fix" what is broken. Conceiving of these conditions as problems suggests an assumption that real systems exist that are able to prevent pain, suffering and death. This mission animates our work: to restore these systems to functionality. We feel the urge to take the machinery of society to the shop and fix it!

But a few moments of sober reflection reveal that no such systems exist, or if they do, they are so weak as to be

ineffectual. Throughout human history, life has been riddled with pain, suffering and death. We can conclude forcefully and assuredly that these conditions represent the norm not only of human existence, but of all life. The painful truth is that our existing systems, biological and social, tend to produce these evils, not protect against them. Armed with this insight, we can be relieved of our fool's errand, to fix systems that exist only in our imagination. The systems to prevent pain, suffering, death and other pervasive evils often cannot be fixed because first they need to be created.

The world as we passively experience it does not have the capacity to factor in our wishes or intentions. It is up to us to construct ways of interacting with and organizing the world that work. We may find this thought to be extremely liberating, dispelling our sense of indignation and injustice. The world is not a broken system that can be returned to Walmart or Washington for a refund. Coming to grips with this reality is empowering. Knowing that there is no preexisting design already supposed to fix what is wrong, we are free to build whatever is required to make things as we would wish them to be. As we go about making change, nothing but our imagination limits our work.

Consider the effort to manage the widely perceived problem of money influencing politics. A problem-solving approach to this issue implies the existence of a system that is supposed to minimize the influence of money upon

political decisions. But as we step back and compare this theory to the system's reality, we see clearly that large pieces of the existing system serve the explicit purpose of magnifying the influence of money on political decisions; think of PACs, campaigns and parties. To approach the influence of money in politics using problem-solving narratives denies reality. It is tantamount to saying that a gun has a shooting problem. Problem-solving as a process can actually lead nowhere when we overestimate the existence or quality of the system that our problem definition assumes into existence.

When Einstein talks about the way that our thinking creates problems, and calls for deeper levels of thinking, he pushes us to transcend routine problem-solving processes. He invites us to explore the background assumptions that shape the way we define problems. We have the opportunity to go beyond the usual tools of appreciative inquiry, grounded in thinking about what works as a foundation for dreaming of what could and should be. Einstein taps into the core ideas that underlie appreciative inquiry and learning-organization practice. He suggests that by going deeper and changing our most fundamental thinking, we can bring forth entirely new worldviews. These new perspectives birth entirely new problem sets. Breakthrough innovation often does not involve problem-solving at all; rather, it rejects the terms of some problems in favor of others not visible within our existing paradigms.

Consider Apple's iPad, one of the most successful products in recent history. Over three million units were sold during its first 80 days on the market, and more than 14 million during its first calendar year. But does the iPad actually solve any problems that people using desktops or laptops were experiencing? A more provocative question: Does the iPad actually cause its users any new problems? Have you considered buying a keyboard for your iPad? The iPad is not a solution to problems. It is an entirely new product paradigm. It changes the nature of the problem set.

In another context, automobile emissions from combustion engines have caused air pollution problems for decades, prompting waves of increasingly stringent state and federal regulations aimed at promoting new exhaust-filtering technologies. Contrast this problem-solving approach with the development of cars that are pollution-free because their engines have fundamentally different designs. Fuel-cell technology is not a problem-solving response to pollution. It was invented more than 100 years ago using hydrogen, one of the most abundant elements on earth. A fuel-cell produces water vapor as exhaust. Imagine how the world would be different today if society had spent the last 50 years solving the problem set related to hydrogen fuel cells (or lithium batteries) instead of attempting to reduce pollution from combustion engines.

I will close with a personal example. When I was 20 (long

ago, in a galaxy far, far away in which I had a full head of hair), I played the title role in an Off-Off Broadway production of Hamlet. What most amazed family and friends was that I could remember so many words. The role is immense and of course Shakespeare's language is difficult. Many who saw my performance expressed disbelief in what they experienced as a tour de force of memorization. Those close to me knew that I did not have a photographic memory. How was this feat of remembering possible? I had done a lot of acting in high school and college, and had never felt the need to study a script. I knew from experience that memory of lines emerged naturally from rehearsals. I had learned not to approach a role as a memorization task. My goal as an actor was not to remember lines but to master the character, situations and emotions. If an actor understands what is happening with a character and stays in the moment, it is impossible to forget what to say on stage, because his entire universe is a reminder of what is happening. If you believe that you are the character, then you cannot forget your lines, because whatever you say is what the character says. I made countless errors in every performance, but because I stayed in the moment, inhabited the role and knew the language well enough to improvise with confidence in iambic pentameter, no one noticed. My errors were minor deviations from the script, but they were not departures from the character or situation. To me, acting never involved the problem of memorizing lines; it was a product of studying characters

and situations, more akin to learning how to play a game. I could make a mistake or be more or less entertaining, but I could never forget how to be myself. With this way of thinking, the problem of memorizing lines did not even exist!

The great innovators of our time have little interest in solving problems. What they care about is inventing entirely new systems of interaction—among humans and between them and their environments. These systems have their own unique goals and problems. All such human systems are imperfect, so there is no escape from problem-solving. But we possess a power deeper and greater: the ability to reimagine the world, calling forth radically different and novel problem sets. Through this power to reimagine we can trade some problems for others. We will never solve all of our problems, but we can invent better problems to solve. Human progress depends upon this unusual ability, rarer than problem-solving. As Einstein said, "I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world." Or as Shakespeare put it, "We are such stuff as dreams are made on, and our little life is rounded with a sleep."

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References

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