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ACCESS TO THE EXPERTS

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XP and Culture Change: Part II

Bold Leap Forward
Getting the business to accept responsibility and authority for the scope of systems (the major organizational implication of Extreme Programming) is reasonable and possible, and the results are satisfying and valuable.

Mission Impossible
Organizations don't want to change, and organizational suggestions from technologists will simply be ignored, no matter the scale of problems or the opportunities if those problems are solved.

"We have often failed to communicate the possibilities inherent in what teams can now accomplish in terms non-geeks can understand. "

— Kent Beck, Guest Editor

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opinion

getting good at it

Embracing Change: A Retrospective

by Diana Larsen

In Kent Beck's "Opening Statement" in the September 2002 issue of *Cutter IT Journal*, he promised that in this issue, a "real, professional change agent" — me — would comment on all 12 articles from both issues in terms of what the authors had done right and where they should or could have used a different approach. When I read that, I thought, "Oh, no!" (or words to that effect). How could I — and why would I want to — pass judgment on the experiences of all those authors when I've had no direct involvement in their encounters with organizational (or, in some cases, personal) change? The truth is I can't, nor do I want to. It doesn't fit with my philosophy of how people learn and change, and change is all about learning.

As a result, I have spent several days wrestling with how to write this commentary from my "real, professional change agent's" point of view. What I offer here is information about change and changing organizations based on a career spent providing support to others in the midst of managing a variety of changes in a variety of organizational settings.

My professional advice is to learn about change, get comfortable with it, and get good at it.

CHANGE IS

The first observation I offer is that change is not unusual or new. "In the Western world, the philosophers of science seem to agree that change is such a pervasive and immediate element of our experience that it could become the subject of thought only after the early Greek philosophers had been able to conceptualize the antithetical concept of invariance or persistence. Until then there was nothing that change could be conceptually contrasted with," write Paul Watzlawick and his coauthors in their book *Change* [10]. Change was the way of all life. Seasons, cycles, migrations. Change was and is constant. After the Greeks, however, the tendency became to view persistence or stability as the natural, spontaneous state of affairs. Thus, change became a problem.

My professional advice is to learn about change, get comfortable with it, and get good at it. This is not a message lots of people want to hear, having been thoroughly indoctrinated by the "desirability of persistence" camp. But change is here to stay. Today we are discussing how organizations or project teams can make the switch to XP; tomorrow the topic may be different. Whatever occurs, it is certain that change will be a part of it. With that foundation, let's move on to beginning to get good at it.

CHANGE MANAGEMENT

Change happens spontaneously for sure, but is it the change you want? In his book *Designing Organizations for High Performance* [6], David Hanna credits his friend Arthur Jones with saying, "All organizations are perfectly designed to get the results they get!" Then Hanna goes on, "For better or worse, the system finds a way of balancing its operations to attain certain results…. To get better results, you need to improve the design of the organization." Therefore, if you are not getting the results you want, intentional change to a new design is the only option, unless you're willing to settle for results you don't want.

If you are embarking on intentional change, then it must be well managed to ensure that it takes you in the right direction. Unmanaged change takes you in unpredictable directions — you may get new

results or the same old ones. In Lowell Lindstrom and Kent Beck's discussion of the Satir Change Model (and David Putman's in September), they note that organizations engaged in a change project will experience a stage of chaos. What happens in the chaos stage particularly, and what sets the direction for how the group moves through and out of it, has to do with how consciously and well the change is managed. People and organizations also get through poorly managed change, but the business outcomes in defect rates, productivity, market share, and so on are rarely those they had envisioned when the process began.

The energy for change is greater when it grows out of successful past experiences.

As a model for understanding the human dynamics during change, Satir's and similar models are invaluable. These models provide great descriptions of the bumpy journey through change, which some have likened to a particularly intense roller-coaster ride. In reading Neil Roodyn's article, I enjoyed tracking his team through their various resistances and expressions of chaotic confusion. His story stopped before the team experienced a clear transforming idea, although fortunately they had a few successes under their belts. Roodyn stepped up to actively manage the change at the team level through those first stages, and I fervently hope for their sake that they continued on into integration, practice, and a new status quo.

While knowing what to expect during the course of change is useful and necessary, it is not sufficient. You also need to effectively manage the change. Managing the change begins with a thorough familiarity with the conditions necessary for success, a definition of the boundaries of the organizational system you want to change, and a readiness assessment.

Success

In the September issue, Laurent Bossavit begins by defining unequivocal, complete success as "a thorough reorientation of a business culture such that the business in question markedly outperforms its competitors in a manner clearly attributable to the XP mindset." A tall order indeed. He ends the same article with a redefinition, "success is learning," which is a somewhat easier goal to reach. Putman describes his company's experience as "an unmitigated success for us; we've reduced our defect rate to a fifth of its previous level and improved productivity threefold." Nancy Van Schooenderwoert and Ron Morsicato say of their initial XP experience, "Thus began some of the most fulfilling work of our careers," but "although we concluded development with all the technical problems solved, our project was cancelled for business and marketing reasons."

Sometimes success is in the eye of the beholder, as in the story told by Mary Poppendieck and Ron Morsicato in the September issue. They write, "The message that Ron's team heard was that they had done an excellent job using XP when audited against a pharmaceutical standard. What their management heard was that the XP process failed the audit." Ken Schwaber looks for some markers of success in implementing agile processes, including whether or not it's okay for project managers and developers to proceed without everything defined; whether the team, customers, and managers see incremental results; whether the team is empowered (i.e., knows what to do and how to figure things out); whether there's a teamwork "buzz"; and more.

How will you define success? In my own work, I spend a good deal of my preparation time analyzing previous successes (as defined by those inside the organization). I look for their root causes and conditions, as well as for opportunities to replicate or expand them. The energy for change is greater when it grows out of successful past experiences.

Boundaries

Bossavit says his personal impact on two organizational adoptions of XP was "close to nil" and that he "failed to transform the corporate culture to a point where it could start making effective use of XP." My hope is that you don't try to take on an organizational system

single-handedly, or if you do, don't judge yourself too harshly. Roodyn confined his efforts to a single team, as did Van Schooenderwoert, Morsicato, and Kay Pentecost. Others have attempted to influence change in a single organization or even a larger system, like Dave Rooney, Matt Simons and Chaitanya Nadkarny, James Knox, and Putman. Organizations and larger systems require a collaborative approach to change, including anything from a team of change agents to the involvement of the whole system.

It's easy to be fooled into thinking that you are only trying to get this one small project team to adopt XP practices. However, much depends on the culture of the organizational system in which the team exists. Several authors commented on the fit between XP and the organizational culture. Bossavit suggests one quality needed for XP success when he says, "The kind of culture in which XP will thrive isn't one that can be achieved by top-down dictates." Putman asks, "Can a culture that is averse to teamwork, communication, and feedback adopt a methodology that has them as its core values?" (Probably not.) Roodyn's team led him to observe, "I realized the theory of XP wasn't the problem for them. Instead, they were struggling with the changes it was creating in their environment and expected personal behavior.… I realized the biggest thing they were lacking was the concept that XP is about the team delivering great software, not the individual or a group of individuals."

The extent to which a team is embedded in or independent of a larger system partly determines the complexity of establishing a change in process and behaviors such as using XP. As Lindstrom and Beck note, "Our experience introducing teams to XP is that it causes enormous pain and dislocation. Many organizations' change antibodies successfully repel the infection….Why isn't the XP fairy tale coming true?"

Readiness

Some of the answer lies in how ready a system (be it a team, organization, community, or, in the case of Simons and Nadkarny, a nation) is to change. We get hints from these articles about the level of readiness that exists. Bossavit argues that "the most crucial feature of any successful corporate culture must be a willingness to reflect upon itself, to assess whether it needs to change itself, and, if need be, to embark on such changes as it finds necessary." Schwaber notes that "if the systems [to be developed] are critical to the organization, particularly to help it stay alive, it welcomes Scrum." Knox has noticed that it is in the nature of organizations to minimize risk, "so the idea of introducing change to this process can be counter to an organization's philosophy." He goes on to illustrate the point with an example of alignment between the organization's intention (a move to customer focus) with values (support for communication, feedback, courage, and simplicity) and the desired method of change (adopting XP or another agile software development method).

Understanding as much as possible about the whole system in which your change will occur helps you to set your expectations about what might or might not be change ready.

Knox also notes that a change to XP is not as much a debate about philosophy or process (heavyweight versus lightweight methods) at the culture change level as it is a tug of war between control and empowerment or between technical orientation and customer or people orientation. To paraphrase: "It's the culture, stupid!" Get clear about what culture you are trying to change. Rooney notes another set of conflicting aspects of corporate culture, particularly in the IT world — development versus certification for deployment. Understanding as much as possible about the whole system in which your change will occur helps you to set your expectations about what might or might not be change ready. In Rooney's example, XP was readily accepted and adopted by the team and the customer, but quickness to market was negated by a ponderous deployment process.

When I approach a new change project, I ask a number of questions about culture, structure, reasons for the change, who is involved, and so on to ascertain the current level of change readiness, as that leads me to know what decisions to make next. In some instances, it means walking away from incongruence or from unrealistic expectations about what can be accomplished in a given situation. However, a system need not exhibit eagerness and enthusiasm for the change for me to be willing to tackle the project. I determine the chances for a successful change effort using the following formula from Richard Beckhard (considered by some to be the "father" of organization development), which he describes in *Changing the Essence* [1]:

C = (A + B + D) > X

Where:

C = the desired change

A = the level of dissatisfaction with the old status quo (What forces are driving this change, and how deep is the pain or attractive is the opportunity?)

B = the desirability of the proposed change or end state (How clear and compelling is the vision of what could be?)

D = practicality of the change; minimal risk and disruption (Are the first steps clearly defined and relatively easy to take?)

X = "cost" of changing (a.k.a. resistance)

Many change theorists have drawn parallels between the losses associated with change and other kinds of loss that lead to grieving.

THE BIG "R"

Conventional wisdom maintains that resistance is an accepted fact of change. Lindstrom and Beck state, "Resistance to change is a natural human reaction." But why? Often, inexperienced change managers get busy trying to "convert" the resisters with rational arguments: "But don't you see? There will be lower defects, fewer change requests, fewer bug fixes, higher productivity, happier customers…," ad nauseum. I find it more useful to remember that, for many people, the impending change may imply the loss of something in the status quo that they value highly, and/or change might move them too far out of their comfort zone. Why would we expect them to pay that high a cost without a fight?

Schwaber notes that a move to agile processes requires potential changes in career paths, office arrangements, roles, customer relationships, project accountability, and ownership. Many change theorists have drawn parallels between the losses associated with change and other kinds of loss that lead to grieving. Make no mistake; at the human level, change is emotional as much as or more than it is rational. I find that this irrationality can be difficult for highly intelligent, sophisticated — and, above all, rational — computer programmers and technology managers to accept.

William Bridges in *Surviving Corporate Transitions* notes that losses due to organizational change characteristically fall into six categories [3]:

1. **Attachments** (including not only relationships, but group membership and sense of connection to something of value)
2. **Turf** (both physical territory and fields of responsibility)
3. **Structure** (patterns of authority, policies, schedules, physical arrangements, processes)
4. **The future** (the disruption of our expectations for what will come next in our lives)
5. **Meaning** (apparent in the persistent question "why?" or a sense of lessened competence)
6. **Control** (the sense that we have a choice about what happens to us)

Each of these types of loss can hit one person harder than another. Note the parallels with some of Schwaber's observations:

- Impact on career paths = loss of our idea of the future
- Impact on office arrangements = loss of structure and/or turf

- Impact on roles = loss of turf, attachments, and/or meaning

Regarding attachments, Lindstrom and Beck write, "Because moving to XP requires changes to the social relationships of work, it can't possibly be easy — and it isn't." In this case, they have crafted a masterful understatement. Part of the readiness assessment consists of evaluating the depth of attachment to the status quo and the cost in individual and organizational value to making the change. If both are high, then A, B, and D from the formula above must be high enough to compensate. If A, B, and D are not, then it is the job of the change agent to determine whether there is a worthwhile chance they can be strengthened sufficiently to become in total greater than X. In his story, Schwaber tells us, "Customers and project management chose not to fully implement agile methods. They liked the idea of daily Scrum status meetings, but they were still comfortable and too invested in traditional processes to make the radical change demanded by agile processes." In short, the cost was higher than they were willing to pay.

IMPLEMENTING CHANGE

So, let's assume we've done the readiness assessment, and we think we have a good chance of success. Then what? Well, there are numerous approaches and methods for managing change. In my own library, I stopped counting when I got to 29.[1] Our authors also mentioned a few. New ones seem to be published weekly. How do you choose an approach? The answer is, it depends on the organization and the point from which you start. There is still much to do before finding an XP coach and plunging into the planning game.

Borrowing from John Kotter in *The Heart of Change* [8], first, take some steps toward increasing the urgency for change; pump up the volume on item A in our formula. If you are choosing to move to XP because you need to be quicker to market with your software product than your competitor, let the programmers and testers feel the heat with journal articles or posted diagrams. Lindstrom and Beck refer to Shoji Shiba's Seven Infrastructures of Mobilization [9]. One of the infrastructures is promotion. Make sure everyone knows the reasons and urgency behind the change effort, and keep it up. When you are implementing change, there is no such thing as too much communication.

Second, know your friends. Kotter suggests convening a team to guide the change. Beckhard introduces a useful commitment chart to determine the level of commitment needed by key players and where they currently stand [1].

Third, be clear on your vision for where XP will take you and, again, communicate it. Did I mention communicate it? Develop a metaphor and language for your change project and use them. Norm Kerth and I once worked with a software team that used the metaphor of shifting their processes from building elephants to building mosquitoes. Elephants are big and hard to miss, but they lack flexibility, and we think of them as moving deliberately and relatively slowly. Mosquitoes, on the other hand, are also noticeable — very noticeable. However, they are small, quick, agile, and very effective at what they do. The team discovered they were building elephants when they really needed mosquitoes. When the team grasped the mosquito metaphor, they knew more about what they needed to do.

When you are implementing change, there is no such thing as too much communication.

Fourth, Shiba, Kotter, and most others agree that empowering the team (or those most directly affected by the change) with coaching or training in new skills is critical. And, by the way, communicate.

XP has an advantage over many change efforts in that fast iterations build in the feedback loop for short-term successes. While floundering through the chaos, nothing bolsters

[1] Eighteen of these are listed in one book, *The Change Handbook* by Tom Devane and Peggy Holman [4].

the participants in a change effort quite like the sense of progress from a quick "win." Shiba calls this "diffusion of success stories." It's a great way to influence the wider organization, if that's a goal. Anthropologist Clifford Geertz defines a central aspect of culture as "the stories we tell ourselves about ourselves" [5]. In that case, stories of XP success reinforce the desirability of change.

When implementing change in any project or development team, I rely (not exclusively, but regularly) on a few techniques mentioned by our authors. Van Schooenderwoert and Morsicato, for example, looked for ways to leverage existing practices that were consistent with XP, which I think is a good tactic. Poppendieck and Morsicato talk about the theory of "punctuated equilibrium," explaining that "disruptive technologies … only grow big in a small pond." This strategy is also known as starting with explicit and visible pilot projects; organizations often successfully install XP by starting with a pilot group. I also start all new project teams, XP or otherwise, with a chartering process in which specific understandings and agreements about the project are communicated, including management tests (e.g., what business objectives will the project serve, and how will success be measured?), availability of resources, key roles, expectations about deliverables, and more.

Lindstrom and Beck provide a good, though not exhaustive, list of things to do at each stage in the change process. To find more ideas to expand your repertoire, check out *Managing Transitions: Making the Most of Change* by William Bridges [2]. Bridges' three-phase change model of Endings, Neutral Zone, and New Beginnings maps closely to the Satir model. As Lindstrom and Beck recommend, installing organizational support for the change early on and continually monitoring its effectiveness and status gives critical assistance to those who find themselves wandering in the chaos stage.

Retrospectives are one of the best organizational learning tools I know.

I definitely agree with Lindstrom and Beck when they advise, "Hold a half-hour retrospective every iteration to propose and evaluate process experiments. Hold two-day professionally facilitated retrospectives every quarter" *and* at project end. Don't wait until the integration phase, however. Do it now to lay the groundwork for the change. Retrospectives are one of the best organizational learning tools I know. Get Kerth's book *Project Retrospectives: A Handbook for Team Reviews* [7]. Find an experienced retrospective facilitator, establish a working partnership, and, to build this capacity in your organization, identify apprentices to work with the facilitator. Do it. Now.

MAKING IT STICK

How do you make the change stick? Sometimes forces beyond your, or anyone's, control take over. Poppendieck and Morsicato report, "The project was cancelled, a victim not of the audit but of the economy and a distant corporate merger." Schwaber says, "I've had limited success spreading Scrum beyond the initial projects at these IT organizations." Once the "wicked"-ness was relieved, there was "no compelling reason for [the organization] to commit to the degree of change required by organization-wide implementation." As a professional change agent, I'm sorry to say that this does happen. A lot. New managers come in with new ideas, and the bright shiny process redesign completed just six months ago is trashed. Market forces change. Good process can't save poor business decisions. Stuff happens. *Change* happens. It's the way of the world.

But sometimes it's only our short-term view of the world. Regarding his organization experience, Knox tells us, "The return was not immediate — we were warned that change would take several years, perhaps a decade. Now, 10 years later, the workers have a different attitude, customer satisfaction has improved, and profitability

is better." He goes on to say, "Initiating change within an organization is extremely difficult. Fundamental change is not achieved quickly; it takes years." (Aw, shucks! But I want it *now*!) Rooney uses the analogy of "baby steps" to note that, through his frustration with the certification and deployment process, he still sees the beginnings of change. Change can require time and attrition for old ideas to fade and new ones to take hold. And, if you look too soon, you might miss it or misconstrue events. Putman points out the need for patience with change efforts as he maps out six months' worth of defect tracking and shows its consistency with Satir's model. He notes that if you had made an evaluation of success or failure after three months, you might have come to an erroneous conclusion.

INDIVIDUAL CHANGE

At the individual level, Pentecost gives us a clue about living with organizational change. In discussing emotional intelligence (EI), she says she persevered with learning how to make appropriate commitments for herself and her team "because I couldn't give up. I had to believe it was possible to do what I wanted." Ben Kovitz offers a schema of personality all his own, yet his point underscores the EI skills of self-awareness. Change agents and those involved with change who have the personal and social skills of emotional intelligence will show more resilience in the face of a shifting environment.

Researchers, including one of my business partners, Sharon Buckmaster, are only beginning to study the role of resilience in individuals coping with change. The definitive study has not yet been done; but there are strong indications that more resilient individuals adapt to changes with more grace and flexibility. If EI skills that boost resilience can be learned, that adds another tool to the change toolbox.

Referring back to the change models of Satir and Bridges, it's also useful to remember that individuals move through the phases at different paces depending on a number of factors — how early they were introduced to the change, how resilient they are, and how many other changes they are coping with at or away from work, among others. Change leaders often express impatience when the rest of the individuals involved don't "catch up," hanging out still in chaos when the leaders are already in practice or even the new status quo. "Can't they just dive into XP because I've told them it's great?" They don't realize the significance of the additional time leaders have had to ride the roller coaster and to overcome their own resistance. Allow for individual differences in moving through change. Trust me, you'll save yourself some heartburn.

Allow for individual differences in moving through change. Trust me, you'll save yourself some heartburn.

CONCLUSION

Various metaphors apply to the organizational change environment of the last few years and those ahead. One is "turning the battleship" to evoke the idea that, in large systems, often the intention and momentum for change are occurring, even when we don't see much movement in the compass. Paradoxically, another is "permanent whitewater" to indicate that the environment within and around our organizations is turbulent and ever changing.

To "stick," an organizational change to XP practices must be well managed and embedded in the organizational system. It helps to have someone along for the ride who knows change management as well as you know software development. Getting change to stick permanently is ultimately a futile effort; it will always be supplanted by the next change. But maybe, just maybe, you can get XP in your organization while it is still leading-edge and a competitive advantage. You can do it by starting with a realistic definition of success, describing clear organizational system boundaries, and developing a plan for working with your organization's

level of readiness, clarifying the urgent need for XP and identifying your change partners.

Success is learning — just ask Bossavit. *Change* is learning, and learning leads to change. Take a moment. Think about the last organizational change you experienced or led. What worked? What surprised you? What puzzles remain? Did you learn anything to make the next time easier? Build on those reflections.

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Kent Beck, Guest Editor

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