UNLearning: the New Skill of the Future

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Wayne Hodgins, strategic futurist and "corporate evangelist" at Autodesk, brings his keen foresight and thought-provoking perspectives to his podcast series Off Course – On Target.

In this podcast, Wayne shows how our inability to UNlearn prevents us from taking full advantage of new innovations and technologies—making it the single biggest obstacle to our future productivity and performance in a rapidly changing world.

WAYNE HODGINS: Wayne Hodgins: Hello, and welcome to another episode of "Off Course – On Target", where unexpected paths lead to great discoveries.

I'm your host, Wayne Hodgins, and I would like to talk to you today about UNLearning, the new skill of the future. I'm going to explain what I mean about this new term "UNLearning," and I will give you some stories, some examples, and suggest ways you can adopt this strategy and put it to work for you and your organization.

First of all, it is real important to me that you understand and not confuse UNLearning with forgetting. You can trust me on this one: forgetting is something that comes very naturally with gray hair; you can just ask my daughter about her dad's "senior moments." But quite seriously, UNLearning is about consciously getting rid of previous habits, thinking, practices, and mental models and approaches, so that entirely new ones can replace them.

So let's take a closer look at this new skill of the future I'm calling "UNLearning."

I get a lot of my concepts and ideas from talking and listening to others, and in this case, UNLearning comes from a conversation I had with Dean Kamen several years ago. Dean is an inventor, an entrepreneur, and a tireless advocate for science and technology.

He is probably most popularly known for inventing the Segway scooters that you have seen or read articles about, but better examples of his brilliance, and his focus on enhancing the quality of life, are things like the RoboChair and the iBOT mobility system. This is technology that enables what was otherwise known as a wheelchair to now be able to do things like climb stairs, and also (more importantly perhaps) to put their occupants at eye level with the rest of us who are standing on our feet, so that when they are having a conversation, they are truly at eye level. This ability makes a profound difference in their lives and in their interactions with others. Or his HomeChoice dialysis machine, and a long list of others that you can check out if you go to his Deka Research Web site at www.dekaresearch.com/.

Dean is just fundamentally one of the brightest people I know. Autodesk and I have had been involved with him for a long time through his competition for young engineering students. His organization is dedicated to motivating the next generation to understand, use, and enjoy science and technology.

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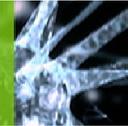
Several years ago, Dean and I were both at a conference—he and I were speaking together, and talking a little bit beforehand—and he happened to bring up an idea that he thought that young people and children are probably not necessarily faster or better learners; they just have less to UNLearn. His comment really struck me, and it has stuck with me ever since. In fact, I have been working at developing it since that time, and it is what I would like to talk to you about today.

But first, let me interject here with a bit of a joke, frankly, but something I hope will serve, in a silly way, to illustrate seriously the point I am trying to make here.

It's an old joke about a lumberjack…an older lumberjack, so it's an old joke about an old person. This lumberjack was retired, had his own property with forest and trees on it. He wanted to put in a new building, so he needed to clear out a small space, which required removing about 20 or 30 trees. And he figured, "Well, heck, I'm an ex-lumberjack and this isn't going to be a problem, but I think I will treat myself to some new tools to get the job done."

So he went down to the hardware store and talked to the fellow there, and explained what he was trying to do, and how many trees he needed to cut down. The lumberjack asked him what the best and greatest tools for the job were today. The hardware store fellow takes him over to the chainsaw section and shows him the models, and they pick out a really good one for the size of work he's going to do, and make sure he has got all the equipment for it. He goes home and gets it all set up.

The lumberjack goes out to the trees, takes his nice new saw with him, and gets to work. Well, he works all day long. He just really, really sweats, and has to work harder than he can ever recall working. He figures maybe it's just his age, but at the end of the day he has cut down one tree; so he knows there is something wrong. He could have done this much faster and much better by hand when he was a much younger fellow, but he doesn't figure it's just age issues; there is something wrong with the tool.

So he takes it back to the hardware store. He tells the guy at the store he worked all day and got one tree cut down. The hardware guy looks at the saw, sees it's nice and sharp, can't see anything wrong with it, but with no questions asked, gives him a brand new one out of his stock, and says, "Well, you take this one home and I'm sure you will be fine." The lumberjack tries it out the next day. Same effect: works all day, cuts one tree down. He goes back to the hardware store, explains the situation.

The guy at the hardware store can't figure it out, so he says, "Why don't we go out back. I've got some trees and logs out there that we use for practicing on and for demonstrations, so let's go give this a try and see what is going on here." So they go out back, and the hardware salesman takes the chainsaw, grabs the pull, and he gives it a yank and starts up the motor. The lumberjack guy goes, "What's that noise?!"

Well, you can see the problem here. The lumberjack just didn't understand the difference between handsaws and chainsaws. And it may be a silly kind of a story, but as I will show you with some other examples, this is an all-too-real example, and something that we are going to see much more of if we don't make a choice to do some changes.

So UNlearning is clearly a simple concept; but simplicity belies how powerful and profound it is, because this is becoming not only the new skill of the future, but a new imperative. It is the imperative, in my opinion, for the survival and success of all organizations, nations, and individuals. "Now whoa," you say. "Wayne, Wayne, take a breath. Take a Valium. You have got to be kidding me. How and why can you think UNlearning rises to this level of importance?"

Well basically, I think so because this is what human performance and productivity is dependent upon—going forward—because change is becoming exponential. Things are happening faster;
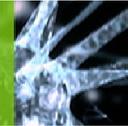
the changes are bigger; the changes are more disruptive. And because of exponential change, the situation requires exponential learning, which requires an equally exponential amount of UNLearning to get rid of our past. I'm going to show you now, and in future sessions, how this is inability to UNLearn is very seriously getting in the way of us gaining, and being more productive, and taking advantage of innovations. Fundamentally, it is because our human behavior is the single biggest obstacle I can see to our being able to benefit from innovation, and to our future productivity and performance.

So let's take a look at some simple examples today, and then I will dig into this in much more detail in future sessions.

A simple example might be this: if you were to install a brand new, major version of a piece of software that you traditionally use a lot—maybe a word processor, a spreadsheet, or your e-mail system—and imagine this is not just a some minor update that fixes a few things and introduces a few new features, but a whole new system that really uses a different approach.

How would you use this software? Just be honest with yourself and look at your past behavior. You have gone through these kinds of upgrades before. Wouldn't you notice that you maybe—or if you think about it now, at least—you probably, like most of us, tend to use the software like any other technology or tool, the same way you first learned how to use it.

Think, for example, how in the very early days when people were using word processors, those devices were really just glorified typewriters. Making the change from typewriter to word processor was really not that difficult, although one simple example of the need to UNLearn was that many of us at the time—I went through this process myself—had the habit of reaching up and physically flicking the carriage over and moving it from side to side. UNLearning this habit of moving the carriage was something that took a lot of us a long time. Eventually we were able to use word processors with ease, making use of the automatic line and word wrap, which was part of word processing technology.

The problem is that a word processor is not just a better typewriter. It is a very different kind of a tool and technology, one that enables us to do more things and be much, much more productive as a result. But here is the result: if the technology is capturing and enabling entirely new processes, then it is only going to work to the degree that we implement, not just the technology, but the new processes that we are able to apply with this technology. This newness of our processes, our newness of an approach to thinking about the problem, is the source of true innovation and change.

Or, in a different context for UNLearning, think about the difference between teaching somebody who is completely new versus somebody who has some past experience. I think you will agree, that it is much easier to teach someone who is a true beginner with no past habits, no past knowledge, no preconceived notions.

Perhaps this idea how incredibly fast children learn keeps coming to mind. It is certainly true—I'm not arguing with that. But is it really just an issue of chronological age, or is it in fact something like I'm suggesting, that in this case they have less to UNLearn, and therefore if we could find a way to unlearn things, we too could be as good at learning as young children and infants are.

I don't think it is a matter of just being young. For example, think of it in another way. There are situations where there is the absence of previous practice. For instance, in developing regions or countries, there is this case and this idea of leapfrogging. Leapfrogging is tied to UNlearning because these people don't have the handicap of any prior knowledge or practice. Leapfrogging is where you either get so far behind, or never even get started with the implementation of something—let's take telephony, for example.
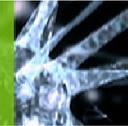
If we have regions in the world—and we do, we have large ones with huge populations who have never had any version of telephony, no telephones of any description. And yet now, what is starting to happen, as telephones are being introduced into those places, people are not bothering with wired telephones. They are, in fact, not even bothering, in many cases, with cell technology or cellular phones. They are jumping right over all of those and going straight to mesh networks, with Wi-Fi and other forms of technology, enabling them to have the same capability of talking to one another, but doing so in a very, very efficient and effective manner, at much lower costs.

The point here is not the technology, but the fact that they are able to do that very quickly, very easily, because there is no prior infrastructure, no prior practices, and no prior learning that they have to get rid of or is standing in their way. They can immediately, and very quickly and adeptly, adopt this new technology.

Imagine trying to do this in a situation where you have just finished going through this very long and expensive process of moving from wired telephony to cellular. You are going to be very reluctant to make a change, to move to something like grid networks and wi-fi, or any other technology, even if that system promises enormous gains and benefits. It is going to be a very big challenge to get rid of those past behaviors and that infrastructure, and move on to a new system.

And I'm not suggesting that we move to the new and different for the sake of it; but if we have examples where a change like that would introduce whole new capabilities that would dramatically improve the fundamental things you are trying to do (like communication in this case), then being able to do that quickly, and make that change quickly, is going to be paramount. It is fundamentally required to make those kinds of changes.

So one of my stranger predictions, at least to some, is that I think we are going to see in the future that the majority of innovation is going to come from some of the most unlikely places, such as underdeveloped and underserved areas and regions of the world.

Examples such as these will show how prevalent the need for UNlearning is; but I think it is equally important to note the scale we are talking about here. In particular, I would like to suggest that if we looked around, we would see just how radical the coming change is.

Take a look at the rate of new information—simply some of the numbers you see, for example, with the growth of the Web. The amount of information, and the billions of pages of information that are showing up there on an almost daily basis is increasing exponentially.

Take a look at the rate of new discoveries that require complete rethinking of past proofs and beliefs, such as the recent discovery that the universe's energy, and rate and speed of expansion, is speeding up, not slowing down. This discovery is causing complete rethinking of what we thought we knew about the past.

Take a look at the rate of new technology being introduced on a daily basis. This requires a whole new set of approaches and techniques that we need to develop. I'm hoping you can agree and start to see that this rate of change is not only increasing—which we kind of have always sort of known it was going forward—but in fact, if you look at it, indeed if you plot it out mathematically, this rate is increasing exponentially.

That is to say, it is going up both in frequency—how often—and in amplitude, or how big the change is. This is related to the exponential change topic that I will cover in a future blog that I will post for you. This exponential rate of change means that we are going to have these kinds of experiences more and more frequently, with greater consequences if we don't adopt them.

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We are all facing these dilemmas—not just as consumers, but as suppliers and developers; and this makes it an imperative, but it also makes me optimistic that the larger this problem is, and the more it is shared, both globally and across various domains—which I absolutely am convinced it is—that I am very much more optimistic that we are going to find these shared solutions, because we have got many more of us working on them, and we have much more benefit and advantage to those solutions being found. I think we are seeing that happen already.

Now the need for both massive degrees of UNlearning and new learning in order to continue to this advanced benefit from innovation, and to improve as people, and as organizations, and society, is why I am saying something as bold as the fact that this is the skill of the future, and that this exponential change is upon us. And so to be successful now, and ever more so in the future, we need to become very skilled at UNLearning.

Well, I'm going to be as bold as to think that I have at least done something to suggest, or have you at least believe a little bit, that this idea of UNLearning is important, and something you want to learn more of. So let's talk a little bit more about how you might become an UNLearner, or get good at UNLearning itself.

We'll take the letter "B" today, because I am going to suggest that there are three things for you to keep in mind in this case: believe, be aware, and be wise.

By "believing", I just want you to fundamentally believe that UNLearning is possible. I am hoping that with some of the examples I have given you today, you are going to be able to look around and see other examples around you. Let's agree that this is not a matter of age, and that you really can teach a dog new tricks, even if that dog is you—or your boss, for that matter—and that these are learned behaviors, and therefore if we can learn them, then we can UNlearn them, or at least it is reasonable to think we can. And we can replace them with new learning as a result.

I would be equally interested, and very concerned that you understand or believe that this is not just knowledge we are talking about, so it is not just facts and figures that we need to get rid of or forget. As I said at the beginning, this is not about forgetting. This is about consciously getting rid of skills and abilities. It applies just as much to those things, and in fact, they are probably even more important, and as a result somewhat more difficult to change.

"Be aware", the second one I mentioned to you, is not about having no habits or assumptions, but knowing that you have them. Be aware of these habits and these behaviors, and this unconscious sense of the past that you have, and how that sense is getting in the way of your changing. Most of these things, especially the big ones, and the ones interfering with the improvement of performance, are unconscious things.

So we have a group of things that are not only for us, by the way, as individuals, but also things which are sort of group or institutional behavior or habits.

This is also sometimes characterized by solutions searching for a problem—the instance where we keep a solution in place, even though the problem is gone. We've never even noticed the problem has already been solved or no longer exists. We've just kept the solution in place because that is what we have always done. "It was written in the manual." "My mom always did it that way." Whatever the case may be, these are very ingrained, and we're probably not even conscious anymore that we are thinking or doing them. So "be aware" is a really critical factor.

Lastly, "be wise." It has often been observed that wisdom is about knowing the difference between the things you can change, and the things you can't. So if we are going to look at UNlearning, it is really critical to distinguish learned behaviors and our more hardwired abilities, our personalities, and our traits.

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For example, a common form of team performance improvement involves the recognition that some people are naturally fact finders and some are quick starts. You don't change these things. You don't try to change people from one to the other. They are somewhat naturally this way; one could argue that they were born this way. It just makes them different, and understanding those differences is the thing you want to go after, to make them more effective so you can have them both on the team, and incorporate and leverage these things as features, not as bugs.

You just want to be careful to not use this as an excuse to not change, however—the difference between "can't" and "won't," that is "I'd really like to change, but I can't. I was born this way." Whereas if we start to look at things that are actually behavioral, things that we have learned, there is reason to believe that they can be changed. Or, just as my wife reminds me, she is not looking for perfection, thankfully, just progress; and so we have agreed that I am a constant work in progress, but happy to report that progress has been made after our 20 years together.

So this notion of believing it is possible, being aware, and being wise—of knowing the difference between what can be changed and what can't—I think are very fundamental to getting good at UNLearning.

Lastly, I'll leave you with a sort of simple, two-step process for UNlearning, because it really is that simple to summarize all these things together. The first step, as I have suggested, is an awareness of these past learned behaviors and mental models—the things that need to be UNLearned. The second step, of course, is consciously replacing these, and being aware of what the new behaviors are going to be. So of course you might recognize this by another term, a real simple one, called "change."

However, the good news is that research shows that it only takes about three weeks of continuous use to replace an old behavior with a new one. Not a real long time. And if these benefits are as fundamental, and as large, and as continuous as I am suggesting they are, three weeks is not a long time to do that.

So set your expectations right. UNlearning is going to be uncomfortable. This change, or any kind of change, is typically somewhat painful—at least, pain in the sense of being uncomfortable, because it doesn't feel the way it used to feel. We got used to it. It was nice. We didn't have to think about it a lot, and that is why we continued to do it. All of those habits are good things, but just recognize that if you're going to take on this UNlearning, you're going to try to replace an old behavior with a new one, and there is going to be a period of time where it is uncomfortable.

But don't quit too soon. It needs to be done consciously and consistently for duration. But typically it takes only a few weeks before you will start to see the benefits, and start to see the new behaviors, and they become unconscious and you don't have to think about them so much.

So, to conclude, just a couple of simple examples you can do easily to get familiar with this notion of being uncomfortable, this idea of what change is like and how good you are at it, so you can get better at doing it.

Try something as straightforward as wearing your wristwatch on the other hand. Just do it for a little while, and notice a couple of things. Notice immediately how much you suddenly are aware you are wearing a watch; whereas probably, like most of us, if you are used to wearing one anyway, you don't even know it's there. See how long it takes for you to get to that same point when you put it on the other wrist. How long until you forget it's there? How long until you start looking at the other wrist, just naturally, when you want to look at your watch and see what time it is?

Or try the old test of crossing your arms or clasping your fingers in front of you—when you interlock your fingers together and put your hands together. We all have a natural way of doing

that; either our right hand is on top of our left hand, or our right thumb is on top of the left thumb. They argue that sometimes this is supposed to tell you which side of the brain you think on more often. But my purpose here is just to fundamentally look at this habit you have of consistently crossing your arms or clasping your fingers the same way, with the same thumb or arm on top.

And of course, you know what I'm going to suggest: do it the opposite way. Try doing that consistently. I mean, we're always crossing our arms or folding our hands, so you're doing it all the time anyway. Start to pay attention to it—that conscious thing again—and start doing it the opposite way. You'll find the same thing: it feels really weird. It doesn't feel right. The other way just feels natural—because it is. But try doing it differently just for the pure sake of it. How long does it take for you to be able to do that unconsciously?

Last thing, let me just suggest that you do some things, like having a look around, and maybe go on what I call an "UNLearning hunt." Look for habits or ways of thinking that you can identify, that need to be UNLearned because they are getting in the way of new learning, and skills, and knowledge. What are some of your ways of being habitually tied to this past that you need to UNLearn, and what are some of the new ways that you could develop to replace them?

Or, maybe look around at the others on your team and organization. What organizational or institutional habits can you identify that are getting in the way? How can you look at some of these solutions in search of a problem that I mentioned to you earlier? Past, process, procedures—things that are very much institutionalized. "This is the way we do it." I'm not suggesting they are all wrong, but have a look at those that were set up for solving a problem that you really don't have anymore, and that therefore can be gotten rid of so that you can replace them with new problems and new solutions.

Have a look at being an UNLearner yourself. Hopefully you don't just listen to these podcasts, but you think, and you reflect, and you act differently as a result. The best learning is, as usual, an experiential learning, and true learning and UNLearning causes change. So try practicing leadership by example. Be an UNLearning leader. Show others by your example how you have been able to significantly increase your performance and productivity—and I certainly hope you will by using some of these tips and some of the tricks you will try in the future.

Better still, I suppose, this is a chance for you to also show how you can be off-course, and yet right on target.

Well, thanks for listening and learning with me. I'm Wayne Hodgins, and this has been another episode of Off Course, On Target; and I hope that this unexpected path of UNLearning leads you to some great discoveries.

Be sure to check out the other podcasts and the content on the blog, especially this very related topic about being tied to our past, which I am going to cover in a future session. I hope to be back soon, and back often.

To hear this podcast, please visit
http://waynehodgins.typepad.com/ontarget/files/ocot_unlearning.mp3.