

SPEAKING FROM EXPERIENCE

"PTOLEMY, DARWIN AND CHANGE"

Guest Commentary by
BUCK BLESSING

You're probably wondering what a second century Arabian astronomer and a 19th century naturalist have in common with the Training and Development profession. One thing we have in common with Ptolemy and Darwin is that they, like us, made a lot of assumptions to explain their ideas. And like us, they've been burned! Take Ptolemy for instance . . .

Claudius Ptolemy was an astronomer who lived around 200 A.D. One day, while observing the motion of Jupiter, he noticed a slight perturbation, a little glitch in that motion. He thought about that for a while and said, "I'm going to go ahead and assume that within this huge motion of Jupiter there's an irregular motion." In effect, he speculated a wheel within a wheel, an epicycle as they called it then. Well, time went on. As it did, Ptolemy began to notice that there were more perturbations, more glitches, and so he added more wheels. Finally, it took about 11 of these epicycles to explain Jupiter's motion. Nevertheless, it worked. It had THE advantage — it worked. And so, for centuries, Ptolemy's version was the answer. In fact, the book in which he wrote most of his theories was called *Almagest*, which in Arabic means "the greatest of books."

Fourteen hundred years later, in about the year 1600, another astronomer was observing Jupiter and he found yet another perturbation. But rather than simply add



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another wheel, that astronomer decided to review the assumptions people had lived with for all of those centuries. One of Ptolemy's assumptions that this astronomer wanted to review was that the planets, among them Jupiter, orbited the earth. This man, Copernicus, decided to change that assumption. He decided to assume that the planets orbited the sun. This, he believed, could better explain the motion of Jupiter. And it did. And 14 centuries of epicycles, perturbation, special wheels within wheels and other gimmicks were gone.

This astronomer, this Copernicus, with one change in perspective, had completely altered man's

view of the world. This better, more correct assumption stimulated Newton's work on gravitation and Einstein's Theory of Relativity.

The Copernican system profoundly changed man's view of man. Man was no longer at the center of the world. Instead of being on center stage, man became a member of the audience. And we're still trying to adjust to that idea!

But what about Ptolemy? Well, his wrong assumption *literally* kept him spinning his wheels all his life. And the same thing can happen to us because we, even more than Ptolemy, operate in a field where there is little "hard" data. With empirical data unavailable, we build entire systems off assumptions . . . assumptions about people, their needs, their responses, their interests, etc.

In our profession, we have developed our own *Almagest*. That is, a body of theories and assumptions about personal growth that every day requires more and more wheels within wheels to make our systems work.

For example, who isn't revising their performance appraisal system? Theories and assumptions about individual development are numerous. Any three of us usually hold at least four views. Look at the issue of feedback. Some say give feedback immediately, others say think it through, marshal your data, then give feedback. Others believe giving feedback is

simply a waste of time. The ink isn't dry on a manpower plan before it needs changing.

Most theorists in personnel say, "It's a failure of execution." More training is needed, better forms should be devised and so it goes. But I don't believe it's a failure in execution; I believe we, like Ptolemy, are trying to explain our world using a wrong assumption! An assumption so basic to our thinking about personal growth that we never question it. It has become a "fact of life." We have assumed personal growth is gradual; that people slowly improve over time; that development is constant. In effect, that development is a gradual process.

Gradual change or gradualism is an assumption we have made about the rate people change. Any statement we make about the rate people change is of critical importance. It affects our expectations of people, the kind of personnel systems we design, and how we prepare managers to develop their people. If you assume development to be a gradual process, then the annual performance review makes good sense. People are slowly changing all the time; there is nothing wrong in a periodic look at progress. If people are gradually changing, a manager can give feedback and expect improvement in performance. If personal growth is a story of slow, continuing, constant progress, working manpower plans can be developed.

Development is Punctuational!

But what if change isn't gradual? If that critical assumption is wrong, then our view of the world is distorted. Our actions are less effective. We can't make good predictions. Systems which depend on linear change won't work very well. And isn't that the reality in our organizations today?

I believe the assumption that development is gradual is wrong! Personal growth is episodic. Change is not gradual. I believe development can best be described as long plateaus of no change punctuated by a rapid change to a new level. Personal growth is better described as an uneven set of stairs rather than as a straight

line. Development is *Punctuational!*

So now I've provided you with a competing assumption about the rate people change. Is it gradual? Is it punctuational? How do we decide?

I believe there are two compelling arguments in favor of punctuational change. The first is yourself, the laboratory of your own personal experience. What incidents contributed most to your personal growth? Or were they triggered by some occurrence? Did your improvement occur in a flash? Have you ever experienced learning plateaus? Think about building a skill in some sport. You practice and practice without much improvement. Then one day — bang! — you're operating on a new level. Remember how you learned to ride a bicycle?

Besides your own life experiences, there is support for punctuational change in the sciences. And this part of the story is Charles Darwin's. You see, Darwin, like Ptolemy, made a wrong assumption. He had to answer two questions in explaining the origin of the species. One was the mechanism for change, the other was the rate of change. He assumed the mechanism to be natural selection. And research has confirmed that assumption. He also assumed the rate of change to be gradual, and here he was wrong. Stephen Gould, author of *Ever Since Darwin*, writes, "When Darwin adopted gradualism as his firm view of evolutionary change, he argued more from tradition than observation."

Contemporary biologists believe evolution occurs in sharp discontinuous steps. T.H. Huxley said that Darwin saddled his theory with an "unnecessary and false assumption" about rates of change. Darwin's error is important for us, since it was his notion of gradualism which influenced our theories of personal development. It happened this way: Since research on the human condition is difficult, we often look to science for help. We make the assumption: human life imitates nature. In many respects human behavior does imitate na-

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ture, so this is a reasonably practical way to learn more about ourselves. More often than not, our theories about human development came from research in the "hard" sciences.

Let me give you one example of Darwin's influence on us. In 1850, he described natural selection as the mechanism for evolution. Within 20 years, Herbert Spencer was talking about Social Darwinism — Survival of the Fittest. The assumption was: "*If natural selection occurs in nature, it must apply to man's social relationship.*"

We now know that, yes, natural selection does occur to some extent, but environmental influences far outweigh the genetic selection. This is simply one illustration of how we take scientific theory, translate it to human terms and, lo and behold, a new theory of human development.

I raised the example of Social Darwinism and natural selection to help us understand how Darwin's other assumption — gradualism — could pervade our thinking. Gradualism is not something we've observed. It's something we have taken from Darwin and other scientists.

And now the influence of gradualism is on the decline in one scientific field after another. Scientists are rethinking their theories from the view of punctuational change. David Warsham, an economist writing in *Forbes* magazine suggested that price inflation can be better understood from a punctuational view. In this case, rapid flips to long plateaus of higher prices make more sense. A mathematician, Rene Thom, is trying to design a mathematical model capable of predicting random events!

Today, all of Darwin's work is being rethought in terms of punctuational change. Most evolutionists believe natural selection to be episodic. We may be 20 years behind the research and using an assumption no longer valid.

What does all this mean to us? Apparently, nature changes in a punctuational, random way. Assuming this condition in nature is reflected in ourselves — that is, quick jumps followed by long

periods of unchanging performance — the implications are revolutionary.

Personal growth may not be a tale of slow progress within traditional forms. Personal development may be a series of plateaus of no growth, punctuated by occasional flips to a new level of performance.

Changing our assumption about growth rate from gradualism to punctuational helps us better understand our world. At least we can get some fresh insight into some of our difficult questions: Why doesn't feedback get an immediate response? Why do our manpower plans fail? Why is performance appraisal working so poorly?

What else could this different assumption mean? It could mean that development is more likely to occur in new and different assignments within the current job rather than simply learning to do the same job better and better. These assignments could act as a trigger for growth. These special tasks permit experimenting with different behaviors, the building of new skills and fresh ways of relating for both manager and subordinate. This suggests there may even be a scientific basis for the "second honeymoon." My own experiences suggest that it is often a task aside from normal duties which often flips our performance to a new level.

If these quick flips to new performance are the norm, we will need to re-educate managers and subordinates about expectations for improvement. Long periods of little or no growth need not be a source of frustration to the manager or the individual.

We will need to rethink our systems. What about the annual performance appraisal? Suppose we have an employee who showed no growth last year? Was that good? Or bad? If we assume gradual growth, that's bad. If we assume punctuational growth, it's a far tougher question.

How do we predict a flip to another performance level? Or reward it? Or plan for it? These are tough questions. We don't have

the answer yet, but I believe they are at least the right questions.

But we don't need to have all the answers to suggest some changes in the traditional role of the manager. We should be more sensitive to our people and less sensitive to the theory. Because the theory, like the times, is "a changin'." We need to ask our people for initiatives. Only they know if the time is ripe. People must be given more responsibility for managing their personal growth. And we have to give them the autonomy to do it.

More attention and priority should be given to special assignments, unique projects and new duties as developmental tools. We need to spend less time focusing on using current responsibilities as the basis for development. We should not always expect an immediate response to feedback.

Let me conclude on this note. Whether the earth goes around the sun or the sun goes around the earth, we have a new day every day. And whether personal growth is punctuational or gradual, you still have a new opportunity every day to support it. Life is more of a random chance than we thought. Since it is, your people need more chances to throw the dice. — *Buck Blessing*

Norbert "Buck" Blessing, vice president of Blessing/White Inc., is a management consultant. He is Phi Beta Kappa, political science graduate of Miami University in Ohio. Formerly, he was a journeyman tool and die maker in the auto industry. He was active in union leadership, including negotiations. This experience was balanced when he joined management as personnel manager and bargained from the other side of the table. Prior to joining Blessing/White, he was director of International Development at Kepner-Tregoe, Inc. In this capacity, he was responsible for subsidiaries throughout Southeast Asia, Latin America and North America. He has developed and conducted management development programs in such areas as motivation, performance appraisal, self-development, interpersonal communicating, marketing, executive problem-solving, and decision-making. His professional interest and publications are in the areas of motivation, personal growth and development of local managers in recently industrialized nations.