



TWITCH SPEED

Keeping Up With Young Workers

Reaching Younger Workers Who Think Differently

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- I. Twitch Speed vs. Conventional Speed***
 - II. Parallel Processing vs. Linear Processing***
 - III. Random Access vs. Linear Thinking***
 - IV. Graphics First vs. Text First***
 - V. Connected vs. Stand-alone***
 - VI. Active vs. Passive***
 - VII. Play vs. Work***
 - VIII. Payoff vs. Patience***
 - IX. Fantasy vs. Reality***
 - X. Technology as Friend vs. Technology as Foe***
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Every parent, educator, and manager knows that "Nintendo children"--those born after 1970 and raised on video and computer games, Walkmans, the Internet, etc.--are different. Unfortunately, the Gen-X discussion has focused mainly on the youths' supposedly short attention spans and attention-deficit disorders, ignoring or underemphasizing what is perhaps the most crucial factor--that this under-30 generation thinks, and sees the world, in ways entirely different from their parents.

An example: This generation grew up on video games ("twitch speed"), MTV (more than 100 images a minute), and the ultra-fast speed of action films. Their developing minds learned to adapt to speed and thrive on it. Yet when they join our companies, we typically begin by putting them in corporate classrooms, bringing in poor speakers to lecture at them, and making them sit through an endless series of corporate videos.

Speedwise, we effectively give them depressants. And then we wonder why they're bored.

I don't mean to suggest that Sega and Sony have created new intellectual faculties in under-30s but, rather, that technology has emphasized and reinforced certain cognitive aspects and de-emphasized others. Most of these changes in cognitive style are positive. But however one feels, it's important that managers (as well as educators and parents) recognize that these changes exist so that we can deal with the younger generation effectively.

Below are 10 of the main cognitive style changes, which raise a number of important and difficult challenges. We have already begun to see the development of new business structures, ideas, and products that take into account under-30 employees' cognitive changes and preferences. It is likely that the full impact of these changes will not be felt until the younger generation fully comes to power, just as the movies were impacted by the coming-of-age of George Lucas and Steven Spielberg. That time is not far off.



Twitch Speed vs. Conventional Speed

The under-30 generation has had far more experience at processing information quickly than its predecessors, and is therefore better at it. Humans have always been capable of operating at faster-than-"normal" speeds (as airplane pilots, race-car drivers, and speed-reading guru Evelyn Wood can attest). The difference is that this ability has now moved into a generation at large, and at an early age. One problem this generation faces is that, after MTV and video games, they essentially hit a brick wall--short of piloting a jet, little in real life moves that fast. This generation's "need for speed" manifests itself in the workplace in a number of ways, including a demand for a faster pace of development, less "time-in-grade," and shorter lead times to success.

An important challenge for today's managers is how to reassess and speed up their assumptions around time, while still keeping sight of other key objectives, such as quality and customer relationships. They also need to create experiences that maintain the pace and exploit the facility of "twitch speed" while adding content that is important and useful. Several possible approaches include speeding things up via technology (such as by providing workers with the kinds of real-time data that financial traders use), installing faster infrastructures with fiber-optic cable and T-1 telephone lines, and creating new, MTV-style corporate videos. Re-engineering systems and activities so that things simply move faster is another.



Parallel Processing vs. Linear Processing

Much of the under-30 generation grew up doing homework while watching TV and doing almost everything while wearing a Walkman. Many of them feel much more comfortable than their predecessors doing more than one thing at once. While some argue that this limits attention to any one thing, this is not necessarily the case. The mind can actually process many tracks at once and often has quite a bit of "idle time" from its primary task that can be used to handle other things. Today you see young computer artists creating wonderful graphics while listening to music and chatting with co-workers, and young bankers having multiple conversations on the phone while reading their computer screens and e-mail.

This growth of parallel-processing ability appears to be acknowledged by Bloomberg TV News, in which the anchor person takes up only one-quarter of the TV screen, the remainder being filled with sports statistics, weather information, stock quotes, and headlines, all presented simultaneously. It is quite possible, and even fun, for a viewer to take in all of this information and receive much more "news" in the same amount of time.

Rather than admonishing their young workers to concentrate on only one thing at a time, managers should be thinking of additional ways to enhance parallel processing and take advantage of this increased human capability. This might take, for example, the form of multiple types of information hitting employees' computer screens at once--the objective of so-called "push" technology and Microsoft's new vision for the corporate desktop. With all the information needed to do the job--numbers, video feeds, links, simultaneous meetings, and the ability to move seamlessly between them--it's the Nintendo worker's nirvana.

This generation's enhanced parallel-processing ability may also help them slide easily into the new "boundaryless organizations," in which each worker is expected to wear multiple hats and be part of many constituencies. I remember when the requirement that consultants at firms such as BCG and McKinsey serve simultaneously on multiple-project teams was considered unusual and highly

suspect. With the arrival of the new generation, such parallelism is being demanded.



Random Access vs. Linear Thinking

The under-30 generation is the first to experience hypertext and "clicking around," in children's computer applications, in CD-ROMs, and on the Web. This new information structure has increased their awareness and ability to make connections, has freed them from the constraint of a single path of thought, and is generally an extremely positive development. At the same time, it can be argued--with some justification--that unbridled hyperlinking may make it more difficult for these workers to follow a linear train of thought and to do some types of deep or logical thinking. "Why should I read something from beginning to end, or follow someone else's logic, when I can just 'explore the links' and create my own?" While following one's own path often leads to interesting results, understanding someone else's logic is also very important. A difficult challenge is how to create experiences that allow people to link anywhere and experience things in any order yet still communicate sequential ideas and logical thinking.

One approach is to set up new information-delivery systems, such as corporate intranets, that let workers break out of the traditional boxes in which corporate information has been stored, and then to create tools to link this information to systems that provide logical and decision-making structure. The U.S. intelligence and military communities recently created Intelink, an intranet-based system in which information becomes universally available as quickly as it gets created, allowing users at all levels the freedom to create and explore random paths that lead to new ideas. The linking and browsing structures of the Internet and intranets have many positive benefits, and managers of Nintendo-generation employees should encourage, rather than discourage, their creation and use. Managers should also be exploring nonlinear electronic alternatives to today's reports, manuals, lectures, and lengthy narrational videos.



Graphics First vs. Text First

In previous generations, graphics were generally illustrations, accompanying the text and providing some kind of elucidation. For today's young people, the relationship is almost completely reversed: The role of text is to elucidate something that was first experienced as an image. Since childhood, the younger generation has been continuously exposed to television, videos, and computer games that put high-quality, highly expressive graphics in front of them with little or no accompanying text.

The result of this experience has been to considerably sharpen their visual sensitivity. They find it much more natural than their predecessors to begin with visuals, and to mix text and graphics in a richly meaningful way. An excellent example of this is *Wired*, whose intensive use of graphics makes it highly appealing to younger readers but difficult for many older folks to read--"Why can't they just give us the plain text?" is the complaint I hear from colleagues. This shift toward graphic primacy in the younger generation raises some extremely thorny issues, particularly with regard to textual literacy and depth of information.

The managerial challenge is to design ways to use this shift to enhance comprehension, while still maintaining the same or even greater richness of information in the new context. In the training area, creative groups such as Corporate Gameware, my unit of Bankers Trust, are presenting important but not especially "sexy" or exciting material in ways that conform with the preferences of younger employees by using the highly graphic style of video games. Another promising development is data visualization, in which large arrays of information are presented as colorful, ever-changing graphic

images that visually accent different characteristics of the data. These tools are beginning to make serious headway in data-intensive business fields such as finance and marketing. However, they should be considered by managers in all industries as an approach that fits the new generational style.



Connected vs. Stand-alone

While the previous generation was linked by the telephone, that system is synchronous (i.e., both people have to be there). The under-30 generation has been raised with, and become accustomed to, the asynchronous worldwide communication of e-mail, broadcast messages, bulletin boards, usegroups, chat, and Internet searches. As a result of this "connected" experience, young people tend to think differently about how to get information and solve problems. For example, if I need a question answered I'll typically call the three or four people I think might know. It might take me time to get to them, and take them a while to get back to me. When my 22-year-old programmer wants to know something, he immediately posts his question to a bulletin board, where three or four thousand people might see it, and he'll probably have a much richer answer more quickly.

The challenge for managers is to invent ways of taking advantage of this connected mode in their interactions with the younger generation, as the younger people do among themselves. The more we help connect these employees to each other and to customers, the quicker they will invent positive ways to take advantage of it. The "connectedness" of the generation has also made young workers much less constrained by their physical location and more willing to work in the so-called "virtual teams" that are becoming more useful in a variety of businesses and industries.

Workers who have grown up online tend to be much more comfortable with seeking out and working with the best, most knowledgeable people, wherever they may be. Such virtual teams often recruit each other via messages on the Internet, operate smoothly from widely scattered parts of the world, and many never physically meet their clients or each other. As they finish their day, software developers around the globe often electronically forward their work to a colleague in another country who is just waking up. Managers must become more adept at managing these connected capabilities and directing the acquisition, enhancement, and appropriate deployment of intellectual capital around the world.



Active vs. Passive

One of the most striking cross-generational differences can be observed when people are given new software to learn. Older folks almost invariably want to read the manual first, afraid they won't understand how the software works or that they'll break something. Nintendo-generation workers rarely even think of reading a manual. "RTFM" ("read the [expletive] manual") is a term of derision. They'll just play with the software, hitting every key if necessary, until they figure it out. If they can't, they assume the problem is with the software, not with them. This attitude is almost certainly a direct result of growing up with Sega, Nintendo, and other video games where each level and monster had to be figured out by trial and error, and each trial click might lead to a hidden surprise or "Easter egg."

We now see much less tolerance in the workplace for passive situations such as lectures, corporate classrooms, and even traditional meetings. As the younger generation progresses up the managerial ranks, it is likely that such old-fashioned managerial standbys will be replaced by more active experiences such as chat, posting, surfing for information, and interactive learning. The process of "designing for doing," i.e., designing systems and experiences that employees can actively use,

rather than things they need to listen to or be afraid of doing wrong, may become the new generational equivalent of the industrial "designing for manufacture." Nike's "Just do it" slogan hits this generational change squarely on the head. It also explains why Bob Dole's saying to Gen-Xers, "Just don't do it" placed him so squarely in the past.



Play vs. Work

While often derided in the press as intellectual slackers, in reality the under-30s are very much an intellectual problem-solving generation. Many types of logic, challenging puzzles, spatial relationships, and other complex thinking tasks are built into the computer and video games they enjoy. Their spending on such electronic games has surpassed spending on movies; PCs are now used more for running entertainment software than for any other application, including word processing. While some have argued that play and games are simply preparation for work, I think that, for today's younger generation, play is work, and work is increasingly seen in terms of games and game play. The fact that the real-life games are very serious does not make the player's approach any different than the way she approaches software. Achievement, winning, and beating competitors are all very much part of the ethic and process.

As the post-1970 generation enters the workforce, its preference for the computer as the medium of play is already beginning to have a profound impact on how work gets done. Game interfaces are appearing in the workplace. Financial companies are inventing gamelike trading interfaces in which winning the game means making an actual profit. New associates at Bankers Trust learn about the bank's policies by playing a nonviolent, customer-focused video game.

One of older managers' most difficult challenges is to be willing to let the younger generation's play attitude enter the "real" world of business as quickly and smoothly as possible. Instead of resisting play by removing or banning all games in the workplace, for example, they could be supporting and funding the development of new game interfaces that help the younger generation work and learn in their own cognitive style. The preference for play is also influencing business in the form of pressure for a less formal workplace. Older managers should reconsider their resistance to such changes carefully.

A potential opportunity for managers to relate to the play attitude of the new generation might be to supplement traditional sports-oriented competitions such as softball with inter- and intra-company tournaments in video and other games. Doing so would engage the minds, as well as the bodies, of employees in healthy competition and perhaps foster additional company spirit. Finally, the younger generation's play preference has implications for employee recruiting, as companies that go on campus with business simulations and other challenging games for potential recruits tend to be very well-received.



Payoff vs. Patience

One of the biggest lessons the under-30 generation learned from growing up with video games is that if you put in the hours and master the game, you will be rewarded: with the next level, with a win, with a place on the high scorers' list. What you do determines what you get, and what you get is worth the effort you put in. Computers excel at giving feedback, and the payoff for any action is typically extremely clear. A key outcome of this is a huge intolerance on the part of the younger generation for things that don't pay off at the level expected. Why, they ask, should I finish school when elementary school kids can design professional Web sites, 20-year-olds can start billion-dollar companies, and

Bill Gates, who left school for something with more payoff, is the world's richest man?

Young people make these payoff-vs.-patience decisions every minute, and sometimes in ways that are counterintuitive. For example, it was at first strange to me that the same people who prefer "twitch" games often have great patience with slow Internet connection speeds and the sometimes long waiting times in a game like Myst. I suspect it is because they have decided, or realized, that the payoff is worth the wait. The challenge for older managers is to understand just how important these payoff-vs.-patience tradeoffs are to younger people, and to find ways to offer them meaningful rewards now, rather than advice about how things will pay off "in the long run."

One clear business manifestation of this requirement for payoff is the increasing demand for a clearer link between what employees do and the rewards they get, leading to the growing trend toward pay-for-performance. Another result is the increasing use of equity as a component of compensation, along with the replication of equity-like compensation structures to reward workers with a "piece of the action" for their own initiatives and efforts. The growing realization that this generation wants its payoff now has also led to an increased willingness on the part of many businesses to provide seed capital and to "spin-off" internal start-ups, allowing workers to potentially cash in more quickly and allowing the firm to benefit long-term through an equity position.



Fantasy vs. Reality

To me, one of the most striking aspects of the under-30 generation is the degree to which fantasy elements, both from the past (medieval, Dungeons & Dragons imagery), and the future (Star Wars, Star Trek, and other science-fiction imagery) pervade their lives. While young people have always indulged in fantasy play, the computer has by its nature made this easier and more realistic, in many ways bringing it to life. Sociologists might say that some or all of this is due to a desire to escape the realities of today's life: fewer good jobs, more alienation, and a degrading environment. Whatever its cause, the fantasy phenomenon has certainly been encouraged by technology. Network technology allows people not only to create their new fantasy identities but to express them to others and join in fantasy communities. The huge interest in chat rooms and in individual home pages is, at least in part, another manifestation of this.

Rather than admonish younger workers to "grow up and get real" and abandon their rich fantasy worlds, managers should look for new ways to combine fantasy and reality to everyone's benefit. One place it may be possible to do this is in the design of work spaces: Spaces designed by the younger generation are very different from those of their predecessors and from those designed for them by the older generation. Companies already run by Nintendo-generation individuals generally have much more informal furniture and settings, and often have special rooms for games, etc. Microsoft's "campus" is full of indoor and outdoor play opportunities.

The younger generation's fantasy preferences can also be seen in the growth of new "off-the-wall" job titles, such as Yahoo's "Chief Yahoo" or Gateway 2000's "chief imagination officer." Young workers may be willing to go a lot further with their imaginations--Gateway decorates its shipping boxes as cows. We are also seeing an increasing debureaucratization of systems and procedures in many organizations. Perhaps it is not too far off when some companies will sport their own "Klingon," "Borg," or "Wookiee" divisions doing serious business while decked out appropriately.



Technology as Friend vs. Technology as Foe

Finally, growing up with computers has engendered an overall attitude toward technology in the minds of the younger generation that is very different from that of their predecessors. To the older generation, technology is generally something to be feared, tolerated, or at best harnessed to one's purposes. No matter how easy we make it, this generation doesn't want to program its VCRs or even, for the most part, surf the Net (though there are, of course exceptions, such as the Internet's becoming a useful way for the retired generation to stay connected and productively use their leisure time).

Yet even if the older generation comes to technology willingly, or is forced by a changing culture to learn and embrace technology, it will never be as entirely comfortable and trusting of it as are their children. To the younger generation, the computer is a friend. It's where under-30s have always turned for relaxation and fun. For many in the generation, owning or having access to a computer feels almost like a birthright. Being connected is a necessity. The huge generational reversal in technical skill, where parents must turn to their children for help in using their expensive equipment, is now legendary. "What technology will I have?" is often the key factor in a young worker's decision about what job to accept.

How can an older generation of managers relate to and help employees who see computers and related technology in this way? One way is to empower them to create new business elements--computer applications, structures, models, relationships, Web pages--that make sense for their generation. Another possible approach is to continually seek ways to communicate, transfer needed information, and build desired skills via the media the younger generation willingly engage in, such as computers and games.

Rather than forcing the younger generation to use the methods of the past, managers should be offering them the resources to create their own approaches that will work in their new cognitive environment.

