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The Next Page: The triumph of the gamer

Videogames are not mere diversions. They have become part of life itself.

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Stacy Innerst/Post-Gazette

The following is a speech delivered to open the 2008 [International Conference on Entertainment Computing](#), held last month at Carnegie Mellon University.

If he were alive today, Shakespeare might very well have rephrased his famous observation stating "All the world's a stage and all the men and women merely players" by describing this worldly existence of ours as more closely resembling a videogame than a theatrical production.

For those challenged by the videogame mirroring life metaphor, let's rephrase it in a way that illuminates the validity of the comparison:

-*All the world* is a series of problem-solving.
-*All the world* is a series of strategic maneuvers affected by seeminglyrandom events.
- *All the world* is a manipulation of tactical decision based upon incompleteinformation.
- *All the world* is a struggle of the individual confronting various rule-basesset by others.
-*All the world* is potentially interactive.

Indeed, in 21st-century society, a society of Facebook, YouTube, seemingly endless digital storage capacity and the persistence of digital DNA, it is not in any way a stretch in my estimation to claim an analogy between life and videogames.

Let us recognize that videogames have become an integral part of all aspects of daily existence: from home to school to the workplace to the *matrix* of our real and imagined lives. And it is morphing constantly into variations and applications affecting every imaginable discipline, and many that will be created and crafted by succeeding generations of "digital natives."

The time will come when questioning the value or veracity of videogames will be as inane as pondering whether or not Shakespeare was correct when he said our lives mirrored the roles played by actors upon a stage.

Contemplating the future of videogames is something I do on a daily basis. As executive producer of the Entertainment Technology Center at Carnegie Mellon University, however, I reiterate constantly how the ETC is concerned with the breadth of interactive digital media and not just videogames.

Interestingly enough, though, we are approached increasingly by institutions, schools, museums, for-profit corporations and myriad aspects of the military-industrial complex, seeking to transform aspects of their existing education and training curriculum into videogame format. It turns out this broad-based mission with regards to the ETC is in actually a harbinger of the future I am about to describe.

In other words, those of us gathered at the International Conference on Entertainment Computing might better be described as a true gathering of visionaries.

This is because we have indeed entered the non-literate society first hinted at by Alvin and Heidi Toffler almost three decades ago -- notwithstanding the fact that most of this

conference will be dedicated to the presentation of "papers."

As used by the Tofflers, society's *non-literacy* is distinctly different from its usual reference to primitive tribes lacking an alphabet and written literature, or whose social history is perpetuated overwhelmingly by oral storytelling traditions. The "non-literate" society of today is one that simply does not read books -- but which *is* immersed in knowledge, imagery, social networks, fiction, world events and massive amounts of sensorial stimulation, albeit mediated by technological means.

This is a major distinction, but one that seldom transcends the initial horror of a governing class educated via traditional literary means trying to comprehend a non-literate student body. For too many of the governing elite the fear is the rise of new Barbarians. But they need not be concerned. Television was going wreak the same havoc to their generation, remember?



The future of videogames will be ubiquitous, on that there is little debate anymore. The real question, though, is what exactly does that mean?

Basically, we are talking about a degree of ubiquity so manifest it will result in our being unable to separate videogames from normal problem-solving, decision-making aspects of school, work, family matters, societal governance and most aspects of mundane existence.

This semester alone in the ETC we will be undertaking game development for medical institutions, museums, schools and the military-industrial complex, not to say the incredible investigations occurring in the myriad colleges and universities represented at this conference.

The walls to the embracing of gaming for myriad purposes are coming down, especially as the baby boomer generation (to which I belong) head for retirement. We will be replaced by individuals more savvy, experienced and much less suspicious of videogames as tools of the devil.

The ubiquity of computational capability will eventually have a major transformational impact on the physical existence of such devices. There is the very real prospect of no one ever really needing to buy a "computer" any more, since everything will come with a computer embedded within it.

Computational capability is headed undoubtedly for implantation in almost every surface, device or machine. There really isn't any question anymore with regards to there being truly wearable computers, especially in light of the research being done at

IBM and universities such as my own, Carnegie Mellon; the only question is when.

Videogames will go from being a shrink-wrapped commodity to a downloadable service. The movie industry stands on this precipice at present. The advent of the "4G universe" -- the Fourth Generation of wireless communication -- is what will facilitate this transformation, much to the delight of cellular providers.

Having a wireless connection anywhere ultimately at 100 megabits per second will be a transformational moment. It might spell the end of the self-standing videogame store, but it will herald the advent of a veritable explosion of videogame accessibility and creative daring.

Finally, if you build it -- and it is good enough to attract enough players to make it profitable -- then it will survive. The tyranny of the existing game publishers will come to an end (to be replaced by some other tyranny no doubt, but at least there will be change).

We are already witnessing the transformation of Second Life presences into parallel universes and existences. Again, there is nothing psychologically shocking about this, as the desire to live multiple existences simultaneously is something that has always been a historical part of human sociology, albeit in various forms of role-playing seldom involving technology. The use of technology in making palpable a visual and cyber-spatial persistence of these parallel lives is what is evolutionary and revolutionary.



The intriguing aspect of videogaming's future lies with the social and cross-cultural possibilities inherent in a truly global online presence.

For the first time ever in humanity's history, a single place -- albeit virtual -- can welcome representatives from all corners of the world. Language-translation technology may fulfill the promise of Esperanto and allow all citizens of the Earth to communicate directly and immediately.

For the most part, it is more difficult to go to war against friends; and becoming teammates and "good sports" may prove to be a lesson learned with monumentally positive implications.

I often wonder what would occur if we did a massive aerial drop of Nintendo DS systems across North Korea.



Education is one area where I see a veritable explosion of gaming waiting to happen.

In the United States, public education is heading for Armageddon. The insistence of locally based school boards on maintaining 19th-century education techniques is running smack up against the "digital native" generation, a generation accustomed to traveling more at the speed of light than the turning of pages in an out-of-date, hideously expensive textbook.

My distinguished ETC colleague Jesse Schell -- a former Disney Imagineer, entertainment technology guru, game textbook author and very successful game company founder -- confided to me once: The two things that absolutely amazed him of late were the success of Disney's "High School Musical" and the success of Wikipedia.

The former -- a true entertainment phenomenon -- was amazing because it now seems so obvious. Wikipedia, meanwhile, is stunning because whoever thought it would really work?

Its success reveals instead that education, knowledge, content generation by the public and instant accessibility need not be left by the wayside of the digital revolution.

What remains missing is the genuine incorporation of videogame dynamics into the required educational regimen. Videogames do exist that augment traditional textbook-based classroom learning.

Very few schools however have embraced the intrinsic problem-solving, attention-getting, imagination-stimulating, creativity-inducing, entertaining capabilities of videogames, nor have they connected the levels found in videogames with the increasingly difficult chapters found in textbooks.

At some point in the near future, the realization will occur to these educators that we would be wise to speak to the "digital native" generation in its own *vernacular* language and stop insisting they be educated by and in Latin.



The explosion of sporadic, casual, cooperate, social-based and console-based gaming is the tip of the iceberg with regards to the predominance of gaming in the future. The Nintendo DS is the premier gaming platform in Japan and speaks to the efficacy of videogame portability and the resulting ubiquity. Of course, similar sentiments can be

said about cell phone gaming across the myriad cell phone platforms.

The bottom line to all this is the avoidance of boredom and the desire for mental stimulation. We live in a world where Sudoku is being touted (rightfully) as mental therapy in hopes of warding off brain atrophy. "Use it or lose it," as the adage goes. It seems to me that the younger generation has a significant head start on maintaining ongoing mental stimulation through the incorporation of videogames into their daily existence.

It also stands to reason that the videogame demographic will expand by the sheer reality and momentum of generational change. Gamers are getting older while the non-digital generation is stepping down from positions of responsibility and governance. It is simple math. This will lead to a further expansion of videogame applications.

The fact that we in the ETC are developing Wii exercises for senior citizens because they too would rather engage in an interesting, imaginary world and story than conduct repetitive exercises in a sterile mind-numbing environment should tell us something about the validity and value of games for older generations.



Shakespeare concludes his "All the world's a stage ..." soliloquy from "As You Like It" by lamenting the ultimate fate of old age:

*... Last scene of all,
That ends this strange eventful history,
second childishness and mere oblivion,
sans teeth, sans eyes, sans taste, sans everything.*

Interestingly enough, if there is anything the modern analogy of life as a videogame alters it is this desperate state and lamentable fate postulated by the Bard.

One thing I absolutely admire about the digital native generation is their basic refusal to grow up and grow old; my generation swore it would adhere to that aspiration and, frankly, failed miserably (as attendance at a recent high school reunion of mine so sadly revealed). Videogames and interactive digital media are an essential part of that transformative and revolutionary dynamic and mindset.

Through the utter magic of digital media and the persistence of digital DNA, a person need not decay into a blind, toothless and tasteless wreck. This incredible medium of digital existence allows us to remain not only young, but to appear as we wish to be seen and remembered.

It is through the same magic driving videogames that humans will come closest to achieving digital immortality. Indeed, technology has replaced Dorian Gray's canvas.

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