

Alternative Route to Goertzel's Transcension?

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[The following is a rough draft written in response to reading a number of Ben Goertzel's essays – especially “Encouraging a Positive Transcension”

(<http://www.goertzel.org/dynapsyc/2004/PositiveTranscension.htm>). I first heard of Ben from Kent Palmer – the two of them had had some extensive exchanges back in the late '90s and after first meeting Kent in the Fall of '04, he often spoke very fondly of Ben. I'm posting this in late '08 in response to John Smart's request for comments on his most provocative draft paper “Evo Devo Universe? A Framework for Speculation on Cosmic Culture” (<http://accelerating.org/downloads/SmartEvoDevoUniv2008.pdf>).]

Over the past 15+ years, a vision of a future “trans-human” possibility has been shaping itself in my mind that I'm now, finally retired and with some serious “leisure time,” beginning to try to articulate. Back in '87 I dubbed this project “The Summa,” with the notion that it would summarize human aspiration and lead beyond it. In the past decade, when asked about it, I've said that I was envisioning “a non-profit research foundation to develop high-tech tools for personal and spiritual growth.” Last year, when YREC fell into my lap – via the abrupt departure of its founder, Yoga scholar Georg Feuerstein – I began to consider how I might re-vision YREC as that very foundation.

Last September, I drafted up some initial thoughts in “Yoga >> Science: applied science in a non-dual frame.” (Don't have this saved on this new notebook.) Upon completion, I was moved to google “non-dual science” – the 2 hits were both links to a blog from '01 by Kent Palmer. Kent and I have been in dialog since. He has gone on to elaborate a series of “working papers” on the subject of Nondual Science and has found a way to incorporate new insights he's gained in the process into the thesis for his 2<sup>nd</sup> PhD currently in draft form. In the course of that dialog which, for me, has been filled with both many fascinating insights and ongoing difficulty with Kent's hypercomplex style, he has often made reference to the work of Ben Goertzel.

Just yesterday I finally got around to taking a serious look at Ben's on-line works, of which there is a considerable amount. Many features of Ben's work pique my interest. Among the most outstanding (on an initial four hours or so of reading), are his wonderfully elaborated (and to me lucid) considerations about the much-buzzed “coming singularity” ([http://www.goertzel.org/dynapsyc/2004/PositiveTranscension.htm#\\_ftn24](http://www.goertzel.org/dynapsyc/2004/PositiveTranscension.htm#_ftn24)); his (I think essentially “bi-perspectivist”) proposal for a solution to Chalmer's “hard problem of consciousness” (<http://www.goertzel.org/dynapsyc/2004/HardProblem.htm>); and his hands-on familiarity with the cutting edge of computing and complexity science. His review of Wolfram's NKS is richly nuanced, balanced, and strikes me as right on (<http://www.goertzel.org/dynapsyc/2002/WolframReview.htm>). Finally, he has cute kids with great names – seems like a most interesting fellow all around.

This morning I'm inspired to try to offer up my own vision of Transcension. This is, essentially, my SummaVision: Ben's preferred ethic of “Voluntary Joyous Growth”

embodied in us humans with help from ever more “clever” computers (rather than in, or via, artificially intelligent machines).

Multiple technological convergences in the near future will yield a host of new tools for human personal and spiritual growth – precisely the kind of growth that is necessarily voluntary and, in its full flowering, joyous. These technologies are based upon ever faster and more robust computer services dedicated to data acquisition, analysis, and real-time presentation suitable for effective biofeedback learning paradigms – machines that will help us learn to self-generate the psycho-physiological states that we experience as growth and joy.

This has been the promise of biofeedback all along. Ever since the earliest studies of exceptional feats of self-regulation by Himalayan monks, the field of biofeedback has been oriented, at its core, to the enhancement of human capabilities for growth and spiritual development. Only for financial reasons has its focus remained so heavily on symptom management. My SummaImpulse has, in many respects, simply been to keep the candle burning for that original promise as the decades have witnessed the development of ever more capable biofeedback instruments.

For example, steady advances in physiological monitoring and analysis have yielded robust findings regarding heart-rate variability as a powerful “wellness” indicator. Now it is possible to do home HRV biofeedback training via an innovative video-game (Journey to the Wild Divine – [www.wilddivine.com](http://www.wilddivine.com)). More sophisticated and attractive tools for learning self-regulation are sure to follow the apparent success of JWD.

New methods of time-series analysis based on findings from complex systems research are in development. See for example the work of Ary Goldberger at the Rey Institute for Nonlinear Dynamics in medicine (<http://www.physionet.org/>). Some are now trying to develop biofeedback protocols based on such methods – see for example the “Heart Tuner” (<http://www.heartcoherence.com/>) that uses “cepstrum” analysis.

Broadband internet connectivity coupled with real-time server-based physiological signal processing and presentation may soon allow the development of on-line biofeedback protocols. With the demonstrated potential for progressive software enhancement via open-source, we can envision the rapid proliferation and evolution of such tools once basic physiological sensors and digitizers become consumer products (as we’re beginning to see with JWD). Ever more capable resident processing capacity (and perhaps even exploitation of GRID computing strategies) could steadily enhance the richness of the user experience.

Practical experience with self-regulation as a tool for enhancing basic education has been very promising. The Institute of Heart Math, for example, has extensive experience in this arena documented at <http://www.heartmath.org/education/index.html>. Many other programs are underway that use various kinds of yoga and self-regulatory strategies in elementary and secondary settings. It seems possible that wider availability of tools for

self-regulation, especially in the form of games attractive to children, could have a significant impact on enhancing basic education.

The same is likely going to be true for vocational skills acquisition. Coupled with financing initiatives such as Karun Philip's Knowledge Capital Project (<http://www.k-capital.com/>) securitization of educational loans will encourage the rapid adoption of ever more effective training programs, even in the poorest countries.

Computer-enhanced basic education is making slow inroads as well. Despite the failures of "programmed learning," efforts are still underway to develop technologies that work – and there have been numerous successes (see <http://www.upenn.edu/pennnews/features/1997/090297/Kimbrough.html>). Another successful model has been that of local neighborhood Score Educational Centers. These offer "extracurricular" remedial and tutorial services to kids of all ages as a successful business. These centers rely heavily on SuccessMaker software that is readily tailored to each child (<http://www.pearsondigital.com/successmaker/>).

Computer-assisted training in self-regulation will be extended into the higher reaches of human potential. As new research tools (such as brain fMRI) and refinement of existing tools (such as EEG and MEG brain mapping) combine with the growing availability of experienced research subjects, our understanding of the psychobiology of meditation and will continue to deepen. (See especially <http://www.mindandlife.org/> for current developments and <http://www.noetic.org/research/medbiblio/index.htm> for historical background.) As research on meditation continues to document its power to facilitate personal and spiritual growth, further vistas for biofeedback training will unfold.

Developments such as these could facilitate, over time, a significant upward shift in the average developmental level of the population (I'm thinking here especially of Ken Wilber's thinking along these lines – see [http://www.newworldview.com/library/Helfrich\\_P\\_The\\_Five\\_Phases\\_of\\_Wilber.html](http://www.newworldview.com/library/Helfrich_P_The_Five_Phases_of_Wilber.html) for an overview of Ken's opus). At what point might a gradual upward shifting result in qualitative shift great enough to be worthy of the term "transcension?" Maybe the term is not appropriately applied to the advance of human development that I'm envisioning here, but only to the advent of some kind of advanced machine intelligence. On the other hand, might not humanity as a whole grow sufficiently "humane" and "joyous" as to represent a literal transcension of the long and agonizing climb out of barbarity that we typically think of as "the human condition?"

The "radical futurists" of today typically envision disruptive technologies emerging directly from computer science, nanotechnology, longevity research, and/or genetic engineering. I've not run across discussion of the possibility I've outlined here to represent yet another potentially "disruptive" technological development. However, it seems at least possible that this "alternative" could be more likely to yield the "Buddha" qualities enshrined in Goertzel's "Voluntary Joyous Growth."

The projections of the more “far out” radical futurists strike me as biologically naïve. As a physician with a background in chemistry, microbiology, and genetics with several decades of both clinical and spiritual practice behind me, I’ve developed a rich appreciation for the holarchic depth of our psychobiology. It is an appreciation of that depth that I find missing in much of futurist speculation. Ken Wilber has pointed this out as well – as I recall most memorably in his Integral Psychology and his several articles in the *Journal of Consciousness Studies*. It may turn out, of course, that some kind of AI will be possible without this natural holarchic underpinning that it took the entire history of biological evolution to develop. As processing speeds and IO capacities continue to escalate, computers may be able to “take consciousness by storm” via “brute force” and Moore’s Law.

In any case, my own instincts are for this more gradualistic and human developmental approach that harkens back to Engelbart’s original ambitions to create computer tools for the augmentation of human intellect. This is my idea of Cautious Developmentalism. I think we’re already seeing the leading edge of computer tools for the augmentation of human intelligence, expressed in the specific terms of the spiritual wisdom traditions as growth in awareness and self-regulation. Not that such growth will always be “fun and games” – but hopefully, access to the kinds of help and instruction that are needed to overcome the inevitable obstacles will also continue to increase as our world becomes ever more highly networked.