

A Pilgrim in the Land of Big G and Little G - A Review Essay

Eternity Soup: Inside the Quest to End Aging

by Greg Critser, Harmony Books (Random House), 2010, (hardback).

Introduction

It used to be said the *life is short and art is long*, but now in our supposed high point for the era of the “scientific management of aging” (Cole, 1992), our goal is instead – *the art of living longer*. Our current landscape for understanding the experience of aging is representing by the following descriptors of the “received view” which illustrate but do not exhaust the examples in the literature in the last two decades: *age wave* (Dychtwald, 1990); *fountain of age* (Friedan, 1993); *from age-ing to sage-ing* (Schachter-Shalomi, 1997) and that we have entered into phase of age power (Dychtwald, 2000), and the power years, (Dychtwald, 2005), and *the creative age* (Cohen, 2001); *third age* (Sadler, 2001; Weiss & Bass, 2002); *successful aging* (Bowling, 2007; Dillaway & Byrnes, 2009; Inui, 2003; Rowe and Khan, 1999); *prime time and encore* (Freedman, 2000; 2007); *aging well* (Valliant, 2002); *positive aging* (Hill, 2006); *healthy aging* (Stanner, Thompson & Buttriss, 2009; Weil, 2007); *the art of aging* (Nuland, 2007); *productive aging* (Bass & Caro, 2001; Morrow-Howell, Hinterlong, & Sherradan, 2001); *transcendence in later life* (Tornstam, 1999-2000); *vital aging* (Achenbaum, 2005); *self-empowerment* (Maples & Abnet, 2006); *empowerment* (Haber, 2009), and *elder culture* (Roszak, 2009). Thus, I propose that the culminating curvature – or inflection point - we now find ourselves in is the operations and supreme goal of *optimal aging* (Aldwin & Gilmer, 2003). In effect, this also means that we have embraced the “meaning” of later life to be more – *more of the same* – but only better. That is, we want to be productive,

vital, successful, positive, engaged as ever before (that is, before aging “took place”) – and as never before – and even better. It appears, that in our contemporary literature, there is rarely the call for stoic acceptance (Graver, 2007) or resignation or revolt with aging (Améry, 1994), rather only the conquering of all that represents senescence. There is still senescence, of course, but we have elected to have it reframed, re-packaged and re-tooled to become an anti-senescence. We don’t retire, we re-career. We don’t age, we transcend. We don’t decline, we transform. We are seeking to overcome entropy and gravity within the optimization of aging. The way ahead – is forward and upward.

And so, based on the increasing array of popular and scientific publications to address the topics of anti-aging, maximum life span, life span extension, “the” fountain of youth, and yes, even immortality, (Aaron & Schwartz, 2004; Binstock, 2003; Bongaarts, 2009; Butler, 2008; Carnes & Olshansky, 2007; de Grey, 2007; Fahy, West, Coles, & Harris, 2010; Gillick, 2006; Goodman, 2009; Hayflick, 2004; Mykytyn, 2006a; Mykytyn, 2006b; Olshansky, Hayflick & Perls, 2004; Rose, 2005; Vincent, 2008; Weil, 2007), it is no surprise that the “outsider” journalist/blogger/writer (via Greg Critser) would enter the fray by taking the angle of the objective, yet, curious role of the innocent pilgrim who enters into a strange land for the first time, marveling at the shape-shifting science and medicine of *longevity*, which appears to be a cacophony of characters, concepts, and contradictions that could, ultimately, make a good story to write about.

And indeed, it is quite an interesting story that is told by Greg Critser (2010) in his book, *Eternity Soup: Inside the Quest to End Aging*. This book is very much in the same spirit of Alexis de Tocqueville (*Democracy in America*), the French visitor who wished to capture the profile of a young America. Or perhaps closer still, to the more

contemporary style found in the book *Stephen Fry in America* (Fry, 2009), as the British humorist/writer who wanted to visit all fifty states and experience America as the “outsider” who would immerse themselves into the thick of American cultural stew - the good, the bad, and the ugly. And this is pretty much the same kind of approach that Greg Critser captures in his investigative sojourn into the land of Big G and Little G.

Big G and Little G?

These are but two of the many interesting characterizations that Critser offers to the reader based on his bird’s eye view of the landscape for the all of the activities that surrounds the promise and challenges of longevity research. *Eternity Soup: Inside the Quest to End Aging*, is a title that not only captures the opening story of Alvisi Luigi Cornaro (from the sixteenth-century) and his quest for the perfect meal to help him live a long life (resulting in the book, *LaVita Sobria* published in 1558), but also descriptively reflects a cauldron full of people that Critser has studied and interviewed including the zealots and skeptics, charlatans, and ingenious clinicians and academics that are at work in discovering the causes – and “cures” of aging. But not everyone in this game is on the same page when it comes to how to conduct the science, nor is everyone in agreement why they are even doing it. According to Critser, Big G is the many (not all) of us who are members of the Gerontological Society of America (GSA) and are probably reading this journal and the *Journals of Gerontology* and *The Gerontologist* and supposedly represent the “gerontology establishment” and follow the marching orders of our dogmatic and received view without question. That is, there appears to be an agenda – hidden or otherwise, that we are following and have allegiance with. And the area of “science” where Critser believes the battle lines have been drawn is in the domain of

antiaging research (or “longevity medicine” or life span extension) because it is those within the Little G camp (as seen by the Big G group) who carry out their rebellious quest, rogue operations, and counterfactual strategies that are challenging the dogma and the status quo of the Big G group (as seen from within the Little G group). In other words, the skirmishes along the front lines between Big G and Little G over the quest to end aging is more than just the loyalty and identification with the array of possible interventions (e.g., caloric restriction, resveratrol, human growth hormone, antioxidants, genetic engineering, and biotechnologies), or of debating the nuances and extrapolations of research on rodents to humans; no, there is something bigger at stake here. From Critser’s vantage point, it is how – and why - the entire enterprise of science shall proceed to address the aging experience, and whether or not aging is something that needs to be manipulated and eradicated. Depending on one’s perspective, Big G is defending “science” and guarding against the quackery, charlatans, and pseudoscience (or a “farrago” as de Grey 2006 defends against) that some associate with the Little G camp, while from another perspective, the Little G camp is portrayed as the creative and heroic David(s) searching for new solutions against the mighty Goliath (notice the big “G”) that is tyrannical in protecting its turf and seems bent on hurling pretentious diatribes against those who (in the Little G camp) go against the grain of tradition and protocol. And there is much at stake with image, marketing, policy, and of course money, both in funding the research and in the profits to be had in selling the goods to a ready and willing “paying” public. Critser proposed that,

The longer I mingled with antiaging types, both those with traditional degrees and those without, the more I came to appreciate the reason Big G hates them. It is

this: They are surfing on – and making money from – the establishment’s science, long before scientists – and most of the time, even ordinary folk – would deem science sufficient...Big G has little faith that such pseudoscience will debunk itself. They may be right. If anything, the marketing is slicker and more even soaked in science (p. 105).

But for many of those in the Little G camp, like Aubrey de Grey (2009b), there is much energy spent on breaking the “pro-aging edifice” that is the domain and prevailing view of (as de Grey claims) of many bio- and social gerontologists who embrace a “compression of morbidity” or “optimization of aging” or “disease management” (see Jackson & Bartek, 2009), but then refuse to entertain the possibility of life extension beyond the “natural” maximum life span. These “pro-aging” scientists (in the Big G camp) supposedly see no value or efficacy in *engineering rejuvenation* because it does not fit into either the “received view” of gerontology and geriatrics and any other “paradigm” outside of mainstream scientific methodology is deemed to be “pseudo-science.” This is a critical issue in what is at stake for any potential success in the implementation of SENS as de Grey (2009b) has claimed that scientists within {traditional} gerontology and geriatrics are misunderstanding the role of technology versus the activities of science,

In science, the objective is to discover the way world works, whereas in technology, the objective is to exploit science to change how things work. Science is ultimately about predicting nature, while technology is about manipulating nature. (p. 75)

Another way to describe the difference in approach (and attitudes) toward investigating the aging process versus “fixing” it is with the following metaphor of “roof

repair” for a decrepit house.

The man on the ground is a gerontologist - digging to see if the tree roots are undermining the house foundations (causes). The man on the step-ladder is a geriatrician – mending the house ceiling (symptoms), and the engineer on the roof – repairing and containing the damage as he goes along. This is the de Grey engineering approach to ‘ending ageing.’ (Spurling, 2009; p. 24.)

Critser, I think, does a good job at covering the entire waterfront of Big and Little G issues and explaining the science and enterprise of longevity for the general reading public. It is written in a breezy style and in some sections he occasionally gets bogged down in the gee-whiz dimensions of competing theories and methods for understanding the *how and why of aging - and what to do about it*. And Critser also allows an inordinate amount of line and word count to the cheerleading tactics for most people interviewed, but, alas, without much critical analysis or investigative inquiry on his part. But overall, I believe it was a balanced presentation. I had anticipated that Critser might simply report his field notes and then get on the bandwagon of the quest to end aging and write it all off as *fait accompli*. But Critser does include a sobering, albeit cursory, account of the existential dimensions of life extension and casts a critical eye on the entire project that purports to extend life, but then he has little to say about the implications and impact on the human condition.

In short, how will we best spend this time, a time of unprecedented health but also a time almost completely unexplored, psychically and psychologically, by previous generations? It would be a new dimension (p. 182).

Although the question asked by Critser as the pilgrim reporter is not exactly novel

in academic circles, I think that Critser, has elevated his personal concerns as a social barometer that all of us (in both Big G and Little G camps) must address and continue to elaborate and dialogue in our writings, seminars and professional conferences. And this leads to the supreme question: It is all a “new dimension” to consider for the life course?

I believe so. And Critser’s observations are illuminating in that the “industry” is not just marketing and selling optimal aging, but proffering tactics and strategies to go beyond that – to *end aging*. And Critser is utterly fascinated by the notion that aging is now being perceived as something so “unnatural” (especially after talking to his own parents about the issue) which then serves as the catalyst for his book and the driving quest for discovery in trying to understand the brave new “pro-longevist” world. Critser sensed that there was something afoot in science and medicine, a shift in direction, a new horizon for where it was all headed,

The more I looked, the more it seemed to me that, over the next fifty years, science, medicine, and technology will transform aging – and the way we think about it. This change will come in ways small and large, its evolution gradual but inexorable, fueled by both self-experimentation and public funded trails. Much of it will take place in terra incognita; aging may become easier and more comfortable, but more expensive and even a little riskier, too (p. xix).

And I think his analysis and prognosis has a significant measure of validity given the rapid emergence of digital technologies (Bainbridge, 2007; Carr, 2008; Charness & Czaja, 2005; Charness & Boot, 2009; Kirby, 2009), assistive technologies (Burdick & Kwon, 2004; Charness, Park, & Sabel, 2000; Charness & Schaie, 2003; Fozard, Reitsema, Bouman, & Graafmans, 2000; Pew & Van Hemel, 2004), and bio-technologies

(Garreau, 2005) which have become a major cross-cutting influence in the explanation and understanding of the aging experience (Culter, 2005; Culter, 2006; Lesnoff-Caravaglia, 2007; Read, Green, & Smyer, 2008). This grammatical and “paradigmatic” shift in tone, this “new dimension,” that Critser alludes to, is for many scholars some kind of conceptual train (i.e., epistemological, theoretical, methodological, ontological) that has already left the academic station and this “new dimension” does not simply represent an overturn or a replacement of the *scientific management of aging*, but rather has changed it dramatically via a metamorphosis (notice the use of the chrysalis-butterfly image on the front cover of Critser’s book, which is quite different than the usual “hourglass” motif found on many other books on aging, or like the iconic logo with the Gerontological Society of America) in perspective and outcome into a “scientific-technological” *weltanschauung* that seeks to change aging itself and move *beyond aging* as a necessary phase or stage in the life course. Aging (biologically, socially, and psychologically) is something to be overcome and transcended – incrementally – and then completely.

I think Critser’s observations and insights has captured the emergence of a new inflection point from both the lab and the lay public that represents the fields of gerontology and geriatrics in this regard: what is wanted and what will be desired in the 21st century is *not* the reflection upon the “shortness of life,” but rather the active investigation and implementation of strategies and tactics that will create a longer and longer interval between birth and death - with the ultimate goal of *post aging* (Wright, 2010). Many will see this a necessary transition, as an entitlement for simply being alive – so that having a life can be extended for as long as possible – with minimal aging – or

ultimately with no manifestations of “aging” (as we know it to be and understand it as senescence – now) at all. The entire enterprise of biotechnology, artificial intelligence, robotics, and nanotechnology (and nanomedicine) is a sleeping giant that has awoken and the speed of its delivery and implementation in both research and development laboratories – and then for individual and societal application is staggering - and overwhelming. Critser’s (2010) book, *Eternity Soup*, has only touched the surface. There are so many layers beyond what Critser has discovered in the quest to end aging, and I believe it will be imperative that every gerontologist should become familiar with the differences in values, attitudes, and perspectives among bioconservatives (left and right wing), the transhumanists, and the technoproggressives and a whole new array of terminology that captures the intersection of aging and technology. Yes, it is a bold request, but just as we are expected to know the differences among Medicare, Medicaid, and Medigap policies or the nuances of skilled nursing facilities versus assisted living facilities, or cross-sectional versus longitudinal studies, we should also expect to know of the issues surrounding artificial intelligence, nanotechnologies, immortality, robotics, science fiction, cybernetics, futurology, post-biological, singularity, methusularity, and posthumanism (de Grey, 2009a; DeLashmutt, 2006; Derkx, 2009)

I also propose that we in the field of aging (perhaps considered as Big G) who have an interest in teaching and developing the interdisciplinary curriculum on gerontology in higher education should take heed to these technological developments that are rapidly altering the landscape of understanding both the how and the why of aging – and more dramatically, is forcing the controversial topic upon all of us – *why age*

at all? More importantly, we need to revisit deeper questions that Cole & Winkler (1994) have already alluded to in their wonderful compilation, *The Oxford Book of Aging*,

Does aging have an intrinsic purpose? Is there anything really important to be done after children are raised, jobs left, careers completed? Is old age the culmination of life? Does it contain potential for self-completion? What are the avenues for spiritual growth in later life? What are the roles and responsibilities of older people? What are the particular strengths and virtues of old age? Is there such a thing as a “good” old age? (p. 3)

But that was then and this is now. As we now enter into the second decade of the 21st century (and some sixteen years later after that publication), it appears that scientific research and medical technology has continued to alter the possibilities of human life to the point where some believe that “living within limits” is exactly what shall be overcome by technological prowess of researchers who see the both the fountain of youth and the holy grail wrapped up into one big bioengineering project that is SENS (de Grey, 2007) or SENSE (Rose, 2005) – or both – in our supposed post aging era. The questions posed by Cole & Winkler (1994) are still relevant today, but would the answers be any different then when posited in 1994? *Is there such a thing as a “good” old age?* That is exactly what Critser was hoping to address toward the end of his book as he discussed of an emergent “longevity social phenotype.” The answers given by Critser reflected more of a social engineering approach to build up and facilitate stronger intergenerational ties and connections. But the answers given by de Grey or Rose or by many of the transhumanists would shock and surprise many in the field of gerontology who suppose *aging* is the very gift and reward for having lived so long. But whereas Petrarch,

Shakespeare, and Montaigne reflected on aging and found it wanting in many different ways, de Grey and Rose (for example) are no longer willing to simply reflect, they want to act – *they want to do something about it*. And that passion, that conviction is seemingly driven by the perspective that there are *no redeeming qualities* of getting old, but simply getting old and with all the attendant miseries of frailty. But I am not convinced that the single-minded driven compulsion and obsession with defeating aging by using bioengineering strategies at full speed ahead *without a deeper reflection process and philosophical discourse* is the path that we (notice the “we” – in the larger collective social-cultural domain) should take if we are to embrace the GRIN technologies (Garreau, 2005) in the post aging era. We should *act* – and we should *do*, but fully conscionable and fully integrated into the fabric of the larger context of humanity who may or may not agree with the goals and perspectives of post aging (David, 2005; Dumas & Turner, 2007). For many people, embracing technology is *not* the way to “outlive the self” (see Kotre, 1996) or engage the “commanding self” (see Shah, 1994), or even to experience a “gerotranscendental self” (Hyse & Tornstam, 2009). I thus submit that technology without philosophical embeddings is a simply a “tool” – and so are those who subscribe to it, as though “it” were the only thing that matters in solving the challenging matters of life. Some, like de Grey may beg to differ. He may see even see the call for an active philosophical engagement as interference and as a frivolous exercise. But I would counter that objection and ask both de Grey, and to you the reader, and to students in our classrooms: Whether we want to live longer – or forever – in any case, *what is the point?* What live at all? What will a thousand years bring you that one hundred could not? Aging has ended - now what? I will submit that technology may change the *dimension of time*

for such reflections, but I still (and believe that others would as well) grapple with the existential reflections nevertheless (see Hoffman, 2009, Krueger, 2009). But as we have seen, to some the end of aging would be seen as the ultimate measure of success with technological advancements and a sure sign of victory against the attributes of senescence, which are typically portrayed as negative when exhibited by all of the hallmarks of frailty. In other words, there apparently is not much to be gained with experiencing the aging process when the ultimate outcome is supposedly illness and suffering and decline; and inevitably, death. At best, it seems that the best that we can do is to treat the symptoms, describe the challenges to social and government structures, and hope to compress morbidity the very ends of human limits in terms of natural life span. And for many, this is enough. This is sufficient given our resources, our ethics, and our needs and wants. We should all want to live life to the maximum – optimally. If decline and frailty appear and enter our existence, then so be it, but at least the presence of disease and decline was to coincide in close proximity to the wall of limits.

Natural limits. Life limited, but life lived fully in the longevity revolution. But for others that is not enough. This is not sufficient. Nor is it acceptable given the tools at our command. For some technology (i.e., the GRIN technologies) is the solution to the problem and challenges of aging; more so, it is the very key to unlocking the limits of human life and to open up and make accessible an entire life experience beyond the so-called natural life span (see Gems, 2003). The longevity revolution should not stop at a “natural” limit. There is no limit that is natural anymore. Being human and becoming an aging individual is not a given and we should certainly not accept the compression of morbidity or optimal aging as the final goal worthy of all of our efforts in gerontology

and geriatrics. It is though *aging* is the touchstone by which we can determine whether or not we shall perhaps fully enhance the state of being human so that we might transcend ourselves into something greater – *better*. The presence of aging – *the experience of aging* is seen as robbing us of our full potential. If aging were defeated, then by extension, the defeat of death would be next on the list for “intervention.” The future of aging is indeed biotechnological. But it shall it also be philosophical? I have strongly indicated that any post aging activities should be embedded in the aesthetical, phenomenological, and hermeneutical – even when purists, advocates, and devotees of the GRIN technologies see no need to taint “the nature of technology” (Arthur, 2009) with any other perspective. We may wish for the longevity revolution, but we should also be *carefully* aware of what we wish for.

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