

Response to Dr. Olshansky

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I enjoyed Dr. Olshansky's gloomy take on the data relating to healthy life expectancy (HLE).¹ As usual with his writings, the essay is clear and thoughtful, but the available data do not support his pessimistic conclusions. First he sets up a straw man offering that, "life extension in the future would probably not yield the same amount of healthy life as it did in the 1980s," but our argument is over whether HLE and not extension is rising.²

The data indicate that, in many places around the world, the curve for HLE is nearly superimposing itself on that for life expectancy (LE)³; this without any discussion about maximal lifespan—which I suspect Dr. Olshansky and I believe is relatively fixed according to the laws of thermodynamics and evolution. Furthermore, in support of my thesis, Olshansky recognizes that "some population subgroups still have significant room for improvement in health and longevity" [emphasis mine]. I also agree with him in that an "endless quest to extend life is...a cruel and potentially dangerous Faustian bargain," but again, this was not the point of our debate.

Simply put, are we healthier as we approach old age than were our grandparents *at the same age*? Likewise, will our children in their old age be healthier than we are in ours? From the work of Fogel,⁴ referred to in my initial contribution² and others,⁵ it appears that we are, but the bigger question is whether this will continue to be the case for future cohorts.

In a nice literary gambit, Olshansky brings up Faust and his bargain with the devil. It is true we should not sell our soul for anything and especially not for the quest for immortality or even its cousin—the extension of maximal lifespan—a la Aubrey de Grey.⁶ Olshansky mentions the generic legend of which Faust is the most famous variant, but some of these tales have a comic twist in which a clever peasant outwits the devil. My favorite example is that of the famous blues guitarist Robert Johnson, who as legend has it, sold his soul at a rural Mississippi crossroads to achieve musical genius. He certainly was a successful musician, being the acknowledged father of the Delta Blues genre, but he died at the ripe old age of 27—

poisoned by a jealous lover or syphilis (the sources are not clear). In contrast, BB King lived to almost 90; where is the Faustian bargain here (Figure 1)?

A final point: we live in a highly technical era, and the biological laws of evolution alone no longer determine how "healthy" we are or even can be. Returning to the Nobel Prize-winning Fogel, cited in my initial foray,⁴ he describes a new phenomenon of "technophysio evolution," the theory of which "points to the synergism between technological and physiological improvements that have produced a form of human evolution that is biological (but not genetic), rapid and culturally transmitted." Fogel claims that this phenomenon has been going on only for the last 300 years. This theory and the abundant data that support it point to a much more potentially positive outcome for many older persons (albeit under reasonable economic and environmental conditions) than do Dr. Olshansky's bleak prognostications.



Figure 1. BB King—still singing the blues into his late 80s. Image used with permission from EPA.

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Perhaps like the wily peasant, we have made a deal with the devil but have cleverly turned the tables on him. We are not designated *Homo sapiens* for nothing.

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