Letters

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All the many humans ever: An update

Some 30 years ago, a poem, in voicing its author's distress with our overcrowded planet (4.4 billion people alive at the time), bolstered his concern by claiming "there are now more of us alive than ever have been dead. I don't know what this means, but it can't be good" (Matthews 1979, p. 36). A colleague asked me to verify that disquieting assertion.

My subsequent stab at estimating the numbers of humans who had ever lived (i.e., for the then past 300 thousand years) came to approximately 46.4 billion. That is to say, those living at the time were thus not even close to the assertion in question—rather representing only 9% of all the humans ever born (Westing 1981, 1982). My analysis necessitated a number of assumptions: (a) As to when it all began, I decided *Homo sapiens* evolved from *Homo erectus* and *Homo habilis* in about 298,000 BCE, basing this on Bernard G. Campbell's detailed analysis of the matter (Campbell 1974, p. 111). (b) As to the seven ages (and eight dates) I established for my calculations, their transitions were based on what seemed to me to be key events in human history, moreover, for which reasonably reliable population numbers had been established (Coale 1974). (It could be noted here that the equations presented in my table 2 [Westing 1981] can be used for obtaining a rough population estimate for any date in human history.) (c) As to the increasing life spans I employed for my seven ages, these were simply educated guesses on my part, based on what I could glean from the relevant literature, and not including neonatal deaths.

As an aside, it may be of interest to note that somewhat earlier, Arthur C. Clarke had suggested that, "Behind every man now alive stand thirty ghosts, for that is the ratio by which the dead outnumber the living. Since the dawn of time, roughly a hundred billion human beings have walked the planet Earth" (Clarke 1968, p. 1). Unlike the poem that started all this, Clarke's guess at least erred in the right direction. However, in 1968 there lived about 3.5 billion people from among an all-time total at the time (employing my assumptions) of about 45.6 billion, thus coming to only 12 ghosts behind each person then alive (i.e., about 8% of them). On the other hand, I might mention that a recent attempt at estimating these values (based on assumptions and a mathematical approach quite different from mine) comes quite close to Clarke's conjecture (Haub 2002).

Updating the above 1980 values to 2010 (and employing the same methodology as before), the number of people worldwide to have ever been born rises to approximately 49.2 billion. With the United Nations global population estimate for mid-2010 being about 6.9 billion, those of us living today thus now represent the somewhat higher fraction of about 14% of all those who have ever lived. Sad to say, we continue to ignore the ever-growing multiplicity of indications that Earth's capacity to sustain a healthy biosphere is being increasingly overwhelmed by our relentlessly expanding human numbers, needs, and desires (e.g., Westing 2010).

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References cited

Campbell BG. 1974. Human Evolution: An Introduction to Man's Adaptations. 2nd ed. Aldine.

Clarke AC. 1968. 2001: A Space Odyssey. New American Library.

Coale AJ. 1974. History of the human population. Scientific American 231 (3): 40–51.

Haub C. 2002. How many people have ever lived on earth? Population Today 30 (8): 3–4.

Matthews W. 1979. Inheritance tax. Vegetable Box 4: 36–37.

Westing AH. 1981. A note on how many humans that have ever lived. BioScience 31: 523–524.

———. 1982. A note on how many humans that have ever lived. BioScience 32: 6.

———. 2010. Overpopulation and climate change. New York Times. 17 February. (16 August 2010; *www.nytimes.com/2010/02/18/opinion/18iht-edwesting.html*)

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