

Addendum to “Entropy as Disorder”: Dismal decay before entropy

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The idea that “the whole world is going to pot” is far older than Rudolf Clausius’s 1865 concept of entropy: the “entropy as disorder” misconception merely latched into a long-prevalent mood.

In 1852 William Thompson (who would be ennobled as Lord Kelvin in 1892) had already written a gloomy paper “On a Universal Tendency in Nature to the Dissipation of Mechanical Energy.”¹

In his great 1737 work, *Critica Botanica*, Linnaeus wrote that “riches vanish, the most stately mansions fall into decay, the most prolific families die out sooner or later; the mightiest states and the most flourishing kingdoms may be overthrown”.²

In 29 BCE Virgil wrote that “All things by nature speed towards the worse”.³

Going even further back, Solomon claims in the Bible that “I have seen all the things that are done under the sun; all of them are meaningless, a chasing after the wind.”⁴

And going forward, even after the formulation of the concept of entropy many people invoked the idea of universal decay without invoking entropy: the idea permeates Toynbee’s twelve-volume *Study of History*.⁵

The idea that things are always getting worse has been around for millennia, and will continue to exist whether or not its proponents misappropriate the concept of entropy as supporting veneer.

¹ *Proceedings of the Royal Society of Edinburgh* (19 April 1852).

² Quoted in Kunt Hagberg, *Carl Linnaeus* (Jonathan Cape, London, 1952) page 106.

³ *Georgics*, book I, lines 199-200.

⁴ Ecclesiastes 1:14.

⁵ Arnold J. Toynbee, *A Study of History* (Oxford University Press, Oxford, UK, 1934-1961).