

David Letzler, “Cross-Up Disciplinarity: What Norbert Wiener, Thomas Pynchon, and William Gaddis Got Wrong about Entropy and Literature.” *Contemporary Literature* 56.1 (2015): 23-55.

David Letzler’s 2015 article seeks to look at the function of entropy in fiction, particularly in the works of Thomas Pynchon and William Gaddis. This might seem a rather banal way to begin this review, but it is worth mentioning due to the position of entropy as a thematic concern in Pynchon criticism. The cornerstone of first wave Pynchon criticism, entropy formed the backbone of early studies from key critics, such as Mendelson, Hite and Tanner, and still informs the basic critical framework for texts like *V.* and *The Crying of Lot 49*. In a scholarship that treats entropy as a kind of “heritage study,” Letzler attempts to reconsider the position of entropy in postmodern literature by highlighting the technical errors made by both the authors and the critics, and addresses how this older theme can be redefined and used again to approach Pynchon from a fresh angle.

Letzler begins by using the work of Wiener and Shannon (the early founders of information theory) to describe the early adoption of entropy as a literary concept that (mainly due to Wiener) combined information theory with thermodynamics into “a Manichaeian societal struggle between Progress’s efforts to create more organised societal communications and ineluctable Entropy’s attempt to degrade them toward most-probable states of motionless homogeneity” (24). To Letzler, this binary way of looking at entropy as a positive or negative force is a key misunderstanding of the core concept of entropy (both thermodynamically and informationally), made by both the critics and the authors themselves. Thus, with Tanner’s criticism that Pynchon uses entropy with “a looseness any scientist would deplore” (26), Letzler attempts to approach early Pynchon again, but instead with a more technically robust form of entropy and information theory.

Letzler achieves this new approach via Borges’ *Library of Babel*. As an arguably more accomplished writer of information theory than either Pynchon or Gaddis, Borges’ short story gives Letzler a very clear, and a very *different*, example of how entropy operates. To paraphrase Letzler’s analysis, the measure of information within a message is related to the statistical improbability of the reader’s expectations. Two concepts are at work here, redundancy and unpredictability. Redundancy is expressed when a message can be expressed in a shorter form. In the *Library of Babel*, this is shown as a text that repeats MCV for 410 pages, made redundant by the phrase “MCV for 410 pages” – a phrase that contains the same information. Unpredictability is shown through a text that is an utter random string of letters. At either extreme, a text would be maddening for the reader.

Both of these terms represent two ends of a scale, the extremities of what literature can be. Letzler calls these “additive inverses” in that they are mathematically identical, but inverted (28-29). Where he feels critic and author have fundamentally misunderstood entropy is that they mistake *inversion* for *opposition*. Entropy and order are not opposing forces, but extremities of the same scale. These texts are less “about order versus chaos, but about the relative strengths of competing forms of order” (40). For Letzler, the text that would produce the most information, and (although he does point out the problems with this) therefore more artistry, would be situated centrally

between these two inverses. As Letzler clearly states in one of his central theorems, “any text of more than minimal length must balance order and disorder to communicate any substantial meaning” (30).

Letzler’s application of his theory to Pynchon and Gaddis is by its nature restrictive in that it focuses on their early work (*The Crying of Lot 49*, the “journeyman” short stories of *Slow Learner* and Gaddis’ *JR*) but this is by no means a criticism of the work on display here. What Letzler achieves is the construction of a new set of (scientifically more viable) tools to re-evaluate entropy in these works, and his textual analysis provides a decent example of the work that could be achieved via these. He manages to express the tensions between static order and an anarchical mind-set in a way that shows the necessity of both in Pynchon’s work, and he also provides a reading of Gaddis that allows the text to exist in a state where it is “not only about entropy but is itself highly entropic” (42).

Where this article becomes important is the potential it grants not for reconsidering entropy in postmodern literature, but the framework it offers for other approaches to the texts. With a core concept undercut, many avenues can be opened up. For instance, this could be used to study political dimensions in Pynchon – the informational possibilities of resistant communities (think *Vineland*) caught between chaos and order. By dissecting the errors that are present in the early criticisms and texts, Letzler has not undone the entropic material in these works, but opened it up to a more vital and more *scientifically viable* analysis. From the old, something new.

Richard J Moss
Durham University