The Total Library

The fancy or the imagination or the utopia of the Total Library has certain characteristics that are easily confused with virtues. In the first place, it's a wonder how long it took mankind to think of the idea. Certain examples that Aristotle attributes to Democritus and Leucippus clearly prefigure it, but its belated inventor is Gustav Theodor Fechner, and its first exponent, Kurd Lasswitz. (Between Democritus of Abdera and Fechner of Leipzig flow—heavily laden—almost twenty-four centuries of European history.) Its correspondences are well known and varied: it is related to atomism and combinatory analysis, to typography and to chance. In his book *The Race with the Tortoise* (Berlin, 1919), Dr. Theodor Wolff suggests that it is a derivation from, or a parody of, Ramón Llull's thinking machine; I would add that it is a typographical avatar of that doctrine of the Eternal Return which, adopted by the Stoics or Blanqui, by the Pythagoreans or Nietzsche, eternally returns.

The oldest glimpse of it is in the first book of Aristotle's *Metaphysics*. I speak of the passage that expounds the cosmogony of Leucippus: the formation of the world by the fortuitous conjunction of atoms. The writer observes that the atoms required by this hypothesis are homogeneous and that their differences derive from position, order, or form. To illustrate these distinctions, he adds: "A is different from N in form; AN from NA in order; Z from N in position." In the treatise *De generatione et corruptione*, he attempts to bring the variety of visible things into accord with the simplicity of the atoms, and he argues that a tragedy consists of the same elements as a comedy—that is, the twenty-four letters of the alphabet.

Three hundred years pass, and Marcus Tullius Cicero composes an inconclusive, skeptical dialogue and ironically entitles it *De natura deorum* [On the Nature of the Gods]. In the second book, one of the speakers argues: "I do not marvel that there should be anyone who can persuade him-

self that certain solid and individual bodies are pulled along by the force of gravity, and that the fortuitous collision of those particles produces this beautiful world that we see. He who considers this possible will also be able to believe that if innumerable characters of gold, each representing one of the twenty-one letters of the alphabet, were thrown together onto the ground, they might produce the *Annals* of Ennius. I doubt whether chance could possibly create even a single verse to read."[1]

Cicero's typographical image had a long life. Toward the middle of the seventeenth century, it appears in an academic discourse by Pascal; Swift, at the beginning of the eighteenth, emphasizes it in the preamble to his indignant "Trivial Essay on the Faculties of the Soul," which is a museum of commonplaces, similar to Flaubert's later *Dictionnaire des idées reçues*.

A century and a half later, three men support Democritus and refute Cicero. After such an enormous space of time, the vocabulary and the metaphors of the polemic have changed. Huxley (who is one of these men) does not say that the "golden characters" would finally compose a Latin verse if they were thrown a sufficient number of times; he says that a half-dozen monkeys provided with typewriters would, in a few eternities, produce all the books in the British Museum.[2] Lewis Carroll (one of the other refuters) observes in the second part of his extraordinary dream novel *Sylvie and Bruno*—in the year 1893—that as the number of words in any language is limited, so too is the number of their possible combinations or of their books. "Soon," he says, "literary men will not ask themselves, 'What book shall I write?' but 'Which book?' " Lasswitz, stimulated by Fechner, imagines the Total Library. He publishes his invention in a volume of fantastic tales, *Traumkristalle*.

Lasswitz's basic idea is the same as Carroll's, but the elements of his game are the universal orthographic symbols, not the words of a language. The number of such elements—letters, spaces, brackets, suspension marks, numbers—is reduced and can be reduced even further. The alphabet could relinquish the q (which is completely superfluous), the x (which is an abbreviation), and all the capital letters. It could eliminate the algorithms in the decimal system of enumeration or reduce them to two, as in Leibniz's

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[1]As I do not have the original text, I have copied this passage from Menéndez y Pelayo's Spanish version (*Obras completas de Marco Tulio Cicerón* III, 88). Deussen and Mauthner speak of a sack of letters but do not say they are made of gold; it is not impossible that the "illustrious bibliophage" has contributed the gold and removed the sack.

[2]Strictly speaking, one immortal monkey would be sufficient.

binary notation. It could limit punctuation to the comma and the period. There would be no accents, as in Latin. By means of similar simplifications, Lasswitz arrives at twenty-five symbols (twenty-two letters, the space, the period, the comma), whose recombinations and repetitions encompass everything possible to express in all languages. The totality of such variations would form a Total Library of astronomical size. Lasswitz urges mankind to construct that inhuman library, which chance would organize and which would eliminate intelligence. (Wolff's *The Race with the Tortoise* expounds the execution and the dimensions of that impossible enterprise.)

Everything would be in its blind volumes. Everything: the detailed history of the future, Aeschylus' *The Egyptians*, the exact number of times that the waters of the Ganges have reflected the flight of a falcon, the secret and true name of Rome, the encyclopedia Novalis would have constructed, my dreams and half-dreams at dawn on August 14, 1934, the proof of Pierre Fermat's theorem, the unwritten chapters of *Edwin Drood*, those same chapters translated into the language spoken by the Garamantes, the paradoxes Berkeley invented concerning Time but didn't publish, Urizen's books of iron, the premature epiphanies of Stephen Dedalus, which would be meaningless before a cycle of a thousand years, the Gnostic Gospel of Basilides, the song the sirens sang, the complete catalog of the Library, the proof of the inaccuracy of that catalog. Everything: but for every sensible line or accurate fact there would be millions of meaningless cacophonies, verbal farragoes, and babblings. Everything: but all the generations of mankind could pass before the dizzying shelves—shelves that obliterate the day and on which chaos lies—ever reward them with a tolerable page.

One of the habits of the mind is the invention of horrible imaginings. The mind has invented Hell, it has invented predestination to Hell, it has imagined the Platonic ideas, the chimera, the sphinx, abnormal transfinite numbers (whose parts are no smaller than the whole), masks, mirrors, operas, the teratological Trinity: the Father, the Son, and the unresolvable Ghost, articulated into a single organism. . . . I have tried to rescue from oblivion a subaltern horror: the vast, contradictory Library, whose vertical wildernesses of books run the incessant risk of changing into others that affirm, deny, and confuse everything like a delirious god.

[1939]   [EW]