# The Empty Book: Borges, Babbage and Chesterton

1.

B orges's fiction and essays refer to distant historical and literary horizons rarely touching the present day. Furthermore, they summon a past that is redolent with myth and arcane mystery. Yet I would contend that a good part of his reputation is due to the sense that his writings reflect the advent of the computer age and the looming possibilities of artificial intelligence. Sidelights are thrown on this by his interest in constructed languages, concepts of mapping, Golems, calculating machines and automata. Indeed, one could read his story "Funes el memorioso" as the anticipation of a culture that is obsessed and will soon be bogged down with memory storage systems, a culture that is throttled by the archive. The computer turns out to be the Babylonian library.

Borges's predilection for the animated text, the return of the text into life, as in the kabbalistic inscription on the Golem or the power of the letter Aleph, can also be studied in the writers he admires and whose quotations proliferate throughout his texts: H. G. Wells, Kafka, Stevenson, de Ouincey, Lewis Carroll, Melville, Hawthorne or science fiction writers such as Bradbury and Stapledon. Among those writers he liked best was Gilbert Keith Chesterton, who at a first glance would not seem to be a part of this 'Gothic' tradition. However as Borges demonstrated in his essay on Chesterton in Otras Inquisiciones, Chesterton's phantasms and fears are the hidden core of his writing. In detective stories, novels and essays Chesterton attempts to redefine order or orthodoxy and thus, paradoxically, depends on disorder. There was in Chesterton something, asserts Borges, that wanted him to be Poe or Kafka, but fortunately he remained Chesterton. In order to make his point, Borges singles out the nightmares relating to the animation of texts or technological constructions. He comments on Chesterton's satirical piece "How I Found the Superman", in which Nietzsche's Übermensch has come to (a miserable) life in the London suburb of Croydon:

Chesterton habla con los padres del Superhombre; interrogados sobre la hermosura del hijo, que no sale de un cuarto oscuro, éstos le recuerdan que el Superhombre crea su propio canon y debe ser medido por él [...]; después admiten que no es fácil estrecharle la mano [...]; después, son incapaces de precisar si tiene pelo o plumas. Una corriente de aire lo mata y unos hombres retiran un ataúd que no es de forma humana. Chesterton refiere en tono de burla esa fantasía teratológica. (OC 2: 73)

Borges calls Chesterton "un tejedor de pesadillas, un *monstrorum artifex* (Plinio XXVIII, 2)" (ibid.) and highlights stories such as "The Invisible Man", where Chesterton uses automata as a red herring; in a murder case: "habla de un hombre devorado por autómatas de metal". He also underlines the metaphorical transpositions taking place between biological systems: "habla de un árbol que devora a los pájaros y que en lugar de hojas da plumas"; or between biological systems and inorganic matter: "si habla de su ojos, los llama con palabras de Ezequiel (I: 22) un terrible cristal' (ibid.). Chesterton's instinct for finding and using the material and techniques of nightmare is matched only by his Argentinean interpreter. Much of this nightmare comes from the juxtaposition of intelligence (meaning) with death (inorganic life) -a procedure that is at the basis of today's experiments in genetics and artificial intelligence.

In this paper I wish to show that anti-modernists like Borges and Chesterton, who cherished the past and tried to disregard the future, had by virtue of their imagination a much deeper insight than many a futurologist into the impending revolution which has come to change the face of the earth: "Entonces desaparecerán del planeta el inglés y el francés y el mero español. El mundo será Tlön." (OC 1: 443)

#### 2.

Pierre Menard's work can be situated on the brink of this nightmare and raises the question whether this proximity is not due to his attempt to turn himself into an imaginary machine. In his "visible" work Menard manifests his interests in machines and projects devised to overcome the contingencies of reality and history. While Borges himself has always evinced an interest in John Wilkins and his concept of an artificial language, Menard has even written a monograph on Descartes, Leibniz and Wilkins. He has furthermore written on Leibniz's Characteristica Universalis and on Lull's Ars Magna Generalis. Both Lull and Wilkins were striving to develop symbolic systems that would translate the world into signs and particularly into numbers. The same could be said for Leibniz, who worked on a universal language of numbers that could represent the real world: an alphabet of thoughts,

as it were. In so far as these projected systems not only represent but ultimately supersede the real, it makes sense that Menard also contributed to a journal entitled Hojas para la supresión de la realidad (OC 1: 445). Though part of his visible work these contributions obviously reflect the concerns of his invisible work, too. However, they do not achieve its purity and radicalism. One of the basic strategies employed in writing the Quijote is elimination. First, Menard eliminates the intermediate stages of his creation: "La sola diferencia es que los filósofos publican en agradables volúmenes las etapas intermediarias de su labor y que yo he resuelto perderlas" (447) He further applies elimination to history (history from 1602 to 1918). Forgetfulness itself is part of the construction since it may be compared to the image of an unwritten book: "puede muy bien equivaler a la imprecisa imagen anterior de un libro no escrito" (448). Finally, he eliminates much of what he has written after the act of writing since he keeps correcting, revising and destroying manuscript pages by the thousand. The negative process of exclusion is complemented by the inclusive vision of an ideal of completeness, a sort of retrospective prophecy. Its characteristics are reminiscent of Laplace's demon who, in its omniscient perfection, could predict any future state of the universe if it were given complete information about its present state. The power of prediction is certainly an ideal that is part and parcel of the computer ideology. Chaos theory, for instance, owes its origin to the perceived lack of prediction in states of disorder -such as the weather. It seems that if we can't feed any more data into the machines to improve their power of prediction the machines will start communicating among themselves; they then might produce further data for their mutual enjoyment. Menard's idea anticipates artificial intelligence which is supposed to raise the level of consciousness on this planet. Though Menard's study and meditation will produce only a few pages of Don Quijote, his method has already changed the view of texts and their historicity. His ideal could be reached with a machine that transcends the individual life cycle a megamind. Menard envisaged it thus: "Todo hombre debe ser capaz de todas las ideas v entiendo que en el porvenir lo será." (450)

## 3.

Menard was right: connecting the individual mind to the expanding machine archives of humanity has led to this 'omniscience', at least in terms of information processing. Yet knowledge has decreased in importance for the individual as knowledge recedes into the pure potentiality of external storage systems. It is merely available. Corresponding

to this type of knowledge we shall probably increasingly become what one might call 'virtual individuals'. The problem of bridging the gap between mind and machine was seen in "The Reading Machine", a story Morris Bishop published in 1947. Here, Professor Entwhistle constructs a machine that does the reading for the student:

-You assign a student a bibliography of fifty books. He runs them through the machine comfortably in a weekend. And on Monday morning he turns in a certificate from the machine. Everything has been conscientiously read!

- -Yes, but the student won't remember what he has read!
- -He doesn't remember what he reads now. (316)

Pierre Menard failed to reach his aims but he had the vision of a virtual machine which, freed of the fetters of biology, could have done the job. He knew the software but his hardware, i.e., his life, was not sufficient. Some day a Swiftian professor will build a word producing machine that by means of random selection and combination will produce a Shakespeare, a Dante, or a Cervantes.

A comparable process was initiated when in the 1830s the mathematician and scientist Charles Babbage nearly invented the computer. His machine failed because it needed more finely tuned parts which contemporary technology could not provide. His "Difference Engine", however, was at last constructed in 1991 and is now on show at the London Science Museum. Babbage's machine is to be seen in a tradition of automata that have begun to replicate the human world by gradually taking over the living world and transforming it into a sequence of numbers which operate by a system of discrete distinctions or differences. Babbage grew up in a cultural climate which fostered the construction of machines and automata as a first attempt at rationalization of labour. He admired John Merlin's London shows, in which a model Turk who chewed stones, mobile bird-cages, musical boxes, chairs for the gout-ridden, or fully mechanized orchestras could be seen. Babbage's keen interest in automata is also shown by the fact that he once bought a famous silver dancer at an auction (Schaffer 54f.). Babbage himself was one of the great project-makers of the industrial age. Besides planning novels for the purpose of making money (and then rejecting them because of the poor profit he anticipated), he thought of inventing an automatic games player and devised copying-machines like the so called "Corinthian Maid". He incidentally also composed a treatise against street-musicians who regularly got on his nerves. Babbage must be seen in the tradition of von Kempelen and Maelzel, who were immortalized by E. T. A. Hoffmann and E. A. Poe. Beethoven also contributed to their fame when he composed his "Battle Symphony" for Maelzel's 42 mechanized musicians. Like Poe, Babbage also had a penchant for cryptography and secret codes. He worked on lighthouse signalling as well as on dioramas and submarines. He even tried to walk on water by using book-shaped shoes. He had an experimental cast of mind and did not spare himself for the sake of science. As a boy he wanted to see whether he could raise the devil (he couldn't) and later, as we learn from his autobiographical Passages from the Life of a Philosopher, went into a hot oven to study the effect of baking on his own body. (158)

On a visit to post-revolutionary France he learned about the great French table-making scheme, the Tables du Calastes, which was a largescale ordnance survey project. Some 60 to 80 human 'computers' were employed, many of whom were redeployed hairdressers no longer needed after the demise of the aristocratic hairstyle popular during the ancien régime. It is here that he probably conceived his idea of a Calculating Machine, or "Difference Engine" that would replace the mechanical labour of the human employees (Campbell-Kelly 13f.). Though he was one of the early inventors of the calculating machine -along with Pascal, Leibniz and others- he had as has been pointed out by critics, no influence whatsoever on the 20th century development of the computer as brought about by Alan Turing or Konrad Zuse. His concerns however, have not ceased to fascinate later minds. Part of the fascination is due to the fact that he collaborated on this machine with Ada Lovelace, Lord Byron's mathematically gifted daughter. The unrealized machine became a seed for fantasies whose basic structure Borges treats in "El jardín de los senderos que se bifurcan": the branching worlds of if. What would have happened if the computer had been realized by the Victorians? This assumption has been elaborated into a steam-punk novel by William Gibson and Bruce Sterling, The Difference Engine (1990). The authors invoke an England where Darwin and machinery coalesce, a world reigned by dark plots, steam-engines and calculators. Babbage and the Queen of Engines, the Enchantress of Numbers, Ada Byron, loom in the background of the twisted story. The Crimean War coincides here with the first articulations of chaos theorv1.

<sup>&</sup>lt;sup>1</sup> Babbage's later calculator, the Analytical Engine, has received another fictional treatment with Peter Ackroyd's *Dan Leno and the Limehouse Golem*, London 1994.

In 1893, Edmund Clerihew Bentley, the inventor of a type of comic verse presenting potted biographies of the rich and famous and henceforth called the *clerihew*, composed, together with Maurice Soloman, a piece on Babbage:

Mr. Babbage Lived entirely on cabbage. He used his head, rather than his thumbs In inventing his machine for doing sums. (Campbell-Kelly 7)

Bentley's friend G. K. Chesterton makes "Babbage" appear in one of his generally underrated Father Brown stories -though these were certainly not underrated by Borges, who praised them on numerous occasions. In "The Blast of the Book" from the 1935 collection The Scandal of Father Brown, Professor Openshaw is a sceptical examiner of apparently occult occurrences. He is much feared by both sides, the mediums as well as the materialists, since he is unwilling (or unable) to take up a clear position. In his brave war against the two parties he is nonplussed only once when he is confronted not with apparitions but disappearances. A missionary from West Africa has communicated to him the remarkable fact that a book in his possession has caused the disappearance of those who were bold enough to open it up. The rusty old book is surrounded by Oriental mystery and exotic occurrences. It is to be feared that more people are likely to disappear. Indeed, five men altogether vanish during the course of the story: a man in Africa, a colonial Captain, the missionary, an Orientalist and, finally, Openshaw's secretary himself, a quiet and diligent man called Berridge. Berridge had been a most reliable assistant working "for the publication of a small periodical of psychical and psychological notes of the driest and most agnostic sort." (Father Brown: 326) The clerk "sat at a desk in the outer office, totting up figures and facts for the purpose of the printed report" (326). His boss often calls him "Babbage" instead of Berridge "because he's so exactly like a Calculating Machine" (331). Openshaw is the more shocked by his disappearance as he cannot understand why such an uninquisitive and reticent man should have opened the cursed book. Father Brown comes to unravel the mystery by being more sceptical than the sceptical professor, whose office is adorned by an engraving of Montaigne. The hub of the story is to be found in this dialogue:

- -Berridge did not disappear, said Father Brown. -On the contrary.
- -What the devil do you mean by 'on the contrary'?
- -I mean, said Father Brown, that he never disappeared. He appeared.(338)

As a matter of fact, the insignificant secretary has devised a most significant plot by impersonating the missionary with his ghastly tale. He is not only an actor but also a creator of stories -about orientalists, captains and other visionaries. The book, when Father Brown has the courage to open it, is a blank. The secretary simply wanted to teach his professor a truth, much as Chesterton teaches his readers, namely, that what is invisible has a tendency to return with a vengeance. Things and people are not invisible by themselves or through some act of magic; they are made invisible by disregard. The whole issue of the blasted book, then, is a red herring, but one which appeals to what Borges called the "culto de los libros". As Borges demonstrates in his essay of the same title, this tradition extends from God's creating the world to the word and the two books (of Nature and the Bible) in Christianity all the way down to Mallarmé's dictum "Tout au monde existe pour aboutir à un livre" (OC 2: 91). From our vantage point we could probably add the strange cryptography of the genetic code, in which our history is inscribed. Now, where the book is the centre of a cult, it is a magical object which creates presence: it makes things and worlds appear. With Mallarmé, however, a reversal seems to have taken place -the world disappears into a book. Mallarmé's blank page is therefore the ultimate expression of the cult of books and its denial at the same time. Chesterton's empty book evokes this tradition and its symbolistic encoding. The religious and superstitious connotations, however, add a further dimension to the story: the book is somewhat of an anti-Bible, or even the Bible of the anti-Christ, an instrument and proof of nihilism. Its credo is elimination -of people, histories and world views. It appears to be the refutation of the modern world but, as Father Brown shows, only the modern world will succumb to this refutation. The moderns fall prey to it because of the reverence with which they regard numbers and statistics. By these means, the modern world maintains a realm of magic underneath its materialist and rationalist cover. Thus the priest argues with the professor:

I suppose the hardest thing is to convince anybody that 0+0+0=0. Men believe the oddest things if they are in a series; that is why Macbeth believed the three words of the three witches; though the first was something he knew himself; and the last something he could only bring about himself. (337)

While we are more prone to be sceptical about images as potentially misleading, numbers can easily create illusions because they make so many things and qualities disappear. As in Pierre Menard's *Don Quijote*, this kind of elimination will never be crowned by completion. The

invisible, or that which has been repressed, such as history or language, for example, will inevitably reappear.

The social implications of Chesterton's humble story are quite clear. As Marshall McLuhan put it in 1948, Chesterton's "unfailing sense of relevance and of the location of the heart of contemporary chaos carried him at all times to attack the problems of morals and psychology" (75). The moral message is that a large part of society -those that serve the rich in their pursuit of power and happiness- remains invisible. The Professor, for example, is surprised to hear that Father Brown is acquainted with the waiter whose restaurant he himself frequents regularly. Much of Father Brown's success as a detective is due to this attention to the unattended, disregarded members of society.

Another story that I have already mentioned and on which Borges has commented, "The Invisible Man", treats invisibility as the central issue. As with the empty book, the reader and spectators are misled by automata that seem to have a cannibalistic inclination. Yet the murderer is the quiet invisible postman whom no one had taken into account because of his unobtrusiveness and nondescript regular appearance. In Chesterton's detective stories the invisible classes take silent revenge. Often reviled as old-fashioned and reactionary, Chesterton here turns out to be in the company of thinkers he would have heartily criticized otherwise: deconstructionists and feminists, who have all been uncovering the invisible and suppressed layers of history and perception. From a Freudian point of view, the invisible would represent the repressed contents of consciousness. But I should like to add another dimension to this story and ask in what sense it is related to the question of machinery, and, possibly, computers.

### 5.

Many of Chesterton's stories can be read as parables of creation, like *The Man Who Was Thursday*, the novel he dedicated to E. C. Bentley and which was greatly admired by Borges. By the same token we can also read them as parables of creativity. Chesterton worked under incessant creative strain and thus it is no wonder that this should also become the invisible centre of his fictions. There is a constant tension in his writings in which creativity and freshness of perception antagonize the mechanization through habit. The story "The Angry Street", is a compelling illustration of how one street revolts against a certain pedestrian who has routinely walked upon it for forty years without noticing it:

For forty years two months and four days I fulfilled this course by accumulated habit: it was not a long street and it took me about four and a half minutes to do it. After forty years two months and four days, on the fifth day I went out in the same manner [...] and I began to notice that walking along the familiar street tired me somewhat more than usual. At first I thought I must be breathless and out of condition; though this, again, seemed unnatural, as my habits had always been like clockwork. But after a little while I became convinced that the road was distinctly on a more steep incline that I had known previously; I was positively panting uphill. (63)

The street gets distorted in space and time and gains an apocalyptic colouring: "it was tilted upwards like a lid (...) the street went up straight in front of my face like a steep staircase or the side of a pyramid (...) had lifted itself like a single wave" (63). The mechanized perception of the office clerk who walked upon it collapses. The result is something like the world picture afforded by modern physics. Compare for example the famous description Eddington gave about entering a room:

I am standing on the threshold about to enter a room. It is a complicated business. In the first place I must shove against an atmosphere pressing with a force of fourteen pounds on every square inch of my body. I must make sure of landing on a plank travelling at twenty miles a second round the sun -a fraction of a second too early or too late, the plank would be miles away. (...) The plank has no solidity of substance. To step on it is like stepping on a swarm of flies. (342)

Walter Benjamin saw the worlds of Kafka and physics converge in this passage. For Chesterton, one could say that his nightmares are easily compatible with those hidden universes that physics has been revealing in the twentieth century. Worlds not meant for humans seem to loom behind the everyday surface of things just as nightmare lurks behind habit in Chesterton's fiction.

Arthur Koestler investigated the mechanization of habits in his influential study of the creative mind, *The Act of Creation*. Our mental development depends on the shifting ofawareness from easy tasks to more complex ones. The simple processes then become invisible: "habit-formation is accompanied by a gradual dimming and darkening of the lights of awareness" (155). In spatial terms, the creative impulse is characterized by an upward surge while the mechanized relegation of tasks corresponds to a downward movement (156). In "The Angry Street", this is exactly the case: the street is ignored and disregarded because it lies under one's feet, whereas in revolt it bucks and rears its head to heaven like a horse. Francis Galton, the founder of eugenics -thus one of the main butts of Chesterton's criticism in his writings

against euthanasia and eugenics- wrote in his *Inquiries into Human Faculty* (1883) a paragraph which curiously foreshadows the setting of "The Blast of the Book":

There seems to be a presence-chamber in my mind where full consciousness holds court, and where two or three ideas are at the same time in audience, and an antechamber full of more or less allied ideas, which is situated just beyond the full ken of consciousness. (160)

Chesterton's and Father Brown's knack consists in what Koestler calls 'thinking aside'.

Protagonists and society are mostly hypnotized, as by statistics, because their view of things is fixed. But in 1960 experiments have led to the

rather surprising discovery that the unconscious movements of the eye are not merely *aids* to clearer vision, but a *sine qua non* of vision. When the subject's gaze remained really fixed on a stationary object (...), his vision went haywire, the image of the object disintegrated and disappeared -then reappeared after a while in distorted shape or in fragments. Static vision does not exist; there is no seeing without exploring. (158)

Mechanized habits outside the ken of awareness, the inhabitants as it were of the antechamber, call for the machine as a tool: "The machine", writes Koestler, "illustrates the process of relegating familiar tasks to lower levels of the mental hierarchy which functions as unawares or nearly- as involuntary reflexes." (156)

Berridge alias Babbage, then, represents such functioning. A man is turned into a machine and takes revenge by making others invisible. Chesterton's point is that the unconscious is not only a vessel for mechanized habit, an internalized machinery, but partakes of the full range of humanity. It has to be looked after, or even cultivated, as in art. In the story, carelessness will lead to the disintegration of the professor's world view. The unconscious threatens with death or disappearance if its creative impulses are ignored. Or, as Chesterton wrote in his fundamental essay *Orthodoxy:* "Imagination does not breed insanity. Exactly what does breed insanity is reason. Poets do not go mad; but chess-players do (...) The madman is the man who has lost everything except his reason." (14, 19)

If "The Blast of the Book" proves anything, it is the fact that professors need processors. But as Father Brown shows, processors carry out processes by making them invisible. Babbage's hairdressers disappear in the Difference Engine, or, to be closer to the story, secretaries secrete invisibility. In the mechanized and automatized world we are increasingly surrounded by black boxes in which invisible and obscure proc-

esses take place. The world thus created is one of new superstitions, sects and technological occultism. Much of the thrust of the Father Brown stories is directed against this confusion. The moon faced little priest demonstrates that a balance is needed: both reason and 'thinking aside' may help us to evade the underlying hypnotism.

Berridge's revolt begins with the statement overheard by Father Brown that "he would like to collect valueless things, as collectors did the silly things they thought valuable" (337). His revolt thus concerns the modern world -its superficial rationality, its spurious philosophy of statistics and the utilitarianism that keeps relegating people and things according to a fixed conception of what is valuable and what not. Father Brown observes "that Berridge was a character; that he was full of antics; that he had all sorts of views on you [i.e. the Professor] and your theories and your reputation for 'spotting' people. (...) He has nonsense motions of all sorts." (339) In other words, the clerk, like Father Brown and Chesterton, practises the art of 'thinking aside'; he abandons pure rationality in favour of intuition and creativity.

Against this background, Berridge's mischievous trick of the empty book gains a further meaning. The book is a nihilistic machine with an empty screen into which or as a result of which all sorts of people begin to disappear. In this sense it is another completion of Babbage's Difference Engine. Not only does it make a difference to the professor's world view, but it also has the properties of a computer which devours qualities and reduces people to statistics. One could even go so far as to say that Chesterton here anticipates the notebook, another book without words in which words and figures keep appearing and disappearing as you or they please. It is a book of the dead -which, according to some cultural historians, was the first kind of book anyway (Kittler 16). It is in line with other early modern media. One of the functions which Edison saw in his gramophone was to record the last words of dying people. Though the computer did not yet exist during Chesterton's time he had a sense of the onset of the media and information age when he wrote in 1931: "For another revolution is going on, parallel to the process of connexion of routes, and it is the disconnexion of ideas" (Insularity: 66). The modern concept of life as represented by Professor Openshaw is bound to fail because of this disconnexion of ideas. Chesterton was well aware of what our civilization with its increasing relegation of awareness to the black boxes of machines and media is heading toward. In one of his last essays, "On Christmas that is Coming", he wrote:

For all the apparent materialism and mass mechanism of our present culture, we, far more than any of our fathers, live in a world of shadows. It is none the less so because the prophets and progressives tell us eagerly that these are coming events which cast their shadows before. It is assumed that nothing is really thrilling except a dance of shadows; and we miss the very meaning of substance. (11)

It is an apt description of Borges's fictional world and our own virtual unreality.

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