

THE METAPHOR OF TRANSLATION:
BORGES AND MAUTHNER'S CRITIQUE OF LANGUAGE

Silvia G. Dapía

Borges read, quoted, and re-elaborated many literary and philosophical works written in the “central” countries. As García Canclini points out, it seems to be a particular characteristic of writers of a “peripheral” country, where the people are trained in the conviction that anything “great” appears only in the “central” countries, to be anxious to know and study the intellectual or creative works of the latter (75). Borges is perhaps one of the best examples of this attitude.

Borges has explicitly and repeatedly expressed his interest in the “central” philosopher Fritz Mauthner (1849-1923), particularly his critique of language. Thus, in 1944, in the preface to *Artifices*, Borges (*Obras* 483) ranks Mauthner among the seven authors whose works he keeps on rereading. Additionally, Borges claims he consulted Mauthner’s dictionary for the essays “The Doctrine of the Cycles” (1936) and “The Analytical Language of John Wilkins” (1952). Indeed, Borges’s interest in Mauthner is not surprising but rather inevitable. Both Borges and Mauthner are mainly interested in language; both of them advocate for English philosophy; both of

them feel themselves attracted by the work of Schopenhauer, perhaps the most Anglophile of the German philosophers; both of them criticize systematic thinking.

Yet Borges's work cannot be simply accounted for by the paradigm of imitation. And because we cannot "uproot" a cultural project of the "center" and merely "replant" it in a different context, I shall not pursue here any kind of "causal" relationship between Mauthner's and Borges's writings.¹ Furthermore, I do not attempt to demonstrate an "exclusive" indebtedness of Borges's writings to Mauthner in regard to certain ideas, notions, or themes. As I have pointed out above, Borges has read too many literary and philosophical works for us to naïvely assume the existence of only one place, namely Mauthner's writings, where Borges might have found an appealing discussion of a certain issue.

Undoubtedly, Borges must have found that other philosophers (Bertrand Russell, for example) took a similar approach to Mauthner's in regard to individual issues discussed in this paper. However, Mauthner's writings provide a particularly tight web of concepts, ideas, and motifs (even if he did not mean to propose any system whatsoever) that as a totality serves as a framework which productively interacts with many of Borges's texts, activating, in each case, one of its possible meanings. For this reason, I intend to focus here on some of Mauthner's conceptions (of things; word-superstition; encyclopedias; adjectives, adverbs and nouns; logic machines; universal languages) and their connections to Borges's own writings.² But first I would like to add some biographical information related to Fritz Mauthner and a presentation of Mauthner's critique of language.

¹ For this matter, see also Altamirano and Sarlo's conception of "the metaphor of translation as the image of the typical intellectual operation of the literary elites of capitalist countries that are peripheral with respect to the cultural centers" (88-89; quoted by García Canclini 52).

² For a comprehensive discussion of this relationship, see Dapía, *Die Rezeption*.

I. FRITZ MAUTHNER'S CRITIQUE OF LANGUAGE

Mauthner was born in 1849 in Horzice, a small Czech town in Bohemia, and moved with his family to Prague when he was five years old. As was the practice of the highly assimilated, upper-class Jewish families in the nineteenth century, Mauthner grew up speaking German in a Czech-speaking society. Mauthner was certain that he was no Czech, either by origin or by language, and regarded himself as a German. He initiated studies of law at the University of Prague but abandoned his studies without taking any degree. When in 1876, at the age of twenty-seven, he ultimately left Prague and chose Berlin in preference to Vienna, he acted in conformity with the prevailing German attitude of his time, namely, enthusiasm for the Reich and contempt for the Habsburg dual monarchy. Later on, being himself a target of resurgent anti-Semitism, he could not but condemn it.³ He lived in Berlin till 1905, being most of the time employed as a theatre critic of the *Berliner Tageblatt*, and achieved a certain literary fame through his novels and satires. Yet Mauthner's main concern was his philosophical critique of language, articulated in his first major book, *Beiträge zu einer Kritik der Sprache* (*Contributions Toward a Critique of Language*) in 1901. His *Wörterbuch der Philosophie* (*Dictionary of Philosophy*), written in 1910 in Freiburg, sought to clarify some central concepts in philosophy from the point of view of his critique of language. He also completed four volumes of *Der Atheismus und seine Geschichte im Abendlande* (*Atheism and Its History in the West*, 1921), a history of the rejection of the God of Christianity. Mauthner always stood outside of academic life; although Ernst Mach and Hans Vaihinger appreciated his work, he remained philosophically a rather lonely figure and had no following.⁴

Mauthner's critique of language can be placed in the context of a tradition that includes the medieval nominalists, John Locke, and Thomas Hobbes, on the one hand, and Johann Gottfried von Herder, Johann Georg Hamann, Giambattista Vico, and Friedrich Heinrich

³ For an account of Mauthner's relationship to Judaism, see Weiler "Jewish Self-Rejection."

⁴ For a biography of Mauthner, see Weiler *Mauthner*; also Kühn.

Jacobi, on the other hand. Indeed Mauthner revives the hidden tradition of the critique of language. He acknowledges, more than a hundred years after Hamann, that a critique of reason is nothing but a critique of language. Thus, Mauthner cites Jacobi's characterization of the history of philosophy as a Greek drama in which reason and language play the role of twins (*Menächmen*) (*Beiträge* 1: 335); even though in some people's eyes Kant sees the end of this drama, Jacobi points out that one thing "still missing was a critique of language that, as a metacritique of reason, would allow us to become of one mind about metaphysics" (Mauthner, *Beiträge* 1: 336). Indeed, although Mauthner is greatly influenced by Kant's *Critique of Pure Reason*, he believes that Kant falls into the error common to all philosophical inquiry: Kant, in Mauthner's view, fails to question the very premises on which his speculations are based because he does not analyze language itself. Kant understands that reason must be subjected to criticism, but he fails to realize that reason is nothing but language. Furthermore, Mauthner counters the call "Back to Kant," dominant in Germany and its universities, with the demand that we must return to Hume in order to proceed from there into a skeptical critique of language.⁵ With his critique of language, Mauthner hopes to meet the need defined by Jacobi.

But let's turn now our attention to the main ideas, concepts, and themes of Mauthner's critique of language.

⁵ Indeed Mauthner admires Hume perhaps more than any other philosopher. "The German school of philosophy," claims Mauthner, "has become used to regarding English common sense, which has made English philosophy so fruitful, as inferior. Yet where common sense is paired with the utmost dauntlessness, as it is in Hume, it seems to me that its restriction to the psychological, its abstention from German metaphysics, is to the advantage of the English mind" (*Wörterbuch* 2: 360; qtd from Haller 58). Furthermore, Mauthner is greatly influenced by the neo-Humean physicist Ernst Mach, Brentano's successor in the Chair of Theory and History of Inductive Sciences at the University of Vienna. Mach may be rightly regarded as the direct predecessor of Mauthner's sense data theory (*Erinnerungen* 209), which, in turn, has important consequences for the latter's notion of language.

ZUFALLSSINNE (CONTINGENT SENSES), ZUFALLSVERNUNFT (CONTINGENT REASON)

For Mauthner, language is based on sense-impressions. He shares the empiricist claim that there can be nothing in our understanding (which Mauthner identifies with language) that did not first appear to the senses (Mauthner *Beiträge* 3: 526). However, Mauthner separates himself from empiricism by acknowledging the contingency of our sense apparatus. In his view, our senses could have been different from what they actually are both in number and kind. Furthermore, like Darwin, Mauthner links contingency to necessity. He argues: "Our senses are contingent only in relation to the countless possibilities for knowledge. Historically, however, they developed out of necessity, like everything else that has developed. . . . Historically, our senses arose as a result of the organisms' interests" (*Beiträge* 1: 344).

Accordingly, for Mauthner, the reality to which we have access is contingent, too. Just as Plato's cave dwellers, who sit in the cave with their backs to the entrance, can perceive only the shadows of those who accidentally pass the entrance, so our senses, Mauthner argues, can register only certain aspects of reality (*Beiträge* 1: 330-31). Thus, Mauthner coins the term "Zufallssinne" (*contingent senses*) to condense his conviction "that there are definitely forces at work in the real world that will never be able to generate sense impressions in us" (*Beiträge* 1: 360). Furthermore, since our reason rests on our sensations, Mauthner speaks of "Zufallsvernunft" (*contingent reason*), too (*Beiträge* 2: 689).⁶ Indeed Mauthner arrives at the conclusion that our access to reality is limited or restricted in two ways. On the one hand, as we have already pointed out, our sense apparatus selects certain aspects of the world while discarding others (*Beiträge* 1: 330-31). On the other hand, our concepts also hinder our access to reality. But how do concepts impede or obstruct our access to reality? Do not concepts apprehend the "essences" of things?

⁶ Mauthner admits his debt to Nietzsche in terms of the application of Nietzsche's notion of contingency to sense-data. For an account of the connection of Mauthner's notion of "contingent senses" to Nietzsche's notion of contingency, see Bredeck "Mauthners Nachlese zu Nietzsche."

Mauthner denies the traditional interpretation of a concept as that which captures the essence of an object. "And because it is impossible to grasp the simple truth that a concept is nothing other than a word and a word is nothing other than a memory-tag for a set of similar sensations," Mauthner claims, "people have been quibbling for two thousand years about the relation between concepts and essence of things" (*Beiträge* 3: 289-90). In Mauthner's view, a concept is just a cluster of sensations. Our sensations are compared with memories of other sensations, Mauthner explains, and, as a result of this process, they are grouped together according to their similarities and captured in a concept or word.⁷ Moreover, Mauthner seems to share Nietzsche's understanding of concepts as constraints to our information about the world "out there." Indeed from his earlier writings onwards, Nietzsche does not get tired of insisting on the indifference to difference entailed by our concepts. He claims: "that one leaf is never quite like another, so it is certain that the concept leaf is constructed by an arbitrary dropping of individual differences, through a forgetting of what differentiates" (*Philosophy* 83). And yet... we have no access to the thing-in-itself, which remains indefinable to us, but only to a concept that necessarily overlooks individual differences. Therefore, through different terms such as concept, word, "memory image" (*Erinnerungsbild*), "memory sign" (*Erinnerungszeichen*), or "representation" (*Vorstellung*), Mauthner emphasizes the fact that we are never dealing with a thing or referent but with a sign or substitute that necessarily ignores individual differences among things.

⁷ Yet a further question arises as to how to account for the transition from mere sensations to concepts. Traditionally, this transition has been accounted for by introducing a further principle (the ordering capacities of our minds) which is not reducible to sense experience. But Mauthner draws no sharp distinction between sensations and conceptualized thinking. He asserts: "The process in the brain has (...) the character (...) of a gradual intensification. Pre-linguistic thinking is observation, a slow accumulation of similarities, an activity of paying attention, an exercising of the memory, which continues until the need arises to fix [the observed similarities] in a sign" (*Beiträge* 1: 217). Thus, Mauthner replaces what are generally assumed to be two discrete events (sensations and thought) by a continuum (prelinguistic thinking-conceptualized thinking).

"IN THE BEGINNING WAS THE WORD"

In Mauthner's view, language is an unfit instrument of knowledge but a necessary basis for community living. It possesses a value of use for the individual because it is the common property of all people (*Beiträge* 1: 25). "Communism," Mauthner claims, "was able to become the common reality in the field of language because we cannot claim property in language; anyone can enter into possession of this common property because language is nothing but a common worldview, belonging equally to everyone" (*Beiträge* 1: 25). Mauthner argues further: "Language exists never for itself alone but always only among humans. It represents for humans the same principle as the legendary ether did for the gravitational, electric, or luminous bodies. Something that allows the brain waves to vibrate from one person to another" (*Beiträge* 1: 28).

And the influence of language on us, in Mauthner's view, is pervasive.⁸ Indeed, in so far as the individual receives words (signs) "from the nanny, the teacher, or the newspapers," and these signs "are pressed into her brain, language," Mauthner claims, "which is also called thought as soon as it gets into movement, is brought through those signs into contact with all other single brains, and trembling and flickering, it lives its own life among humans" (*Beiträge* 1: 29). Clearly, the Cartesian "I think, therefore I am" is questioned here, and Mauthner's individual becomes to a great extent a function of language. In Mauthner's view, language "thinks" in people, that is to say, language precedes and defines the individual.⁹ "The feeling

⁸ However, in Mauthner's view, language is not a flawless means of communication. Mauthner's skeptical position in regard to language's communicative capacity can be perceived in his metaphor of language as a chaotic factory and that of a jumbled, large city. He states: "Language, as the result of the common impulse to communicate, is like the imperfect work of a factory, which is a chaos of millions of day-laborers" (*Beiträge* 1: 26-7). He claims further: "Language has become like a large city. Bedroom on bedroom, windows on windows, apartment on apartment, house on house, street on street, neighborhood on neighborhood, and everything is interlocked, interconnected, smeared into each in confusion, through pipes and ditches" (*Beiträge* 1: 27). These images, while emphasizing the primacy of the social aspect of language, also reveal Mauthner's skepticism in regard to its communicative effectiveness.

⁹ Mauthner's proposal of replacing "I think" by "language thinks" is reminiscent of Lichtenberg. Lichtenberg proposed that instead of "I think" we should say impersonally

often expressed with the words *not I think; it thinks in me*, this feeling of compulsion," Mauthner argues, "is quite simply correct" (*Beiträge* 1: 42). And elsewhere, Mauthner claims that people "believe they themselves think, when actually they only speak" (*Beiträge* 1: 176). Thus, in opposition to the Cartesian notion of an independent individual which brings meaning to the world, Mauthner conceives here of the self not as a cause but as an outcome of social meanings. "Because language between human beings is a social force," Mauthner maintains, "it exercises power over the thoughts of the individual" (*Beiträge* 1: 42). However, the question arises as to whether the power of language upon human beings allows any room for human agency and resistance.

Indeed Mauthner allows some space for the individual to take responsibility, for, according to Mauthner, the social force of language can somehow fail to "think in us." Mauthner asserts: "*In the beginning was the word*. With the word, human beings stand at the beginning of knowledge, and they remain there if they remain with the word. Whoever wishes to take even the smallest step forward, must free him/herself from the word and word-superstition, from the tyranny of language" (*Beiträge* 1: 1). Furthermore, Mauthner acknowledges his own individual space when he refers to the goal of his critique of language. Thus, aware that he too is playing a rule-governed social game, Mauthner claims: "This critique of language, too, would like to make a slight addition to the social game of knowing--a minor new rule. . . . It can become slightly real only if other players accept the little rule, when others adopt the reasoning of this critique of language as their own" (*Beiträge* 1: 39).

"THE WORLD OCCURS ONLY ONCE"

If we have no access to the things "out there" apart from our sensations of them, and if these sensations are articulated in concepts

"it thinks," as we say "it thunders" or "it rains" (*Borges Reader* 182). Interestingly, Ernst Mach, whose influence Mauthner always acknowledged, was the first person to draw attention to the philosophical significance of Lichtenberg in the intellectual circles of Vienna (Janik 134).

or words (for Mauthner, as we have already pointed out, words and concepts are identical), it follows that what there is consists for us not of things but of representations (*Vorstellungen*) or "things of thought" (*Gedankendinge*) (Mauthner *Wörterbuch* 1: 295). Accordingly, Mauthner denies that questions such as "What is the world apart from our representation (*Vorstellung*) of it?" make sense. In his view, all those who attempted to give a name to what is hidden behind our description or representation of it deceived themselves. Kant, extremely carefully, called it "thing-in-itself"; Schopenhauer, with an apparently irrefutable sense of introspection, called it "Will." Mauthner claims further that his critique of language is the only philosophical undertaking that does not pose the question about a "hidden reality" that stands behind the representation (*Der Atheismus* 4: 445). Thus, in contrast to the traditional appearance-reality dualism, Mauthner encourages a particular version of monism: "the world in which we live and suffer occurs only once," and therefore we must "make up our minds and be content with the only [existing] world" (*Wörterbuch* 2: 349). And elsewhere, Mauthner claims that it is language that splits the world into things-in-themselves and things for me. Yet the world does not occur twice. The world occurs only once (*Der Atheismus* 1: 552).

Moreover, since we cannot move beyond the realm of our representation and arrive at what our representation is a representation of, then it follows that there is no extralinguistic reality for us that might serve as a criterion for truth. Consequently, Mauthner is not committed to a correspondence theory of truth. In other words, since our statements cannot be tested against the background of an extralinguistic reality, the correspondence theory of truth does not make any sense.¹⁰ Assuming that there cannot be a truth "out there" independently of language, Mauthner proceeds to search for a criterion of truth in language. Mauthner's point of

¹⁰ Interestingly, in his dictionary of philosophy, Mauthner examines the history of the word "wahr," the German word for "true," and points out that from "allwaere," the medieval German word for "true," stems the modern German word "albern," which means "silly," "childish," "simple." Mauthner, who thinks that only simple minds can look for truth outside of language, praises the German word "albern" for having lost its original meaning of "true" and acquiring that of "silly" and "childish" (*Wörterbuch* 3: 416).

departure is Hobbes and his view that "*Verum et falsum attributa sunt non rerum sed orationis*" (*Beiträge* 1: 693). Since, according to Hobbes, only what is said can be true or false, it follows that truth is a property of sentences (Mauthner *Wörterbuch* 3: 400). "We cannot get to the objects without mediation," Mauthner argues, "only have our ideas and representations of them, and can therefore compare these only with themselves and not with things-in-themselves" (*Beiträge* 1: 694). And he concludes: "Therefore, nothing would remain but to see in truth the correspondence of our ideas and statements with themselves" (*Beiträge* 1: 694). Thus, in Mauthner's view, if an extralinguistic reality is unavailable, the only possible criterion of truth is the formal one. Objective truth is to be looked for only in language, Mauthner claims further, in the "common use of language" ("der gemeine Sprachgebrauch"; *Beiträge* 1: 695).¹¹

PLAYING THE SOCIAL GAME OF LANGUAGE

For Mauthner, there is no such "thing" as language but individual human beings who use language. Mauthner states that language is "not object at all, it is nothing but its use. Language is the use of language" (*Beiträge* 1: 24). Furthermore, Mauthner claims that there is no meaning whatsoever apart from the meaning that a word has in use (*Wörterbuch* 1: 147).¹²

¹¹ However, the conclusion drawn by Mauthner is not the only possible one. We can say, with Wittgenstein, that "This chair is blue" corresponds to a reality--although we can only say what reality by using that very sentence (Putnam *Pragmatism* 21). Mauthner makes here the same assumption that Kant and Schopenhauer have made before him. Mauthner assumes that because our descriptions of the world are shaped by our conceptual schemes, they are, for that very reason, not descriptions of the world "as it really is," opening thus the door to the question about the things-in-themselves that Mauthner claims Kant and Schopenhauer have falsely posed and his critique of language refuses to ask (*Wörterbuch* 4: 445).

¹² Mauthner acknowledges affinities between his position and that of the signification movement led by Lady Welby, who also denies the notion of an absolute, transcendent meaning: "The English theory of meaning is not far removed from a critique of language. It distinguishes precisely between the usual meaning (the prevailing usage), the individual meaning (the intention of the speaker or the writer in using a word), and the

Indeed Mauthner warns us against the misuse of the verb "to mean" as a synonym of the verb "to refer to." According to Mauthner, the verb "to mean" has always encouraged the human tendency to "double" the world into a world of language and a world beyond language, as if claiming that a certain word *means* something were equivalent to transcending our linguistic reality and thus arriving at the world "out there." For Mauthner, the belief in the possibility of *reference* to an extralinguistic reality makes sense only within the context of ancient times. Thus, Mauthner admits that questions such as "What does this earthquake mean?" "What does this freak of nature mean?" "What does this comet mean?" may have been appropriate for our ancestors, for they actually believed that those natural phenomena *refer to* some hidden fact that the gods were intending to convey to them. But since we no longer hold this belief, it does not make any sense for us to associate meaning with an external, extralinguistic world to which we have no access as such. Yet although today we have become terribly enlightened and leave earthquakes, freaks of nature, and comets to scientific research, Mauthner notices that we still use the verb "to mean" as if claiming that a certain word means something were equivalent to asserting the existence of the word's referent in the world "out there" (*Beiträge* 1: 158).

Instead, Mauthner highlights the psychological dimension of meaning (*Wörterbuch* 1: 148), narrowing thus the scope of the term "use" to the dimension of the individual's use. Yet the question arises as to whether he adheres to Humpty Dumpty's theory of meaning. As is well known, according to Humpty Dumpty in Lewis Carroll's *Through the Looking-Glass*, a word uttered on a particular occasion bears whatever meaning it does because the speaker confers that meaning upon it. "When I use a word," Humpty Dumpty says to Alice, "it means just what I choose it to mean--neither more nor less" (Carroll 163). Furthermore, when Alice says "I don't know what you mean by glory," Humpty Dumpty replies: "Of course you don't--till I tell you" (Carroll 163). Thus, by his reply, Humpty Dumpty shows that he knows he will not convey his meaning to Alice--unless he tells

value-meaning of a conception. In this last sense 'significant' was a favorite word of the aging Goethe" (*Wörterbuch* 1: 150).

her what he means—for we do not simply confer the meanings we choose upon words.¹³ We use a word as having a particular meaning because that is the meaning we have learnt it has in our language. In other words, the speaker's individual decision to mean something is not a sufficient condition for a word to have meaning. And although Mauthner takes account of the subject in the process of meaning, he does not reduce meaning to the speaker's intention. Instead, Mauthner claims that the subject is able to produce her individual acts of meaning only within the limits imposed by the rules (*Spielregeln*) of the community of speakers to which she belongs. And this brings us to another aspect of Mauthner's theory of meaning: the social dimension of meaning. In Mauthner's view, when one learns to use a particular language, one acquires the ability to play a particular kind of social game (*Gesellschaftspiel*). This social game has its particular rules (*Spielregeln*) that coordinate the utterances of all its speakers, enabling them to understand each other (*Beiträge* 1: 25). Moreover, if somebody violates its rules, she will have to pay a penalty: that of not being understood. Consequently, a word cannot mean whatever we choose it to mean because language is a rule-governed social game, with particular rules that have to be respected in order to ensure communication.¹⁴ Mauthner asserts: "Language is only a pseudo-value, like the rule of a game: the more participants, the more compelling it will be" (*Beiträge* 1: 25).

But Mauthner's notion of language as social game not only stresses the social dimension of language. It also prevents the issue of reference from arising. If language is a (social) game, then it follows that it can be played without establishing ties with anything standing beyond the game itself. Accordingly, when playing a language-game, we do not need to look outside of the realm of the game to see if there are things "out there" corresponding to every part of the language-

¹³ For a discussion of Humpty Dumpty's theory of meaning, see Davidson: 433-46.

¹⁴ According to Mauthner, communication is not the only goal of users of language: "Language is something between human beings; its purpose is communication. But communicating information cannot in itself be the purpose--only in the case of a babbling. We always--if often indirectly and unconsciously--want to influence what another person thinks, and thereby wills; influence it according to our own thinking and willing, that is, according to our own interest" (*Beiträge* 2: 444).

game. Thus, through his notion of language as social game, Mauthner denies, once more, the view that whatever is referred to in language must find a correspondence outside of the realm of language.¹⁵

WORD-SUPERSTITION

Mauthner argues that we fall prey to fictions and confusions which are linguistically generated because we assume that words necessarily refer to things beyond themselves, that they all are names of independently existing entities, and he calls "word-superstition" (*Wortberglauben*) our tendency to think of words as if there always were objects in the world "out there" coexisting with them. With this notion, he acknowledges the fact that "most humans suffer from this intellectual weakness: to believe that because a word is there, it must stand for something; because a word is there, something real must correspond to the word" (*Beiträge* 1:159). Interestingly, the doctrine that claims that we are led to confusion by means of language can be found also in Schopenhauer, whose impact on Mauthner was acknowledged by Mauthner himself (Janik 123-24). Thus, in a way that reminds us of Mauthner, Schopenhauer contends that we are held captive by linguistic fictions because we ingenuously suppose that "there must be some meaning in words" (*The Essential* 194). Substantially, Schopenhauer presents a "diagnosis" of the generation of fiction and linguistic deception, which, in turn, will be extensively developed by Mauthner.¹⁶

¹⁵ However, Mauthner also emphasizes the role played by *the* world (or "state of affairs") in relation to the meaning of a given expression (*Beiträge* 3: 117). Mauthner illustrates his point with simple situations which seem to anticipate Wittgenstein's language-games. After discussing the many distinctions that workmen make among their tools and which remain completely unaccessible for the layman, Mauthner claims: "When the lock-smith calls out to his apprentice 'the pincer', he has a particular pincer in mind. However, through the state of affairs and the common state of mind, the same representation is awakened in the apprentice, who hands the master the right pincer. Similarly, a maid understands whether her mistress, when she asks for a "needle" or "pin", has a hairpin, a pin, or a sewing needle in mind" (*Beiträge* 2: 255).

¹⁶ Schopenhauer's account of the way language unavoidably leads us into fictions can be traced in works such as his *Art of Controversy*, which was published only posthumously, as well as in the essays contained in his *Parerga and Paralipomena*. At first

Furthermore, Mauthner's position seems to be close to Hans Vaihinger's, who, in his *Philosophie des Als-Ob* (*The Philosophy of As If*), written in 1876 and published in 1911, presents a new criterion for regarding fiction.¹⁷ For Vaihinger, only what is perceived is real; however, in order to give presence to things that cannot be perceived otherwise, Vaihinger introduces three types of ideas: dogma, hypothesis, and fiction (Iser 134). While in dogma the idea is identified with reality and in hypothesis the idea becomes an assumption that has to be verified, in fiction, in turn, the awareness prevails that the idea is the radical "other" to which it relates (Iser 135). Yet Vaihinger stresses the practical usefulness of fiction; as opposed to the traditional view which regards fiction as a mere example of unreality, Vaihinger understands fiction as a "device" (*Kunstgriffe*) serving to accomplish something that could not be carried out otherwise (Marquard 34-38). Accordingly, Vaihinger acknowledges that something can work as if true, even though false and recognized as false (256-60).

Both Mauthner and Vaihinger--one of the few academic philosophers who thought highly of Mauthner's work¹⁸--uncover

sight, *The Art of Controversy* seems to be a treatise on common fallacies, a mere catalogue of stratagems which give statements the appearance of being sound when they are not. Yet a point that Schopenhauer makes here is that those stratagems are not necessarily dishonest "tricks" which one may use in order to gain a dispute; rather they often arise, according to Schopenhauer, out of language itself (*The Essential* 176-77). Schopenhauer shows, for example, how words such as "substance," "god," and "perfection" have misled philosophers, particularly Spinoza and Leibniz, into the doctrine of the preestablished harmony, which, according to Schopenhauer, is unquestionably wrong (*Parerga* 1: 10-11). Reminiscent of Mauthner are Schopenhauer's endorsement of sensualism as well as his advice about constantly controlling "thought by perception" (*The World* 2: 211).

¹⁷ Carter Wheelock, for example, indicates that Borges's conception of fiction partially coincides with Hans Vaihinger's (25-26), while Juan Nuño claims that Borges had Kant in mind, when in 1944 he determined the title for *Ficciones*, his famous volume of stories (42). Floyd Merrell, in turn, relates Borges's nominalistic fiction-making not only to Hans Vaihinger's philosophy of as-if (16-18) but also to Alexis Meinong's world of "mental objects" (23-25; 27) as well as to Nelson Goodman's *Ways of Worldmaking* (4-9; 22; 26).

¹⁸Vaihinger mentions Mauthner in his analysis of paragraph 59 of Kant's *Critique of Judgement*, relating Mauthner's critique of language to Kant's recognition that "our language" is full of words that are merely linguistic analogies, that is, fictions (672). Mauthner, in turn, devotes a whole chapter to Hans Vaihinger's philosophy and his ideas about fiction, hypotheses and dogma (*Wörterbuch* 1: 25-44).

with their critiques of language "realities" that only exist in language. However, their positions differ primarily in the value that each of them assigns to the usefulness of fiction. Thus, while Vaihinger claims that an idea whose theoretical untruth or falsity is admitted is not for that reason practically worthless and useless (viii), Mauthner, by contrast, completely disregards its usefulness. Certainly, Mauthner is aware of the fact that one can organize societies and operate within them on the basis of "useful," fictional ideas. However, in his view, it is not enough that a society "functions" if its functioning depends on the most erroneous principles (*Wörterbuch* 2: 570-71).¹⁹ And he sets out as a task to denounce the ghosts created by word-superstition in metaphysics, theology, science, and political and social affairs. His target is twofold. On the one hand, he criticizes the naive belief that holds that words always refer to something real; on the other hand, he criticizes the acts of taking advantage of this common belief. Yet the second attitude seems to disturb Mauthner much more than the first one: "The theologian who builds a system from the ghost of people's superstition or carries this superstition even further practices a worse fetishism than the simple peasant who only believes in the ghost" (*Beiträge* 1: 160).

Yet a contradiction seems to arise out of Mauthner's notion of word-superstition. Mauthner has repeatedly asserted that there is no world "out there" apart from our representation of it; he has advocated the notion of language as social game, which prevents the issue of reference from arising; ultimately, he has even praised himself for being the only philosopher who does not ask for a "hidden" reality behind our descriptions of it. Yet the notion of an extralinguistic reality, that Mauthner has insistently rejected, is presupposed by his notion of word-superstition. It seems now that

¹⁹Vaihinger distinguishes his philosophy from any pragmatism which holds that a statement is true if it is useful in practice. In contrast, he recognizes the necessity and utility of acting on the basis of fictions that are known to be false (viii). Yet it is clear that pragmatism and fictionalism have much in common, especially in their acknowledgment of the significance of heuristic ideals. Mauthner, for his part, rejects any kind of pragmatism. He claims ironically: "True is what works--teaches the English pragmatist Schiller; then all prejudices and mistakes which ever played a part in the mad history of mankind such as the belief in the Devil have been true" (*Wörterbuch* 2: 570-71).

there is a world independent of our representations, after all. For if we cannot compare our representations with something which is not a representation, how can Mauthner, coherently, claim now that a belief in a certain word or concept arises out of word-superstition?²⁰

II. MAUTHNERIAN MOTIFS AND BORGES'S WRITINGS

FROM "THINGS OF THOUGHT" TO WORD-SUPERSTITION

Because there is no way to step outside our representations of the world, Mauthner concludes that the world occurs "only once," in our representation of it. Similarly, in many of his stories, Borges suggests that we are encapsulated in a world of descriptions, without touch with the world as such. In "Theme of the Traitor and the Hero," for example, we find a description of the "glorious" death of Fergus Kilpatrick that completely neglects the fact that our Irish revolutionary has become a traitor to the Irish cause. It is Nolan, Kilpatrick's oldest companion, who is to blame for this description severed from the facts. Playing the role of Leibniz's god, Nolan orchestrates every single detail related to Kilpatrick's death so that the Irish people believe it is an assassination (probably plotted by the British "enemy") when, in fact, it is an execution. Thus, Nolan carefully articulates the words pronounced by Kilpatrick at the moment of his death with those of the inhabitants of the city who have a part in his stage play. Indeed, the image of the theatre pervades in Borges's story, emphasizing the character of representation of Kilpatrick's tragic death. Furthermore, the

²⁰ Elsewhere, Mauthner concedes that some words refer to things beyond themselves (as for example the words "water" or "orange") although he hastens to add that these words are mere hypotheses about the existence of real entities. But there are other words, Mauthner explains, ones which look exactly like the former but which do not point to anything beyond themselves--to anything extralinguistic. Mauthner laments that such words (such as "substance," "god," or "absolute"), which cannot be accounted for by our sense-impressions, are deeply rooted in our mind and sets as a task of his critique of language to uncover the words that posit entities which are not linked to any sensible foundation whatsoever (*Wörterbuch* 1: 175). Yet a contradiction seems to arise between Mauthner's claim that sense-impressions constitute the standard against which words are to be evaluated, on the one hand, and his contention that there is no world "out there" beyond our representation of it, on the other.

conjunction between Leibniz and the image of the theatre reminds us of Schopenhauer, who claims that the impeccable articulation presupposed by Leibniz's theory of the preestablished harmony can never be found in reality itself but only in a stage play (*Parerga* 1: 7). On the other hand, the image of the theatre reminds us also of Francis Bacon, who regards theories that need to twist experience in order to fit in as stage plays, which represent reality as their author would wish it to be, not as it is (Bacon 55-56), and calls "idols of the theatre" the illusions arising from these faulty theories.²¹ Significantly, Mauthner refers to Schopenhauer's joke on Leibniz's theory as well as to Bacon, precursor of the critique of language, in the article entitled "Einfluß" ("Influence") of his philosophical dictionary.²² Mauthner argues:

If science had not forgotten how to laugh, it might have realized that the good joke that Schopenhauer once made on the preestablished harmony (*Parerga* 1: 7) can perfectly apply not only to the *influxus animi et corporis*²³ but also to the new formulations of the old riddle, namely, the way a form of energy becomes another. Schopenhauer compares the preestablished harmony with what happens on stage.... We should remember that Bacon called every system ghost of the theatre. (*Wörterbuch* 1: 360)

Thus, like Schopenhauer's view of Leibniz's preestablished harmony, Nolan's orchestration of events is a mere human creation, which has lost touch with reality as such. Furthermore, like the

²¹ In Mauthner's translation of Bacon's *Novum Organon*, Bacon concludes: "The similarity between philosophical systems and the entertainment provided by theatre is really impressive. Even historical dramas are more rounded-off and more elegant, more concerned with satisfying the public's taste than with being faithful to the data on which they are based" (*Wörterbuch* 1: 136).

²² For an account of the influence that Bacon exerted upon Mauthner, see Eschenbacher 129-31.

²³ Leibniz's theory of the preestablished harmony was his response to the problem of connecting minds and bodies without giving up the concept of substance. Indeed, Leibniz's response was an elaboration of seventeenth-century occasionalism, the theory that assumes parallel series of events transpiring in two independent substances, which cannot, because they are different, interact. The two series of events were viewed like two clocks, one of which strikes ten when the other shows ten, though there is no causal connection from clock to clock (Danto 216).

faulty theories criticized by Bacon, Ryan's historical account of Kilpatrick's death, which ultimately perpetuates Nolan's invention, cannot be taken to adequately describe *the way things were*. Hence, we are immersed in the theatre of representation twice, for not only everything people do but everything history perpetuates is, in Borges's story, a representation with a peripheral connection to reality. As in Mauthner's critique of language, reality inevitably becomes description.

And description severed from the real "facts" and propagated by language takes over again in the story "Emma Zunz." As in "Theme of the Hero and the Traitor," everyone believes here the protagonist's narrative. Indeed the people who listen to Emma's account of what has happened seem to obey the human tendency—so penetratingly defined by Mauthner—to superstitiously think of the words of our language as if they always had a backing in reality (*Beiträge* 1: 158). And because we feel we ought to be able to identify the reality to which words correspond, we either assume the existence of it or simply invent it. Thus, everybody assumes in Borges's story that Emma's narrative corresponds to reality just as the Irish people who witness Kilpatrick's "performance" assume that there is a real hero behind Kilpatrick's words. Both stories seem to illustrate Mauthner's claim that people generally believe that "because a word is there, something real must correspond to the word" (*Beiträge* 1: 159). However, "Emma Zunz" can be read as embodying the dangers of Mauthner's monistic world of representation in two ways. On the one hand, as I have already suggested, the people who are confronted with Emma's neat and coherent narrative assume, obeying the spell of words--and not incidentally Emma works at a textile factory--that her skillful weave of words corresponds to the facts. On the other hand, Emma herself obeys the power of words; notably, the words "justice of god" exert a fascination upon her and mislead her into her quest for Loewenthal's punishment.²⁴ Ultimately, the realistic tone of Borges's "Emma Zunz" also acquires its meaning within this context. Emma's account of what happened

²⁴ For a study of the connection between Mauthner's notion of word-superstition and Borges's "Theme of the Traitor and the Hero" as well as "Emma Zunz," see Dapía, "Why Is There A Problem About Fictional Discourse?"

and a realistic narrative have certainly something in common: both of them intend to make people believe that they are synonyms with the "real."²⁵

Again, in the short story "Tlön, Uqbar, Orbis Tertius," we are confronted with a Mauthnerian world of description, in which the inhabitants of an imaginary planet, Tlön, firmly believe. As in Mauthner's critique of language, all things are, for the inhabitants of this imaginary planet, nothing but "things of thought." And because the Tlönians have no commitment to things beyond their representations of them, they cannot understand our materialistic world, whose problematic nature is condensed in their parable of the nine copper coins. Furthermore, the fact that for the Tlönians there is no access to reality but through our representations of it explains the sequence of encyclopedias that take over in our planet Earth. But let's turn now our attention to Mauthner's article on the encyclopedia and its possible connections to Borges's treatment of this motif.

ENCYCLOPEDIA

In his philosophical dictionary, Mauthner devotes an article to the encyclopedia (*Encyklopädie*). In the third section of this article, he questions the belief in systems of knowledge as means of reproducing the world-as-it-is. To illustrate his point, he advances a new classification of knowledge and opposes it to the traditional division into "natural sciences" (*Gesetzwissenschaften*) and "human sciences" (*historische Wissenschaften*). Mauthner's own classification restricts the traditional concept of natural sciences while enhancing that of human sciences. Why should, however, one of these classifications--Mauthner's or the traditional division of knowledge--reflect the world any more than the other? Clearly, Mauthner intends to demonstrate that because the world is not intrinsically sorted or

²⁵ Borges has argued in several contexts against realistic discourse, particularly against its attempt at making us forget its status of "verbal artifice" (*Reader* 123). Thus, in his essay "Narrative Art and Magic" Borges strongly argues against a realistic fiction that pretends to duplicate the causality of the world "out there," defending by contrast a fiction that follows the causality of magic (*Reader* 37-38).

classified in any particular way, there cannot be an objective system of knowledge but a plurality of appropriate classifications that fit the casual structure of the world equally well (*Wörterbuch* 1: 396).

Furthermore, in order to emphasize the arbitrariness of any classification, Mauthner relates encyclopedias, which are the point of departure of his reflections on systems, to Leibniz's *ars combinatoria* (*Wörterbuch* 1: 398). Leibniz had long wondered what the best way would be of arriving at the set of primitives or simple constituents of our thought, from whose *combination* a set of true propositions would be derived. His interest in the *encyclopedia* as a catalogue of human knowledge grew, thus, as the basis of an alphabet of primitive terms, which, by combination, might lead to all the true propositions that could be expressed by our thought (Ishiguro 13). Obviously, Leibniz's thought rests on a series of assumptions. Thus, Leibniz presupposes, with his conception of an encyclopedia, that human knowledge reflects the world-as-it-is. And this is precisely what Leibniz, in Mauthner's view, failed to see: that a system "whose repertory of signs is nourished by past memories would never be able to produce new ideas" (*Wörterbuch* 1: 400). In other words, Mauthner disapproves of Leibniz's belief in the capability of a system of knowledge to produce true propositions about the world; according to Mauthner, a system is able to produce true propositions only within the limits of the system itself. Mauthner claims: "The human mind, even when man is able to focus on real science, is something completely different from the *order* of nature. We have obtained our knowledge of nature by connecting thoughts, and human interest--whatsoever people may claim--is at the base of these connections" (*Wörterbuch* 1: 396).

As in Mauthner's dictionary of philosophy, both the image of the encyclopedia and the reference to Leibniz are used by Borges in the short-story "Tlön, Uqbar, Orbis Tertius" to show the impossibility of arriving at systems that accurately depict reality-as-it-is. Indeed Borges fully realizes the potential of the motif of the encyclopedia and exploits it.²⁶ In addition to *The Anglo-American Cyclopedia* and *A*

²⁶ For a more detailed study of "Tlön, Uqbar, Orbis Tertius" in relationship to Mauthner's critique of language see Dapía "This is Not a Universe."

First Encyclopedia of Tlön, the narrator forecasts that a third encyclopedia, the Second Encyclopedia of Tlön, will be discovered one hundred years hence. It is thus suggested that an infinite sequence of encyclopedias or cultural worlds will succeed the world of Tlön, imposing orderliness on our world and infinitely postponing the possibility of arriving at the world as it is. Furthermore, the narrator claims that Tlön's order, with its numerous disciplines, could not have been the product of "a single creator, some transcendental Leibniz working in modest obscurity" (*Borges Reader*: 115).²⁷ The mention of Leibniz in conjunction with the motif of the encyclopedia is significant, for just as Leibniz does not doubt the fact that human systems produce "accurate" representations of the world, so humanity, in Borges's story, does not seem to think for a moment that the order of Tlön, contained in a huge encyclopedia, might not reproduce the objective order of the world. The presence of the encyclopedia and the reference to Leibniz emphasize the gap between the "rigor" of our systems and that of reality in itself. As the narrator points out, humanity keeps on forgetting that the "rigor" of our systems have the "rigor of chess players, not of angels" (*Borges Reader*: 122).²⁸

ADJECTIVES, ADVERBS, AND NOUNS

According to Mauthner, nouns are the most misleading parts of speech. Mauthner rejects nouns because they encourage us to think that there are things "out there," and, in his view, there is nothing in our senses identifiable as a "sensation of a thing." Because our senses inform us of qualities and adjectives refer to qualities, adjectives, in Mauthner's view, are closer than nouns to our experience of reality (*Wörterbuch* 3: 366). In other words, for Mauthner, the sense-impression is the primary element, and the objects or things that we assume cause these sense-impressions are only hypotheses. Certainly,

²⁷ "un solo inventor – de un infinito Leibniz obrando en la tiniebla y en la modestia" (*Obras completas* 434).

²⁸ "rigor de ajedrecistas, no de ángeles" (*Obras completas* 443).

Mauthner admits that nouns are useful linguistic means of referring to clusters of sensations; however, he emphasizes that only qualities are real, but clusters of qualities are not (*Beiträge* 1: 634). He illustrates his point thus: because an apple does not occur a second time, apart from the sensations we have of it (round, red, sweet), it follows that "an apple does not occur once in the world of the adjective and a second time in the world of the noun" (Mauthner *Wörterbuch* 1: 297). He concludes that beyond the adjectives that express its qualities, the question of what is an apple is a "metaphysical" one, and insists that "everything we know of [the apple] qua chemists or botanists can equally well be expressed in adjectives" (*Beiträge* 3: 99).

Consequently, while philosophy has traditionally regarded nouns as the main parts of speech and adjectives as secondary (for, traditionally, nouns refer to substances and adjectives to qualities), Mauthner undermines this hierarchy; for him, adjectives represent the principal term, while nouns only serve to systematize the information provided by our sense-impressions. Furthermore, for Mauthner, qualities can be expressed equally well by verbs. Indeed Mauthner does not see any reason for verbs to mislead us, since verbs are not likely to suggest the existence of things; verbs usually signal some change in the cluster of qualities.

Significantly in regard to my interpretation, there are no nouns in the languages of Tlön.²⁹ Because for Tlönians there are not things "out there," they avoid nouns and replace them by groups of adjectives or verbs. In the languages of the northern hemisphere, the noun moon, for example, is replaced by different accumulations of adjectives such as airy-clear over dark-round or orange-faint-of-sky, while in the southern hemisphere it is usually replaced by the verbs to moon or to moonle. Nouns are for the Tlönians no more than their literature's poetic objects, a group of sense-impressions that can be conjured up at will. These ideal objects articulate sensations in a way that clearly differs from those in Western languages. The narrator asserts:

There are objects made up of two sense elements, one visual, the other auditory--the color of a sunrise and the distant call of a bird. Other

²⁹ Arturo Echavarría points out the relationship between Borges's notions of noun, adjective, and verb and Mauthner's critique of language (186-87).

objects are made up of many elements--the sun, the water against the swimmer's chest, the vague quivering pink which one sees when the eyes are closed, the feeling of being swept away by a river or by sleep. These second-degree objects can be combined with others; using certain abbreviations the process is practically an infinite one. (*Reader* 115-16)³⁰

Moreover, in a previous text, Borges, following Mauthner, defines nouns as groups of sensations:

The world of appearances is a rush of jumbled perceptions.... Language is an effective arrangement of the world's enigmatic abundance. In other words, we invent nouns and we add them to reality. We touch a round form, we see a small, rounded mass of dawn-colored light, a tickle delights our mouth, and we lie and say that these three heterogeneous things are one, and it is called orange. (that 45; see also Borges, *Inquisiciones* 66)³¹

Mauthner's longlasting influence on Borges can be traced as late as 1977. In a lecture, basing himself on the assumption that we have no access to reality apart from our sense-impressions and that there is no "sense-impression of a thing," Borges claimed that there is no difference between prose and poetry; neither of them is closer to reality than the other; both of them are only different ways of mapping our sensations. He stated:

It is said that prose is closer to reality than poetry. I think this is wrong. There is an idea that has been attributed to the short story writer Horacio Quiroga: if a cold wind blows from the bank of the

³⁰ "Hay objetos compuestos de dos términos, uno de carácter visual y otro auditivo: el color del naciente y el remoto grito de un pájaro. Los hay de muchos: el sol y el agua contra el pecho del nadador, el vago rosa trémulo que se ve con los ojos cerrados, la sensación de quien se deja llevar por un río y también por el sueño. Esos objetos de segundo grado pueden combinarse con otros; el proceso, mediante ciertas abreviaturas, es prácticamente infinito" (*Obras completas* 436).

³¹ "El mundo aparental es un tropel de percepciones barajadas.... El lenguaje es un ordenamiento eficaz de esa enigmática abundancia del mundo. Dicho sea con otras palabras: los sustantivos se los inventamos a la realidad. Palpamos un redondel, vemos un montoncito de luz color de madrugada, un cosquilleo nos alegra la boca, y mentimos que esas tres cosas heterogéneas son una sola y que se llama naranja" (*Tamaño* 45; see also Borges, *Inquisiciones* 66).

river, one must write simply "a cold wind blows from the bank of the river." Quiroga--if it was he who said this--seems to have forgotten that that construction is as far from reality as it is from the cold wind that blows from the bank of the river. What is our perception of it? We feel the air moving, we call it wind; we feel that that wind comes from a certain direction, from the bank of the river. And with this we form something as complex as a poem by Góngora or a sentence by Joyce. (*Seven* 78)³²

LOGIC MACHINES

Based on Borges's observation that it is much easier to review the books one hopes to write than actually to write them, Stanislaw Lem, in *A Perfect Vacuum* (141-166), presents a narrator who reviews a nonexistent book entitled *De Impossibilitate Vitae* by Professor Benedykt Kousha.³³ To demonstrate that there is something wrong in how scientists think about probabilities, Professor Kousha shows, in his book, that according to the laws of probability he ought not to exist. His father was an army doctor who met his mother when he snapped at her after she entered the operating room by mistake. Had his mother not been a nurse unfamiliar with the hospital and his father a doctor with a short fuse, and had there not been a superior officer who told the doctor that his behavior toward the young lady was inappropriate, the doctor would not have looked for the nurse to apologize, and they would not have fallen in love, married, and had a child. Furthermore, Professor Kousha claims, the meeting required

³² "Se supone que la prosa está más cerca de la realidad que la poesía. Entiendo que es un error. Hay un concepto que se atribuye al cuentista Horacio Quiroga, en el que dice que si un viento frío sopla del lado del río, hay que escribir simplemente: *un viento frío sopla del lado del río*. Quiroga, si es que dijo esto, parece haber olvidado que esa construcción es algo tan lejano de la realidad como el viento frío que sopla del lado del río. ¿Qué percepción tenemos? Sentimos el aire que se mueve, lo llamamos viento; sentimos que ese viento viene de cierto rumbo, del lado del río. Y con todo esto formamos algo tan complejo como un poema de Góngora o como una sentencia de Joyce" (*Siete noches* 104).

³³The connection between chance and Stanislaw Lem was drawn by Katherine Hayles in "Chance Operations" 226.

that his father be conscripted into the army as a doctor and his mother volunteer as a nurse, which in turn required all the intricate conjunctions that initiated World War I. In the professor's view, if one calculates the probabilities for each of these events and multiplies them together, the probability of his birth proves to be infinitesimal. Just as infinitesimal is the probability of Pierre Menard's generating Cervantes's *Quixote* in Borges's story "Pierre Menard, Author of the *Quixote*." Notably, Borges's image of a French symbolist poet intending to compose the *Quixote*, a masterpiece of Spanish literature, recalls Mauthner's image of a Chinese gentleman who does not know any German and nonetheless intends to compose Goethe's *Faust* (*Wörterbuch* 3: 428). However, among the vast number of possible, randomly produced combinations, the right combination (of our French symbolist poet intending to rewrite the *Quixote* or of Mauthner's Chinese gentleman attempting to compose Goethe's *Faust*) is a nearly impossible single occurrence.³⁴

And precisely because Mauthner does not believe in arriving through chance at anything more than nonsense, he rejects the logic machines invented in the nineteenth century by Williams Jevons, John Venn, and Allan Marquand. A logic machine, which supposedly reveals logical connections between ideas through the blind play of chance is, in Mauthner's view, a mere remnant of scholasticism (*Wörterbuch* 1: 281). Because Mauthner himself once intended to create one when he was very young, he claims to be capable of commenting on its usefulness. For, Mauthner argues, "I believe the principle I selected to be not more foolish than the principles of other inventors" (*Wörterbuch* 1: 282-83). Just as Jevons and Marquand use logical pianos, and Venn diagrams, so Mauthner decided to use dice. He believed that if dice were thrown a sufficient number of times, they would ultimately produce logical connections between the different ideas represented by each of their faces. Moreover, since the main function of a logic machine is to combine diverse elements, the young Mauthner believed that dice were certainly the best representation of the infinite possibilities of

³⁴ For a study of the relationship between Menard's attempt at composing the *Quixote*, the concept of chance, and Peirce's studies on probability, see Merrell, *Unthinking Thinking* 172-73.

combinations. However, Mauthner soon abandoned the belief in a logic machine whose outcomes, as product of chance, could lead to revealing connections of ideas (*Wörterbuch* 1: 284).

Mauthner claims that neither a literary text, the *Iliad* for example, nor a scientific truth can be generated by merely juggling letters by chance (*Wörterbuch* 1: 284). Poets as well as scientists, Mauthner argues, do select from the vast number of all possible combinations of words the appropriate one. Mauthner writes:

The thinker's discernment lies in foreseeing with secure instinct the outcome of a series of thoughts and finding afterwards the connections that lead from the concept chosen as point of departure to the outcome. Admittedly, the outcome, the goal, can be offered to the thinker or researcher by chance or aperçu, that is to say, through a penetrating observation of a casual event. Yet chance is excluded from the *course* adopted by the thinker.... The law of probability teaches us that from the vast number of possible combinations, the right combination (of my dice or of Lull's circles) is a nearly impossible single occurrence among an endless number of occurrences. (*Wörterbuch* 1: 285)

Borges, too, discusses the idea of arriving at a literary text by simply combining words by chance. In his essay "For Bernard Shaw" he asserts:

At the end of the thirteenth century Raymond Lull attempted to solve all the mysteries by means of a frame with unequal, revolving, concentric disks, subdivided into sectors with Latin words. At the beginning of the nineteenth century John Stuart Mill expressed the fear that the number of musical combinations would some day be exhausted and that the future would hold no place for new Webers and Mozarts. At the end of the nineteenth century Kurd Lasswitz played with the overwhelming fantasy of a universal library that would record all the variations of the twenty-odd orthographic symbols, or rather everything that can be expressed, in all languages of the world. Lull's machine, Mill's fear, and Lasswitz's chaotic library may make us laugh, but they merely exaggerate a common

propensity to consider metaphysics and the arts as a sort of combinatory game. (*Other Inquisitions* 163)³⁵

Like Mauthner, Borges rejects the idea of a literary text conceived as the result of a random process of word combination. Unlike Mauthner, he emphasizes the role that the reader plays in the constitution of any literary work. Borges claims:

Those who play that game forget that a book is more than a verbal structure, or a series of verbal structures; a book is the dialogue with the reader, and the peculiar accent he gives to its voice, and the changing and durable images it leaves in his memory. The dialogue is infinite. . . . A book is not an isolated entity: it is a narration, an axis of innumerable narrations. (*Other Inquisitions* 163-64)³⁶

UNIVERSAL LANGUAGE

Leibniz searched for a *characteristica universalis* or universal language, which would provide each of the minimal units of thought from whose combination all other possible thoughts could be derived, with a sign. It was Leibniz's conviction that those signs would not remove reality from us but lead us to it. Thus, in Leibniz's view, if it were possible to arrive at the entire set of simple ideas and assign a character to each of them, all complex concepts or

³⁵ "A fines del siglo XIII, Raimundo Lulio (Ramón Lull) se aprestó a resolver todos los arcanos mediante una armazón de discos concéntricos, desiguales y giratorios, subdivididos en sectores con palabras latinas; John Stuart Mill, a principios del siglo XIX, temió que se agotara algún día el número de combinaciones musicales y no hubiera lugar en el porvenir para indefinidos Webers y Mozarts; Kurd Lasswitz, a fines del siglo XIX, jugó con la abrumadora fantasía de una biblioteca universal, que registrara todas las variaciones de los veintitantos símbolos ortográficos, o sea cuanto es dable expresar, en todas las lenguas. La máquina de Lulio, el temor de Mill y la caótica biblioteca de Lasswitz pueden ser materia de burlas, pero exageran una propensión que es común; hacer de la metafísica, y de las artes, una suerte de juego combinatorio" (*Obras completas* 747).

³⁶ "Quienes practican ese juego olvidan que un libro es más que una estructura verbal, o que una serie de estructuras verbales; es el diálogo que entabla con su lector y la entonación que impone a su voz y las cambiantes y durables imágenes que deja en su memoria. Ese diálogo es infinito.... El libro no es un ente incomunicado: es una relación, es un eje de innumerables relaciones" (*Obras completas* 747).

propositions could be generated as a result of operations based on those signs (Ishiguro 36). Before Leibniz, Descartes had played with a similar idea, a sort of mathematics of thought. However, it was Bishop Wilkins who created the most complete project for a universal language of the seventeenth century.

Significantly, the names of Leibniz, Descartes, and Wilkins appear in connection to the idea of a universal language throughout Borges's writings. In "Pierre Menard, Author of the *Quixote*," for example, we are told that Menard wrote a monograph on certain affinities among the ideas of Descartes, Leibniz, and John Wilkins; a monograph on the *characteristica universalis* of Leibniz; and a monograph on the *ars magna generalis* de Raymond Lull, who is considered a predecessor of the above mentioned philosophers regarding the creation of a universal language. Furthermore, Borges devoted an essay, "The Analytical Language of John Wilkins" (1952), to Wilkins's universal language and declares Mauthner's *Wörterbuch der Philosophie* as one of his sources. Therefore, I shall examine Borges's essay, "The Analytical Language of John Wilkins," as well as the role that Descartes, Leibniz, Wilkins, and Lull play in "Pierre Menard, Author of the *Quixote*" against the background of Mauthner's article on universal language. Furthermore, I will trace the pervasive theme of the universal language in other stories by Borges.³⁷

In Mauthner's view, the Bishop's main task was to invent a means of communication for the scholars of all nations at a time when Latin ceased to serve as the international scholarly language. Actually, Mauthner claims that the Bishop's goal was to invent if not a universal language at least a real script, namely, "signs that directly correspond to things" (*Wörterbuch* 3: 322). According to Mauthner, the Bishop proceeded on the assumption that we already had dozens of signs that directly correspond to things, such as mathematical signs (plus sign [+], minus sign [-]) and some signs used in astronomy (for example, the signs used for the sun, the moon, and the planets), which were understood by the scholars of all countries and expressed everywhere in different languages. Based on Mauthner, Borges, in

³⁷ What follows is an abridged version of my article, "Borges and Mauthner: From Philosophy to Critique of Language."

turn, discusses how Wilkins intended to formalize a real script. Borges claims that Wilkins created first a world-catalogue and describes--always following Mauthner--how the Bishop arrives from his world-catalogue to a universal language by assigning arbitrary vowels and consonants to each class, subdivision, and subsubdivision of his world-catalogue. As Mauthner ironically points out, the student who attempts to learn Wilkins's universal language only has to keep in mind the immensely difficult world-catalogue, and if he learns by heart the arbitrary vowels and consonants assigned to each class, subdivision and subsubdivision, then he will achieve an enviable basis of knowledge (*Wörterbuch* 3: 325).

Mauthner questions the Bishop's faith in the immutability of the knowledge of his day. Bishop Wilkins assumed, according to Mauthner, that the knowledge of his day was changeless and, therefore, regarded the world-catalogue on which his real script and universal language was based as an unchangeable and faithful representation of the order of the world. "Each expansion," Mauthner argues, "indeed each fundamental modification of knowledge (and each new generation looks at the world differently) would throw out his system and, with it, the value of his artificial language" (*Wörterbuch* 3: 326). "Just imagine," Mauthner concludes, "trying to use today in chemistry a system of classification of the year 1668" (*Wörterbuch* 3: 326). Mauthner takes the demonstration of the historical transitivity of knowledge to undermine the validity of Wilkins's world-catalogue. In Mauthner's view, the Bishop's world-catalogue is a mere human construction incapable of reflecting the order of the world.

Borges, too, questions Wilkins's classification of the world. He claims that Bishop Wilkins's world-catalogue reminds him of an encyclopedia entitled *Celestial Emporium of Benevolent Knowledge*:

On those remote pages it is written that animals are divided into (a) those that belong to the emperor, (b) embalmed ones, (c) those that are trained, (d) suckling pigs, (e) mermaids, (f) fabulous ones, (g) stray dogs, (h) those that are included in this classification, (i) those that tremble as if they were mad, (j) innumerable ones, (k) those drawn with a very fine camel's hair brush, (l) others, (m) those that

have just broken a flower vase, (n) those that resemble flies from a distance. (*Other Inquisitions* 103)³⁸

In Borges's example of the Chinese encyclopedia, heterogeneous elements are ordered in different categories according to the reassuring alphabetic organizing principle. As Sylvia Molloy points out, while the lack of common ground for these categories may be disturbing, no less disturbing, within this enumeration, is one of the categories themselves, the (h) or "those that are included in this classification" (121). The inclusion of this category, that represents the whole, in the whole itself results in a paradox: the whole that both contains and is contained by the part. Moreover, this paradox implies that the sequence closes back on itself, so that the diverse elements that we initially take to be separate and distinct collapse into identity.³⁹ This self-referential field serves Borges to draw our attention to the arbitrary nature of the Chinese taxonomy, which, in turn, brings out the arbitrariness of Wilkins's classification and, ultimately, of any classification, for, in Borges's view, "there is no classification of the universe that is not arbitrary and conjectural" (*Other Inquisitions* 104).⁴⁰ Indeed Borges's Chinese encyclopedia, which will be later quoted by Michel Foucault (9), may be interpreted as a fruitful rendition of Mauthner's "world-catalogue."

Yet, as I already pointed out, Wilkins was not the only one who was concerned with the idea of a universal language: Descartes and Leibniz were also attracted by this idea. As both Mauthner and Borges point out, Descartes proposed the invention of a language, easy to learn, pronounce and write, without the logical imperfections of natural languages (*Other Inquisitions* 102; *Wörterbuch* 3: 318).

³⁸ "En sus remotas páginas está escrito que los animales se dividen en (a) pertenecientes al Emperador, (b) embalsamados, (c) amaestrados, (d) lechones, (e) sirenas, (f) fabulosos, (g) perros sueltos, (h) incluidos en esta clasificación, (I) que se agitan como locos, (j) innumerables, (k) dibujados con un pincel finísimo de pelo de camello, (l) etcétera, (m) que acaban de romper el jarrón, (n) que de lejos parecen moscas" (*Obras completas* 708).

³⁹ For a study on Borges's appropriations of Cantor's idea of the set that contains itself see Merrell, *Unthinking Thinking* 60-82; Hayles "Subversion" 139-51.

⁴⁰ "no hay clasificación del universo que no sea arbitraria y conjetural" (*Obras completas* 708).

However, according to Mauthner, "Descartes seems to have only played with this idea; for him its realization was possible in idea, not in reality" (*Wörterbuch* 3: 318). Inspired by Descartes, Leibniz--who, in Mauthner's view, might have known about Bishop Wilkins's work--intended to create a universal language or *characteristica universalis*. Not surprisingly, Mauthner provides us thus with some of the connections that Pierre Menard might have encountered between Descartes, Leibniz, and Wilkins in "Pierre Menard, Author of the *Quixote*."⁴¹ Thus, while Descartes awakened the dream of a universal language and Leibniz failed in his attempt at creating one, Wilkins achieved the goal. Moreover, the three of them believed that the world-catalogues serving as a basis for their universal languages reproduced the "true" order of the world. Neither of them seems to have wondered whether the world could be classified in a different way. Never did they seriously consider that any modification of the knowledge of their time might imply a different classification of the world. Ultimately, they did not think that a universal language, once it was used by people from different cultures, would develop under those cultures and share the fate of any natural language (Mauthner *Wörterbuch* 3: 326).

Furthermore, Mauthner connects the work of Leibniz and that of Wilkins with Lull's *ars magna*--to whom Borges's Pierre Menard also devoted a monograph. According to Mauthner, four centuries before Leibniz, Raymond Lull constructed, in his *ars magna*, a logic machine, which, on the basis of a few primordial elements, was supposed to produce true propositions about the world (Lull conceived of his *ars magna* as a basis for a universal language, which would serve as an instrument to convert the infidels). Indeed, Mauthner regards Bishop Wilkins's universal language as an attempt to transform Lull's logic machine into a world-catalogue (*Wörterbuch* 1: 286). Regarding Lull's *ars magna*, Mauthner explains that nine letters represent nine arbitrary categories in a first auxiliary circle and nine equally arbitrary characteristics in a second circle. He claims further:

⁴¹ For a study of the connections between Mauthner's critique of language and Borges's "Pierre Menard, Author of the *Quixote*," see Dapía "Pierre Menard in Context."

When two of these letters meet together as a consequence of the rotation of the circles, a kind of word emerges. This word stands symbolically for a sentence of extreme banality. For example, "the goodness is a great concordance or a great difference, be it between God and a carnal human being or between two carnal human beings." *Naturally, the pompous abstraction has to be translated into a human language, even if only a tautological banality is going to emerge. (Wörterbuch 1: 399; emphasis added)*

Interestingly, a similar reference to Lull's *ars magna* is found also in Borges's:

It is said that Lull, inspired by Jesus, invented the logic machine, a kind of glorified roulette-wheel (*bolillero*), though with a different mechanism... As we can see, (...) *Lull with his alphabet, which translated into words and these words, in turn, into sentences, [did not] succeed in avoiding language. (El idioma 26; emphasis added)*⁴²

Consequently, Borges rejects Lull's *ars magna* for the same reason that Mauthner rejects it. Lull, like Descartes, Wilkins, and Leibniz, searched for the world-catalogue; he believed in creating a system that would faithfully represent the order of the world. However, he did not realize that *the* world-catalogue is unattainable, for the simple reason that no system can avoid language and its particular ordering of our sense-experiences. Indeed Mauthner regards the belief in a world-mirroring language endorsed by Lull, Descartes, Bishop Wilkins, and Leibniz as utopian. Mauthner claims:

The categories of grammar, developed through the endless years of the history of language, and which the child learns through his mother tongue within a few years, are really just an index of a world-catalogue which language intends to achieve; in a sense, they represent the alphabet upon which the catalogue of the world will be ordered. It would be very unphilosophical to believe in the objectivity of this alphabet. (*Beiträge* 1: 76)

⁴² "Lulio – dicen que a instigación de Jesús – inventó la sedicente máquina de pensar, que era una suerte de bolillero glorificado, aunque de mecanismo distinto.... Como se ve, (...) [Lulio] con su alfabeto traducible en palabras y éstas en oraciones, [no] consiguió eludir el lenguaje (*El idioma* 26; italics are mine).

Mauthner does not rely on logic either; in his view, logic cannot mirror an objective truth better than grammar does. Indeed, Mauthner identifies logic with grammar. Mauthner argues that Aristotelian categories are the mere product of Greek grammar: "Had Aristotle been speaking Chinese or Dakota, he would have had to arrive at a completely different logic" (*Beiträge* 3: 4). "A world-catalogue, a logical catalogue," argues Mauthner, "is not possible, because nature is not logical. Only man has invented logic for the economy of his thinking, and he has regarded it as a useful tool for a long time" (*Wörterbuch* 1: 286). Mauthner believes that, if the world were logical, we might arrive, with the help of a systematic classification, at a world-catalogue. Moreover, if we owned a reliable world-catalogue, then, perhaps, a universal language might also be built (*Wörterbuch*: 3: 321).

Mauthner's image of a "world-cataloguing" language reappears throughout Borges's writings. Indeed, in his short-story "Pierre Menard, Author of the Quixote," the motif of the catalogue appears not only in connection to those seventeenth-century philosophers who searched for the "catalogue of catalogues," but also to Menard's "visible" works, whose enumeration occurs in the form of a catalogue. Furthermore, according to the narrator, Menard's "visible" works have already appeared in a "fallacious catalogue," that the narrator sets himself as a task to "rectify" (*Borges Reader*: 96). In the framework of my interpretation, Menard's catalogue, which Molloy (29) correctly claims to defy the establishment of any hierarchy or order among its parts, is understood as a parody of Leibniz's, Wilkins's, Descartes's, and Lull's beliefs in the possibility of creating a *true* catalogue of the world, just as the Chinese encyclopedia of Borges's essay, "The Analytical Language of John Wilkins," is interpreted as a parody of Wilkins's world-catalogue. Moreover, just as Leibniz, Lull, and Wilkins believed in a world-cataloguing language which reflects the single, "true" order of the world, Menard believes at first that there is a single, true meaning of a literary text, which corresponds to the author's intention and which is the task of the reader to reveal. However, Menard will abandon the belief in a single, true meaning, acknowledging the fact that the meaning of a literary text does not exist independently of the framework in which we place it, just as there is, according to Mauthner, no world

independently of each representation of it, no object independently of a subject (*Der Atheismus* 1: 552).⁴³

The Mauthnerian catalogue of the world emerges, again, in Borges's short story "The Library of Babel" (1941). In "The Library of Babel," the structure of the library, identified as the universe and depicted as a sphere whose circumference is inaccessible and whose center could be any of the indefinite number of hexagonal galleries which it is made up of, calls into question not only the notion of a unified space but that of a fixed, absolute, accurate representation of the world. For just as it is impossible to arrive at the centre of this library, it is also impossible to find "the catalogue of catalogues." Furthermore, Borges's short-story "The Congress" (1971), too, revolves around the notion of a "world-cataloguing" language or system. Indeed, Borges's expounding of the problems implied by the search for a classification of the world--Alejandro Glencoe, for example, should he represent only cattlemen, or Uruguayans, or humanity's great forerunners, or men with red beards, or those who are seated in armchairs? Nora Erfjord, "would she represent secretaries, Norwegian womanhood, or--more obviously--all beautiful women?" (Borges *El Congreso*: 27)⁴⁴ is reminiscent of Mauthner's discussion on the possibilities of achieving a world-catalogue and a universal language (*Wörterbuch* 3: 321). A universal language presupposes access to the things-in-themselves, to the things independent of any conceptualization. Yet those who pursue this line of thinking forget that a grain of wheat, a star, a fly, or Glencoe as cattleman only exist as such *only* through the conceptualization of language.

⁴³ For an excellent account of the texts that Borges might have read at the time of the composition of this story, see Daniel Balderston, *Out of Context* 18-38. Balderston's reading of "Pierre Menard, Author of the *Quixote*" aims at reconstructing the *hidden context* of this story through attention to its literary and historical references. He brilliantly examines the references to Paul Valéry, Julien Benda, Bertrand Russell, and Cervantes present in "Pierre Menard, Author of the *Quixote*," while intending to reproduce the debate on pacifism and militarism as it was carried on in the period from 1914 to 1939 primarily in France.

⁴⁴ "representaría a las secretarias, a las noruegas o simplemente a todas las mujeres hermosas?" (Borges *El Congreso*: 27).

III. EXCERPTS FROM MAUTHNER'S WÖRTERBUCH DER PHILOSOPHIE
 (DICTIONARY OF PHILOSOPHY) AND BEITRÄGE ZU EINER KRITIK DER
 SPRACHE (CONTRIBUTIONS TOWARDS A CRITIQUE OF LANGUAGE)
 RENDERED INTO ENGLISH

Thing.--We have learned to recognize that the entirety of all things, which one has called matter or material, are representations, are indeed things of thought as they are customarily called. "That which we call matter is a certain law-like connection of sensations" (Mach). It is not so simple to understand that the critique of the general concept of matter is also adequate to what is generally called a *thing* or an object. We will learn still more exactly that the two German words for thing, *Ding* and *Sache*, are translations of two words borrowed from the legal language of the Latins and originally meant "the bone of contention" in a lawsuit. In contrast, *object* (*obstantia*, *objectivum*) comes from philosophy. Object unclearly touches upon epistemological issues in its meaning: An object is that which stands in front of the I. The representation of the object emerges through something that is outside of human reason, but it can emerge only through the application of human reason. All these expressions are used, in common language, without particular distinguishing between the large and small details of reality, which naive realism does not see the need to clarify. However, much explanation is needed. For all these things are not real; they are rather the causes of one half of our real world, the exterior reality. An apple is nothing but the cause of the sensations: round, red, sweet etc.; it does not exist a second time along with the sensations which it causes; it is not once more there. In this sense, all things are only things of thought, only representations. And one is careful not to confuse here the concepts of *representation* and *phenomenon*. Phenomena, in the sense of Berkeley and Kant, are the directly given adjectival sensations. These sensations are, however, not things of thought, not representations; they are already well wrought somehow by the central apparatus of one's brain when they come to one's consciousness. However, the sensations are not yet wrought by reason or language, they are not

yet things of thought or representations, like things. Beyond this one thing we know--that all things are only things of thought--we do not know what to say about things. The epistemology that applies to Mach's statement on things differs from naive realism. Where the former claims "what we call a thing is a certain law-like connection of correlated sensations," the latter believes we perceive things through the senses. The two differ only through a trifle, only thereby: that epistemology sees a problem where the so-called sound common sense sees nothing and looks for nothing. The riddles contained in the concepts of cause, substance, law, and unit, are concealed behind our assumption of a law-like connection that our senses do not reveal to us and that consequently drive us beyond the seductive sensualism. (*Wörterbuch* 1: 295-99)

Kant, and still much more evidently the Neo-Kantians, have explored the relationship between sensations and their causes, the relationship between the adjectival world and the causal or verbal world. The Neo-Kantians have kept Kant's terminology and completely uncorrectly call the causes of the adjectival sensation things-in-themselves. Lately, they believe that they have encountered the true things-in-themselves in energies (see article on "*Energy*"). Energies are, however, not things, even if they are the objects of our thinking. Things belong to the substantival world, even if they are only things of thought. It seems to me -- and I wanted to make the point -- that if this *Weltanschauung* makes any sense, then it doesn't make any sense to ask about the thing-in-itself of the thing of thought unless one would decide--paradoxically enough--to call the adjectival sensations relative things-in-themselves of substantival things of thought.

Of course, I do not mean by "things of thought" pseudo-concepts; for these (*witches, miracles*) distinguish themselves because nothing in the sensual world corresponds to them. We get used to the idea that all things are only things of thought by thinking of concepts like *shadow, flame, wind, and thunder*. Thunder is not a second time there, substantively, along with our sensations of thunder; the flame is not still a second time there, outside of and along with its effects: we project, hypostatize, or whatever we want to call it, the causes of these effects. Similarly, the apple is not a second time there, once in

the adjectival and once in the substantival world. We smile with superiority at the child, to whom a journey had been promised, who had seen far from home new mountains and lakes and forests, and who then asked: "Yes, but where is the journey?" We are likewise childlike if we ask the physicist: "Yes, but where is the apple, the apple itself, the apple along with and outside of its qualities?" We demand the apple twice, which nature, despite its omnipotence, can only give us once.

So I arrive at a new paradox, which will seem strange only to naive realism but not so strange to the *Weltanschauung*, that we have learned from Hume: Our representations of a thing of thought (*ens rationis*) are much clearer than our representations of a corporeal thing. I have said a little while ago that our sense impressions are the relative things-in-themselves, that it makes no sense to look for extra things-in-themselves behind the real things, in whose existence we must believe. I have called the sensations *relative* things-in-themselves because there is nothing absolute.

All of these corporeal things or bodies are representations. It is only that things of thought do not seduce us to look for a second existence behind them. These corporeal things give us motives to see them twice insofar as we don't want to be satisfied with sensualism. And we cannot be satisfied because it is an instinct of the human understanding to assume a reality behind the sense impressions.

It is the equal difficulty we have with the feeling of I, when we think there is a special I that is along with and outside of the continuous chain of experiences, which links together this chain. Exactly the same difficulty. Duration is to us the sign of self. Duration is to us the sign of things. Unconsciously, driven by an instinct, we project some self onto the things. We call it *introjection*. The knowledge of it was available already in Hume's work, long before Avenarius created this unfortunate word, *introjection*. The thought is best expressed by Mach; he calls *thing* and *I* pseudo-problems: "It follows, however, that an *isolated* thing does not exist, strictly speaking. Only the chief consideration of notorious, strong dependencies and the disregarding of not-so-notorious weaker dependencies allow us to conclude provisionally the fictional nature of isolated things. On the same gradual difference of dependency also rests the opposition of the world and the I. An *isolated* I exists just as

little as an isolated thing. *Thing* and *I* are provisional fictions of an equal kind" (*Erkenntnis und Irrtum* 15).

Word Superstition--Plato and other good philosophers of Antiquity often appeal to Homer's verses as if the poet were an authority for reality. The verses are not adorning quotations for them, nor are they moral supports for their arguments but rather something like dogmas. Today, one has become subtler. However, words, which people invented in need or out of superstition, are still treated as if the existence of a word were a proof for the reality of the thing that the word designates.

The word "to mean" used by everybody strikes us as a parody of the origin of language. From the original meaning, "to cause somebody to do something by pointing to it," for example, in the expression, "to mean somebody to do something," the word "to mean" has become a designation for all the cases in which one points to something different, foreign, or inaccurate. Language developed through metaphors so that a word could mean occasionally something different from what it used to mean. Now one understands "bedeutend" "important." Still Goethe, who loved the word so much, understands "bedeutend" as "typical," "characteristic." It would be good to limit this much misused word to the explanation of metaphors; for example, in the sentence "she was seventeen Lenze," the word "Lenze" means "years."

Human superstition, however, had in "to mean" an admirable word, a sign that points to a future event or to a hidden fact; and because human superstition had the word, it used it. Humans used to believe that the gods hide behind natural phenomena and that they conveyed with signs and miracles the future and the hidden. Priests then revealed the future and the hidden through words. Then we used to ask: What does this earthquake mean? What does this monster mean? What does this comet mean?

Today, one has become terribly enlightened and leaves earthquakes, monsters, and comets to scientific research. Does one find, however, somewhere in usage an old word that one does not understand any more, then one asks with equal superstition: what does "mind" mean? What does "reason" mean? What does "matter" mean? When geology used to teach that God created the rocks and

put the marks of plants and animals inside them, then one used to ask: what do these miracles of nature mean? Today, one explains these marks through the theories of the origin of the earth and evolution of the species and asks: What does "evolution" mean?

"Rebus"--Most people suffer from this intellectual weakness: to believe that because a word is there, it must stand for something; because a word is there, something real must correspond to the word. As if each weathering in a stone would have to be a mark of a plant! Or as if lines scribbled by chance by a fool would have to be always a solvable rebus! (*Beiträge* 1: 158-61)

Certainly, language is generally used in this way. It is not only the common people and so-called half-educated who have picked up foreign or new words they do not understand in order to display them ornamentally or affectedly in the embroidery of their speech patterns. Scholars, researchers, and thinkers have always twisted old, weathered words to solve the riddle into which they have looked. Once one believed to find and solve rebuses in the drawings of individual blossoms and in the skeletons of fishheads. They were, however, half-conscious pastimes. One intended to interpret old American ornamented lines with the help of Hebraic characters. That was a foolish pastime. One has always applied since--and still now--the most strained thinking of living persons, namely, the association of their living experiences, on long gone word-remainders of dead generations; one has always intended since to transform with the juices of alive digestive organs the excrement of the ancestors into new food. And one does nothing different if one intended to thoroughly solve a rebus that is not really a rebus whatsoever or whose language one does not understand. As when, for example, absolutely modern researchers still intend to define mind, purpose, organism, life, death, or language, categories, and roots, just because there are words available.

Moreover, he must have been a perfect fool who introduced rebuses in our entertainment pages. It would certainly be beautiful to talk with facts instead of words, "rebus" instead of "verbis." The rebus-solver, however, only simplifies the comfortable alphabetic characters. I seriously believe that it must be sick minds who write

our horrible rebuses (with the exception of jokes) and that only children occupy themselves--according to an old communal identity--with the works of these fools.

Fetishism with words-- Still far more than in the common usage of language, a fetishism is driven by words in science. Thus, the theologian, who builds a system from the ghost of people's superstition or carries this superstition even further, practices a worse fetishism than the simple peasant, who only believes in the ghost.

As we are now more easily inclined to hold the theologians of the Middle Ages or the theologians of the cannibals for system-makers of dead knowledge--present professors of theology--, so we also see clearly that fraud and idolatry have been driven with now obsolete concepts in the history of science. However, we refuse to easily assume the same from the supreme concepts of current science, although personification or deification today is the same as in the old days. Thus, the individual "forces" play the same role today as the *qualitates occultae* once did. Furthermore, if scholars, when their noses are pushed to the grindstone, deny the existence of the error of personification, they think, however, further in this childlike way as soon as they believe themselves unobserved. For a doctor, *pace* Virchow, individual diseases are personal forces, personifications that he fights. For a biologist, *pace* Darwin, species have become personifications, even if one refuses to concede it. The error becomes more visible where self-perception handed in uncontrollably basic ideas. Psychology swarms with personifications. For example, to the human soul three personifications (understanding, reason, and imagination) are attributed. Also free minds are not able--despite their own better judgments expressed in the introduction, conclusion, or otherwise at a proper place--to easily release themselves from the picture that each of these demigods directs a certain activity of the soul, like a departmental executive committee in a ministry. It is exactly the same process as when the Greeks deified particular protective divinities for the large areas of life and personified special nymphs, like dryads and oreads, for smaller sections.

Encyclopedia.--I was inclined to contribute with a new system of knowledge. I attempt to describe here only the underlying idea of my classification because this main idea contains within itself the seed of self-undermining and makes me so suspicious toward all kinds of systems, inasmuch as the sharpest criticism is the criticism of our own thoughts.

I intended to divide all human knowledge into facts linked by laws, regularities, and causalities capable of being known, on the one hand, and isolated facts, on the other hand. This classification might work perfectly under the customary division conveyed by natural sciences and humanities. But I would need to restrict the concept of natural sciences and to expand the concept of humanities. All classifying sciences--the science of the three kingdoms of nature, for example--would fall under the collection of historical facts. Yet it will not be proper to call the collections of facts "sciences," but perhaps only "knowledge." "Sciences" would be only those systems of knowledge that allow a determined or a probable forecast.

One sees immediately that for this classification, the content would become secondary. One sees furthermore that each of such systems of knowledge would always correspond to the instantaneous "state of the art," and precisely because each system is fluent, it would be historical. And thus I arrived at the following conviction: there cannot be an objective system of knowledge; also, this extreme awareness must remain a subjective human work.

The underlying idea of Bacon's and Diderot's classifications cannot be logically maintained. Memory, reason, and imagination are not coordinated concepts. Reason and imagination are subordinated to memory. We know nothing, we think nothing, we create nothing; only through memory are we able to know, think and create. Memory is also the language in which we know and think. Certainly, we also attribute memory to nature; however, only metaphorically. The unconscious memory of nature is something completely different from conscious, linguistic human memory. Human disposition for knowledge, even when it is able to focus on real science, is something completely different from the order of nature. We have obtained our knowledge of nature by connecting thoughts, and human interest--whatsoever people may claim--is at the base of these connections. We have come closer and closer to nature by means of our

knowledge or our language because dominion over nature was in our own interest. Never, however, does our language coincide with nature, not even in the cases where we have already or almost discovered laws: in mathematics and mechanics. (*Wörterbuch* 1: 395-401)

Relationships in nature are not connections of thought, at least not human connections. We associate, for example, fire and warm sensations and still do not know today, more than a hundred years after the discovery of oxygen and after unprecedented efforts by physicists, what fire is. And we do not know what warmth is either. Still we associate fire with warmth. Neither does nature know what fire is, what warmth is. However, it does not need to know it because nature does not speak about fire or warmth, because it does not have any interest in fire and warmth; it has no human interest, no scientific interest in them. And if nature could laugh, as human beings laugh, then it would laugh at the poor human beings in their attempts to regard fire and warmth always from a different point of view: from the point of view of history of religion; of arts and technology; of psychology and of the history of war; of astronomy and zoology, botany and mineralogy; of medicine and chemistry, etc. etc. Furthermore, nature would also laugh at all other classifications of natural phenomena into fields of knowledge or sciences; at the contents of a scientific system, which are an absurdity in regard to the system itself; and at the methods, which obeying only instant profit always replace one another from field to field and from generation to generation.

In addition to the purpose of satisfying the longing of especially talented minds, the strenuous attempts to bring vast knowledge into a system pursue the general purpose of acquiring a criterion to value the particular knowledge in regard to the whole knowledge--which is only a whole in the longing. Perhaps systematic knowledge may also enable the individual to have her knowledge in readiness, even though the quickness of the individual's association rests more frequently on an instinctive, practical system than on a logical one. The large encyclopedias, which were our point of departure, have achieved with brutal simplicity something that is certainly far away from the order of nature and that certainly has nothing to do with the

disposition of a system of knowledge. That, however, in an openly blunt matchless manner, makes knowledge accessible, makes the connections of thought independent from interest, and also produces relationships from one issue to another issue. The task was to make each part of knowledge instantly accessible in the notoriously vast field; through a reliable and fast registry to make this knowledge accessible. This registrar, absolutely reliable, infallible precisely because of its stupidity, is the alphabet, which is knocked into every child's head. And I do not hesitate to claim that this childish grand invention, namely, to arrange alphabetically the *omnia scibilia*, approximately corresponds to the longing of the dreamer Lull and of the science organizer Leibniz. Both, Leibniz not independently from Lull, invented, or intended to invent, a kind of logic machine.

Our encyclopedias are definitely in their brutal systemlessness just the *ars magna*, the art of Lull, or the *ars combinatoria*. Certainly, Lull and Leibniz had still hoped to see new ideas mechanically resulting from their logic machines. However, a logic machine would at best have not been able to accomplish more than logical thinking itself, and we have learned that even logical conclusions do not lead to new propositions.

Regarding Leibniz, it remains to be mentioned that he in fact often lamented in letters and even in an important place in his *Nouveaux Essais* (IV, 3, §18) the unauthorised reproduction of his work (the so-called second edition of his *Ars combinatoria*); this unauthorised edition, however, still conveyed significance to the writing. He regrets just at the cited place that one could hold him capable of publishing once more, in his advanced age, a fruit of his earliest youth: "because although there are ideas of some importance in it, of which I still approve, so nevertheless there are also ideas which only a young beginner could maintain."

The *ars magna* of the delirious Raymond Lull, who dared to construct newly and freely the scholastic philosophy that had been shaken up by the influence of the Arabs, indeed appears to me in theory a logic machine, in practice a mechanical logic.

He cannot be blame at all for the fact that the definitions produced by the machine were thoroughly and revoltingly tautological. In the *logic machine*, the natural error of all logic, namely, to lead from tautology to tautology, had to become especially clear. Taken exactly,

as Ritter (8: 492) has already pointed out, the syllogisms in *barbara*, *celarent* etc. certainly amount to a logic machine in the end. We can make no more use of them because we have lost the belief in the value of logic, because we expect still less from a new logic, and finally because we have no more practice in the application of the mysterious words *barbara*, etc. In a completely similar way, Lull tied the logical operations to the letters of the alphabet and also made it a duty to learn the letters and their meanings by heart. Lull's use of the symbols B, C, D, E, F, G, H, I, K is close to a system which stands in the middle between a mechanical logic and universal characters. The chosen nine letters express, in one auxiliary circle, nine arbitrary categories (whose number and classification is equally meaningless) and in the second auxiliary circle they express nine likewise arbitrarily chosen characteristics. If with the rotation of the auxiliary circles two such letters met together, a kind of word emerged, which symbolically expressed a sentence of extreme banality, for example: "The goodness is a great concordance or a great difference, be it between God and the carnal human being, be it among carnal human beings." Whereby naturally the pompous abstractions first had to be translated into a human language, even if only a tautological banality should emerge. With three concentric auxiliary circles, symbolic words of three letters appeared, and their solutions were still more complicated but equally banal.

In this completely schematic presentation, I have intentionally omitted (see article on "*Logic machines*") that each letter in each auxiliary circle could moreover have five meanings and that therefore the possibilities of solution were ultimately, according to the rules of the combination theory, countless. Therein delirious Lull perceived precisely the construction of a logic machine; Leibniz, the mathematician, carried out the combination theory and hoped for a long time to invent a logic machine. Neither of them noticed that a machine whose symbolic materials were constituted only by past memories could not produce new ideas. Once more: if the human disposition for knowledge corresponded to a natural order, we could then create in an artificial universal language a natural world-catalogue, and something like a logic machine would be possible. And a system of sciences would also be possible. We do not have even in the limited fields of zoology, botany, and crystallography a

natural catalogue; we have still less a natural world-catalogue. We have only collections of human knowledge organized according to human connections of thoughts and interests, and we must be satisfied if we can orient ourselves in the mass of this knowledge with the assistance of the brutal alphabetical connections of thought. *Nota bene*: with a book, with the characters of the alphabet. The capacity of such a book is thus greater than the one of a brain.

Not only Leibniz, but also Agrippa von Nettesheim, Bruno, and Kirchner the Jesuit ran across the art of Lull. And it will perhaps be still more frequently discovered again just as the squaring of the circle is tried again and again, even after its rejection. The three new English logic machines will not be the last. We, however, have recognized the madness and have no more interest in the discussion whether the holy adventurer Lull was really given his *ars magna* directly by Jesus Christ, or whether he has copied it from an Arab or a Kabbalist; we have no interest in the discussion whether his condemnation or his canonization (1419) had better grounds. Three hundred years before Bacon, Lull tried to draft something like a genealogical tree of sciences. However, his classification scheme (Mary, angels, apostles; Pope, cardinals, bishops; the seven sacraments) speaks to us no more.

Adjectival World.-- The grammatical term *adjectivum* is, as we know, a translation from the Greek. It is also well known that Aristotle, who certainly was no grammarian, had no idea of the category of the adjective. In Aristotle's work, *epitheton* amounted to a special case of the poetic *epitheton ornans*. The grammarians of Greek who came later thought of *epitheton* primarily as being related to praise and criticism, but very slowly they also added other quality words to the qualities of the soul and body.

As the founder of logic Aristotle would have had to pay attention to the grammatical meaning of adjectives if the Greeks had pursued epistemological investigations.

In my *Contributions to a Critique of Language* (Volume II, starting at page 94), I have intended to show that the adjective is the youngest part of speech in the history of grammar but the oldest one in the history of understanding. The qualities of a thing tell me what a thing

is; what it is beyond its qualities, that is a metaphysical question. "The building of the corporeality of a thing is achieved prelinguistically through its qualities; also the monkey, when he eats an apple, would probably construct the hypothesis of a thing called 'apple' out of its qualities: smooth, sweet, red, heavy, etc." The adjectival world is the world of the sense impressions, the only world to which we have access; the substantival world is the same world again, understood under the hypothesis of a thing.

I don't intend to force my observations into a system. But the application to the concept of apperception of a *Weltanschauung* that we are going to discuss further attracts me and removes me from nominalistic individualization. Human language, which originated through and is constituted of apperceptions, had constructed three categories from time immemorial with whose help it tries to understand the world: the adjective, the verb, and the noun. It dawned on me the possibility of dividing the interior process of apperception, once again and in a different way than before, into these three categories.

There is an adjectival world, the only world that we experience immediately through our senses; all our sensations, all our sense data, are adjectival. Additionally, all our mental perceptions, our value judgments, all that we call right, good, beautiful, etc. are adjectival. This adjectival world, which falls apart into individual impressions that are not configurated into unities, can be called punctiform. (*Wörterbuch* 1: 17-19)

If we would like to link the points into units and direct attention to them (and we should not forget that our attention is aroused by mysterious units or forms in things), so we have to act, to think, to apply the ability of apperceiving to sense impressions. The act of linking sensations into units through the activity of memory, could (much more boldly than the previous expression adjectival world was) be called the verbal world. Or by audaciously equating action with effectiveness, we can call it the causal world. The punctiform world of passive sense impressions is transformed through active apperceiving into a world of becoming, into the woven fabric of the world, into a flux.

The mass of apperceptions or thinking does not rest before thought comes into words. We have words for the adjectival world (blue, loud, sweet, hard, correct, pretty), but all of these words pierce the impressions with the pinpoint of the moment, and they do not let us see units, the so-called totality, let alone describe it. The adjectival world is the world of animals. By contrast, the verbal world appears and brings designation for becoming and passing, for enjoyment and suffering, for change and stasis, for action and reaction. The verbal world can be described. But the impudent human word wants to explain it. It wants to find an expression not only for the impressions of the moment, and for the transformations in space, but for being, for what lasts in time, for the substances. And the impudent word creates for itself (only for itself, the word creates the word) the substantival world, the world of things and forces, the world of gods and spirits, a world that the memory of humankind could not know before the memory created the word. And because the substantival world has high prestige among people, and since always it is the longed-for world among profound thinkers and mystics, I would not have anything against it, if one would call the whole unreal, substantival world the mystical world.

Logic Machines.-- In England from 1869 to 1882 no less than three new logic machines were invented, each different from the other, each condemned by its origin to collect dust as a curiosity in some museum. Jevons, Venn, and Marquand, respected logicians of our time, were the inventors. The re-emergence of such efforts proves one thing: that the art of Lull, which has occupied many of the best minds from the thirteenth century to Leibniz, which along with the remnant of scholasticism seemed completely surpassed, still continues to live as a ghost. That is not so surprising. Our scholars have taken care that scholasticism continued to grow secretly in formal logic and in scientific concepts. And precisely the large philosophical systems used to have, and still have, the tendency to take from the most consistent of all systems, scholasticism, their terminological instruments. The fearful Descartes, as well as Spinoza, Kant and Schopenhauer, the free liberators, have here and there indulged scholasticism and its formal logic. Only critical skepticism may boast of not consciously being scholastic any longer. Lull's art was, if one

wants to be fair, the peak or bloom of scholastic thinking. If this thinking were alive, if formal logic could really promote our knowledge of the world, then the art of Lull or the *Ars magna* would not appear so absurd to us as they do.

The same thing happens to the inventors of logic machines that happens to the like-minded inventors of perpetual motion; one may show them, no matter how strongly, the impossibility that these machines work; nevertheless, they go back to their insoluble task. A thorough proof that a logic machine cannot have the slightest usefulness would be nevertheless a meritorious task today. I will restrict myself to emphasize some issues. She who is interested in the history of the *ars magna* of Lull can find a lot of literature that extends from Raymond Lull to Leibniz in old Morhof's *Polyhister*, chapter five of book two (in volume one).

In my younger years, I once devised such a logic machine after Lull's model. For that reason, I can perhaps speak of its usefulness because I think that the principles I selected were no more stupid than those of the other inventors. Lull had used for the combination of concepts revolving circles; the English men of our time chose rulers, grids, or ellipses. I was thinking, because of a reason I will give later, of carrying out the same thought with dice. And it was so: The first "die" had twelve faces, each of them marked with a letter, and each letter represented one of Kant's twelve categories. The second "die" was limited to eight faces that again through letters referred to the eight possible relationships between affirmation and denial. The third "die" had to have five faces to represent the five predicates (designated by vowels); the fourth die finally honored its name because it was really a die with six faces, to which I--I intend to confess--attached as meaning the three dimensions of space in both directions of time, past and future, and gave them mathematical signs (2×3). I said to myself, not without good reason, that the whole activity of the machine would consist of the combining of concepts and that the countless possibilities of the sum of combinations, because of the idea of chance, would be better represented through the game of dice than through the movement of rulers or circles, whereby the will or intention of the experimenter cannot be excluded.

I didn't know then that the development of the law of probability, which was implied in Lull's art, followed after the course of many centuries and that Leibniz's *Ars combinatoria* coincided with both efforts.

My dice were produced amateurishly and very insufficiently, so I hid them, not only for that reason, from the sight of everybody. However, they served as a foolish game. It was completely clear to me that it was a game; perhaps something would come out of it, a hit, like a lottery game. I know perfectly well that my brain was to some extent the fifth die; I had a certain concept in mind; I thought to relate this concept to a second one, apparently a completely disparate concept, through the dice game. The first attempt resulted in the concepts (my religious teacher of logic was to blame for this) of "God" and "ponderable". The dice should have, and had to, produce a logical connection between both concepts if thrown often enough. One can perhaps imagine what kind of sorcery came out of this passionately driven, solitary dice-game. However, I did not know at the time how idiotic the whole occupation was. Many devoted representatives of Lull's art saw as little as myself the worthlessness of their trivial game--not to mention the charlatans of the *ars magna*.

By the same time, I had learned of an ambitious school friend, a Czech, who was composing poetry with the help of a rhyming dictionary. Naturally, I used to compose poetry also, and I tried this time with such a dictionary, which was gladly lent to me, but in German. At that moment, I was enlightened by something that I feel is worthwhile to communicate.

1. The value of a logic machine is considerably less that of a rhyming dictionary, but the meaning of both of them is very similar for the psychology of creativity. She who is mathematically minded can really grasp the origin of a poem, like the origin of a new scientific truth, as one of the countless combinations of words of a language. Only that--according to the ancient image--the *Iliad* did not originate through random throwing of letters. She who composes poetry, who seeks the formula of the new truth, certainly combines words; but she could never let herself be led by chance. There is here still a difference that speaks in favor of the rhyming dictionary and against the logic machines. Poets and thinkers select, during their

intellectual work, lightning quick and unaware, one of all possible associations.

For the poets, the sound of the word does not play an irrelevant role in the process of association. When one did not yet rhyme, the rhythm of words played a similar role. The poet has in her head something like an ideal, unwritten rhyming dictionary, whose sounds influence her work, whether she likes it or not. This could be shown in the manuscripts of outstanding poets (Schiller, Heine). To state it briefly, the random emergence of similar linguistic sounds plays a role in the emergence of poems. Chance composes poems along with the poet; even a rhyming dictionary can help chance. Thinking means, however, to choose the correct association from the vast number of all possible associations or word combinations. The discernment of a thinker consists in foreseeing the resulting concept with secure instinct and then finding those connections that lead from the initial concept to the resulting one. The resulting concept, the goal, can be offered to the thinker or the investigator through chance, through *aperçu*, through a shrewd observation of a random event. However, chance is excluded from the path of the thinker; otherwise, a rhyming dictionary could lead the thinker to the correct connections as randomly as a logic machine. The law of probability teaches that of the vast number of combinations, the right combination (of my die or of Lull's circles) could be an almost impossible single occurrence among the many endless occurrences. And it would be a miserable head whose brain worked no quicker or better than the machine that would make the discernment superfluous.

2. My school friend composed poetry with the help of a Czech rhyming dictionary; I borrowed a German one. Evidently, there were in both languages completely different rhyming sounds, and therefore completely different associations. Was it different regarding thinking? Did the philosophical concepts of the two languages correspond exactly? Didn't the concepts have a history? Weren't Kant's categories completely different from those of Aristotle? Therefore, it was impossible to invent a logic machine that completely fit human thinking disregarding the diversity of languages.

This second circumstance intersects with a curious fact. Lull had already used the letters of the alphabet for his *Ars magna*, and he could represent the results of his witchcraft each time with the simplest means; the charlatans who followed Lull often promised to create a new universal language based on such an arrangement of letters. I would like to remind you that the greatest attempt at creating such an international sign language--as it exists in Bishop Wilkins's unsurpassed "Essay Towards a Real Character and a Philosophical Language" (of 1668)--is nothing but an attempt to transform Lull's logic machine into a world catalogue. It is no coincidence that Leibniz, the genial appropriator, occasionally addressed in his youth and adulthood, both problems: a logic machine and a universal language. (*Wörterbuch* 1: 281-287)

I come back to the beginning. Such a world catalogue, a logical one, is not possible because nature is not logical; only human beings have invented logic for the economy of their thinking, and they have long considered it useful. If the world and nature were logical and we possessed a reliable world catalogue, then we might perhaps speak about the possibility or usefulness of a logic machine. However, we have to marvel that not only a visionary thinker like Giordano Bruno but also the keenest Leibniz could judge positively an instrument that makes the intelligence worthless, an instrument that intends to transform the layman at the crank of the logic machine into a philosopher.

The English, who struggled with the invention of a new logic machine, could have perhaps saved discernment and industry if they had paid attention to the harsh words with which Bacon criticized the idea of a logic machine three hundred years before: "I may not leave unmentioned that some men, who were more self-important than knowledgeable, had sweated over a certain method, which could hardly be called a method, which is rather the method of the imposter (*methodus imposturae*); which without doubt was very welcome by busy indolents (*ardelionibus*). This method sprinkles drops of knowledge around itself so that someone half-educated (*sciolus*) can be deceived with this appearance of erudition. This also applies to Lull's art; this also applies to the cosmographical histories; they were nothing but a mass or heap of words about an art; when

the words are familiar (*in promptu*), he can make believe that he has thoroughly studied (*perdidicisse*) those arts. Such conglomerations remind of a junkyard where one can find much garbage but nothing valuable" (*De dignitate et augmentis scientiarum* VI, 2).

Respectable old Brucker, whom Schopenhauer correctly ranked over the much more modern historian of philosophy, made this essential point, namely that logic machines are like the dreadful branches of old logic, the so-called topic, which had only one advantage, namely, that the user of this instrument can endlessly blab about a given theme. Brucker made this point much better than did Bacon. Brucker said of Lull: "that he possessed a glowing but fantastic genius was shown by his well-known arts, consisting of a special invention which is to be able to make out of all kinds of matters that one does not understand many *ex tempore* babbles. From this it follows that his art does not belong to philosophy and logic but to oratory, and is therefore condemned to disappear" (excerpted from the *Short Questions* 399).

Universal Language.---A few years ago, as I have come to find out, a serious danger threatened the children of a German federal state. A powerful man in this state had made, or had had to make, the decision making the instruction of so-called *Esperanto* (which with clever modesty was called only an international auxiliary language) mandatory. The agitation originated in France, where people do not like to learn foreign languages and where the feeling for utopia and centralization are at home. Well-known scholars in France and Germany advocated the embryonic monster *Esperanto*, and then, again, they advocated a new and improved *Esperanto*. With the entire weight of their knowledge, Brugmann and Leskien had to oppose the attempts to consider the ridiculous *Esperanto* a living being. Brugmann criticized the new universal language from the standpoint of philosophy of language; Leskien did so more from the standpoint of phonetics. Both scholars' results were devastating for *Esperanto* and its scholars.

From a different direction, I came to a sharp rejection of these efforts when they set about committing a new crime on the poor school children (see my small book *Die Sprache*, 31 ff). I started with two assumptions. First, an ideal language, a philosophical language,

given the present state of our natural sciences, is just as impossible today as it was in the seventeenth century. It is impossible because a logically ordered world-catalogue, on which this ideal language would have to be based, is still not available, and because such a world-catalogue cannot be constructed at all since the Creator of the world was no Registrar. Second, each artificial language is fated to be no language at all but at best a translation of real languages into a pseudo-language, invented as a game that could satisfy neither poets nor scholars. Furthermore, I pointed to the fact that there is somehow no sufficient dictionary of Esperanto, that an international dictionary of Esperanto is not possible at all. Just as there is no grammar for all languages, there is no dictionary of concepts of all languages; even grammars and dictionaries of languages present deep internal differences when they belong to people who do not have exactly similar psychological conditions.

I do not want to criticize here the naive attempts to create artificial languages in detail but only on the spur of the moment. Esperanto will soon follow the faded Volapük, but new universal languages will be invented again and again as long as no one realizes that a universal language is an unattainable utopia.

For that reason, I would like at this point to criticize the greatest plan that has ever been conceived of for a philosophical universal language, namely, the *lingua characterica universalis* of Leibniz, a rare man whose discernment and industry nevertheless failed in this attempt. In addition, I would like to discuss the almost simultaneous universal language of the never to be surpassed Bishop Wilkins. Apart from the writings of both men, I rely on an essay of Trendelenburg, "On Leibniz's Draft of a General System of Characters" (Berlin Academy of Sciences, 1856).

About a hundred years before Leibniz, the bold idea that places Leibniz's intention far above the school-works of scholars of Volapük or Esperanto had already arisen from the mathematical genius of Descartes. Descartes observed that the endless quantity of all possible numbers are organized in our number system in such a way that each person is able to learn, in one day, the art of naming all the numbers in a language which up to that moment was unknown to her; besides, these numbers are written in the same way in all languages. Accordingly, a real philosophy should also be able to

order all human thoughts. Then, we could hope for a general language, and which would be easy to learn, pronounce, and write, which beyond that would avoid all the logical mistakes and deceits of available languages. Descartes seems to have only played with this thought. He considered that its realization was possible in idea, not in reality. Before that, the world would have had to be transformed into a paradise.

Since that time, men of lesser discernment and greater critical ineptitude have worked on the idea of constructing such a universal language. Thus, two totally different tasks should be carried out in a single blow. On the one hand, using an improved system of concepts, one should construct a systematic world-catalogue, a complete catalogue of all things and things-of-thought, which would be organized by these concepts. Simultaneously, one should create a logical substitute for historical, alogical, natural languages that originated by chance. The dream was to make with the help of new international and systematically designated words, the *lingua characterica universalis*, the infinite thinking as comfortable as the speaking and writing of endlessly many numbers, which had been made comfortable by the system of numeration. Between Descartes and Locke, pressed into a few years, the most attractive attempts to construct a new language and new characters took place. This language would be constructed through familiar numbers and the letters of the alphabet or through arbitrarily formed syllables and simple geometrical lines. Namely, in Bishop Wilkins's "An Essay Towards a Real Character and a Philosophical Language" (1668), our modern universal languages and much of the modern *Algebra of Logic* are already included. In the same period, between Descartes and Locke, just the decade between 1676 and 1686, most of Leibniz's writings about this topic were written. I had to mention Descartes and Locke because the mathematical genius of the one awakened the dream while the linguistic genius of the other was able to bring the dream to an end. Whoever at that time, in trying to improve the world, worked on a general system of characters or on a logical universal language, hoped to accomplish for all human knowledge what Descartes achieved for analytical geometry: to represent all the relations that are capable of being known through signs, that seemed linguistic signs because they--according to the procedure of older

mathematicians and specially of Vietas--were borrowed from the Latin letters of the alphabet.⁴⁵ Nobody noticed that using its arbitrary signs, analytical geometry did not express linguistically but genetically the relations with which it has to do. Nobody noticed further that the incomparable excellence of analytical geometry could not be translated into endlessly complex relationships of cause and effect because this symbolical language was only applicable to the world of being, to spatial relationships, which are always the same. Nobody had explored the nature of language more deeply, nobody had practiced critique of language before Locke published his "Essay concerning Human Understanding" (1690), which was not appreciated enough. In its splendid third book, almost against his intention, only in the course of his investigations, did Locke uncover the imperfection of all languages. I hope once again to get to the point of presenting Locke's philosophy of language in its interconnectedness. However, I want only to recall here that Locke already knew that a language can never be translated into another language (Chapter 5, §8). He also knew that not the true being, which cannot be known, but the being of words is the basis for classification, according to which one organizes things into categories (Chapter 6, §§ 7-9). Further, I want to recall that Locke sought for means to correct the imperfections and misuse of language (Chapter 11), and that he already thought of a dictionary written according to the principles of the critique of language as an ideal (Chapter 2, §25). The only difference is that Locke had seen the essence of language

⁴⁵ I think I have proved that numbers are not concepts, that ciphers are not words (*Contributions* 3: 153). In fact, neither do the letters used in analytical geometry belong to language. That would have been obvious if the first inventors of analytical geometry had not chosen letters but other arbitrary signs. This applies also to the letters currently used in chemical formulae; also in this case, it would have been obvious that those letters do not belong to language if, as signs for the elements, one had not chosen the beginning letter of their Latin names but other arbitrary signs just as metals were once expressed through the old planets' signs. I make this remark to psychologically clarify the curious fact that today like yesterday chemists are easily inclined to become general sign language enthusiasts. Currently, a well-known German chemist, Ostwald, is the most passionate supporter of Esperanto. In the seventeenth-century, the genial chemist Boyle was so familiarized with the Bishop Wilkins's real character and philosophical language that, according to an occasional joke of Leibniz, he was, apart from Wilkins, the only one who learned his characters.

and he did not try to find a desperate way out: to eliminate the imperfections of language by employing, for the purposes of communication, a means which was not and could not become a language.

It would have been completely different to discover an immanent *order* in the things and the things-of-thought of the world, and then to represent this order in an orderly language. It would be all the same whether for this purpose one had improved an existing language or constructed a new one. The men who sought to construct a world-catalogue did not suspect that *order* is of course only a poor human concept, not to be found in the real world. Even today, many people still do not suspect it.

If it were possible, with the help of a systematic classification of all concepts, to arrive at a world-catalogue; if this *world-catalogue* were arranged so that each small star, each individual grain of wheat, and each fly presently living or that has ever lived in the world were not to have a particular name, but so that with the help of a huge system each individual could be designated by a combination of concepts, then we would have a universal language. In regard to this huge idea, Leibniz thought only peripherally about the advantage that a coherent language could grant. Certainly, one should not put his plan on the same level of the foolish efforts of our petty contemporaries who, just as children invent an imaginary language, invent a Volapük or *Esperanto* and come so far with it as a missionary who translates the Lord's Prayer into Hottentot. Leibniz's universal language is a gleaming fantasy.

In spite of the fact that Leibniz was an independent investigator in the area of the science of language, he was not spared, even in this area, from being shown forerunners from whom he supposedly took his basic ideas. This thereby throws light on the well-known controversy over priority in the discovery of the differential calculus. It is more than likely that Leibniz had known about Bishop Wilkins's work on a real character and a philosophical language (London 1668). Wilkins's work must have greatly interested Leibniz, for from his boyhood he carried around in his mind a similar project of creating a scholastic world-catalogue. And since Leibniz's project was never accomplished, while on the other hand Bishop Wilkins's work--whose title was already mentioned--was thoroughly and broadly

carried out, then it seems advisable to criticize the fantasy of a universal language using Wilkins's curious effort. The Bishop's main task was to invent a means of communication for scholars of all nations. It was at a time when Latin ceased to serve as the international scholarly language. Therefore, it may have been an attractive thought: if not to invent a common language, then at least common *characters*. These characters should, however, not be alphabetical ones, which could only be applied to natural languages and for that reason were not going to remain intelligible for all nations, but *real characters*, namely, signs that directly correspond to things. We are told that there is an old Chinese language whose literary monuments Chinese scholars can objectively understand from their characters, although the language itself is no longer known. Bishop Wilkins proceeded on the assumption that we already had a dozen of such signs (in our mathematical signs such as + and -, in our astronomical signs for the sun, the moon, and the planets), which can be understood by the scholars of all countries and expressed everywhere in another language. If a particular sign were assigned to every object and concept, and if grammatical forms were expressed through smaller conventionally fixed signs, then we would possess a visible international language, which certainly could hardly become alive without translation into natural languages. These universal real characters are of less interest here. Rather, we are concerned with the consequences that Bishop Wilkins himself has drawn. He felt that a huge quantity of signs would be necessary if one wished to designate things and concepts (he really means only concepts) without the proper internal relationship. If one, however, based the signs on a systematic world-catalogue, then their quantity could be considerably reduced, and the characters could be learned. Furthermore, an artificial language could also be learned if it connected signs and their grammatical form changes with the simplest syllables available, and if it, at the same time, could be communicated orally.

Regarding the characters, it suffices to say that they were arranged very ingeniously according to the musical notation system. The inventor assures us that only about two thousand ciphers are needed for the concepts and approximately forty signs for the grammatical changes. He achieved this by, for example, using the same sign (in a

language, the same word) to designate an adverb, a verb, an adjective, or a noun, depending on whether the sign stands on the place of a C, D, E or F in the musical notation system. To need only forty syllabic signs for the skeleton of grammar is the height of simplicity if one just thinks about the thousand endings that arose in our language to indicate different noun and verb patterns, and by the many exceptions. The world-catalogue emerges when the signs and words created for those signs are logically related in such a way that one is able to see the sign, listen to the word, and immediately know what it means. In Bishop Wilkins's time, there was no notion of modern linguistics; even less could people know how the meanings of words change just by chance. For this reason, it seemed clear that such an artificial language would be enormously superior to any other language in regard to logic. No language can be learned logically; it is always the usage of language that must be learned in a nonsensical way. Hence, the universal language would moreover be a logical ideal language (see Müller, *Vorlesungen* 2: 41).

In an attempt to reach his goal, Wilkins was not frightened by the need of creating a *world-catalogue*, which would serve as a basis of a new lexicon. Nothing would be more foolish than to laugh at either his world-catalogue or his naive way of arbitrarily forming words. His catalogue was excellently conceived within the framework of his world-view. And his system of forming words also evolved from the old view that language could be based on stipulation, and, in this respect, his ideas were of classic simplicity.

The world-catalogue--the attempt to describe it in detail is superfluous--divides the world into six categories. The second, third, fourth, fifth and sixth categories correspond, respectively, to the old categories of substance, quantity, quality, action, and relationship, as they were defined by Aristotle's "labyrinth of the logic of reeling" grammar and carried on from the Middle Ages to the present. It seems to us a secret joke that the Bishop's first category encompasses transcendental concepts, that is to say, the so-called *transcendental* categories, like unit, truth, etc. (see article on "*Transcendental*"). Thus it seems to us a secret joke that, while creating a catalogue of the real world, the Bishop felt compelled to create a category for concepts that fail to correspond to real objects. Wilkins further divides these initial

six categories into forty classes and these classes into subdivisions, etc.

The world-catalogue is an underlying assumption of the real characters and universal language. Thus, the Bishop arrives at the *universal language* by inventing forty simple syllables, which the new linguistics calls artificial roots. These syllables are formed, in principle, by a consonant (B, D, G, Z, P, T, C, or S) and a simple vowel. The forty roots begin with Ba, Be, Bi and terminate with Sa, Se, and Si. One has only to remember the immensely difficult world-catalogue, a sort of logically organized conversation-lexicon. If one further learned the arbitrary forty roots by heart, then one possesses, in fact, an enviable basis of all knowledge. Likewise, the subdivisions are accomplished in a simple way. For the first subdivision, a consonant B, D, G, etc. is added at the root, and the words Bab, Bad, Bag, etc. emerge. For the second subdivision, a vocal is added to the stem resulting from the first subdivision, so that the words Baba, Babe, Babi, etc. emerge. One should not forget that the student of this language must precisely remember the sequence of the classes, subdivisions, and subsubdivisions if he wants to learn the language. Only then would she be able to calculate quickly, for example, if *De* stands for the class "elements," then *Det* must represent the fifth subdivision, which (in the Weltanschauung of the time) designates a celestial phenomenon, and *Deta* would be then the second subsubdivision and mean, with absolute certainty, "*a halo around a star.*"

Grammatical form changes are taken on according to the models of inflectional languages. The transformation of a noun into an adjective or even the linguistic formation of an opposition, finally, the inflections of noun and verb, are done by change or insertion of letters.

I refuse to copy the gibberish into which Bishop Wilkins translated the Lord's Prayer using the universal language. The reader would laugh--and without reason. Indeed, the unintelligibility of these chaotic sounds is not what makes this attempt dubious; each language appears that funny to anyone who does not understand it. Neither can I accept the objection that claims one needs an extraordinary knowledge and rare logical training in order to learn this language. It is true it won't teach a child Aristotle's table of

categories before she learns the words "mama" and "papa." But Wilkins could argue the point that the knowledge of the world-catalogue need not precede the knowledge of the language. On the contrary, the child could learn the artificial language as her mother tongue, like any other language. Later, she would arrive at an understanding of the world categories, and the comprehension would be easier through the structure of the artificial language than through one of the possible natural languages. In addition, this universal language could be of importance as a scholarly language alongside of one's native language, just as Linnaeus' botanical classification exists alongside of the common names of the plants. What we can more appropriately laugh at is something very different. At first glance, it is clear that Bishop Wilkins could set up his large division of forty classes only by virtue of his knowledge of the world. Each expansion, indeed each fundamental transformation of knowledge (and each new generation looks at the world differently), would throw overboard his system of artificial language and therewith its value. Therefore, the universal language (even if it would not come apart under different cultures into diverging dialects and, ultimately, into diverging languages) would share, sooner or later, the same fate of any natural language, and it would not coincide with the knowledge of a future time. Just imagine trying today to use in chemistry a system of classification of the year 1668. In order to fit in with the language of each area of knowledge, it would be necessary annually to patch the scientific terminology up, and each patch would be an error in the system. One could ultimately understand each word practically through its use, scientifically through its history. That, however--and herein lies the intimate humor of the situation--can also be said in praise of our living languages. (*Wörterbuch* 3: 316-26)

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