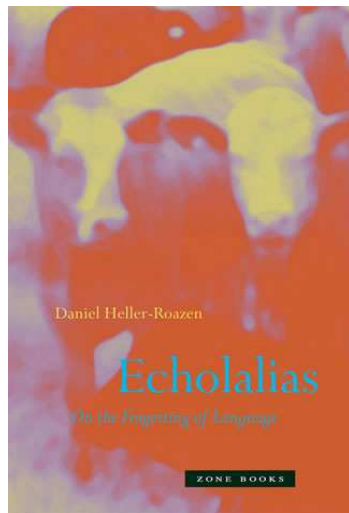# Echolalias: the logic of forgetting
– Echolalies: la logique de l'oubli –

Joseph E. Brenner

1. INTRODUCTION. ECHOLALIAS

In psychology, the term "echolalias" has two related meanings: 1) the uncontrollable and immediate repetition of words spoken by another person – an "echo" of them; and 2) the imitation by an infant (derived from the Latin *infans*, non-speaking) of the vocal sounds produced by others. As Daniel Heller-Roazen (DHR) shows in his fascinating book of the same title *Echolalias*[1], there is a form of forgetting that is at the heart of the evolution of both processes. The sub-title of *Echolalias* is *On the forgetting of language*, and the operation of forgetting extends to its constituents.

In the second example above, to achieve normal language skills, the child must forget the "babble" that were the first sounds he made himself. In the first, the speaker must forget that the same phrase has just been uttered by someone else. More fundamentally, it is a repetition of what just may have been said, including by the speaker echoing himself. Anyone who, like this writer, has had the experience of being with someone who has just suffered a transient ischemic attack can attest to this pathological form of echolalia. The patient forgets in a few seconds the question she has just asked and repeats it, endlessly.

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[1] Heller-Roazen, D. 2008. *Echolalias: On the Forgetting of Language*. Zone Books: New York.

In his brief introductory Chapter 1, **The Apex of Babble**, Daniel Heller-Roazen situates the origin of language in the individual's first babble or prattle as a child. The often difficult achievement of first words, however, as the phonologist Roman Jakobson observed, is accompanied by the loss of the ability to maintain the variety of sounds originally available. The child forgets, in a sense, the possibility of access to the plurality of languages he had had as one begins to dominate, and which would interfere with its mastery. This model is reminiscent of the pluripotentiality of germ cells at certain stages of division, which is also lost, and of stem cells in more developed embryos, which is in part retained.

DHR asks if our existing "real" languages as adults do not retain anything of the infant's babble which they replaced. He concludes that if they did, it would only be as an echo, an echolalia of something other than speech, that guards "the memory of the indistinct and immemorial babble, which, *in being lost* (emphasis mine), *allowed all languages to be*". It is possible to give an answer in the "language" of an extension of logic to real processes recently proposed by this writer, Logic in Reality (LIR): echolalias as described exist in language in *potentialized* form, the non-localized residues of the original babble. The babble is lost *and* not lost, but only in this perspective. A brief summary of this novel logical system, of which further examples exist throughout *Echolalias*, will accordingly be provided.

Despite its grounding in our best physics, and its applicability, unlike standard logics, to complex cognitive issues, LIR is far from being accepted as a valid addition to the armentarium of reasoning. The great artist and visionary William Blake stated that "I must invent my own system, or be enslav'd by another man's." This is a lonely road on which to travel, as Stéphane Lupasco, the originator of the theory on which LIR is based, had also found. It is almost a necessity for survival, from time to time, to come upon the work of someone, as I have here, that not once or twice, but repeatedly confirms the value of having taken that road.

2. THEORETICAL FRAMEWORK

2.1 LOGIC IN REALITY (LIR)

The following summary of Logic in Reality (LIR) is the minimum necessary to give some basis for understanding the thesis in this paper. For further background, I direct the reader to the material which accompanied my previous article in *PLASTIR*[2] that discussed the logic of plasticity itself. LIR is a new kind of logic[3], based on the original work of Lupasco based in turn on the quantum mechanics of Planck, Pauli and Heisenberg, and subsequent developments of 20th century quantum field theory. Its axioms and rules provide a

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[2] Brenner, J. E. 2009. The Logic of Plasticity: A Lupascian Analysis. *PLASTIR*, 14(3).
[3] Brenner, J.E. 2008. *Logic in Reality*. Dordrecht: Springer.

framework for analyzing and explaining real world entities and processes. The term "Logic in Reality" (LIR) is intended to imply both 1) that the principle of change according to which reality operates is a logic embedded in it, the logic in reality; and 2) that what logic really is or should be involves this same real physical-metaphysical but also logical principle.

LIR states that the characteristics of energy can be formalized as a structural logical principle of dynamic opposition, an antagonistic duality inherent in the nature of energy (or its effective quantum field equivalent) and accordingly of all real physical and non-physical phenomena – processes, events, theories, *etc.*[4]. The overall theory is thus a metaphysics of energy and LIR is the formal, logical part of that metaphysical theory. LIR is a *non-arbitrary* method for including contradictory elements in theories or models whose acceptance would otherwise be considered as invalidating them entirely. It is a way to "manage" real contradiction, in a manner different from that of paraconsistent, inconsistency-adaptive and ampliative-adaptive logics, which deal with formal contradiction alone.

Details of the axioms, semantics and calculus of LIR are provided in Brenner 2008. The key postulate, as formulated by Lupasco, is that every real complex process, element or event e is always accompanied, logically and functionally, by its opposite or contradiction (principle of dynamic opposition), but only in the sense that when one element is (predominantly) present or actualized, the other is (predominantly) absent or potentialized, alternately and reciprocally, without either ever going to zero; and 2) the emergence of a new entity at a higher level of reality or complexity can take place at the point of equilibrium or maximum interaction between the two.

LIR should be seen as a logic applying to processes, in a process-ontological view of reality[5], to trends and tendencies, rather than to 'objects' or the steps in a state-transition picture of change. Stable macrophysical objects and simple situations, which can be discussed within binary logic, are the result of processes of processes going in the direction of a "non-contradictory" identity. Standard logic underlies, rather, the construction of simplified models which fail to capture the essential dynamics of biological and cognitive processes, such as reasoning[6]. LIR does not replace classical binary or multi-valued logics but reduces to them for simple systems. In the LIR ontology, the sole material category is Energy, and the most important formal category is Dynamic Opposition.

From the LIR metaphysical standpoint, the elements of real systems, phenomena or processes in which real dualities are instantiated are not separated or separable! Real complex

[4] Lupasco, Stéphane. 1987. *Le principe d'antagonisme et la logique de l'énergie.* Paris: Editions du Rocher. (originally published by editions Hermann, Paris, 1951)
[5] Cf. Seibt, Johanna. 2009. Forms of emergent interaction in General Process Theory. *SYNTHESE* 166: 479-512 for a complementary formal view of process ontology.
[6] Magnani, Lorenzo. 2002. Preface to *Model Based Reasoning: Science, Technology, Values* (Lorenzo Magnani and Nancy J. Nersessian eds.). Dordrecht: Kluwer.

phenomena display a contradictory relation to or interaction between themselves and their opposites or contradictions. On the other hand, there are many phenomena in which such interactions are not present, and they, and the simple changes in which they are involved, can be described by classical, binary logic or its modern versions. The most useful categorial division that can be made is exactly this: 1) phenomena that show non-separability of the terms of the dualities as an essential aspect of their existence, at their level of reality; and 2) those that instantiate separability.

The philosophy of LIR can be characterized as a non-naïve dualistic realism that postulates a real, interactive relation between all the classic dualities when they are instantiated in reality. The LIR view, critical for the discussion of free will and the origin of moral responsibility, is that the world is ontologically deterministic and epistemologically indeterministic, in the contradictorial relation suggested above. LIR thus approaches in a new way the inevitable problems resulting from the classical philosophical dichotomies, appearance and reality, as well as the concepts of space, time and causality as categories with separable categorial features, including, for example, final and effective cause. I thus claim that non-separability at the macroscopic level, like that being explored at the quantum level, provides a principle of organization or structure in macroscopic phenomena that has been neglected in science and philosophy.

2.2 THREE MEMORIES, SOUVENIRS AND FORGETTINGS

Lupasco's treatment of memory - and forgetting – as complex dynamic processes is difficult to summarize in a few sentences, but one can begin eliminating the mechanistic picture of memory as "data storage", from which pieces are subsequently recovered by some sort of search process (carried out by whom or what?).

In the epistemology of Lupasco, summarized in Logic in Reality, the information available by stimulation of afferent systems becomes first a "souvenir" or remembrance, the potentializing change that can appear in consciousness, occupies and creates it and is equal to the re-actualization that must subsequently take place. What is memorized is the quantity of energy necessary for this to happen under appropriate conditions. From this point of view, memory is not a receptacle, a box containing past events in a potential form, that spring up all at once for one reason or another, but the actuality and actualization themselves, although, as actualizations, primarily unconscious. Memory and souvenir are also antagonistic and contradictory to one another.[7]

Lupasco refers to Bergson and his example of two memories, mechanical and organic, which can be better characterized as macrophysical-homogenizing and biological-heterogenizing, related to the afferent and efferent systems of perception and action. One's

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[7] Lupasco, Stéphane. 1979. *L'Univers Psychique*. Paris: Denoël-Gonthier.

"mind" is subject to the constant interference and antagonism of the two physical and biological memories, and the dialectics of dialectics of memory and souvenir in opposition to the third memory constituted by the consciousness of sub-consciousness and consciousness of consciousness in a T-state, an emergent included middle. The third memory, the psychic memory is finally the most important for human beings. The third memory is defined by Lupasco as equivalent to self-awareness, a memory "that knows it is a memory". It is not to be found as a fixed structure but as an incessant internal contradictorial activity when afferent and efferent operations are cut off from external relatively non-contradictory contacts.

A forgetting, for Lupasco, is a "neuro-energetic" activity that prevents an actualization in the unconscious or a semi-actualization in the subconscious from potentializing itself, emerging at the level of consciousness, becoming conscious. There are accordingly three forgettings, one for each of the three memories: the forgetting of identities, the actualized by unconscious homogenizing forces; the forgetting of variations and diversities actualized by unconscious heterogenizing forces and a third forgetting at the same time of the identities and diversities in the subconscious, even though the relevant force of actualization is only a semi-actualization in the T-state. It is from this third memory and its forgetting that emerge discoveries and inventions, all the riches of the creative imagination, all the new combinations of images, concepts and ideas. We will see in the different echolalias below several examples of different forms of forgetting that reflect this picture.

The plasticity of mental structures –mind- is by now a well demonstrated scientific process. The plasticity of language is often considered to reside in its capacity to grow primarily by the incorporation of new words and also of new rhythms and forms of speech. These become available to individuals and peoples as a result of war, as victor or vanquished, immigration and, of course today, by the effect of the new information media. "Culturomics" is the neologism for the quantitative investigation of cultural trends through computer analysis of word frequencies in digitized books[8], providing insights into the evolution of grammar and collective memory, among other phenomena. English shows very large increases in the number of words, rapidly making standard dictionaries obsolete. The loss of words by obsolescence and changes in technology and fashion are also well-studied processes, albeit proceeding in a more "genteel" way.

On shorter time spans, deformation of linguistic structure (grammar) that was initially carried out for specific purposes of dramatic or rhetorical effect often remains in standard popular usage. A similar result, of course, can be obtained by reversion to forms

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[8] Michel, Jean-Baptiste *et al*. 2011. Quantitative Analysis of Culture Using Millions of Digitized Books. *SCIENCE* 331: 176–182.

that have essentially disappeared, as in historical novels, to avoid the appearance of anachronism. The examples provided by DHR provide many illustrations of more complex forms of plastic change in language and its components, including, even, the asterisk – * – that accompany or constitute the echolalias themselves.

To conclude this Introduction, I would like to say that the present article, in which the vast array of original sources available to DHR has been narrowed down to one, is nevertheless a Borgesian enterprise in its own right. It is a story about stories about stories, some of which are about stories themselves, of which the Arabian Nights contains canonical examples. My article may thus be permitted, so to speak, to participate in this traditional structure.

3. THE CHAPTERS [9]

3.2 EXCLAMATIONS

According to DHR, Aristotle excluded all exclamations, including prayers and cries, from the field of logic. In the interpretation of the linguist Trubetskoi, however, exclamations within a language have a complex phonetic structure that enables them to be linked to other languages and, DHR suggests, to the animal sounds and natural and mechanical noises that preceded human language.

Pace Aristotle, Logic in Reality accepts the phenomenon of exclamations as part of the logical, dynamic structure of language. In LIR terms, exclamations are carriers of substantial complex information, that is, meaning, but this meaning can be predominantly actual or potential, in DHR's words, looking beyond or before itself. It is in exclamations, which are characterized by their high level of energy, a "non-language", that a language shows its relation to a proto-language that it can neither completely recall nor forget.

3.3 ALEPH

Many languages contain letters that are not pronounced, but whose presence is felt by an almost imperceptible pause in breathing, such as the g-carat in modern Turkish. However, the aleph in Hebrew cannot be sounded because it represents no sound at all, although it may have once been related to the glottal stop in Arabic, the hamza. It is, rather, the role of the aleph in Judaic theology that suggests its unique dialectics: the entire divine revelation, God's "I" is said to be contained in this letter whose sound has been forgotten. Its silence thus becomes the point, a singularity like that "before" the Big Bang, from which all language

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[9] N.B.: I have retained the sequence and numbering of the Chapters in the original book.

emerges. Paraphrasing DHR, the aleph is the "guardian" of the dynamic interaction between sound and silence.

3.4 ENDANGERED PHONEMES

Similar considerations of presence and absence apply to phonemes in language in general which can be lost and disappear, constituting while they persist an "endangered species". In DHR's expression, in which the relation to Logic in Reality is immediately perceived, "Endangered phonemes inhabit the indistinct region at the limits of every sound system; they reside in the phonic no-man's land that both separates and joins every language to what it is not".

The so-called silent *e* at the end of French words is one such phoneme. Although the *e* is not required for the definition of meaning, an error in meter results if it is not sounded in formal poetry. When it is not counted as a syllable, should it be considered a non-actualized vowel, a vowel that could have been actualized? My answer is that it remains, in my jargon, potentialized, a sound that could have been actualized but was not, but still may be under the right conditions. It is also to be heard in occasional performances of 17th century theatre by dedicated companies of actors and actresses. It can be valued, at least, for its quaintness and the somewhat additional humoristic flavor of the accompanying obsolete pronunciation, which persists to some extent in Canadian French.

The "named but unnamable *e* thus remains in poetry, and as long as poetry exists, the silent *e* will persist, the absence of sound returning from time to time from its occultation to the classroom and the poet's pen.

3.5 H & CO.

The history of the grapheme *h*, as that of a number of letters retained in or vanished from Indo-European languages, is extremely complex. I became aware of the problematic of *h* when first learning Greek, with its aspiration before vowels – rough breathing, ' and its absence – smooth breathing, '. In modern English and French, *h* continues to have a dual existence, aspirated and unaspirated (honestly!) at the beginning of words, while having other more complicated roles in compound consonants in English, German and Spanish.

DHR suggests that the complex role of the *h* is that it is a sign *sui generis*, neither a consonant nor a vowel but representing a written "breath". "One might call it the spirit of every letter, for there is no written sign, …, whose sound does not pass through the mute medium of the rough breather; there is none that does not come into being and fade away into nothingness in the aspiration and exhalation designated by the letter now called 'aitch'." As described thus, the *h* is a real entity, a T-state, an included middle, the 'mute medium'

through which sounds pass. It emerges from the fundamental duality of the dynamic use of breath in speech and so, DHR assures us, in one way or another, it will not leave us.

3.6 EXILES

The original Hebrew language of the Pentateuch underwent a series of changes and much of it was ultimately forgotten even before the emigration of Jews to, primarily, Spain and North Africa that accompanied the expansion of Islam. DHR describes the attempts to retrieve classical Hebrew, in particular its sounds and rhythms, made by Jewish philologists, in particular, by writing poetry using classical *Arabic* systems of versification.

Despite the inevitable objections, Hebrew poetry flourished in the second half of the 1st Millennium using first Arabic rhythms and then those of the Eastern European cultures in which Jews found themselves. The exiled status of both the Hebrew language and its people affected its use neither as a sacred tongue nor as a medium of expression. Exile therefore, DHR writes "may be the true homeland of speech; and it may be that one accedes to the secret of a tongue only when one forgets it".

The LIR concept of forgetting as an active process naturalizes (that is, brings into science) statements of this kind, as well as others that are discussed in the next Chapters, such as the "residue" left in a language by its precursor. Such potentialities may never be able to be *totally* reconstructed, but in my view they remain not an imaginary but a logically real part of the dynamics of speech.

3.7 DEAD ENDS

The application of the biological metaphor of life and death to languages is quite common, and DHR describes its complex aspects. Some languages are not dead but "moribund" due to the rapidly diminishing number of native speakers and other social and technological factors, with social and technological methods also proposed to try, where possible, to preserve them in an accessible and hopefully adequate form.

There is a problem, however, in associating the death of a language with the death of its last or last two speakers. For a language to be "completely" alive there must be a hearer who understands it as well as a speaker. But it is also always present in those who had been exposed to it in some differences in forms of thought or speech that would not have existed in its absence. Such structures, while real, have their own "time" which is not standard clock time or even the biological time of living beings. In DHR's contradictorial phrase, the time of speech is a "persistent passing". This theme, and my glosses on it based on Logic in Reality, is explored further in the next two Chapters.

3.8 THRESHOLDS

As should by now be abundantly clear, language is one of the complex phenomenological processes like change, consciousness and information that cannot be captured by standard forms of categories or logic. Thus, most of the debate about "when" "a" "language" changes into another one, or dies or is born, is otiose. To begin with, it is not only a language as a whole that changes and could in principle define a new one, it is also its parts or properties, such as the method of conjugation or declination.

The concept of a continuous "time" characteristic of language as primarily continuous with only a few identifiable points is supported by the LIR view of language-as-process. Language is thus intrinsically variable as DHR shows Dante understood. Since mutability is one of its essential properties, a language lives only as long as it changes, is and is not itself which is a logical concept in Logic in Reality. A similar property was noted by Montaigne, who wrote that in a process of continued variation, a language deforms itself. The points at which a community of speakers becomes conscious that it has lost the language it once spoke are *ipso facto* those at which it recognizes it has adopted a new language. In the continual alternations, formation and deformation, emergence and decay and memory and forgetting are "inextricably" dialectically linked. DHR calls the beginnings and ending of a language the two sides of a threshold, "figures of the transience that destines every tongue to vanish in its imperceptible and yet irrevocable passing into another." A language can never remain the same, as Dante wrote, but at any moment, incapable of being fully possessed and already partly forgotten, in the phrase of the Nobel prize-winning chemist Roald Hoffmann[10], it is the same *and* not the same.

3.9 STRATA

It is easy to apply the metaphor of strata to the persistence in one language of words and forms from another for various reasons. A people occupied by an invading group may adopt its language, and the opposite process may occur, but both languages may retain words and forms that persist "unconsciously" as far as its modern speakers are concerned.

Similar linguistic tendencies can occur with individual phonemes, for example the "u" of modern French which is not found in other current Romance languages. It has been supposed to derive from a "Gallic substrate u", but little hard evidence is available. In general, it seems impossible to explain the persistence and recurrence of long obsolete forms of speech as part of a well-defined historical process. As DHR writes, the overlapping of distinct forms in a speech cannot be restricted to a single moment in its development. A concealed

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[10] Hoffmann, Roald. 1995. *The Same and Not the Same.* New York: Columbia University Press.

"archeological" component, like the Gallic u, may be present in any linguistic element at any point in the life of a language. "More of a language than its speakers would like to think is the forgetting of another, which continues to resound, albeit in oblivion, in the sounds of its successors". DHR thinks that in the moving process that constitutes language, one cannot distinguish with certainty between emergence and decay, the obsolescent and the incipient. The rhythms of the shifting of their strata are too many and too diverse to be perceived all at once.

The perspective of Logic in Reality does not require simultaneity in understanding. At least the major properties in some shifts between opposites can be seen as logical alternations, present simultaneously but differently actual or potential or "in a process" leading to emergence of a new form. The dialectics of language are the dialectics of reality itself.

3.10 SHIFTS

As discussed in **3.7 Dead Ends**, a language may survive in some form in another after its "death". The multiplicity of existing dialects of Arabic, for example, may have resulted from the encounter between a classical Arabic and languages spoken locally, as discussed in **2.3**. But in the absence of any criterion of measurement, what is the relation between one language and another when the former includes so much of the latter that it is a question of whether it is a language at all?

Another relation is that between rediscovered or revived languages and their sources, in particular, ancient and modern Hebrew; the latter became the living (and official) language of Israel after being separated from any political entity for two thousand years. In this period, Hebrew as such was used essentially by scholars and for ritual. But the sense in which modern Hebrew continues the ancient tongue is by no means clear. As has been shown by many linguists, including Israelis, modern Hebrew was essentially invented by Zionists at the end of the 19th Century but many of its key structural components are those of a European language from which it is derived, namely, Yiddish, the fossilized German of the 15th –16th Century.

As stated by DHR, one of the axioms of the "substrate" theory that codifies the changes in language strata discussed in the previous Chapter is that it is possible to distinguish between a single new stratum and the pre-existing linguistic mass to which it is added. In the language of set theory, the former is the element and the latter the set. In the relation of Yiddish to modern Hebrew, however, it would appear that Yiddish, the part or element, was determining the sound and grammar of Hebrew as a whole.

This process, like the others discussed in this paper, reflects the major changes to standard set theory made in Logic in Reality: sets and wholes cannot be totally separated from their elements and parts, which share one another's properties. Another basic part of

the logical dialectics of LIR is that between identity and diversity, where the "identity" of a national language can only be defined with reference to its diverse or heterogeneous components. None of them is more "fundamental" than another in their constant shifting. For DHR, language has no being beyond its drifting parts which are "too many and too diverse to be represented as members of a single set". The advantage of LIR here, perhaps, is to permit the logical acceptance of a single perspective as a useful illusion, that of "everyday" references to "Hebrew" by its existing speakers and others. Illusion and reality, also, do not need to be totally separate in the ontology of LIR.

3.11 LITTLE STARS

By this time the reader of *Echolalias* or of this paper will be clear that the term is being used in a very broad sense in explanations of the interactive relations both within and between languages, as well as their historical development. As DHR states, it is always possible to perceive in one form of speech the echo of another and attempt to describe in some manner the links that "bind and separate them". LIR simply serves to emphasize, if need be, that such structures are themselves not arbitrary, but follow patterns of evolution about which one can make some reasonable inferences.

In his discussion of the evolution of philology itself, DHR tells the curious story of the use of the asterisk – * – as a linguistic "operator"[11] in the characterization of so-called Indo-European languages and the ambiguous changes in meaning which it, the "little star" underwent. Appropriately for this paper that discusses the real and the imaginary "in the same breath", the existence of a proto-Indo-European language that was actually spoken before giving rise to current languages designated as such is a scholarly fiction. One cannot be sure that root words attributed to such a proto-language (*Ursprache*) really existed. Writing in 1861, August Schleicher decided to place an asterisk before words or terms used in discussions of this language to distinguish them from their deduced descendents. The asterisk has thus a function similar to that of the quotation mark, but unlike the latter, which serves to emphasize the use-mention distinction, the asterisk points out to the linguist a domain in which there is no linguistic tradition.

This use of the asterisk to designate hypothetical forms was followed by complications of double- and triple-star systems, to indicate different degrees of probability or admissibility in theory of the form. This does not alter the basic importance of a single little star, that of indication of the existence of historical *processes* of relation and affiliation, referring both to what may never existed and what may have been forgotten. Like the dynamic operators of implication, conjunction, *etc.* in Logic in Reality, the * in philology introduces a dialectic

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[11] Burgin, M. and Brenner, J. E. Operators in Nature, Mind and Society. Unpublished paper.

chain of reasoning about theory, the subject of theory and the behavior of theorists. We follow this chain, with DHR, in the next Section.

3.12 THE GLIMMER RETURNS

In this tale, we are introduced to another use of the asterisk in modern linguistics, where it serves, since Chomsky and his followers, to denote a phrase that is impossible grammatically. In this standard binary view of language, this "science" then, phrases can be only grammatical or ungrammatical, ultimately, true or false by some available criterion. Unfortunately, but from my perspective not unexpectedly, this strategy fails, since by the admission of its own practitioners, no process of verification or validation, other than "the linguistic intuition of the native speaker" can be provided.

DHR is able to state, however, what the users of the asterisk could not bring themselves to, namely, that it was the *falsity* of the asterisked phrase which confirms the concept of the possibility of empirical grammatical principles. These inexistent or better not yet existent forms of speech, implied by the asterisk as a linguistic operator, are necessary to explain forms of speech that do exist. DHR considers the asterisk an "imaginary point of orientation", and we must in fact consider it, like other symbolic operators, as referring to an abstract movement between classical limits of idealized grammaticality or its negation.

This example thus indicates, *a contrario*, that grammar as it is generally understood is nothing but standard bivalent logic in another form, and has as little to say about linguistic reality as it does any other aspect of it. I discuss this further in Section 4, in reference to Derrida's *Of Grammatology*.

3.13 THE WRITING COW

In the myth of Ovid, Io was a nymph, beloved of Jupiter, who was transformed into a cow by a jealous Juno. Unable to speak, she was able to convey the fact of her metamorphosis by writing the two letters of her name in the sand with her hoof. The myth is, then, of the invention of writing, since "I" and "O" and/or segments of them can be used, somewhat in the fashion of the simplest Chinese characters, to build up the totality of the written alphabet. At this point, of course, she both is and is not Io, her written language being the only thing remaining of her former state, but something she never had had that emerged only in her transformation.

DHR sees in this situation a relation to an observation by the poet Joseph Brodsky. Initial writers or speakers of a language will have disappeared, but in a process of plastic transformation, a changed language will remain. The conclusion is that "At once with and without its speakers, language, over time, thus remains, but it does not remain itself. It may

last, but only as another". Again, we are able to feel more comfortable, in the framework of Logic in Reality, in saying that something is both itself and not itself.

3.14 THE LESSER ANIMAL

Aphasia, the inability to speak, can be seen both as a loss due to pathology or trauma, but also as the normal state of the human infant. The former has recently been well-described non-technically by Oliver Sacks[12] (the case of Patricia H). Freud also studied aphasia in detail in work that was part of the foundation of his theory.

DHR sees aphasia, however, as an instance, noted by the classical Arab scholar Al-Jahiz, of a unique *capability* of human beings, unlike animals, to perform tasks in a less than perfect manner. From the LIR standpoint, it is interesting to note that scholars of language learn a great deal about it by exploring the forms of its failure – distortions, omissions and ultimate disappearance. This is an example of the ontological value that should be ascribed to diversities, inconsistencies and negations as well as the positive counterparts with which they interact. DHR summarizes the work of Sigmund Freud and Hughlings Jackson leading to the key conclusion by Freud that "Aphasias simply reproduce a state which existed in the course of the normal process of learning to speak."

I cannot go into detail here about the mechanism Freud proposed for the retention by aphasics of certain "remnants" of their lost speech, sounds, words and phrases repeated to the exclusion of others, echolalias as defined above. In DHR's interpretation, however, aphasia, contrary to the common conception, is not due to a form of forgetting but the reverse, an exacerbated form of recollection of the components of one's language that blocks the capacity of uttering anything except the remnant in response to stimuli. The energy of memories and reminiscences is too great, and it requires a "logic of energy"[13] to make some sense out of the processes involved.

The dynamics of the dialectic between what is remembered and what is forgotten becomes determining for the evolution of behavior, as DHR illustrates with Kafka's parable of the man who has learnt to swim and who is, potentially, able to swim like other people. However, cursed with a better memory, he is unable to forget his former inability to swim and is, finally unable to. Similarly, one can say that aphasics have not been able to forget their original inability to speak (as *infants*). Only forgetting to forget this fact might lead to speech. This raises the specter of an infinite regress to which it is possible to apply the epistemology of Logic in Reality. We note that some people who have suffered from the inability to speak (or swim) recover to a greater or lesser extent. In reality, regresses do

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[12] Sacks, Oliver. 2010. *The Mind's Eye*. New York/Toronto: Alfred A. Knopf.

[13] Lupasco, Stéphane. 1987. *Le principe d'antagonisme et la logique de l'énergie*. Paris: Editions du Rocher. (Originally published in Paris: Éditions Hermann, 1951).

terminate after a maximum of two or three iterations, as no new information is added by further movement. But some do not, and there is no way of saying on which side a particular individual will remain . . .

3.15 AGLOSSOSTOMOGRAPHY

Of the twenty-one case histories studied by DHR in *Echolalias*, only three refer to clearly pathological situations, **3.14** above on aphasia and **3.17** to follow on schizophrenia. Here, he discusses several reports of individuals who have lost their physical tongues but are somehow still able to produce understandable speech. One can adduce additional real examples, such as birds, which lack a human speech apparatus, and fictional ones, such as Poe's Mr. Waldemar, who kept speaking with a tongue that survived the death of the rest of his body. The first objective of the tale is to show the paradoxical relation of the terms language and tongue (*lingua*).

The importance of Poe's parable thus extends beyond the domain of (fantastic) literature. The last statement made by Mr. Waldemar before his reduction to complete silence is the impossible "I am dead". As fiction, it can be subsumed under the category of binary, Liar-type paradoxes. On the other hand, DHR sees in the description of this utterance being made by the "blackened" tongue of dead/not-dead individual his transformation into pen and paper, placing him in a relation with the history of the forms of writing, in particular the classical Greek practice of funereal inscriptions in the first person. (This is a further example of writing (or should I write *writing, as being under a Heideggerian "erasure" as discussed by Derrida, cf. Section 4.)

In the poetic domain of reality *and* unreality, but logically acceptable in my extended sense, DHR defines the further term of "asomaglossography". The title of this Chapter refers to a "mouth without a tongue, which speaks", and this term to a "tongue without a body, which writes". The tongue stretches, so to speak (sic), beyond the body and speaker. But seriously, then, DHR concludes, what we call a language/tongue is nothing other than a being which outlasts itself.

3.16 HUDBA

A "mother" tongue, in its simplest interpretation, is that spoken by and learned from one's mother and retained and used throughout life. As told by DHR, however, the writer and poet Elias Canetti was involved from earliest life with a complex set of languages, including two "mother" tongues. The languages are a microcosm of the linguistic complexity of Europe, but the point of the story is the understanding of what underlies the concept of a mother tongue itself:

1. Ladino (Judeo-Spanish): This was the first language Canetti learned as a small child growing up in Rustchuk, a village in Bulgaria, his first "mother" tongue.

2. German (1): Canetti's mother and father, however, spoke German with each other, refusing to give him access to their dialogue. He could only repeat to himself the sounds of words he did not understand.

3. Bulgarian: In Rustchuk, however, Canetti was also exposed to the only language the servant girls of the household knew, namely Bulgarian. Unlike Ladino, which he remembered throughout life, especially in relation to dramatic events, he apparently forgot whatever Bulgarian he may have learned.

4. English: In 1911, when Canetti was six, his parents moved the family to London. He had begun to learn English as his "second" language when his father died suddenly, forcing his mother to leave England and make plans to educate her son in Vienna.

5. German (2): Mother and son, together with his English governess first moved to Lausanne where she undertook to teach the eight-year old German, the language of herself and her lost husband. The mother used unusually drastic methods, but Canetti finally learned German, once only heard as a child, a traumatically born new "mother tongue". It became the language in which he subsequently wrote.

6. French: For Canetti, French was simply a language he had heard spoken around him in Lausanne. Since it had not been loaded with the problems connected with German, he had learned it more or less easily.

7. Czech: The title of this Chapter, however, is the Czech word for music. Canetti became exposed to the language through contacts with Czech writers and musicians. Above all, he was struck by the word, *hudba*, which he felt had enormous significance, conveying not only the essence of Czech and other music but also the music of the language.

The effect of *hudba* on Canetti, in DHR's view, cannot be attributed to an understanding of Czech, or to a knowledge of Bulgarian which he insisted that he did not have. Rather, he heard an echo in Czech of the Bulgarian he had forgotten, which, in addition, bore no relation to the problematic languages involving his mother, Ladino and German. DHR suggests that no matter what language one speaks, and no matter how many one may learn and forget, there is none that does not "open onto" or provide access to another and no tongue is *fully* a mother tongue, not even that of one's mother. This statement was also made by the Russian poetess Marina Tsvetaeva, who wrote primarily in French and German. The language of art, then, DHR concludes, is in a sense, a mother tongue that is not singular. It is a simultaneously single and multiple idiom whose

antagonistic components cannot be totally differentiated. A language that is none, or is and is not one, is a "mother tongue" that may be "the ultimate medium of all speech". I like to see this as an emergent entity in the LIR sense, a linguistic space in which languages, as fully active processes, transform themselves.

3.17 SCHIZOPHONETICS

Oliver Sacks, most recently in *The Mind's Eye*[8], has documented the histories of people who have lost the ability to read (*alexia*) or to write (*agraphia*) as a consequence of stroke or external trauma. He describes the enormous energies they expend and cognitive strategies they develop to remember letters and words and recover all or part of their ability. This Chapter tells of a young man, suffering from schizophrenia, who put extraordinary effort into *forgetting* his mother tongue – that of a hated mother – English. His basic initial strategy was to translate, as instantaneously as possible, English words and expressions into those of another language, primarily French and German, which bore some phonetic similarity to the original.

As DHR shows, however, this exercise of transcription was paradoxical, since for understandability, reference to the original English had to be maintained. Thus the patient: "in forcing himself never to forget to forget his mother tongue, he obliged himself to remember to remember it". Like the incorrect German expression "to forget on", *daran vergessen*, the non-existent equivalent of the correct *daran erinnern*, to remember, studied by Karl Kraus, the forgetting, here, remains attached to its object, such that the latter is always present as the subject of the intention of not wanting to remember it. The case of the schizophrenic patient involves the same ambiguity of a simultaneous possibility of reflecting and not reflecting on English, a simultaneous recollection and oblivion. He finally sees that as a result of the unbearable conflict, a "third path" of some kind of new relation to his mother tongue may emerge, as a consequence of eventual boredom with the linguistic games he had had to employ.

This is, terms of Logic in Reality, a perfect example of the emergence of a third entity at a higher level of reality or complexity as a consequence of conflict or contradiction. The only difference I suggest is to replace the "ambiguous" term of simultaneity by the diachronic, albeit rapid, oscillation between the two states.

Throughout the Chapter, DHR maintains the tension between the reader and the patient-hero, not allowing the former to forget the unique mental configuration of the latter by repeatedly referring to him in the way he refers to himself in his own writings. Thus in almost every other sentence, the "young schizophrenic student of language" is given a new equivalent designation, such as "the alienated young man" the "psychotic phonetician". We are thus placed in a continual logical dialectics between the presumably satisfactory

relationship most of us have with our own mother tongue and the potential attitude we might have of hating or fearing it, for any reason.

3.18 A Tale of Abu Nuwas

The conception of the complexity of forgetting as an energetic process in the LIR epistemology is well illustrated by this report by DHR involving three classical Arab literary figures: the poet Abu Nuwas, his biographer Ibn Manzur, and the master poet from whom Abu Nuwas learned his craft, Khalaf al-Ahmar. (DHR is, of course, the fourth figure in the series.)

It would appear that when Abu Nuwas first approached Khalaf for instruction, the latter said that before Khalaf would agree to teach him, Abu Nuwas would first have to memorize a thousand lines of ancient poetry. He did so, but then he was required to forget them as completely as if he had never memorized them at all! Only when, by an extraordinary effort, he had done this to Khalaf's satisfaction could his further training begin.

Three questions present themselves: how could Abu Nuwas be certain he had forgotten the lines; how could Khalaf check to make sure they had been forgotten; and on what basis could Ibn Manzur be certain of both? My first response is that we are here in a domain where standard logical "proof" has no application. The learning, the forgetting and the understanding of both are themselves creative "poetic" acts or processes that are nonetheless logical in my expanded sense. This view is supported by DHR's gloss that Abu Nuwas' forgetting involved a parallel and perhaps an "exacerbated and intensified recollection: for how, after all, could the poet truly forget all the passages he had learned by heart if he did not continue to remember to do so?" We are thus in a cognitive domain, from which poetry emerges and in which memory and forgetting, writing and erasure can not only not be told apart in a metaphorical sense, but are not separate or separable in fact[14].

3.19 "Persian"

This Chapter is an interpretation of a short story by Tommaso Landolfi, an Italian writer of the 1930's about the nature of art that exactly fits the contradictorial approach of Logic in Reality. DHR writes: "In this story, the mastery of technique seems to coincide with its undoing, and the perfection of a literary language comes perilously close to its forgetting." In the LIR jargon, the actualization of the mastery of technique would be accompanied by the potentialization of its undoing, allowing the former to persist, at least for a time, before the latter would "take over".

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[14] NB: 3.20 Poets in Paradise continues this theme.

One protagonist of the story is a young writer, Y. whose objective is to express himself more fully in a language he does *not* know well. The other is an English captain, supposedly versed in foreign tongues, who offers to teach Y. the one he knows best, namely Persian, which could satisfy Y.'s need. Eventually, Y. becomes sufficiently proficient in the spoken and written language he has been taught to write several poems in it.

On opening a book of an Iranian author, however, Y. is horrified to find that he can not read even a letter, and further efforts to determine what the language the Captain had claimed was Persian were unsuccessful. He had apparently learned, well, a language that did not exist and had never existed!

The LIR "nexus" of this story lies in the dynamics that DHR sees in the process of forgetting that must have occurred in at least one of the two protagonists. The Captain forgot the Persian he once knew; the hero forgot what he took to be Persian that he once learned; and both forgot the fact that they ever forgot. External evidence is adduced, however, against the language in which Y. wrote ever having been Persian. The possibilities are now one or both of the following: the Captain invented a language, forgot he invented it and forgot he had taught it. Y. forgot what he had been taught and developed his own non-existent language.

DHR asks if this or these languages are living or dead if it or they had never been the tongue of a people. Are it or they are both or either, even if alive only for that brief moment of a strange exchange between two individuals? At the end of the story (one almost forgets, in reading it, that it is "only" a story), Y., driven mad by the tongue he cannot know, exclaims: "This damned language, which I don't even know what to call, is beautiful, beautiful, beautiful … and I adore it." Thus Y. achieved his original objective, and so did Landolfi, from the interplay between reality and unreality from which art can emerge.

3.20 Poets in Paradise

As in **3.18**, the protagonists of this tale are also classical Arabic literary figures. The action revolves around the response of one, Abu al-Ma'ari to an *apologia pro vita sua* he receives from the other, Ibn al-Qarih, who had previously criticized him.

The response, a "letter" of some three hundred pages, entitled *Epistle of Forgiveness*, describes a Dante-esque sojourn of al-Qarih (after his death, however) in Paradise, in which he discourses, or attempts to discourse, with the pre-Islamic poets who, like him, have been saved, and others, who have been damned. First, from his vantage point in Paradise, but without leaving it, he has satisfactory exchanges on various questions of philology with poets who have been damned to reside in Hell. Turning to Paradise however, Al-Qarih finds to his dismay that the great poets of antiquity who had been saved are unable to remember the poems and literary works and even some of the words, rhyming letters and meters they had

used. They have all suffered some sort of collective amnesia, which when they are even aware of it, they do not regret but see as a desirable consequence of their beatified state.

In Arabic tradition, Adam, "the father of mankind" was also a poet, but al-Qarih's interview with him is equally unsatisfactory. Adam claims that he could not have written the poetic lines attributed to him: when he was in Paradise, he spoke Arabic; after his fall to earth, he spoke Aramaic, and after his return he spoke Arabic again. There are thus two occasions of forgetting involved.

DHR notes that in the fable, al-Qarih is in fact the only poet in Paradise who does not suffer from amnesia, and gives the following interpretation of the meaning of this fact for its author, al-Ma'ari *vis à vis* his colleague and antagonist. The *Epistle of Forgiveness* is not only a satire of the original letter sent by the falsely repentant al-Qarih, the memory which the latter appears to have in Paradise is at the same time a proof of his truly belonging in Hell. In the damned "reality" which is all that al-Qarih could expect, he could nonetheless look forward to bearing witness to the redemption of the saved poets and to remembering eternally what they had forgotten. He would have a unique perspective on the relation to language of someone who forgets, "a relation in which recollection and oblivion remain as indistinguishable as the continuity and discontinuity of the time to which they are bound, and in which the memory of speech is at last 'liberated from everything that had been stored in it'".

Philosophers and logicians may object that the fantasy above has nothing to do with their respective disciplines. I beg to disagree; the model of reality that underlies this and the other stories in *Echolalias* and the extensions of the term that DHR has made is far closer to that of our best science, conceptions of continuity and discontinuity and so on that all scholars should refer to. One needs only to recall, since we have been speaking of Paradise, Dante's topologically correct description of its four-dimensional structure, not unlike that of the cosmos in some current theories.

3.21 BABEL

As discussed in **3.7 Dead Ends**, the number of human languages is steadily decreasing, in an irretrievable actual loss of the cultural diversity that may well be as necessary as in biology for the potential well-being of the species. The loss is (partially) compensated by an increase in some form of globalized understanding by the medium of a small number of languages, despite considerable debate as to the values carried by this understanding.

In the Biblical fable of the Tower of Babel, an inverse process is described: its prospective builders of the valley of Shinar, originally all capable of speaking and understanding the same language, were punished by God for their presumption in attempting

the construction by their language being "confounded" such that they were unable to understand one another. The fable is presumably an attempt to account in some manner for the existence of the large number of mutually incomprehensible languages. As DHR shows, it contains several interesting paradoxes: it would appear that the people of Shinar wanted to build the Tower exactly to avoid being "scattered abroad". The dialectics are by now familiar: the execution of the punishment confirms the rationale for the original project. The confusion of their language involves the vanishing of one and the emergence of an "irreducible multiplicity". DHR then quotes Dante to the effect that the process of "confusion" was nothing other than the forgetting of the previous language, a process however, that does not occur only once, but continually. "It would constitute the invariable core of the variable being we call a tongue, the unalterable kernel of every alteration of speech." As each language reconstitutes the one before it, as process is in progress at the same time "paradoxically" of its deconstitution. "By speaking, we would always already, in short, have begun to forget, even – or especially – when we did not know it."

From the standpoint of Logic in Reality, these paradoxes are not abstract binary artifacts of a fictional situation. LIR provides a language for establishing the dynamic relation between the actualization of a language (A) and the potentialization (forgetting) of its predecessor (non-A). They point, as the Chapter demonstrates further, by reference also to the concept of the "unforgettable" of Walter Benjamin, to existence of a higher cognitive level of reality that emerges (as an included third T-state, cf. p.4) from the on-going interaction between language and the human condition. (The "reality" of levels of reality was a first extension of the logic of Lupasco by Basarab Nicolescu[15], and I have recently discussed it elsewhere[16]).

DHR concludes his book on an apparently pessimistic note. We may among the survivors of the partial destruction of the Tower, those exposed, in one rabbinic gloss on the story, to an "air around the Tower that makes one lose one's memory." We persist with it and in it, but "consigned without end to the confusion of tongues", oblivious of its origin in the punishment of our ancestors. Of course, we do not have to follow DHR here, in reality, into some Wittgensteinian land of total incommunicability. We do communicate, with both others and the world, albeit imperfectly and incompletely, since we are separated neither from them nor from it. Rather, we should follow Walter Benjamin in a search for the "unforgettable", that which persists in a work of art or an individual human life, "that without memorial and memory, and perhaps without even witness, must remain unforgotten". As quoted by DHR, Benjamin argued that "certain relational concepts find their good, even their true meaning when they are not related exclusively to human beings." But not exclusively

[15] Nicolescu, Basarab. 2002. *Nous, la particule et le monde*. Paris: Editions du Rocher. (Originally published in Paris : Éditions Le Mail, 1985)
[16] Brenner, Joseph E. 2011. Levels of Abstraction. Levels of Reality. In: *Knowledge, Technology, Policy*, ed. Hilmi Demir. Dordrecht: Springer (in press).

does not mean not at all, and there is no need, in the LIR logic of relations, to postulate a "demand" that something remain unforgotten in total separation from humanity. There is no logical problem in seeing the unforgettable as both non-forgotten *and* forgotten.

The title of the final Chapter bears an accidental phonic relation to that of the first. Babel is derived from the Babylonian *babilu* – gate of God, and *bab* = gate survives in modern Arabic. But the *subjects* of the two Chapters are the same: the unforgettable babble at the heart of speech.

4. SPEAKING AND WRITING. THE GRAMMATOLOGY OF DERRIDA

Although there are several tales in *Echolalias* which refer to forgetting in relation to the evolution of written as well as spoken language, DHR does not discuss explicitly the differences and similarities between speaking and writing. One may, however, usefully compare the underlying dynamics of the linguistic structures of Heller-Roazen with the discussion of writing by Jacques Derrida.

Writing for Derrida is something that carries within itself a perennial alterity: the structure of the psyche, the structure of the sign. The sign cannot be taken as a homogeneous semiotic identity bridging an origin (referent) and an end (meaning), but must always be studied under erasure, that it, inhabited by the trace of another sign which never appears as such. In the conception of LIR, that sign is, of course, potentialized.

In general, the relation of Derrida's ideas to the principles of Logic in Reality depends on his rejection of the usual sterile view of opposition. For Derrida, it is not enough to "neutralize" the binary oppositions of standard metaphysics; one must deconstruct their simplistic hierarchy. Derrida thus distinguishes between writing in the narrow sense as a mechanical process of production or reproduction of physical signs that is somehow to be valued over speech. Writing in the narrow sense does not contain the elements of the structure of writing in general, the author, the subject-matter and the deployment of a space-time unique to it. These are the things that "inhabit" everything else including speech. There is no rigorous distinction between the two senses, which LIR would lead us to expect. The simplistic view that Derrida is trying to restore or establish the priority of writing over speech in the study of language is equally mistaken. Speech too, grafted within an empirical context (that is a real system of processes in the LIR sense), the configuration of speaker-listener and his absence is structured as writing, and therefore there is "writing in speech". Like the examples of speech in *Echolalias*, all texts are also double, containing within themselves the seeds of their own deconstruction.

Derrida's introduces the philosophical concept of '*différance*'[17] in place of the standard structure of binary oppositions and says that *différance* "invites us to undo the need for balanced equations, to see if each term in an opposition is not after all an accomplice of the other. At the point where the concept of *différance* intervenes, all of the conceptual oppositions of metaphysics, to the extent that they have for ultimate reference the presence of a present …(signifier/signified; diachrony/synchrony; space/time; passivity/activity, etc.) become non-pertinent." LIR takes this intuition and provides a new 'structure' of the oppositions in question and what it might mean to "be an accomplice"[18].

Différance is anterior to all that one calls sign (signifier/signified, content/expression, *etc.*) and founds the metaphysical opposition between them. Not more sensible than intelligible, it permits the articulation of signs among themselves within the same abstract order – speech and writing, or between two orders of expression. If language were not already, in this sense, a writing no derived notation would be possible, and the problematical relationships between speech and writing would not exist.

A final remark that links Derrida to Heller-Roazen is the former's reading of Nietzsche on forgetfulness, assigning it a first-class ontological role as an "active and in the strictest sense positive faculty of repression." Knowing that there is nowhere an isolatable unit of "knowledge", the philosopher or poet, that is, all of us win ourselves a present by an act of forgetting that knowledge. In the context of LIR, the difficulty that Derrida points to in the reading Nietzsche of establishing a coherent relation between knowledge and forgetfulness is lifted: we are allowed to sustain the incoherence, knowing that the two poles are in fact interdependent. Erasure deletes and leaves legible at the same time.

Looking at the essential points of the echolalias in which writing is involved, *e.g.*, **3.13 The Writing Cow**, **3.15 Aglossostomography**, **3.18 A Tale of Abu Nuwas** and **3.20 Poets in Paradise**, I see them as all expressing in a similar way the existence of "something other than speech", mentioned in **The Apex of Babble**. From the above perspective, this "something other", that is both forgotten and not forgotten, is equally present in writing in the Derridean sense. The essential complex properties and processes at the heart of both writing and speaking are the same.

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[17] The neologism *différance*, with an 'a' in the third syllable, differs from the word for difference in French which is spelled *différence*. *Différance* is a dynamic process in the LIR sense.

[18] Priest, Graham. 2002. *Beyond the Limits of Thought.* Oxford: Clarendon Press. Priest also shows that the notion of *différance* instantiates both the inexpressibility of all linguistic expressions and its own expression and that this real contradiction is inherent in Derrida's system.

5. THE PLASTICITY OF LANGUAGE AND NEW FORGETTINGS

In Section 2.2 above, I referred to the notion of the plasticity in and/or of language. Implicit in *Echolalias*, and explicit in the work of Marc-Williams Debono (below, MWD), are many examples of plasticity and the plastic properties of language. These are by no means epiphenomenal, of purely academic interest, but are closely related to the driving causalities of human society, especially today.

In MWD's acceptation, plasticity is a concept taking into account the basic observation of an insoluble link between matter and form "in and by a brain which thinks in a world whose evolutionary dynamics is fundamentally plastic, *i.e.* whose total behavior is not rigid and passive, but on the contrary flexible, coherent and highly interactive". Plasticity is so an epistemological extension of the scientific concept of plastic deformation not only to neurological structures, neural networks in the brain, but also to cognitive processes[19]. Plasticity describes the active interface between the macroscopic-biological and cognitive domains, whose evolution is described by LIR. Plasticity thus links the form of the unique experience of the human subject to knowledge as a whole, the "memory of humanity". The relation to the work of Heller-Roazen is given by MWD's use of the metaphor of the palimpsest to describe the current evolution of that memory: a palimpsest, in the Middle Ages, was a parchment that was partially erased for reuse, an image that applies most aptly to short-term memory, both human and, today, machine.

Erasure in mental phenomena is, however, to be understood in the Derridean sense, not as an elimination but as a temporary "bracketing". MWD quotes Baudelaire to the effect that no mental reality is lost: "The palimpsest of memory is indestructible." The question of the origin of the source of speech and writing in the plasticity of the nervous system, and MWD sees it in a Lupascian reconfiguration of an incessant dynamics, involving movement from an ideographic, close to synaptic traces of basic human gestures, to an alphabetized brain. He considers for that the links between the written language and the plasticity of thinking as a classical step[20] – of co-signified plasticity[21].

The linguistic process starts then, somewhat as in DHR's conception, in the mother-child interaction impinging on the plasticity of the child's brain, followed, as in **3.1 The Apex of Babble**, by the "attrition" of this language concomitantly with the development of the child and his "mother tongue". In the MWD picture, the dynamic relation between memory and forgetting is a key mechanism of normal mental processing, as shown by experiments on

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[19] Debono, Marc-Williams. 1996. *L'Ère des Plasticiens, Coll. Sciences, Epistemology,* Aubin Ed., St Etienne.

[20] Inscription of a common trace (syllabic and synaptic: link and neurons).

[21] Citations about Baudelaire: « *Les paradis Artificiels, VIII– Visions D'Oxford* », Revue Contemporaine, 1860. Unpublished data.

"reverse learning".[22] The "residues" remaining after forgetting, (**cf. 3.6 Exiles**), are a consequence of the overall plasticity of a normal brain.

Combining these ideas, MWD sees human language as being elaborated from pre-concepts[23] which although largely "forgotten" and absent in everyday life, remain an active "interior language", a potentiality of existence – an LIR concept - with which writers and poets remain in a plastic relation as a source of inspiration. This relation signs a direct link between the informed field[24] of poetry and the metaplasticity of conscious or unconscious brain activities. Both DHR and MWD, then, define a multi-dimensional, poetic configuration space in which essential, partly potentialized but indispensable structures operate. . The reader should look, for example at **3.21 Babel** above on the "unforgettable".

This multidimensional space is a "spage" (*espage* in French) for MWD considering the contraction of space-page as a necessary interior space-time for the non finalized spatial approach of the poet and his possible deciphering of the language. This "spage" permits the evolution of two « vestigial memories , one silent or dead – the pre-language area - and the other alive symbolized by the syllabic one. The classical space-time is so really inflected in case of creative work or real acquisition and open to global scheme interfaces (GSI) that are able to *transcode* the information like DNA for biological cell. "*Moemes*"[25] being "*between-two-words between-two schemes*", so the GSI structures at the scale of language containing these two kind of memories whose syllables are the time constants of the linguistic system.

It is would be extremely naïve to imagine, nevertheless that the concepts of a dynamic interaction between memory, forgetting and plasticity, or, in fact, of a logic of/in reality that might link them, will make much headway in today's world. As MWD writes, a mechanical, computational "virtual" is accepted, while the world diffuses such artificial elements as much as the original artistic creation in the media and its icons, "denaturing the word and man in favor of the thing". In the corporation, collective memory is often undervalued, and corporate forgetting of prior knowledge is, instead often rewarded while lip-service is paid to "not reinventing the wheel".

But it is not necessary to endure the impact of the information glut passively. A key word here is "re-memorization", in my view, of information as possessing valence, a carrier of human and esthetic values that are *not* present throughout the society. Having forgotten in

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[22] Debono Marc-Williams. 2009. The plasticity of memories. Convergences between archetypes and complex of plasticity, in Acts of the International Conference « *Jung and the Sciences* », University of Brussels, Szafran, Baum & Decharneux Eds., EME Editions.

[23] Allusion to the works of and to the a pre-language area combining thinking without language introduced by Dominique Laplane about aphasia (neurologist, author of *Penser, c'est-à-dire ?*, Armand Colin, Paris, 2005).

[24] Even a conceptual field, cf. the « Informed field of the poet », Chapter 1 of *l'Ere des Plasticiens*, (ref. 18).

[25] Term published for the first time by MWD in the book "*La Joute*", 1993, Ed. du Soleil Natal, Paris.

DHR's sense about the necessity of such values, or rather, being in a process of forgetting them all the time (cf. **3.8 Thresholds**), we need to rework the dynamics of the plasticity of thought and the plasticity of the new networks to manage the various contradictions in both. And MWD concludes with the striking image, perfectly in line with the DHR thesis, of men, those capable of this, as a "living language that changes at the same time as new concepts are put into place".

6. FINAL COMMENTS

There are no conclusions that I draw or intend to be drawn. This brief report, based on a single book, does not lay claim to being a complete theory of the complex processes involved in the non-pathological and pathological forgetting of aspects of language. I also have not attempted to describe the manifold ways in which language displays plasticity including, alas, its current degradation.

I prefer to offer this paper as an example of what can be accomplished by a careful complexification of a thesis that is an ontological "building-over" in the sense of Nikolai Hartmann. There is – here - no internal dialectic. I am not seeking, here, counterexamples that might or would disprove or invalidate any theory, or support it by implication.

My glosses on the stories sculpted by Heller-Roazen do not pretend, either, to match his scholarship, of which it has been possible to give, in each case, only a few hints. However, if the former have the good fortune to encourage some people to read the latter, the exercise will have been more than justified.

ICONOGRAPHY: Photography of the book *Echolalias. On the Forgetting of Language*, New York, Zone Books, 2005. A French translation is now available. *Echolalies. Essai sur l'oubli des langues*, Le Seuil Ed. , coll. "La Librairie du XXIe siècle", Paris, 2007.