

# Chapter 1

## Planet of Speech: the Conceptual Framework

Within the biosphere of planet Earth, the supremacy of a single species - *humankind* - has been facilitated by its development and mastery of *speech*, a skill resulting from the interaction of the human intellect and the human vocal system. From person to person, and from community to community, the operation of this skill has led to the progressive appropriation of the Earth's surface by humankind, to its development into a *planet of speech*.

● *The planet of speech is a social creation and construction, based on the co-ordinated use by two or more people of the human brain and vocal system (extended subsequently and secondarily to the human hand, and to products of the human hand). The planet of speech may be analysed in terms of two fundamental components: the global continuum of linguistic structure or the linguasphere, and its meaningful content or the logosphere.*

The key to humankind's global domination has been the weaving of a worldwide mantle of inter-dependent languages, including the communicational and cognitive environment of speech which embraces every human community, and every speaker of every language. The outward form of that environment is manifested in every spoken and written language, and in every dimension of artistic, musical and computational expression. In less than fifty millennia, this human-made environment has provided humankind with the communicational and cognitive means to catapult itself through a gamut of creativity, from the first handprints on the walls of painted caves to the first footprints on the Moon.

The following discussion distinguishes five intertwined strands of enquiry:

1.1 the concept of *speech* (including writing, printing, electronic transmission and other extensions of speech) as the **facility** of communication uniting all human beings and communities; together with the concept of *speechways*, as the total **activity** of human communication around the surface of the globe at any one time;

1.2 the concept of the *linguasphere* as the multilingual **structure** of interacting and inter-dependent languages encompassing the globe (including their collective lexical repertoire and phonological and grammatical patterns);

1.3 the concept of each person's *voice*, as the ultimate **unit** of speech in all circumstances and as the only precisely definable **component** of the linguasphere;

1.4 the concept of the *logosphere* as the total **content** of human reasoning, perception and creation, generated and comprehended in the brain behind each person's *voice*, and expressed and conveyed through the living and recorded languages of the world.

1.5 the concept of the three *thresholds of speech*, covering the **invention** of vocal communication, followed by the invention and development of its written and electronic derivatives.

## 1.1 The Concept of Speech

### The Non-sense of 'Language'

Discussion of the central importance of *speech* to humankind has been compromised in English by the existence of 'language' as an abstract term (in contrast to its concrete application to individual *languages*). Some have sought to describe this abstraction as an innate "speech organ", a "bioprogram" or a Darwinian "instinct".<sup>1</sup>

It appears simpler, however, to set aside the notion of 'language', and to recognise the probable ability of early human beings to develop the "software" of speech in response to the "hardware" of their advanced brain and of their highly flexible vocal system, once both were available as complementary human attributes. Writing and other modes of articulate communication – through to computers and telephones – may then be regarded as by-products of the original invention of speech.<sup>2</sup>

There has been much speculation about the nature and origins of speech (or of so-called 'language'), from the biblical account of Babel to the changing theories of Chomsky. Today, however, questions of global communication in the present and their implications for the future take their place alongside questions about the distant past, and deserve an important place in the *neolinguistics* of the 21<sup>st</sup> century. In the meantime, the abstraction of 'language' will be avoided in the following discussion of the Register.<sup>3</sup>

One thing is certain, and that is the fact that speech and all its derivatives and extensions – including the thousands of languages and dialects classified in the Linguasphere Register for the first time – belong collectively to humankind as its most complex creation and most valuable heritage.

### The Facility of Speech

The present volume is concerned with the currently spoken and written varieties of *speech*, the acquired facility which has allowed humankind to develop differently from any other life-form on Earth. The resulting acceleration of human culture, from the first handprints on the walls of painted caves to the first footprints on the moon, has taken less than fifty millennia.

Speech has permitted the proliferation and expansion of diverse human *languages* around the globe, as part of a continuum of linguistic conventions or *linguasphere*, the essential communicational environment for the domination of Earth by humankind.

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<sup>1</sup> With reference, respectively, to Chomsky 1975, Bickerton 1981 and Pinker 1994.

<sup>2</sup> For a "vindication of the – today very unpopular – view" that 'language' (i.e. speech) is an invention, see Wells 1987. Wells' historical review draws attention to the value of considering some Enlightenment views on the subject (including Condillac's), and in contrast to those of some 19<sup>th</sup> and 20<sup>th</sup> century writers. It strengthens a conviction arrived at during preparation of the Register, that 'new' ways of thinking about the 21<sup>st</sup> century may benefit from certain ideas mooted in the 18<sup>th</sup>.

<sup>3</sup> It was encouraging to learn that Noam Chomsky, the doyen of linguistics in the late 20<sup>th</sup> century, also came to doubt the reality of the notion of 'language': "I do not know why I never realised that clearly before, but it seems obvious, when you think about it, that the notion language is a much more abstract notion than the notion of grammar... there is nothing in the real world corresponding to language. In fact it could very well turn out that there is no intelligible notion of language... language might turn out just to be a useless notion." (Chomsky 1982, p.107).

- *Speech may be described as «the facility of self-expression and interpersonal communication, and of cumulative reasoning and creativity, exercised in the form of vocalised, heard and memorised words, including all written, printed, signalled and electronic extensions of vocalised communication».*
- *Speech is a product of two highly adaptable attributes of the human body: an advanced intellect, capable of reflecting about itself and its environment, and a vocal system, capable of producing an almost limitless variety of sounds. The accelerating 'lift-off' of human societies and cultures has been fuelled by harnessing the power of speech, through the co-ordinated use of the human brain and the human voice.*
- *Speech is the primary distinctive feature of the human species on this planet.*<sup>4</sup>

By mastering the facility of self-expression, according to the conventions of one or more distinct *speech communities*, the human infant distinguishes itself from all other components of the planetary biosphere, including all other present and earlier forms of primates.

Human beings have been able to anchor their personal thoughts, and harness the cumulative power of their individual brains, by the creation of audible labels or *words*. The first stage in the acceleration of human progress lay in the assembling of an ever-growing tool-kit of words, used to label specific objects and ideas, and in the adoption of practical rules to govern their efficient use. It was necessary to conventionalise the way words were pronounced, to avoid ambiguity, and the way they could be strung together, to allow the construction of more complex messages. Hence phonology and grammar.

But speech, without the artificial and relatively recent aid of writing and printing, and now of electronics, has its in-built limitations. In natural use, it carries only as far as a person can shout, and the retention of its message depends on fallible human memory. The development of writing, during the last five thousand years, and of printing during the last five hundred, have enabled the speech of a small minority of human beings to be preserved and transmitted, whereas the prelude to the present telecommunications revolution has already had a much wider impact throughout the whole world, even with the limited technology of the 20<sup>th</sup> century. Speech in its original form can now be stored, and transmitted around the globe instantaneously.

A different limitation of speech lies in the need to stabilise (more or less) the conventions of lexicon, phonology and grammar, a requirement which depends on the existence of a *speech community*, a group of people in close contact who accept the same spoken conventions. As soon as communicational contact is lost, or even reduced, words and patterns of speech begin to diverge. Hence the enormous internal diversity of the *linguasphere*.

## The Activity of Speechways

The exposure of the underlying unity within this global diversity is a central theme of the following reflections, and needs to involve an increasing awareness of *speechways*, the activity of human communication at a global level.

- *Speechways may be defined as «the synchronic operation of the facility of speech at the level of humankind», or - in other words – as the totality of meaningful communication among human beings around the world during any given period of time, involving any form of living speech or of its written, electronic and other extensions.*

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<sup>4</sup> If one accepts this formulation, the essential difference between human beings and other mammals may be less than the former have tended to believe, with important implications for the treatment of other living creatures by humankind. The respect shown by many communities of hunter-gatherers towards animals, including those they hunt for food, may thus reflect a more acute awareness of the place of human beings among other species in the biosphere.

- *Speechways are as vital to the functioning of human cerebral life at a communal and now global level as is the circulation of blood at an individual level.*

The acceleration and proliferation of speechways is a major aspect of the current telecommunications revolution, allowing the facility of speech to operate around the globe without its original limitations of space or speed, and with selected voices reaching unlimited numbers of hearers. It may soon be possible to develop electronic means for the surveying, sampling and measurement of speechways in all parts of the globe.

Whereas speechways cover the day to day activity of human communication at all levels, by all means and in all languages, the concept of the linguasphere (as discussed in the following section) covers the overall structure of human communication, including the long-term changes resulting from contact among *overlapping* languages.

## 1.2 The Concept of the Linguasphere

### The Structure of the Linguasphere

In linguistics, as in the natural sciences, it is now clear that the mechanistic application of rules or laws will not explain all stages in the ordered evolution of the surroundings of humankind, from the universe itself to the *linguasphere*, humankind's communicational environment. It seems appropriate to reckon with the existence of a universal 'fuzzy blueprint', holding everything together within the same overall structure and design, and guiding it irresistibly forwards.

The linguasphere represents the multilingual structure of human communication, generated by the diversity of conventions adopted by different communities since the invention of speech.

- *The linguasphere may be defined as the continuum of all spoken conventions through both space and time– lexical, phonological, and grammatical – which in differing combinations constitute the structure of all human languages*

- *The linguasphere is a human-made layer of the terrestrial environment, comprising at any one time:*

- *the total **lexical repertoire** of humankind, or the collection of vocalised labels which in differing forms and combinations constitutes the vocabulary (lexicon) of all living and recorded languages on earth, and of all varieties of each living language down to the voices of its individual speakers,*

- *and the global distribution of **phonological and grammatical patterns** or collections of rules which in differing forms and combinations constitute the structure for pronouncing and ordering the lexical repertoire of each living and recorded language.*

The outstanding characteristics of the linguasphere are its continuity and historical fluidity, extending from each person's voice through widening layers of linguistic affinity to the totality of human speech, including all derived forms of written and electronic communication.

Living languages inevitably overlap with each other in the minds or *alternating voices* of bilingual speakers, where a continuous flow of words, however gradual in one or both directions, is an inevitable feature. From the study of such *overlapping languages*, in all parts of the world, it is evident that the boundaries among them are pervious even to the distribution of phonological and grammatical patterns, and that every element of human speech is ultimately capable of spreading among languages in contact.

Work on the *Register* has confirmed that there is an element of continuous change among spoken languages in all parts of the world, and that there is a tendency for spoken vocabulary to change gradually, and for patterns of phonology and grammar to shift also gradually, frequently under the influence of the vocabulary and patterns of a neighbouring language. Nearly a century ago, Ferdinand de Saussure drew a useful analogy between the development of an individual language and the moves of a chess-game. One move, or one linguistic change, has a greater or lesser effect on the whole structure of the game or the language, and precipitates further moves or changes. More recently, André Martinet has described the push and pull effect of successive sound-changes among specific languages and groups of languages.<sup>5</sup>

<sup>5</sup> see (de) Saussure (3<sup>rd</sup> ed) 1964, chap.3 ; for «chains of traction» and «chains of propulsion», see Martinet 1955

De Saussure's analogy can now be extended to the linguasphere as a whole, and it will be a profitable theme for neolinguistic research in the 21<sup>st</sup> century if systematic evidence for Martinet's processes of cause and effect can be gathered throughout all parts of the linguasphere.

A global continuum of millions of linguistic conventions are currently interwoven, in a vast array of forms and combinations and with varying social and geographical distribution, to form tens of thousands of interactive languages and dialects, as now classified globally for the first time in the Linguasphere Register. Central to the functioning of the linguasphere are two inter-dependent systems of patterning - phonological and grammatical - which like words themselves have been continuously adapted and modified as the collective product of human brains and voices in spoken contact. Phonological patterns enable words to be regularly structured and clearly differentiated when spoken, within the context of any one speech community, and grammatical patterns enable them to be linked together in more or less fixed patterns to form complex sequences of thought and speech. Gradual changes within either of these two systems of patterning are liable to precipitate gradual changes elsewhere, like the movements in very slow motion of ocean currents or the global weather system. Even where such processes are slowed down by the written standardisation of a language, their effect is never eliminated from the development of their spoken form over a sequence of generations.

- *The underlying foundation of the linguasphere is composed of two inter-dependent layers, phonological and grammatical, which in varying forms and combinations provide the foundations for alternative collections of words, or languages.*

The geographical distribution of the phonological and grammatical patterns which make up these two layers is in a continual state of gradual shift, often independent of the geography of individual languages currently spoken on the surface of the linguasphere. Take, for example, a long established geographical sequence of four languages, A, B, C and D. If B and C share 80% of their phonological and grammatical patterns, then one may expect that much of the 20% of dissimilar patterns on either side will be shared between A and B, and between C and D. The mapping of the distribution of phonological and grammatical features at a world scale will be a productive area of research for the neolinguistics of the 21<sup>st</sup> century. After allowing for the effects of the whirlwind expansion of European languages during the last half millennium, there is every reason to believe that the global mapping of phonological and grammatical features will reveal a widespread but gradual ebb and flow of such features among overlapping languages and speech communities, like a very slow-speed weather-map of the inhabited globe. One is tempted to predict that spatial symmetries will be discovered in the underlying patterns of the linguasphere and their processes of change<sup>6</sup>, in the same way that there are structural symmetries within individual languages on the surface of the linguasphere.

The study and exemplification of the phonological and grammatical foundations of the linguasphere, on local, continental and global scales, will be a major task for neolinguistic study in the 21<sup>st</sup> century, and provides an ideal topic for the development of collaborative research through a co-ordinating website. Perceptions have been severely limited in linguistic research before the turn of the millennium because of the dominant position of the individual language, and of the conviction in much popular and professional thinking that the individual language is the primary unit of analysis in the study of speech. For this reason, perhaps, there was an inadequate follow-up to the interesting work of I.F. Brosnahan in the middle of the 20<sup>th</sup> century on the distribution of phonological patterns across language boundaries, especially in Europe.<sup>7</sup> It is possible that the interest of linguists was diminished by Brosnahan's less convincing theory that such patterns are linked to the distribution of blood-groups among speech communities (as had been previously proposed by the geneticist C.D. Darlington).

<sup>6</sup> as proposed, for example, in the "circular" development theory presented in Dixon 1997, chapter 6 (p.93).

<sup>7</sup> Brosnahan 1961

Nevertheless, it is notable that the concern of 19<sup>th</sup> and 20<sup>th</sup> century linguistics with the sub-discipline of linguistic geography should have been dominated throughout by the minutiae of local dialectology. David Crystal's outstanding survey of the concerns of linguistics to the end of the 20<sup>th</sup> century consequently devotes only one page among almost 500 to the translinguistic topic of "linguistic areas".<sup>8</sup>

## The Linguasphere as an Ocean of Words

The linguasphere may now be perceived as a worldwide ocean of words and meanings, moulded into individual *languages* by the application of specific phonological and grammatical patterns to a specific but open selection of words. Although some languages may become artificially 'frozen' in writing, actively spoken languages are never impervious entities.

- *Viewed over centuries, spoken languages may be seen as shifting islands of verbal expression and comprehension within the worldwide ocean of the linguasphere.*

These words had already been drafted for the present chapter when a chance visit to a second-hand bookshop revealed the use of the same image more than a century ago by the 19<sup>th</sup> century linguist Max Müller. He made the comparison as a reproach to Catherine the Great and others in the 18th century, whose classification of languages appeared too geographical: "Languages seemed to float about like islands on the ocean of human speech".<sup>9</sup> Müller's image, although intended to contrast unfavourably with the image of the linguistic 'family-tree', so close to the heart of many 19th and 20th century comparative linguists, serves in fact very well to express the fundamentally fluid relationship between individual languages and the totality of the linguasphere itself. This is not the only instance where a bridge may be established between 18<sup>th</sup> and 21<sup>st</sup> century "global" concepts of languages and humanity, a theme which deserves further attention.<sup>10</sup>

The 'islands' of speech on the organic surface of the linguasphere are in a state of continual development and gradual change as daily currents of *speechways* pass among and over them. They overlap and interact as voices move among them, and as generations of individual voices are extinguished and replaced. Whereas voices are the active, short-lived and continually recycled components of the linguasphere, individual words and lexical roots are its passive, mutable but also potentially permanent components, often longer-lived than the individual languages of which they form part. It is significant that neither of these two most fundamental elements of the linguasphere is necessarily bound to any one language. An individual word may be copied (or 'loaned') from any one language into any other, in either an identical or modified form, and an individual speaker – the younger the better – may learn to switch her or his voice from any language to any other. Both voices and words are inherently free.

For practical and referential purposes, the linguasphere is a geographical phenomenon related to the physical surface of the world. More precisely, however, it is stored and operated exclusively within and among the brains and voices of individual living speakers. The linguasphere thus constitutes a maze of cerebral pathways of communication among the continually changing voices of humankind across the surface of the globe, pathways which have been progressively strengthened and lengthened by the successive inventions of writing, printing and electronic communication. Within this maze of pathways, "language contact" can then be clearly seen as nothing more nor less than the continuous ebb and flow in time and space of the millions of conventions - lexical, phonological and grammatical - which form the medium of human discourse around the globe, and which cluster in thousands within overlapping communities of brains to form the configurations known as "languages".

<sup>8</sup> Crystal 1997, p.33 (in a chapter on Geographical Identity)

<sup>9</sup> Müller 1866, p.153

<sup>10</sup> cf. *inter alia* the formulation by P.S.*Pallas* of the concept of "linguarum totius orbis" («languages of all the globe») in his *Linguarum totius orbis vocabularia comparativa* 1786

Nowhere in the world can the continuity of the linguasphere be seen more clearly than within the set of [99] Bantu languages which together cover half the continent of Africa. The Bantu languages constitute the largest group of closely related languages in the world, providing a modern example of the way in which the linguasphere continues to operate as a fluid continuum, linguistic differences accumulating over long distances as one moves from one speech community to another.

This continuum of inter-intelligibility or semi-intelligibility among neighbouring communities continues across a vast area of the African continent. In such a situation, the listing and classification of adjacent languages and dialects must often be guided by local perceptions of ethno-linguistic identity, rather than by consistently measurable linguistic differences. Detailed historical relationships are also difficult or impossible to trace among such closely related idioms because of the ebb and flow of converging, diverging and re-converging idioms over long periods of time.

In addition to the [99] Bantu languages of Africa, other extensive areas of gradual variation among adjacent idioms are found among the [67] Mixtec and Zapotec languages of Central America, the [44] Turkic net in West and Central Asia, the [59] Indic languages of South Asia, the [47] Tai net in South-east Asia, the [79] Sinitic languages of East Asia and the [39] Tahitic+Marquesic net in the East Pacific. In Europe, the vast majority of the inhabitants of the continental mainland speak idioms belonging to one of three widely spread nets: the [51] Romance net, the [52] German+ Dutch net, and the [53] Slavonic net.

### The Linguasphere and 'Proto-World'

The speed and direction of currents of change among languages are of course dependent on a wide variety of factors and circumstances. Waves of slow convergence among dissimilar but overlapping languages may blur the equally slow currents of historical divergence among related languages no longer in direct contact. And these creeping trends in both directions are from time to time disturbed, interrupted or accelerated by the 'storms' of ethnic invasions and migrations. This overlap of different types and speeds of linguistic change may be compared to the "punctuated equilibrium model", recently presented by Dixon in his important volume, *The Rise and Fall of Languages*.<sup>11</sup> Among other examples, he draws attention to the situation of Australian languages, which share many recurrent features. Unlike earlier linguists who have postulated an Australian language family, he argues for the greater probability that Australia represents "a long-term diffusion area" with overlapping but non-identical areas of distribution for many different phonological and grammatical features.

At the end of the 18<sup>th</sup> century, the grandson of a Welsh-speaking farmer made a famous pronouncement in India about the manifest historical relationship which exists among Indo-European languages<sup>12</sup>. The cultural and historical value of this discovery was subsequently offset not only by the political misuse of distorted ideas about so-called 'Aryan' supremacy in the first half of the 20<sup>th</sup> century, but also by the diversion of much energy during the 19<sup>th</sup> and 20<sup>th</sup> centuries in the search for similar language "families" among more diffuse and dissimilar languages spoken over vast areas of the world.<sup>13</sup>

<sup>11</sup> Dixon 1997, chapters 6 to 8. The author's conclusions converge at several points with the perceptions provided by the Linguasphere Register, and he likewise addresses the need to reassess the assumptions of 19th and 20th century historical linguistics, together with the preoccupations of 20<sup>th</sup> century theoretical linguistics, and to establish new conceptions and priorities for the early 21<sup>st</sup>. For his discussion of Australian languages, see esp. pp.87-93.

<sup>12</sup> Sir William Jones, addressing the Bengal Asiatic Society at Calcutta in 1786.

<sup>13</sup> Leading, for example, from Rasmus Rask's proposed 'Scythian' family in 1834 through Max Müller's wider 'Turanian' family (including such diverse members as [31] Malayic, [40] Euskara (Basque), [44] Turkic languages, [49] Dravidian languages and [60] Inuit+Aleut or Eskimo) to proposals for an even more ambitious 'Nostratic' super-family in the late 20<sup>th</sup> century.



The underlying fluidity of the linguasphere may be less evident in the reconstruction of relatively closely knit linguistic groupings, but becomes increasingly obvious when attempts are made to roll back so-called 'genetic' hypotheses into remoter periods of prehistory. The fluid diffusion of specific features has of course facilitated the reconstruction of speculative prehistorical hypotheses, wherever these have been based only on the random selection of 'look-alike' features over a wide range of languages. Some of the best known examples are the controversial reconstructions based on Joseph Greenberg's so-called "mass comparisons", such as his hypotheses uniting a wide variety of so-called 'Nilo-Saharan' languages across Africa, or – almost a quarter of a century later - virtually all the native languages of the Americas.<sup>14</sup> The backward-looking quest to discover or create new language-families, and to unite hypothetical ancestral languages in the distant past, became in its most extreme form a search for clues leading to the dream of a 'proto-world mother-tongue', a theme inevitably attractive to the media.<sup>15</sup> This search for a simplistic unity among languages in their prehistorical origins has unfortunately taken precedence over the study of the synchronic continuity of all languages to-day, as working parts of the modern linguasphere.

It is important that consideration be given to the future priorities of comparative linguistics, which previously had sometimes regarded the comparison of closely related languages and dialects as 'low-level' <sup>16</sup>, in contrast to 'high-level' research on distant prehistorical relationships. It can be strongly argued that the high-level is the modern linguasphere, the verifiable ground humankind now stands upon, as opposed to the lower and increasingly uncertain layers of linguistic prehistory, uncovered as linguists burrow deeper in the search for linguistic clues to a distant past. Fascinating as they are, searches for a lost linguistic unity have distracted attention from the fact that the spoken and recorded languages of humankind constitute a vast and complex unity of communication at the present time.

## The Linguasphere and Mixed Languages

Testimony to the underlying nature of the linguasphere is also provided by so-called *mixed languages*, notably those which combine a lexicon drawn principally from one direction, with a grammatical system drawn from another. That the study of mixed languages should have been neglected and their existence even denied, because they conflict so strongly with the conventional assumptions of linguistic family-trees, is strangely illogical. If one wished to make a comparison with biological family-trees, then the apparent "dual" origins of mixed languages would be more appropriate than the single line of descent normally sought in historical linguistics.

A great service to linguistics has therefore been rendered by Peter Bakker and Maarten Mous for their attention to the study of mixed languages, based on a series of fifteen case-studies from around the world, and for Bakker's useful formulation of the concept of intertwining: <sup>17</sup>

"We propose the term 'language intertwining' for the process forming mixed languages showing a combination of the grammatical system (phonology, morphology, syntax) of one language with the lexicon of another... If a certain language can be identified as an intertwined language, it is either spoken by descendants of a nomadic group who settled among speakers of other languages, or by a new group with a new identity, the result of the contact between two groups (although other possibilities cannot be excluded)".

<sup>14</sup> Greenberg 1963 & Greenberg 1987

<sup>15</sup> Controversial evidence has yielded a succession of hypotheses, culminating in current debate about the possible common origin of all human languages. Both *The Atlantic Monthly* (USA) and *L'Express* (France), for example, focussed their attention in 1991 on the attempt to prove that humanity once spoke a single primeval language, "Proto-World" (Wright 1991, Monier 1991).

<sup>16</sup> e.g. Ruhlen 1987, p.3

<sup>17</sup> Bakker & Mous 1994; for Bakker on "intertwining" see pp.4 & 28.

The studies presented or edited by Bakker and Mous - including such varied examples as [12] Maltiya / Maltese Arabic in the Mediterranean, [15] Mbugu / Ma'a in East Africa, [59] Romani in Eurasia and [62] Mitchif in North America - demonstrate that language intertwining is normally correlated with the social intertwining of communities of voices, sometimes combined with a need for secrecy or encoding. Further examples of language intertwining may be found at a variety of other points within the Linguasphere Register, for example [34] Hiri-Motu and Kosirava+ Uiaku, on the island of New Guinea; [20] Kairui+ Midiki with [32] Waima'a+ Habu, on the island of Timor; [58] Teber+ Heynu (Abdal) among Central Asian nomads; [52] Hong-Kong Mix in East Asia; and [66] Haida.

## The Linguasphere and Creole Languages

One of the many areas of enquiry where the concept of the linguasphere may provide new insights is in the origin of creole languages (51-AAC, 52-ABB and 52-ACB-b), established in the wake of major social upheaval caused by the slave-trade. In the emergence of such languages, after criminal economies had deported and enslaved members of less powerful communities, the uprooted victims – torn from a wide variety of different speech communities - succeeded in developing "new" communal languages from pre-existing lexical elements and phonological and grammatical patterns, free of redundant morphology. Speakers of many different African languages, torn violently from their homes and thrown into the "ocean of speech", were successful – with help from their children – in creating new speech communities for themselves, against great odds and in spite of savage oppression and prejudice.

Creole languages can thus be seen as a remarkable means of repairing the surface of the linguasphere, at points where it had been ripped apart.

## The Linguasphere through Time

The concept of the linguasphere draws attention to the relative nature of individual languages, and to the flexible and porous nature of the divisions which separate them.

No-one would deny, for example, that English, Russian, Greek and Hindi are four distinct and different languages, which are not inter-intelligible. All four, however, are recognised as having Common "Indo-European" roots in their vocabulary and grammar. It is consequently reasonable to assume - as linguists have for two centuries - that these languages have diverged gradually, by different geographical and historical routes, from an Indo-European ancestor - probably from a net of related idioms spoken near the borders of Europe and Asia.

If people alive today were able to speak English with the dead, they would find it very difficult to converse with Chaucer, who died in 1400, and almost impossible with Alfred the Great, who died in 901. Modern English is now too different from the Middle English and Old English of those times. On the other hand, it would be possible for modern speakers of that language to maintain a chain of conversation extending without interpreters from themselves to Geoffrey Chaucer, via a succession of overlapping lives and voices from the past.

Such a chain could be maintained through the voices of only eleven people in Great Britain: James Joyce (1882-1941), Florence Nightingale (1820-1910), William Wordsworth (1770-1850), Samuel Johnson (1709-1784), Isaac Newton (1642-1727), John Milton (1608-1674), Walter Raleigh (1552-1618), Mary Tudor (1516-1558), Thomas More (1478-1535), William Caxton (1422-1491) and Margery Kempe (1373-1440). None of these would have had difficulty conversing with the next in line, which could be extended further backwards through time from Chaucer to the Old English of Alfred, to the Old Germanic of his forbears, and to the Indo-European idioms from which most modern European languages are assumed to derive.

On a grand resurrection day, one could demonstrate the further possibility of advancing forward again through overlapping voices from Indo-European to the Ancient Greek of Homer, and on to Modern Greek, or along different routes to Slavonic and the Modern Russian of today, or to Indic and Modern Hindi. It would then be evident that there has been no historical break in the unbroken chain of intercomprehension linking all past and present idioms of Indo-European languages. Viewed in this way, Indo-European becomes no more than a continuum of overlapping voices through time, serving to illustrate not only the fluid and collective nature of the linguasphere but also of the purely relative nature of the concept of a "language".

## Conclusion

The view of humankind as a global community is opened up by this framework of linguistic communication, constructed progressively around the planet by overlapping and interacting communities since paleolithic times. Comprising a continuous web of languages and modes of communication, culminating in the telecommunications revolution, the linguasphere has provided human beings with an intimate environment for their personal and communal development, and for the accumulation and continuity of their creative inventions and discoveries.

The sum total of languages in the linguasphere determine - but are also determined by - the continuum of voices alive at any one time. They constitute parts of a collective human artefact, developed since the beginning of humankind as its most important creation and most distinctive attribute within the biosphere. It follows that no natural spoken language in the modern linguasphere (excluding revivals of older written languages) can be any "older" than any other. Over some periods of time, some languages may have changed or developed more rapidly than some others, but every language remains the direct outcome of a collective heritage of tens of thousands of years of continuous human discourse on this planet.

Something as close to humankind as the circulation of blood became apparent scarcely more than twelve generations ago, and it is not surprising that the reality of the linguasphere, a less tangible attribute of humankind, should have taken longer to become fully apparent. Although its scale and complexity have for long obscured its existence and planetary unity, the communicational environment of the linguasphere now supplies the key to recognising and accepting the existence of a collective human heritage. Its worldwide web of spoken languages provides the only systematic transnational framework for the classification of planetary society, and of its intricate networks of interdependent communities.

New perceptions of the linguasphere may assume yet further importance, if they lead to a greater understanding of the collective workings of an abstracted "human mind".<sup>18</sup> Does the modern linguasphere, with its millions of linguistic conventions serving a global network of billions of brains, in any way represent an unconsciously constructed human-made model of the vastly more complex structure of the individual human brain? Should one begin to talk of a collective human mind?

This delicate philosophical topic extends beyond the scope of the present discussion, but it will be relevant to return, later in this chapter, to the concepts of the individual human *voice* and of the *logosphere*, covering the content expressed and recorded through the medium of the linguasphere.

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<sup>18</sup> There was apparently a difference of perception on this topic between the French-speakers and English-speakers responsible for the wording of UNESCO's bilingual constitution in 1945. The opening words refer to the "esprit de l'homme" in the singular in French, but to the "minds of men" in the plural in English (quite apart from the fact that both texts ignore the "mother half" of the equation).

## 1.3 The Concept of each Person's Voice

In everyday use, the word "voice" (or its equivalent in many other languages) means «the sound of a person speaking». Technically, it describes «the sound produced by air expelled through the larynx», but the word is associated above all with the unique and identifiable quality of an individual person's speech. From this personal application, "voice" has acquired also the more abstract sense of «opinion» or «right of expression», and its equivalent in some languages (French "voix" and German "Stimme", for example) extends to the applied democratic sense of «vote».

● *Direct communication from one speaker to another lies at the heart of the nature and origin of speech, and of the global communicational environment called the linguasphere. In this context, it is useful to widen the meaning of the word "voice" to describe:*

- *each living person, viewed as a speaker of one or more languages;*
  - *each person's total verbal repertoire, active or passive, in any language;*
- and by extension:*
- *each person's total verbal contribution to the linguasphere and the logosphere from birth to death.*

The term "speaker" is used here to include also any person who converses by any alternative to vocal communication. including hand-signing, writing and electronic speech.

With the rapid growth of its own voice, each normally endowed infant acquires a personal place in the linguasphere, as represented by its ability to memorise and pronounce *words*, in the form of acquired *patterns* of speech-sounds, and to juxtapose selections of those words to create meaningful phrases, in the form of acquired *patterns* of grammatical structure.

● *Each voice is an active, temporary component of at least one living language, just as each person is normally a 'life-member' of at least one speech community or community of voices.*

Within a normal life-span, each voice makes its own unique contribution - however modest - to the collective creativity, diversity and mutability of at least one language. Many individual voices, perhaps the majority in the world, become also 'associate-members' of one or more additional or overlapping speech communities, their personal movements among languages helping to ensure that no spoken language exists as a water-tight compartment.

Since the voice of each speaker is the basic active component of any living language, it is appropriate to re-examine the linguasphere from the worm's eye view of an individual voice.

As already discussed under the topic of *speech*, the two basic components of the linguasphere are not bound to any one language, and move frequently from one to another. These are the *word*, as an individual unit of speech, and the *voice*, as an individual user and creator of speech. Both are inherently free, in the sense that any individual word may be copied (or 'loaned') from any one language into any other, in either an identical or modified form, and in the sense that any individual speaker – the younger the better – may learn to switch her or his voice from any language in the world to any other.

Whereas too many voices are confined throughout their lives to the semantic system and horizons of a single language, it is also true that a large proportion of living voices – perhaps even half or more - have had the experience of navigating between two or more different languages.

Each voice may be active within one or more languages for a maximum of around ten decades, but on average for little more than half that time. In contrast, each word is potentially immortal, and may survive even longer than a language of which it once formed part.

It is because all voices, as active components of the linguasphere, must change within a few decades, that the evolution of the global linguasphere cannot be arrested – any more than it is possible to halt the individual and collective development of the languages which compose the linguasphere.

This view might be challenged by the observation that permanent forms of languages often reside in books, which have become independent of dead human voices or of storage in the human brain. They are comparable to the survival of ancient works of art.

However, it should be recalled that books - and texts within books or the electronic media – exist only as inanimate and meaningless "objects", whenever they are not being read, either aloud or silently. Their content only becomes an active part of the logosphere again when the recorded words are restored to life – or "defrozen" - in someone's brain, and when they re-enter the experience of someone's voice. In the same way, an ancient work of art only re-acquires meaning, even if a different meaning, when it is viewed by a living eye and brain. And the majority of all newsprint is a waste product from the start, since it is never actually read, and so never enters the cycle of living voices.

## The Uniqueness of each Voice

The extended meaning of the word *voice* may be taken to cover a person's lifelong verbal experience and performance, from one's first perception of one's mother's voice in the womb to one's own dying words. This experience and performance include not only a person's possible written contribution but also one's total linguistic acquisition, manipulation and eventual creation of linguistic conventions during one's lifetime, in whatever language or variety of languages one may have access to.

This extension of the concept of *voice* is more appropriate and more user-friendly than the technical term 'idiolect'. This term (including French «idiolecte») has never caught on in European languages outside the closed circle of professional linguists, partly because of its unattractive form (and confusing similarity to terms like "dialect" or even "idiot"), and partly because the concept and role of the speech of the individual have drawn less attention hitherto than they deserve.

An 'idiolect', in the sense of «the speech of an individual», has also been viewed conventionally as the smallest component of a specific language, and hence as the first rung of a hierarchy leading often towards its idealised standard form. In contrast to this usage, it is more useful to stress the comprehensive nature of each *voice*, which may participate in more than one language, and to emphasise the consequent role of bilingual voices as the initiators and controllers of variation and diversity, at meeting-points between individual languages.

- *Generations of individual voices in the world may be pictured as relays of needles which have sewn, altered, repaired and extended a continuous patchwork quilt of living languages, the mantle of the linguasphere which humankind has wrapped around the globe.*

If blessed with normal health and circumstances, each person is motivated in infancy to build up a personal repertoire of spoken conventions. This repertoire provides not only an umbilical cord of expression, communication and social integration with one's family and community, but also an operating system for one's conscious thoughts and a framework for the development of one's personal identity.

The task is simplified by the modelling of each person's speech on what one has heard, although the end result is always unique. The "voice" of each person grows up to contain an expanding personal repertoire of words and phrases, tailored in its lexical content to personal experience of life and in its form to the phonological and grammatical patterns of one or more "languages".

The total linguistic repertoire of each person constitutes a personal reflection of where he or she has lived within the linguasphere, and of all voices heard or perceived to that point, as well as (for those fortunate enough to be literate) of what has been read on the page or the screen.

● *It is therefore certain that no two human beings have ever articulated exactly the same linguistic repertoire, down to the finest detail (with the theoretical exception of identical twins over a short life-span).*

● *The combination of all the words each person knows in any language, the meaning and associations of each of them to each person, the precise way in which each person pronounces each language he or she knows, and the personal, recognisable quality of each person's speech... these all add up to the totality of each person's voice, unique to her or him.*

The concept of the *voice* of the person is central not only to the study of speech but also to that of politics and government, with the democratic right of every voice to be heard and respected.

Ideally, but quite impossibly, the Linguasphere Register should have begun its linguistic inventory with the voice of each communicating person alive on earth during the 20<sup>th</sup> century. As expressed over two decades ago, "the only truly accurate map [of African languages] would need to represent every person on the continent with a separate illuminated spot, which would move as the person moved and which would light up in any of two thousand different colours according to the language that person was speaking at the moment".<sup>19</sup>

Although it is impractical to document the speech of every individual, it is useful to reflect on the way in which each newborn person makes her or his entry into the linguasphere.

## The Entry of each Voice into the Linguasphere

A convenient way of describing the functioning of speech within the linguasphere - and hence of its component languages - is in terms of four interdependent layers which provide the structural key to the form of any spoken language at any time. The nature of these four overlapping and interwoven layers can be seen most clearly in the initial learning experience of a child:

**Memories** - the memorizing and recognition of a growing collection of people, animals and objects (mother, cat, bed...), of qualities, actions and experiences (cold, drink, play...), and of the infant's physical body and environment;

**Sounds** - the learning of a growing set of communicative sounds heard from other human beings, within the vast repertoire of vocal noises naturally available to the infant;

**Labels** - the collection of a growing store of meaningful labels, created with those same sounds, and attached to the infant's growing collection of memories; and

**Patterns** - the acquisition by imitation of a growing series of grammatical patterns, enabling sequences of labels to be created by analogy with sequences already encountered and learned.

From birth, most children are surrounded by the sounds of speech. They are also equipped for life with a unique and amazingly adaptable vocal system, enabling them to produce and control a vast range of

<sup>19</sup> See Dalby 1977, p.8

sounds. Before they can interpret the words they hear, they absorb the rhythms of speech. Their mother's voice helps them to assimilate the rhythm of their primary language (literally their "mother-tongue" in this case), and to recognise and recreate the intonational patterns which will form a framework for the first words and phrases they learn, the 'rails for them to run along'. They discover that they can influence their environment by making sounds themselves, and then by producing and controlling an array of sounds for which their vocal organs equip them.

They then learn to slim down the vast repertoire of vocal noises they can produce, in order to arrive at the selection of communicative sounds they hear used by older people around them, the phonological patterns of their first language. After beginning to collect a growing store of meaningful words, which serve as one-word sentences, they learn to assimilate their first short set phrases. They realise that they can create new sentences to deal with new situations by changing individual words in fixed patterns they have already heard and learned.

The large majority of children acquire speech within a few years, but with much greater personal variation than is sometimes allowed for in theories about the 'innateness' of language skills (which may be no greater than the 'innateness' of other tasks, such as driving a car, operating a computer or playing a piano). Their instinct for self-preservation, and their desire to "belong" to the human world around them, impel them to establish their own linguistic repertoire, and to construct their own voice as a life-raft on the ocean of words surrounding them. In normal circumstances, and by their own conscious and subconscious efforts, each of them recreates the so-called "gift" of speech, and becomes a new participant in the linguasphere.

This participation occurs in a context with psychological and social dimensions. One of the important factors in language acquisition is undoubtedly the degree to which psychological and social "bonding" takes place between young children and their parents or carers. Acquisition of a specific language may certainly be accelerated by empathy with one or more existing speakers.

However, although every human child is born linguistically neutral, and culturally free, it is a widespread human tradition to consider each child to have been born into a particular tribe, nationality or religion. The assumption by mothers and fathers that their involvement in a child's creation means that that new person therefore 'belongs' to them, and that he or she must assume their own allegiances, is an ancient and worldwide tradition. It has served the social function of binding children to their parents and their community, as they in their turn were bound in infancy to their own parents and grandparents and to their respective ethnic-groups, religions or nation-states, or to all three.

This function must now be questioned, as the era of global communication places increasing emphasis on the twin poles of society in the new millennium: the individual person and the planetary community of humankind.

## **The Role of the Bilingual Voice**

Bilingual voices secure the fabric of the linguasphere.

For those born into a monolingual environment, their child's-eye view of the world does not prepare them for the fact that their mother's language will not serve them in addressing every other human being, or even every other living creature. Other infants are confronted from birth with two or more different rhythms of speech, and are exposed to two or more different languages in their own family. Left to themselves, and given sufficient contact with speakers of each, they learn to weave their way seamlessly between different linguistic systems, recognising them as alternative codes to be used in different circumstances and with different people.

From recent research,<sup>20</sup> it would appear that the brain of bilingual children structures itself accordingly, and differently, if they learn to speak and understand two primary languages (or "mother-tongues") simultaneously in their infancy. The two languages are more fully integrated with each other within their brains than if one language had been learned at a later stage than the first.

The simple contrast between a monolingual and a bilingual cradle represents the two extremes in a wide range of intervening types of bilingualism, or partial bilingualism, which may confront a young person before reaching adulthood. The term "bilingualism" is in fact overworked, covering a miscellaneous array of attitudes and motivations, sequential or simultaneous acquisition, relative degrees of competence, domestic or communal roles, and functional usage.

One way in which this range of variables may be partially clarified is by distinguishing between:

being *bilingual*, i.e. «able to speak two languages which are not immediately related to each other», and

being *translingual*, i.e. «able to speak - or weave one's way between - two or more closely related languages».

It is also useful to distinguish between:

being *multilingual*, «able to speak three or more languages not immediately related to each other», and

being *plurilingual*, covering all or any of the above, i.e. «able to speak two or more languages, whether closely related or not».

In defining the difference between *bilingual* and *translingual*, one is faced with the need to measure linguistic relationships, and in practice it has proved useful to apply the term "translingual" to situations involving idioms in the same *net*, in other words to *inner languages* or *dialects* classified within one or more very closely related *outer languages*. Although translingual competence is more readily acquired or "picked up" than bilingual ability, it often – or even usually - involves greater blurring or overlap between the idioms involved.

The Linguasphere Register has begun (but is far from having completed) the task of annotating all languages which share the majority of their component voices with one or more other languages, i.e. the majority of whose voices are bilingual or translingual. Such annotation - marked in the Register by the symbol E - covers not only external bilingualism (or translingualism), as used in communication with voices outside the speaker's primary speech community, but also internal bilingualism or translingualism, as used in diglossic situations *within* a primary speech community.<sup>21</sup>

An important divergence in the use of the term "bilingual", found in a variety of cultural and geographical contexts, is its different application to privileged and under-privileged communities. In the affluent suburbs of Paris or Rio de Janeiro or Mumbai, for example, bilingual education in a private school – with English as a now essential part of the equation - is now a much sought-after social advantage. In geographically adjacent but socially distant contrast, however, the bilingual or multilingual environment of disadvantaged immigrant or ex-rural communities, as in many other suburban environments, may be perceived as an educational handicap. And bilingualism often is a personal and social handicap in a disadvantaged environment, if society is not equipped with the necessary attitudes and resources to provide an appropriate education for bilingual pupils.

<sup>20</sup> Kim et al. 1997

<sup>21</sup> These two functions may overlap in reality, as in the case of [52] Hochdeutsch-F. (formal German) among speakers of [52] Schwyzertütsch (Swiss German), who may use formal German not only in conversing with non-Swiss speakers but also in certain formal situations within their own society.



In such situations, talented children may develop remarkable street-skills in the use of speech, while others may be left *semilingual*, with a below average command of each of the languages involved.

Societies unwilling to consider the educational advantages – but also material cost – of adequate bilingual education have often taken legal or institutional action to reduce or eliminate bilingualism, often supported by monocultural motives. Such actions still continue, in Algeria and California for example.

In 1998, the electorate of California voted to abolish bilingual schools within the state educational system<sup>22</sup>, after these had been accused of maintaining [51] Español (Spanish) speaking enclaves within an [52] English-speaking society and of denying Spanish-speaking children the opportunity of integrating themselves into the English-speaking mainstream.

In 1998 also, the government of Algeria established [12] 'Arabiyya (Arabic) as the sole language of administration and education, in an overt move against the parallel use of [10] Tamazigh (Berber).

In the 1990's, use is still made in parts of Africa of the device once known in Brittany as "le symbole" and in Wales as "the Welsh knot", whereby a pupil heard using her or his own language (as opposed to [51] French or [52] English) receives a small object which can only be got rid of by being passed to another pupil overheard doing the same. The pupil who has the symbol at the end of the day is punished.

In Wales, within living memory, [50] Cymraeg (Welsh) speaking children and parents were often under pressure to abandon their own language in favour of the perceived educational advantages of English, although during the last half century there has been a remarkable turn-around in educational attitudes and practices in that country. The children of all parents can now benefit from the intellectual and educational advantages of free bilingual state schools.

This is not to say that bilingualism poses no more problems in Wales, but that the organisation of bilingual education anywhere needs to be organised in a positive environment, and with adequate funding to allow the two languages to co-exist in a balanced relationship within the educational system.

Above all, a bilingual child needs to have confidence, not only in the speaking of two languages but also in the respective value of both. And the many parents who find themselves in bilingual situations need also to have confidence in the value of their own languages and in their right to speak and teach that language to their own child. Unfortunately, this right – and the right of children to speak their own language – is not always observed.

In India, for example, where multilingualism is almost a way of life, there are still many problems surrounding the status of individual languages, and the way in which children are taught to consider them. In some respects, the situation in India today can be compared with that of pre-revolutionary France. An international language is actively studied in private "English-medium" schools, and used as a lingua franca by the 'upper' classes or castes, and by the newly rich, while public education in local languages is considered desirable for the population at large.

The practical results of such a situation are sometimes absurd. In some states of India, including Gujarat for example, it is possible to find rural schools where children from smaller (so-called 'tribal') communities are banned from speaking their own language, and are obliged to study through the medium of the relevant state language, in this case Gujarati. Meanwhile, in adjacent urban areas, better-off parents who speak Gujarati pay to send their own children to English-medium schools, many of which ban their pupils from speaking their own language, Gujarati, and even encourage their parents to speak English to their own children at home.

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<sup>22</sup> California's Proposition 227 (June 1998).

Much is proclaimed about the importance of languages – especially major written languages – as vehicles of ancestral culture and beliefs, including traditions of religion and the nation-state. Yet the importance of any language as an affective bond between each child and each parent, is of greater importance to a child's personal development than its role in passing down traditions from distant ancestors.

It is also important for each child's personal development that he or she should be in a position to examine critically all traditions inherited from the past, a task which is easier for a child familiar with two or more languages and cultures, whose bilingualism can help reduce the power of words over ideas. Unfortunately, even in areas where bilingualism is actively promoted, it is not always recognised that the effectiveness of an education in two languages depends on a fundamental change in the attitudes of parents and teachers, and of educational authorities. Bilingual education must be accompanied with an overall reform of the school syllabus, and with a resolute attempt to root out the causes of sectarian rivalry among neighbouring speech communities.

Even in the peaceful and relatively 'class-free' context of Wales, the successful development of opportunities for bilingual education (in [50] Welsh and [51] English) needs to be followed by a review of the roots of juvenile xenophobia, and of traditional hostility between young people from different linguistic and cultural backgrounds.

An understanding of the importance of bilingualism today requires the education not only of children but also of their parents, and one of the challenges confronting both the media and the teaching profession today concerns the imparting of new attitudes towards bilingualism, including improved knowledge about other languages and cultures. For now, at the beginning of the 21st century, humankind finds itself in the early stages of the most remarkable development in the history of the linguasphere, in which the spoken word - hitherto limited by space and time - can be recorded indefinitely and projected instantly around the globe. Just as the printing-press has recently become a domestic appliance, so living-rooms are beginning to acquire access to an increasing number of languages and cultures, relayed through space.

The education of all children, whether within small or wider speech communities, needs to be restructured to take these new developments into account, and education about the languages of the world, and especially of one's own region of the world, should become an integral part of the basic school curriculum - such as learning to recognise by ear the principal languages of neighbouring countries, for example.

In education, a case can be made today for abandoning the traditional teaching of languages as individual subjects, and for creating "languages and literatures" as a single "core" discipline<sup>23</sup>. Relevant teachers would be responsible for a series of component subjects within this new discipline, not only "literature" and "the structure of speech", but also interlinguistic skills such as "translation and interpreting", "creative writing", "debating" and "drama". Instead of the monolingual teaching of specific subjects, as is the present pattern in most countries of the world, even in nominally "bilingual" schools, children deserve to be given a bilingual approach to subjects such as "current affairs", "history" or "geography", enabling them to observe how similar events or facts may be presented quite differently by writers in different languages and from different national backgrounds.

Fluency in two or more languages has become an educational goal as vital as literacy, not only in meeting to-day's social and economic realities but also in assisting young people to escape the confinement of a single mode of expression. Although each human language has remarkable flexibility, no single language is perfect, and it is important both socially and intellectually that each child develop the freedom and agility to think and communicate in at least two different modes, from as early an age as possible. In the 21<sup>st</sup> century, the eradication of monolingualism and illiteracy should become a global educational objective.

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<sup>23</sup> See Dalby 1984b

No national government or provincial administration, anywhere in the world, can be regarded as adequate – or even legitimate - if it does not give over-riding priority to the provision of an adequate education to every child within its jurisdiction. In the 21<sup>st</sup> century, such education must go beyond simple literacy and numeracy in one language. Every child has the right and need, not only to acquire a knowledge of the written word through the medium of her or his primary language, as young as possible, but also the right and need to acquire a window on the wider world through an alternative international language, also as young as possible. Just as children from small speech communities need to be bilingual, in order to escape from a confined cultural environment, so also do children speaking a major language like English, in order to escape from mental confinement within the structure of one language.

## The Concept of the Logosphere

All communication which has ever taken place among all speakers of all languages around the globe, comprising every act of human expression and discourse, artistic creation and verbalized thought, may be conceptualised as a continuous and on-going human creation, the *logosphere*.

- *The logosphere comprises the content and product of the linguasphere, embracing all meaningful realisations of language, including every verbalised act of thought, speech or writing, viewed either synchronically or diachronically.*<sup>24</sup>

The logosphere in its more abstract form is a reformulation of a concept put forward in the 20<sup>th</sup> century, and known hitherto in French as the *noösphère*. Half a century ago, the French priest, archaeologist and philosopher Pierre Teilhard de Chardin completed his treatise *Le phénomène humain* («the human phenomenon»), in which he discussed the place of humanity in the evolution of the world.<sup>25</sup> He developed an idea, advanced previously by the Russian biochemist Vladimir Vernadsky, that the human consciousness had created an intellectual envelope or membrane around the globe, supplementing the organic biosphere and the inorganic geosphere - a collective memory built up by the peoples of the world since the beginnings of speech. This specifically human dimension of planet Earth had already been named *noösphère* by Vernadsky, from Greek *noös* "mind", although the awkwardness of this term, in either French or English, has prevented its gaining very wide currency.

The more congenial term *logosphère* began to be used in French by the Observatoire Linguistique during the early 1990's, as a term to cover the totality of languages around the world, but the word did not appear in print with this meaning until 1993, followed in 1994 by the use of *logosphere* in English and *logosfera* in Spanish and Italian, in the same sense. The first published use of the word in French or in any other language, however, may have been in 1991 by Régis Debray, who employed the term *logosphère* in a more restricted sense, to describe the period of communication between the inventions of writing and printing.<sup>26</sup>

The original concept of the noosphere was partly obscured by the essentially historical approach which Teilhard de Chardin adopted towards the evolution of humanity. He was writing in a different age, at a time when human progress was at a mere gallop, and when scholars in the humanities were as much preoccupied with the remoter past as with the rapidly unfolding present. So it was that philosophical – like linguistic - speculation on the prehistory of humankind drew attention away from the need to reflect on the actual cultural and linguistic geography of the world today.

- *The logosphere can be considered as the cumulative product of human expression and creativeness through time and in all parts of the world, including every tangible and intangible product of humankind. It extends to the totality of every act of human expression and communication, including every verbalised thought and conversation.*

<sup>24</sup> From this point of view, there are some parallels between the concepts of the *logosphere* and the *linguasphere*, on the one hand, and Ferdinand de Saussure's concepts of *parole* and *langue*, on the other (Saussure 1964, based on lectures 1906-1911).

<sup>25</sup> Teilhard de Chardin 1955

<sup>26</sup> Debray 1991

- *It is reasonable to extend the concept of the logosphere to include all surviving forms of art and music, all forms of scientific and technical creation, attributable to individuals and communities in the possession of speech; and all forms of "destructive communication", aimed at silencing the voices of others.*

The tangible heritage of the logosphere is central to the cultural identity and social dynamics of all speech communities, and to the reception and integration of each human voice and personality, as each person takes her or his place in the sequence of individuals who constitute each and every community on earth.

The essential difference between the linguasphere at the core of the logosphere, and the surrounding logosphere itself, is that the linguasphere constitutes a neutral framework of languages, to be used and developed as their speakers wish. It provides the central operating system, the essential linguistic blueprint, at the heart of the logosphere. The logosphere itself, on the other hand, provides modern speakers with the accumulated experience and traditions of earlier generations, providing them with openings and clues for further discoveries and explorations, but also shackling them to past dogmas and preconceptions.

The logosphere represents the totality of humankind's cultural and scientific heritage, across the boundaries of every language, community and nation, and from the noblest to the most evil of human words, gestures, actions and creations.

The logosphere includes also an important non-verbal form of human communication, in the form of violence deliberately inflicted on others or on oneself. The possession and use of weapons have always been major factors in the way human beings communicate, both within and between speech communities, and it must be recognised that the use of this brutal form of "anti-speech" is often a response to verbal violence or to the encouragement of violence through the spoken or written word. It is significant that the propagation of tools designed to silence the voices of others, from the proliferation of the handgun to that of nuclear weapons, has kept pace during the last five hundred years with the multiplication of inventions designed to spread and facilitate the use of speech and writing.

Just as the linguasphere is composed of a continuum of varying but intercommunicating languages and individual voices, so the logosphere itself is composed of a continuum of varying but intercommunicating outlooks (or belief-systems) and individual views. Just as the individual child – and the child's *voice* - is incorporated into her or his speech community through the acquisition of linguistically appropriate speech patterns, so he or she is normally incorporated into – and identified with - her or his cultural community through the acquisition of a socially appropriate outlook on the world.

A major task of the new millennium will be to construct a new social architecture which permits the construction of a single planetary community, preserving the creative and non-destructive elements of all component communities and leaving the individual free to create and to choose, but not destroy. A universal system of ethics will need to be constructed, through the medium of every language, by which there is universal respect of the rights, freedoms and views of others, regardless of their sex, origins or age. Ideally, such a system would include a taboo on the infliction of physical violence or death on any human being, as well as a clear recognition that all children are born free, and are in no way the property of their parents or communities.

Children's freedom from the confines of individual cultures will be enhanced if they are provided with the opportunity to be bilingual, not only in terms of the linguasphere but also in terms of the logosphere. In other words, they will benefit from the knowledge of two or more different languages, not only as an exercise in mental agility and communicative skills, but also because each chosen language opens up new perspectives, providing them with access to different life-styles and communal outlooks. By the same token, every child deserves to benefit from a system of education which does not imprison her or him within the belief-system of a single cultural community.

## 1.5 The Three Thresholds of Speech

### The First Threshold of Speech

It is reasonable to assume that pre-human communicative skills were progressively expanded and developed, as the cranial capacity and tool-making skills of hominid communities expanded and developed over a period of thousands of millennia. By just one hundred millennia ago, so-called Neanderthal communities had a sense of aesthetics and religion, as indicated by the burial of flowers with a dead body, and they therefore probably possessed early forms of human speech, even if restricted phonologically by their vocal apparatus.

The most rapid development of human powers of self-expression and communication are likely to have occurred after the emergence – from around one hundred millennia ago - of the human brain and vocal apparatus as people now possess them, and hence of humankind (*homo sapiens*) in its present mental and physical form.

It is also reasonable to suppose that the elaboration of speech in its present form, and of existing powers of linguistic and artistic self-expression, were at least in part the result of increased mental power of observation, introspection, analysis and inventiveness. A relatively late but rapid onset of fully articulated speech among all human communities which subsequently survived would explain the subsequent swiftness of technical and cultural innovations. A sudden break-through in the available means and mode of human expression and communication provides the best explanation for the "mystery of evolution" described by Lieberman more than two decades ago:

*"One of the great "mysteries" of human evolution is the sudden acceleration in the rate of change of human culture that occurred between 40,000 and 30,000 years ago.... Tool types became more varied; new materials were utilized; finely detailed bone implements like needles became common; new techniques for stoneworking appeared... The appearance of art was sudden. The drawings of the upper paleolithic [period], which were executed on cave walls, have been equalled but never surpassed in human history... The art of the paleolithic also includes engravings and sculpture. Accompanying the art is the first evidence of the use of technology to expand human cognitive abilities... The exact nature of what is being recorded is not always clear. However, the startling thing is that notational systems were in use 30,000 years ago. Human morphology, cognitive ability, and language probably were fully evolved."*<sup>27</sup>

The first *threshold of speech* may have been crossed as late as fifty to forty thousand years ago. After millions of years of slow but steady progress as tool-makers, the direct ancestors of modern humankind began to express a new relationship with their environment through paintings of a remarkably high quality, and through engravings and sculpture. It is not impossible that some paleolithic artists, with new perceptions as well as new skills, were already seeking to communicate their existence to other beings through time, just as humankind is now seeking to communicate with possible extra-terrestrial beings through both time and space.

Technological innovation began to accelerate, and has brought humankind from the stone-age to the space-age in only thirty times the length of the millennium now ended. Such a dramatic breakthrough can only have been accomplished by communities possessing fully articulated speech, as it now exists, and communities possessing such a high level of artistic feeling and sophistication can be assumed to have

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<sup>27</sup> Lieberman 1975 (p.180-1)

mastered also the less preservable modes of expression provided by music, song and oral literature. The first evidence is also available, from that same period of cultural breakthrough, of attempts to create notational systems, as yet undeciphered.

For it seems improbable that communities of human beings, possessing fully developed speech, could have existed for long on this planet without leaving abundant physical evidence of the cultural and conceptual sequels of speech. It is also clear that human individuals and communities already possessing speech would have had an immense advantage over hominid communities still lacking that facility. The only communities which subsequently survived were those which had crossed the threshold of speech, and this fact provides a clue to the likely invention of speech.

Speech depends on the application of the human intellect to the potential of the human vocal system, and vice versa, just as entry into the world of telecommunication has depended on the application of that intellect to the recently discovered potential of electricity. Rather than explaining the development of articulate speech by reference to a pre-existing linguistic instinct, or an as yet unrealised capacity of the human brain, it is simpler to credit that development to the inventiveness and adaptability of the human brain, once allied to the labelling and communicative power of the human vocal system. That speech should play such an integral part in the development and functioning of conscious thought, from infancy onwards, is no more surprising than the way in which children assimilate reading and computing skills, especially where they are allowed to acquire these at a very early age.

The apparently rapid development of speech may likewise have a simple explanation, if visualised in the context of a world in which a variety of hominid forms had evolved over a period of several million years. If one of those human varieties had developed a higher degree of intellect than some others, and if another had developed a more flexible vocal system, then their hybridisation might explain the sudden "take-off" of humankind, once its members were equipped with articulate speech.

From such a hypothetical point onwards, the development of spoken communication would have allowed the speed of human development to accelerate relentlessly.

Communities of speakers explored and occupied the inhabitable areas of the entire planet, and non-speaking communities found themselves unable to compete. Each community had a tool-kit of words and speech patterns, which could be expanded and adapted at will, and the number of these tool-kits or "languages" multiplied and diversified with the expansion of humankind around the world.

The relatively late but rapid onset of fully articulated speech among all those human communities which survived the first threshold of speech serves to explain the subsequent accelerating speed of technical and cultural change within humankind, alongside the continuous growth and development of the stocks of words which communities developed in all parts of the world.

It is reasonable to suppose that this network of speech was established gradually around the globe by migrant communities, exploring ever more widely afield, until at last the invention of writing gave a new impetus to human progress, a new momentum in the organisation of larger communities and economies. The long millennia of exploration and expansion can be described as the *paleolinguasphere*, lasting until the beginning of the era of the written and printed word, beginning only five thousand years ago.

During this paleolinguasphere, it is likely that the human population of six continents totalled less than the present population of a modern metropolis like Mexico City or Bombay, but that there were more individual languages spoken around the world than there are today. This same era of the paleolinguasphere represented the large majority of time which human speech communities have spent on planet Earth, during which the majority of humankind subsisted in small nomadic bands of hunters, fishers and gatherers. Some communities succeeded in retaining this traditional way of human life until modern times, but have succumbed or are now succumbing to the aggressive expansion of agricultural, pastoral and industrial communities.

## The Second Threshold of Speech

The extension of speech to its written form, beginning in North Africa, Mesopotamia and East Asia, marked the threshold from the *paleolinguasphere* to what may be termed the *mesolinguasphere*, the era of the development of the written and printed word. The invention of writing brought much needed permanency and mobility to the products of speech. The transcription of certain languages into written form, over the last five millennia, was further accelerated over the last five hundred years by the rapid spread of printing as a device for propagating texts in a growing number of written languages.

Especially in its early stages, the impact of writing was so great that it was often believed to have had supernatural origins. Such beliefs were exploited by individuals who controlled the new skill of writing, and who – as in Egypt – managed to arrest the development of new writing skills by freezing writing systems in forms presented as sacred or divine.

Among the first applications of writing were the administration of wider empires and trading-systems than had previously been possible, and the establishment of written religions. Writing thus created "dead" languages, frequently sacred, whose fixed texts - and varying interpretations of texts - have had a profound effect on the subsequent development of human society.

As a by-product, writing has provided historical evidence on the development of human society during recent millennia and has allowed the progressive accumulation and development of human knowledge and inventiveness. The most influential of those inventions was that of the printing-press, which took writing out of the hands of small, largely priestly minorities. During the last five hundred years, printing has brought knowledge and enlightenment, and therefore power, to broad sections of society previously excluded from any form of education or decision-making.

## The Third Threshold of Speech

The latest and most sensational stage in the progressive development of speech, and of humankind itself, has been the present telecommunications revolution, which began with the invention of the telephone in the 19<sup>th</sup> century, but which has accelerated exponentially during the last decades of the 20<sup>th</sup>. The year 2000 arrives at a moment which can appropriately be regarded as marking the third great threshold in the history of speech.

The many technical and political developments of the late 20th century have overshadowed a change in the most fundamental aspect of humanity – the power of speech in its primary vocal form. Until modern times, the spoken word travelled only as far as a voice could carry and it faded away as soon as it was uttered. It could be stored only within the fallible memory of human beings or committed to paper. With the advent of electronic communication, speech, in its primary form, has now resumed its position as the dominant force of human communication.

This *neolinguasphere* is the era of the development of telecommunications and the electronic word, marked by the permanent recording and instant telecommunication of speech, and by the unlimited storage, transmission and manipulation of texts and images. Most importantly, it marks the onset of a world in which individual voices are able to contact each other and converse without limitations of distance, with increasing ease and at steadily decreasing cost, and where illiteracy or limited reading skills no longer form a barrier to long-distance communication.

The linguasphere, as humankind's greatest and most collective creation and mental resource, has thus broken many of the physical, temporal and now social restraints on human communication. As a result, the pre-electronic human past is receding from the present day at an accelerating speed, as the human world is launched into a new era.



For the sake of their descendants, it is appropriate that all human communities should now review the way in which they have hitherto organised themselves on this planet, including all their inherited beliefs, practices, prejudices and assumptions. Most importantly, all communities need to recognise their allegiance to humankind as a single globalised community, and to this planet as a collective home and vehicle. The key to this recognition must be a more equal relationship between young and old, and between men and women, a more balanced distribution of the planet's resources, and a greater independence from the voices and wisdoms of the past.

Until recent times, it was difficult to observe the globality of Earth and humanity as though from outer space. All humankind was involved in constructing a vast web of converging and diverging languages, but few could see more than the small area of communication around them. It was as though everyone had been involved in painting or writing on their own section of a giant frieze or wall, but with no-one able to appreciate the totality of their global human creation. Individual communities have often believed that their own language was somehow unique, or that it had been chosen as the privileged point of contact between humanity and a wider creative force in the universe. This was often accompanied by the illusion that people from one corner of a Lilliputian world, or from one tiny social or ethnic or denominational group, were somehow "superior" to others. These are divisive attitudes which deserve to be left behind, as humankind moves forward into a new and better informed millennium.

Until now, global information on the languages of the world has tended to be presented in terms of the search for their historical or presumed historical origins, or in terms of their geographical distribution within individual nation states. The Linguasphere Register opens the way to a new overall view of the linguasphere, of the totality of all living and recorded languages as a functioning transnational system of global communication.

The remarkable kaleidoscope of the world's languages and communities may now be observed in detail, without one's view being constrained and fragmented by the framework of the modern nation-state. Human beings to-day have the means of observing and studying themselves as a single but complex human family, across all superimposed frontiers of nationality, religion and culture. By exploring the continuum of languages and communities which make up the linguasphere, they will perhaps find the key to unlock within themselves a deeper, underlying sense of global unity and of human interdependence.

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