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**WHY SHOULD LINGUISTIC DIVERSITY BE  
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SOME ARGUMENTS**

*Guide for the Development of Language Education Policies in Europe  
From Linguistic Diversity to Plurilingual Education*

**Reference Study**

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## Preface

This text, part of a series published by the *Language Policy Division*, is clearly significant in its own right because it deals with certain influential factors in the organisation and sociolinguistic foundations of language teaching and in the linguistic ideologies at work in problems related to the languages of Europe. It is, however, part of a larger project since it is one element of a collection of publications focused on the *Guide for the Development of Language Education Policies in Europe: From Linguistic Diversity to Plurilingual Education*.

This *Guide* is both a descriptive and programmatic document whose purpose is to demonstrate the complexity of the questions involved in language teaching, often dealt with in a simplistic manner. It aims to describe the processes and conceptual tools needed for the analysis of educational contexts with respect to languages and for the organisation of language learning and teaching according to the principles of the Council of Europe.

There are several versions of this *Guide* for different audiences, but the 'main version' deals with a number of complex questions, albeit in a limited framework. It seemed necessary to illustrate these questions with case studies, syntheses and studies of specific sectors of language teaching, dealing in monographic form with questions only touched upon in the *Guide*. These *Reference Studies* provide a context for the *Guide*, showing its theoretical bases, sources of further information, areas of research and the themes which underlie it.

The *Modern Languages Division*, now the *Language Policy Division*, demonstrates through this collection of publications its new phase of activity, which is also a continuation of previous activities. The *Division* disseminated through the *Threshold Levels* of the 1970s a language teaching methodology more focused upon communication and mobility within Europe. It then developed, on the basis of a shared educational culture, the *Common European Framework of Reference for Languages* (published in its final version in 2001). This is a document which is not concerned with the nature of the contents of language teaching but rather with the form of curricula and syllabi for language teaching. The *Framework* proposes explicit referential levels for identifying degrees of language competence, and thus provides the basis for differentiated management of courses so that opportunities for the teaching of more languages in schools and in lifelong learning are created. This recognition of the intrinsic value of plurilingualism has simultaneously led to the development of an instrument which allows each learner to become aware of and to describe their language repertoire, namely the *European Language Portfolio*. Versions of this are increasingly being developed in member States and were at the heart of the European Year of Languages (2001).

Plurilingualism has been identified in numerous *Recommendations* of the Council of Europe as the principle and the aim of language education policies, and is valued at the individual level as well as being accepted collectively by

educational institutions. The *Guide* and the *Reference Studies* provide the link between teaching methods and educational issues on the one hand and policy on the other, and have the function of making explicit this political principle and of describing concrete measures for implementation.

In this study, Tove Skuttnab-Kangas discusses in detail what is meant by linguistic diversity and the advantages of preserving it. She suggests that linguistic diversity can be defined in terms of the absolute number of languages and the numbers of people speaking a language. She then clarifies what is meant by 'European languages' and relates her discussion to the purposes of the Council of Europe in promoting linguistic diversity. Linguistic diversity can be compared to bio-diversity and the importance of preserving the latter is comparable to preserving the diversity of languages around us. She then discusses other arguments, in particular economic costs and benefits, and ends with the question of how ability in English will probably be less economically significant as the number of people with some degree of proficiency in English increases. Being plurilingual will thus be an advantage in the future..

This specific aspect of the problems of language education policies in Europe gives a perspective on the general view taken in the *Guide* but nonetheless this text is a part of the fundamental project of the *Language Policy Division*: to create through reflection and exchange of experience and expertise, the consensus necessary for European societies, characterised by their differences and the transcultural currents which create 'globalised nations', not to become lost in the search for the 'perfect' language or languages valued at the expense of others. They should rather recognise the plurality of the languages of Europe and the plurilingualism, actual or potential, of all those who live in this space, as a condition for collective creativity and for development, a component of democratic citizenship through linguistic tolerance, and therefore as a fundamental value of their actions in languages and language teaching.

Jean-Claude Beacco and Michael Byram

"Just as the 'information age' has commenced, two of the world's great stores of information, the diversity of biological organisms and of human languages, are imperiled." (Brush 2001, 517).

## 1. Introduction - the state of the art

### 1.1. *Europe and linguistic diversity: Europe is linguistically the poorest continent*

The latest count of both living and many known but extinct languages of Europe (Price, 2000) gives some 275 languages (and more than half of these are in the former USSR). Nonetheless, Europe is very poor on linguistic diversity. If we discount recent immigrants and count only the autochthonous languages, we have only some 3% of the world's spoken languages. North, Central and South America have around 1,000 autochthonous spoken languages, 15%. Africa has around 30%, Asia a bit over 30% and the Pacific somewhat under 20% (see Skutnabb-Kangas, 2000 for details). A count based on Sign languages would probably give a similar distribution<sup>1</sup>. Two countries, Papua New Guinea with over 850 languages and Indonesia with around 670, have together a quarter of the world's languages. Adding those seven countries which have more than 200 languages each (Nigeria 410, India 380, Cameroon 270, Australia 250, Mexico 240, Zaire 210, Brazil 210), we get up to almost 3,500 languages, i.e. 9 countries have more than half of the world's spoken languages. With the next 13 countries, those with more than 100 languages each (the Philippines, Russia, USA, Malaysia, China, Sudan, Tanzania, Ethiopia, Chad, Vanuatu, The Central African Republic, Myanmar/Burma and Nepal), 22 mega-diversity countries (some 10 percent of the world's countries) have around 75% of the world's languages (and only one of them is in Europe if Russia is counted as a European country).

The top ten languages in the world in terms of number of speakers (Mandarin Chinese, Spanish, English, Bengali, Hindi, Portuguese, Russian, Japanese, German, Wu Chinese) account for approximately half the world's population but they represent only 0.10 - 0.15% of the world's spoken languages. Five of them are spoken in Europe, even if the bulk of the speakers of Spanish, English and Portuguese are in other parts of the world.

- There are 6-7,000 spoken languages (see *The Ethnologue*, <http://www.sil.org/ethnologue>), and maybe equally many Sign languages;
- The median number of speakers of a language is probably around 5-6,000;

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<sup>1</sup> Nobody knows the number of Sign languages, but there may be as many of them as of spoken languages. Sign languages are full-fledged languages, capable of expressing any thoughts. They are in no way related to spoken languages.

- Over 95% of the world's spoken languages have fewer than 1 million native users;
- Some 5,000 spoken languages have fewer than 100,000 speakers;
- Over 3,000 spoken languages have fewer than 10,000 users;
- Some 1,500 spoken languages and most of the Sign languages have fewer than 1,000 users;
- Some 500 languages had in 1999 fewer than 100 speakers;
- 83-84% of the world's spoken languages are endemic: they exist in one country only.

### **1.2. What is happening to the world's linguistic diversity?**

Languages are today disappearing faster than ever before in human history. A language is threatened if it has few users and a weak political status, and, especially, if children are no longer learning it, i.e. when the language is no longer transmitted to the next generation. There are detailed definitions of the degree of threat or endangerment. Even the most 'optimistic realistic' linguists now estimate that half of today's spoken languages may have disappeared or at least not be learned by children in a 100 years time, whereas the 'pessimistic but realistic' researchers (e.g. [Krauss 1992](#)) estimate that we may only have some 10% of today's oral languages (or even 5%, some 300 languages) left as vital, non-threatened languages in the year 2100.

If Europe wants to support linguistic diversity and become more creative and richer (see section 3), we should grant maximal support to ALL indigenous and minority languages, including, especially, immigrant and refugee minority languages which represent the only way to increase linguistic diversity in Europe. Before discussing whether and why Europe should support linguistic diversity, we need to clarify some of the main concepts in the debates.

## **2. Concept clarification and definitions**

We shall discuss educational linguistic diversity in relation to three groups: linguistic majorities, linguistic minorities, and indigenous peoples, and also talk about "Europe", and "European languages" and "non-European languages". All of these need to be clarified and some defined.

**Linguistic diversity** (LD) in general has been defined in at least two ways. The most common definition uses a simple count of languages: the more languages, the more LD. Nigeria with its over 400 languages, is more linguistically diverse than the whole of Europe, regardless of how we define Europe (even with a maximum definition of "Europe" the number of languages is under 300). If, as has been predicted, the number of (spoken) languages in our world, diminishes drastically, so that we according to the more "optimistic" prognoses might have only 50% of today's languages left in a hundred years' time as non-threatened, vital languages, the world would in the year 2100 be much less linguistically diverse than it is now.

When we here say that Nigeria has over 400 languages and Europe has fewer, we are only speaking of those languages that are autochthonous to Nigeria or Europe, meaning they are spoken natively by Nigerians or Europeans and have in most cases been spoken there for centuries. Languages which have come to Nigeria or Europe with recent immigrants and refugees are not counted. Most definitions of linguistic diversity count only autochthonous languages.

Most of Nigeria's languages are endemic, meaning they are spoken natively only in Nigeria and nowhere else. Some are also spoken in neighbouring countries and they are not endemic. In Europe, for example, German is not endemic to Germany because it is spoken natively not only in Germany but also in, for instance, Austria, Switzerland and Belgium, by people who are not (descendants of) recent immigrants. Some definitions of linguistic diversity count only endemic autochthonous languages. There are however other definitions of LD. In an article analyzing countries with no definite linguistic majorities (in the sense of one large linguistic group, for instance over 50% of the population), Robinson (1993: 54) suggests, that:

a ranking of degree of linguistic diversity should not be based on the absolute number of languages in a country, but rather on the percentage of the population speaking any single language. Thus the country where the largest language group represents the smallest proportion of the population would be deemed as the most linguistically diverse, since all the other language groups would represent yet smaller percentages.

Both ways of assessing linguistic diversity, absolute number of languages and the percentage of the population speaking the largest language, are useful measures for certain purposes. We clearly have to differentiate between 1. Countries with a combination of one definite linguistic majority and one or many minorities, and 2. Countries consisting of "minorities" only, without a "majority". The first type is prevalent in Europe and neo-Europes, whereas the second type is more common in the rest of the world, even if there are many exceptions.

Both types of definition are also important when discussing educational linguistic diversity (ELD). The various counts of numbers of languages can be related to how many languages are studied in schools and other educational institutions in various countries ("language token" in Candelier et al.'s terms, 1999): the more languages studied, the more ELD. The percentage speaking (or signing) the largest language can be related to how large a percentage study the most frequently studied language, of those who study languages ("dispersion" in Candelier et al.'s terms). The smaller the percentage (of those who study languages) studying the most frequently studied language, the more ELD.

The Council of Europe has as one of its goals to promote both types of educational linguistic diversity.

**Indigenous peoples, minorities and linguistic minorities** are the stewards of the world's linguistic diversity. In international law, groups accepted as "minorities" have many more guaranteed rights, also in education, than "immigrants",

"migrants", "guest workers" or refugees, who have almost no rights. Therefore many groups strive towards being granted the status of minorities. One of the strategies to force unwilling States to organize minority education better is to make them real duty-holders: to hold them to task under international or regional human rights instruments which they have signed and ratified.

On the other hand, many groups reject labels, not knowing the legal implications. In much British discourse "immigrant" is seen as a negative term by many immigrant minorities from former colonies, whereas in Germany being accepted as "immigrants" (rather than "foreigners" or "guest workers") would be positive for Turks. In the USA, on the other hand, "minority" is seen by many as degrading. But "linguistically diverse students" (a recent North American invention for linguistic minority students) have no rights whatsoever in international law. They are a non-entity, whereas "minority students" have at least some rights. From a human rights point of view, especially in relation to legal implications in education, those groups who reject the label (ethnic/linguistic/national) "minority", are doing themselves a disservice and, sometimes unknowingly, rejecting rights which they need and want to have.

The distinction between "indigenous peoples" and "minorities" is important. Only peoples, not minorities or populations or (ethnic or other) groups, have the right to self-determination in international law. When the Draft Declaration on the Rights of Indigenous Peoples (1991) is accepted by the United Nations, it will probably grant indigenous peoples many more rights than minorities have, hopefully also in education. Thus states will also have more duties to organize (and pay for) mother tongue medium education for indigenous peoples than for various kinds of minorities. ILO (International Labor Organisation) Convention Concerning Indigenous and Tribal Peoples in Independent Countries (Convention No. 169, 27 June 1989) contains perhaps currently the strongest definition (the one we shall also use here) of indigenous peoples for legal purposes (the Draft Declaration above has no definition<sup>2</sup>):

... peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

For example, the Saami (in Norway, Sweden, Finland and Russia) are indigenous peoples in Europe (and the 10 Saami languages are indigenous languages). So are

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<sup>2</sup> Since virtually all indigenous peoples are also at the same time minorities in terms of both numbers and power (less than 50% of the population and non-dominant), they can in principle make use of all the rights that minorities have in international law. But still more important is that most of them have never properly surrendered or abandoned their sovereignty as a people – it has been forcibly taken from them. This is also true in most cases where there have been treaties with the colonisers. Therefore they should be seen as sovereign entities, with the right to negotiate self-determination. For further references, see Clark & Williamson's edited volume *Self-Determination: International Perspectives* (1996); de Varennes 1996; Hannum 1989; Martinex Cobo 1987; Alfredsson 1990; Thornberry 1997.

the Inuits in Kalaallit Nunaat (Greenland) and several small peoples in the north of Russia.

There is no definition of a "minority" that would be universally accepted in international law, but most definitions are very similar. Most definitions use as defining characteristics a combination of the following:

- Numbers;
- Dominance is used in some but not others ('in an inferior and non-dominant position', Andrysek 1989: 60; 'in a non-dominant position', Capotorti 1979: 96);
- Ethnic or religious or linguistic traits, features or characteristics, or cultural bonds and ties which are (markedly) different from those of the rest of the population (in most definitions);
- A will/wish (if only implicit) to safeguard, or preserve, or strengthen the patterns of life and behaviour, or culture, or traditions, or religion, or language of the group is specifically mentioned in most definitions (e.g. Capotorti 1979: 96). Language is included in most but not all definitions (e.g. not in Andrysek's definition 1989: 60);
- Citizenship/nationality in the state concerned is required in most definitions in charters and covenants as part of the definition, i.e. minorities are defined so as to give national or regional minorities more rights than to immigrants and refugees (who, by definition, are considered non-national and non-regional).

In contrast, academic definitions for research purposes often make no mention of nationality as a criterion and I shall use my own definition here:

A group which is smaller in number than the rest of the population of a State, whose members have ethnic, religious or linguistic features different from those of the rest of the population, and are guided, if only implicitly, by the will to safeguard their culture, traditions, religion or language.

Any group coming within the terms of this definition shall be treated as an ethnic, religious or linguistic minority.

To belong to a minority shall be a matter of individual choice.'

(Skutnabb-Kangas 2000: 489-490)

I have in this definition omitted the requirement of citizenship ('who are nationals of that State'), because a forced change of citizenship to my mind cannot be required in order to be able to enjoy basic human rights<sup>3</sup> (Skutnabb-Kangas 2000, 490-491). This means that immigrants and refugees who otherwise fulfill the criteria in the definition, are also to be seen as minorities. In addition, many immigrants to Europe and their children are citizens of their country of residence anyway. The question has been discussed how long they have to have been in the new country in order to be granted the status of "national" minorities. For instance, are the Russian-speaking immigrants from after the 1940s in the Baltic countries, national minorities? The only country in Europe which has a legally set time limit

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<sup>3</sup> This interpretation has since been borne out by the UN Human Rights Commission's General Comment on Article 27, from April 1994.

is Hungary; the time required is 100 years. According to this definition, the Roma ("Gypsies") would be national minorities in all European countries whereas the large majority of the Russians in the Baltic countries are not. Nonetheless, they should have the same educational language rights as "national minorities", at least if they are citizens. The Deaf are also national linguistic minorities and Sign languages are minority languages.

Finally, we come to the definition of **Europe and European languages**. Are, for instance, Russia, Britain and Georgia in "Europe"? According to some criteria yes, others no (Skutnabb-Kangas 2000). Price (2000) uses geographical or geological rather than political criteria. Some of his problematic cases include Iceland (his decision is that it should be included, whereas Greenland "is, according to all criteria, part of North America" and is excluded). The Portuguese Atlantic islands, except Madeira, are included; Malta is included; on the south-eastern and eastern borders of Europe, he has included Georgia, Armenia and Azerbaijan even if "the crest of the Caucasus Mountains offers an obvious dividing line between Europe and Asia" (p. xi) and they should thus be left out.

Accepting all Council of Europe's member states as "Europe" defines "Europe" politonymically (on the basis of belonging to certain political entities; some people use a very small entity, e.g. saying "Europe" when only referring to the European Union). A toponymic definition, based on geographical criteria, would exclude all Price's other problematic cases except Malta. The three "Asian" countries and the "African" islands are included by Price on a cultural ethnonymic basis (the first three "would almost certainly wish to be considered as European countries", p. xii).

All included languages are "languages of Europe"<sup>4</sup>. But are all "languages of Europe" also "European languages"? Many writers use the term only about (some of) the Indo-European languages (a linguonymic definition), often just those with large numbers of speakers (like English, French, German, Italian, Spanish), leaving out (at least some) non-Indo-European languages (e.g. many of the small Finno-Ugric languages, like Saami or Mari). In this article a very broad politonymic definition is used. Thus Europe refers here to Council of Europe's member states. All languages spoken natively in these countries (regardless of whether they are originally toponymically, ethnonymically or linguonymically "European") are seen as languages of Europe. This includes languages which are mother tongues of indigenous peoples and autochthonous ("national"), or immigrant and refugee minorities (see also Extra & Gorter, 2001). It is important to emphasise that it also includes **all** the Sign languages, and those planned languages which, like Esperanto, are the native languages of at least some people<sup>5</sup>.

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<sup>4</sup> How much did you know about languages of Europe like Arbresh, Archi, Auregnais, Avar, Bagvalal, Balkar, Bruttian, Budukh, Camunic, Carian, Tat, Urartian, Vegliote, Veinakh, Veps, Votic, Yurak (Nenets) or Zyrian (Komi), just to take a few examples?

<sup>5</sup> There are children growing up in Europe who have Esperanto as (one of their) mother tongue(s).

### 3. Why is linguistic diversity important?

After the concept clarification, we are ready to ask again whether Europe, and here specifically the educational system, should in fact support linguistic diversity. Why should we do it? Would the world not be a better place if we all spoke just a few big languages? We would all understand each other? Maybe we would, through easier contacts and networking, become more tolerant and peaceful? We could use the time that now goes to language learning, for something more productive? Are there in fact substantial arguments for supporting linguistic and cultural diversity, or is this just about nice phrases about "to increase awareness and appreciation ... of the richness of Europe's linguistic heritage", and "to celebrate linguistic diversity" (aims of The European Year of Languages)?

#### ***3.1. The heritage and biodiversity arguments: linguistic and cultural diversities are the storehouse of historically developed knowledges; linguistic and cultural diversity are connected to biodiversity***

These arguments discuss the relationship between linguistic and cultural diversity (LD) and biodiversity, and threats to them both. LD is disappearing relatively much faster than biodiversity. We use low and high estimates of numbers and extinction rates for biological species and do a simplified calculation. According to the 'pessimistic realistic' estimate, 20% of the biological species we have today might be dead in the year 2100, in hundred years' time. According to the 'optimistic realistic' estimate the figure would be 2% (Skutnabb-Kangas, 2000). Putting these figures together with the figures for threatened languages, we get the following comparison: Optimistic: 2% of biological species but 50% of languages may be dead (or moribund) in a 100 years' time. Pessimistic: 20% of biological species but 90% of languages may be dead (or moribund) in 100 years' time.

Linguistic and cultural diversity on the one hand and biodiversity on the other hand are correlated - where one type is high, the other one is usually too, and vice versa, even if there are exceptions. Comparing the top 25 countries in terms of the number of endemic languages and the number of endemic vertebrates, conservationist David Harmon (1995) finds a high degree of overlap: 16 of the 25 top countries are on both lists. He has the same result when comparing languages and flowering plants, languages and butterflies, etc - there is a high correlation between various kinds of indicators of biological mega-diversity and rich linguistic diversity (Harmon, in press).

New research suggests mounting evidence for the hypothesis that the relationship might also be causal: the two types of diversities seem to mutually enforce and support each other (Maffi, 2001; Posey, 1999). It is not only the biological species and languages that disappear. With death of languages, also the "traditional ecological knowledge about relationships between plants and animals is being lost" (Nabhan 2001: 151). Indigenous and minority communities are "reservoirs of considerable knowledge about rare, threatened, and endemic species that has not to date been independently accumulated by Western-trained conservation biologists",

says Nabhan (2001: 151), summarizing a wealth of studies. This knowledge which is encoded in the many indigenous and minority languages, can be used both to "promote sustainable use of land and natural resources" (Nations 2001: 470) and to "help guide the identification, management, protection, or recovery of habitats" (Nabhan 2001: 151) for threatened species. These "conservation traditions, expressed in native languages, are what Hazel Henderson called 'the cultural DNA' that can help us create sustainable economies in healthy ecosystems on this, the only planet we have" (Gell-Mann, quoted in Nations 2001: 470). If the long-lasting co-evolution which people have had with their environments since time immemorial is abruptly disrupted (as we are doing today), without nature (and people) having enough time to adjust and adapt, we are also seriously undermining our chances of life on earth (see Terralingua's web-site <http://www.terralingua.org>). Evolution has been aided by diversity. The strongest and most stable ecosystems are those which are the most diverse. Diversity contains the potential for adaptation whereas uniformity can endanger a species (including the human species) by providing inflexibility and unadaptability, (Baker, 2001: 281). Baker argues that "Our success on this planet has been due to an ability to adapt to different kinds of environment over thousands of years (atmospheric [e.g. the Ice Age] as well as cultural. Such ability is born out of diversity. Thus language and cultural diversity maximises chances of human success and adaptability" (ibid.). "Just as in biology, diversity is the norm. So it is with language: multilingualism is the norm" (St. Clair 2001: 102).

### **3.2. Economic arguments**

#### *3.2.1. The creativity and innovation argument*

In industrial societies, the main items produced are commodities and, in a later phase, services. In industrial societies the ones who do well are those who control access to raw materials and own the other prerequisites and means of production. When we move to an information society proper, the main 'commodities' produced are knowledge and ideas. These are mainly transmitted through language(s) (and visual images). In this kind of information society, those with access to diverse knowledges, diverse information and ideas, will do well, the creativity argument claims. Creativity precedes innovation, also in commodity production, and investment follows creativity.

The countries with mega-diversities have had more varied micro-environments to observe, analyze, describe and discuss than countries with less diversity, and all of these knowledges have been encoded in their many languages. This means that countries where there is a rich linguistic and cultural diversity, embodying diverse knowledges, have in this sense access to more varied knowledges, ideas, and cosmo-visions than countries with few languages and cultures. A certain degree of uniformity might have promoted some aspects of industrialisation, but in post-industrial information societies uniformity will be a handicap. As we mentioned earlier, Europe is poor on linguistic diversity.

Plurilingualism enhances creativity. High-level Plurilinguals as a group do better than corresponding monolinguals on tests measuring several aspects of 'intelligence', creativity, divergent thinking, cognitive flexibility, etc. In an information society, those parts of the world will do well where multilingualism has

been and is the norm (as it is in most countries with linguistic mega-diversity), even among people with no or little formal education. This presupposes that the plurilinguals there obtain access to exchanging and refining these knowledges - which they may, in a thoroughly wired satellite- and chip-driven global society. This presupposes in most cases education through the medium of the mother tongue, even for numerically small groups. Thus education that leads to high levels of plurilingualism produces not only local linguistic and cultural capital but knowledge capital that will be exchangeable to other types of capital in the information society.

### 3.2.2. *Cost-effectiveness: should commodities or ideas travel?*

People often say that (diversified) language learning, using even the small mother tongues as languages of teaching and learning, and interpretation and translation into large numbers of languages are too costly<sup>6</sup>. When discussing the costs involved in the maintenance of linguistic diversity, it is important to differentiate between 'physical' and 'mental' aspects of costs. When people 'communicate' with each other, they can exchange things, commodities, or they themselves travel ('physical communication'). Alternatively, they can exchange ideas ('mental communication'). For physical communication to flow, we need roads, motorways, railways, airports, bridges, tunnels, lakes, seas, ports, etc. For mental communication to flow, we use spoken and signed languages, visual and aural images, telephone cables, satellites, missiles, etc. The tools (vehicles) needed for physical communication are both self-reproducing (legs; horses, donkeys, camels) and non-self-reproducing (bicycles, motorbikes, cars, lorries, trains, aeroplanes, boats, ships), and the material costs for these are large for individuals for all the non-self-reproducing ones above bicycle, and massive for both building and maintenance for societies. The tools for mental communication are our physical apparatuses for hearing, seeing, speaking and signing, books for reading; paper & pen, board & chalk, typewriters, TVs, phones, computers, radios, music instruments; clothes, food, movement, jewelry, etc.

The costs for material investment by individual are relatively small for most basic tools, larger for computers etc. Educational systems, from nurseries to universities, pay many of the initial societal costs (materials for language learning, training of teachers and translators, interpretation equipment etc), which may be relatively large initially but less for maintenance. Still, a lot of books, computers and salaries for language teachers can be financed for the price of airports, missiles and motorways. There are also other investments by individuals and societies. The time and effort involved in transport and travel can be compared with the time and effort for learning and using languages - it is fairly large in both cases for individuals. It is massive for societies for physical communication (research, planning, production, maintenance; traffic accidents; vulnerability of the tools for terror) and also relatively large for mental communication (research, planning, interpretation and translation). However, when we think of the costs for the environment, which obviously will pay an ever increasing role, the costs for physical communication

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<sup>6</sup> But Papua New Guinea, with some 5 million inhabitants, had in 2000 elementary education through the medium of 380 languages, and another 90 are to be added (Klaus 2001). This is more than in the whole of Europe...

are massive and to a large extent irreversible (e.g. CO<sup>2</sup>) while they are negligible for mental communication. The ROI (return on investment) for physical communication is negative for the world, including environmental effects, whereas the ROI for mental communication is substantial and positive.

A general conclusion is that while the costs for physical communications are enormous, the ROI low and negative (except for transnational companies), the rationale for much of the movement of commodities non-existent, except for market capitalism, and the effects for equity and peace negative, the costs for mental communications are relatively much lower, the ROI much higher (also for some transnational companies, like Microsoft or Nokia) and with few side-effects and the rationale a positive one for peace and democracy (Sachs, 1992; Galtung 1996).

### *3.2.3. Externalities and internalities as factors in cost-effectiveness*

In mainstream economics, internalities are the costs that are routinely counted in the price of a product, while externalities are costs which can be seen as possible side-effects, long-term effects (like environmental pollution which is not counted in the costs of a car). Externalities are today not only not counted as costs which the consumer should pay; they are often not mentioned or not even known. When people start demanding compensation from cigarette factories for their lung cancer, for instance, these costs which so far have been externalities, may soon become internalities and be counted in the price, making the cost of cigarettes higher.

If we apply these concepts to various aspects of communications, it seems to be clear that the externalities for physical communication are growing so rapidly in terms of the environmental costs that it will be necessary to support mental communications to a much larger extent. Computer chips and ideas weigh little and their travel causes little pollution, as compared to raw materials, oil, food, clothing, machines. In rational communication, ideas should travel globally, with the help of additive multilingualism in many different languages, and translation and interpretation, while most of the production of commodities and energy should be done locally, for local needs. It is unjustifiable that food on the average American table has traveled 2000 miles (Lehman & Krebs 1996: 122), or that people in Denmark buy Californian apples or New Zealand lamb or Kenyan cut flowers, or their pigs are fed Brazilian or Argentinean soy bean flour. If this still happens, those who benefit should pay the real price, with externalities internalized.

But for rational communication to be effective, in terms of ROI, local and global mental communication and the free exchange of ideas must be optimal<sup>7</sup>. Since people receive, reflect on, exchange and create ideas most optimally in languages they know, local languages and thus linguistic diversity are necessary for cost-effective communication. This might be the only way in which problematic economic theories about 'comparative advantage' (everybody should produce what

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<sup>7</sup> With due compensation, though – see the articles about the problematic aspects of intellectual property rights for indigenous peoples in Posey (Ed) 1999.

they are good at - see Lehman & Krebs 1996 for a critique) do work - using local languages definitely is a comparative advantage. The cost involved in people not understanding the messages (also in education) and not being able to fully utilize their potential and creativity, are enormous, as many African and Indian scholars have repeatedly pointed out (e.g. Pattanayak 1988; Prah 1995). From a communications cost point of view, then, when externalities are internalized, languages are our most cost-effective communication tools, and language learning should be strengthened in educational institutions. Any resources used are cost-effectively spent - provided we know how to spend them optimally. This is not done today in European schools.

#### *3.2.4. English and future supply and demand*

Prognoses from several countries predict that English proficiency, even very high levels, is becoming more and more common (e.g. Graddol, 1997). In a few years' time, when Europe, USA and Canada are lesser and lesser economic players globally, as seems likely, even native-like English will not be a guarantee of advantage, as there will be too many people who possess that qualification. High competence in English will be like basic literacy skills hundred years ago or computer literacy today in the West, a self-evident, necessary basic prerequisite for any job, not just "good" ones, but not sufficient.

Theories on supply and demand predict that when many people possess what earlier might have been a scarce commodity, the price goes down, i.e. it will be more difficult to exchange linguistic capital for economic capital. When a relatively high proportion of a country's or region's or the world's population have 'perfect' English skills, the value of these skills as a financial incentive will decrease substantially. Especially when Europe, North America and Japan in the near future will be lesser economic players, a development that has been predicted and that may materialise sooner than most predictions before September 11<sup>th</sup> 2001, knowledge in non-European languages becomes an important economic (and political) asset. Therefore, we need to be plurilingual and have English as only one of the languages. There are many common factors in all languages, and in learning languages: once learners master some of the basics, they can apply their knowledge about languages in general and their learning strategies to further languages. Since according to the interdependence hypothesis (Cummins 2000), there is transfer between many aspects of languages and since learning a third and fourth and further languages demands less effort and time once you have learned a second language up to a high level, it is perfectly possible for non-English speakers to reach high levels of English even if they start with other foreign languages and come to English only later. Plurilinguals as a group thus think in more flexible and divergent ways than monolinguals as a group; they innovate more, create more new knowledges and dreams - and have much more exchangeable linguistic capital.

The future belongs to multilinguals. They are an important part of the linguistic diversity which is necessary if the planet is to have a future.

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