The power to control language offers far better prizes than taking away people’s provinces or lands or grinding them down in exploitation. The empires of the future are the empires of the mind. *Winston Churchill*, 1943

In the language of ecology, the strongest ecosystems are those that are the most diverse. That is, diversity is directly related to stability; variety is important for long-term survival. Our success on this planet has been due to an ability to adapt to different kinds of environment over thousands of years (atmospheric as well as cultural). Such ability is born out of diversity. Thus language and cultural diversity maximises chances of human success and adaptability (*Colin Baker* 2001: 281).

1. Introduction

Languages thrive when material and ideological resources are invested in them. Most government policies and education systems worldwide reflect linguicism, since in official functions and education, resources are generally allocated to the standardised variant of one language. Linguicism is ‘ideologies, structures and practices which are used to legitimate, effectuate, regulate and reproduce an unequal division of power and resources (both material and immaterial) between groups which are defined on the basis of language’ (*Skutnabb-Kangas* 1988: 13, 2000). Most societies are hierarchically structured and reproduced along criteria of class or caste, ‘race’ (racism), gender (sexism), and language (linguicism). Discrimination on linguistic grounds functions to allocate resources unequally in the linguistic market. These categories interlock with each other: sociolinguistic differences typically involve distinctive features correlating with each.

The expansion of English through processes of global and local transplantation and appropriation will be analysed in relation to a) factors that explain the current dominance of English, and the search for conceptual stringency, b) ecolinguistic diversity maintenance and language revitalisation, and c) implications of the expansion of English for other languages in a range of contexts. When referring to English in the singular, we assume that for our scholarly purposes it can be considered a single language, since in written English and in formal spoken English ‘in the present-day world it is Anglo English that remains the touchstone and guarantor of English-based global communication’ because of distinctive heritage embedded in the core semantic and grammatical structures of the language (*Wierzbicka* 2006:13-14). For other purposes it is important to distinguish between different Englishes; however publications that celebrate the diversity of world Englishes or that document uses of ‘English as a Lingua Franca’ (*Jenkins and Mauranen*, this volume) tend not to be concerned with how English functions in power relations between speakers of different languages over time and currently.

Linguicide has occurred when a language is no longer used. Most languages do not die a ‘natural’ death but are extinguished as a direct result of policies in which the causal agents (direct or indirect)
which determine such policies, governments, educational policy-makers, and the media are identifiable. Survivors of the physical assault on Indigenous peoples by Europeans in the Americas and Australia were subjected to vigorous cultural and linguistic assimilation policies, as a result of which many if not most of the languages originally present on these continents are no longer in use. European languages – particularly English, French, Portuguese, and Spanish – have replaced them. English has thrived, as Ngũgĩ wa Thiong’o, the distinguished Kenyan novelist writes, ‘on the graveyard of other languages’ (1993: 35).

Linguists lag well behind researchers in many fields in understanding, analysing and even describing the role of languages in ecological diversity maintenance. The new cross-disciplinary research area, environmental social science ‘demands a better understanding of the complexities of current human-environment interaction’ and recommends ‘a new collaborative approach that makes environmental theories and research methods accessible across the natural and social sciences’, which would constitute ‘a mutually beneficial research agenda for all concerned’ (Moran 2010: back cover). Moran describes in great detail theories and methods from anthropology, biology, ecology, economics, geography, history, psychology, political science and sociology (and various cross-subdisciplines of these). After a synthesis, he outlines possible ways of exploring and understanding the human-environment interaction involved in climate change, biodiversity loss, deforestation, the impending crisis in availability of potable water and other global fast-growing challenges. That ‘language’ is not even an entry in his 13-page index is shocking, and shows the invisibility of linguists in cutting-edge research addressing some of the most important issues of our times.

Some of the work done on ecolinguistic diversity maintenance is described in the chapter and related to the expansion of English (and other dominant languages).

2. Reasons for the current dominance of English

2.1 English for world dominance

The current pre-eminence of English is the direct result of active UK and USA policies, in the British empire, and in the territory of the USA and its expansion policies in the Americas in the 19th century and worldwide throughout the 20th century (Arnove 1982, Smith 2003). English is one of the most permanent legacies of the period of European empires. This historical record is concealed by labels such as a ‘world’ or ‘global’ language, terms that reveal nothing of the processes that have led to its pre-eminence or to its consequences. English accompanied British settlers on continents with temporal climates, and in tropical countries with economies based on slavery, as in the Caribbean. The economies of most colonies in the Indian sub-continent, Africa, and the Philippines served purposes of commercial exploitation, accompanied, as in settler economies, by Christianisation and ‘civilisation’ missions. Postcolonial successor states have generally maintained colonial linguistic hierarchies.

The expansion of English and maintenance of its dominant position can be seen as the result of policies of linguistic imperialism, which interlock with policies in other domains (economic, cultural etc.) and involve the following (Phillipson 1992, 2009):

- it is structural: more material resources and infrastructure are accorded to the dominant language than to others;
• it is ideological: beliefs, attitudes, and imagery glorify the dominant language, stigmatize others, and rationalize the linguistic hierarchy;
• the dominance is hegemonic, it is internalized and naturalized as being ‘normal’;
• it is a form of linguicism that privileges users of the dominant language, those with convertible linguistic capital;
• linguistic imperialism interlocks with a structure of imperialism in culture, education, the media, communication, the economy, politics, and war;
• in essence it is about exploitation, injustice, inequality, and hierarchy that privileges those able to use the dominant language;
• this entails unjustified unequal rights for speakers of different languages;
• language use is often subtractive: proficiency in the imperial language and in learning it in education involves its consolidation at the expense of other languages, instead of in addition to these;
• it involves supply and demand, push and pull factors, collaboration between internal and external forces in any given context;
• linguistic imperialism is invariably contested and resisted.

This overall pattern of characteristics and activities seems to hold for the role of language/s in all empires, even if these inevitably display great variety over time and space. Whether linguistic imperialism is in force in a given context is an empirical question.

In British India, English was the key link between the colonial administration and a small class of Indian intermediaries. In British Africa until the 1950s, 90% of educational work was in the hands of missionaries, from a range of European countries as well as the USA, working for dozens of different Christian denominations. Christian missionaries remain active worldwide, often in the guise of teachers of English. This poses a major ethical dilemma for the international English teaching profession (Wong and Canagarajah 2009).

When colonies acquired political independence, a number of competing factors – the language profile of the new elites, ‘aid’ and dependence – resulted in the continuation of the language policies of the colonial period till the present (Bamgbose 2006). In language education, five tenets have been of decisive influence since the 1960s, each of which is false, i.e. a fallacy (Phillipson 1992: 183-218): English is best taught and examined monolingually (the monolingual fallacy); the ideal teacher of English is a native speaker (the native speaker fallacy); the earlier English is taught, the better the results (the early start fallacy); the more English is taught, the better the results (the maximum exposure fallacy); if other languages are used much, standards of English will drop (the subtractive fallacy).

The UK and USA have had a major economic interest in strengthening English learning worldwide, quite apart from language being a medium for cultural and political influence. Gordon Brown, when visiting India and China as UK Prime Minister, announced a plan to ensure that English is the world’s ‘language of choice’ (17 January 2008). TESOL (Teachers of English to Speakers of Other Languages, USA) and TEFL (Teaching of English as a Foreign Language, UK) are significant exports for the Americans and British: teaching materials, examinations, educational ‘aid’ and know-how, teachers, et al. They are a vital dimension of continued English linguistic and educational imperialism. For every £1 pound of UK funding for the British Council, it earns £2.50 through English teaching and examining (Annual Report 2009-10). ‘The English language teaching sector directly earns nearly £1.3 billion for the UK in invisible exports and our other education
related exports earn up to £10 billion more’ (Lord Neil Kinnock, Chair of the British Council, in the Foreword to Graddol 2006). The substantial traffic in international students to English-medium universities worldwide combines a strengthening of English with commercial and political profit. Comparison of the arguments adduced for privileging English in the British Empire, articulated by Lord Macaulay in India in 1825, and those of apologists for British English teaching and testing expertise in the present-day world (e.g. Alderson 2009, Graddol 2010) reveal striking continuity (Phillipson 2010).

The most significant source for funding for education in postcolonial states in recent decades has been the World Bank, which channelled funds toward the learning of the former colonial languages. World Bank policies filter through into the ‘aid’ agendas of the US and the British, which favour a ‘transition’ from local languages to English, and coerce governments into strengthening English at the expense of local languages, for instance in Sri Lanka (Perera and Canagarajah 2010) and Africa.

The World Bank’s real position … encourages the consolidation of the imperial languages in Africa. … the World Bank does not seem to regard the linguistic Africanisation of the whole of primary education as an effort that is worth its consideration. Its publication on strategies for stabilising and revitalising universities, for example makes absolutely no mention of the place of language at this tertiary level of African education (Mazrui 1997: 39).

The acquisition of linguistic capital in postcolonial societies is structurally constrained by international linguistic market forces:

European languages were imposed on Africans in the colonial period. [...] In the global village there are a few chiefs – very powerful economically and militarily – and a lot of powerless villagers. [...] The market has indeed replaced imperial armies, but one wonders whether the effect is any different. [...] It is therefore not the case that more English will lead to African global integration; the reverse is more likely.[...] Giving false hopes that everybody can have access to ‘World English’ is unethical (Rubagumya 2004: 136-139).

Alexander (2006: 241) considers that in post-apartheid South Africa two factors determine current practices and attitudes in the relationship between language and power:

- the hierarchies of the linguistic market are largely determined by the mundane fact of economic and political, or military dominance
- the ‘colonised mind’ [...] of conquered peoples has often led to a failure on the part of their leadership to realise the power that is latent in the languages of the oppressed and of other subaltern strata or groups.

The marketing of ‘world English’ has been part of political discourse on both sides of the Atlantic for two centuries. I. A. Richards, who combined appointments at Cambridge and Harvard (see the analysis of his key role in literary criticism in Britain and the US in Williams 1961: 239-246) wrote in So much nearer. Essays toward a world English (1968) that when English is approached appropriately, its acquisition is not merely for ‘wealth and prestige’, but because ‘new levels of mental capacity are induced … the development of those concepts and sentiments: methodic, economic, moral, political, on which the continuance of man’s [sic] venture depends. We of the West have somehow – out of a strangely unself-regardful, indeed a regardless impulse of benevolence – committed ourselves to universal education as well as to universal participation in government, nominal though this last can be’ (1968: 240). Richards considered the study of English
as the ultimate qualification for global leadership. The British and Americans should insist on English learning in basic education worldwide (Phillipson 1992: 165-168).

This is the Anglo-American civilising mission of the twentieth century, to ensure that all citizens of the world are not confined to English for merely instrumental purposes. Its users will also adopt worldviews that will make them understand that the West, out of sheer benevolence, has taken upon itself the right to decide how world affairs should be run.

Richards’ text is uncannily like the neoconservative agenda that was elaborated in the US in the 1990s, and implemented as soon as George W. Bush became president. ‘Our’ values are universal, and we reserve the right to enforce them globally by all available means. Education through English takes over the role of religion in concealing the special interests of privileged classes or states, and the hegemony of speakers of privileged languages.

2.2 Terminological obfuscation

There is a need for more conceptual rigour when analysing language dominance. Terms like language ‘death’ and the ‘spread’ of a language obscure the identity of the agents behind an outcome (endangerment or extinction), behind processes of language expansion and contraction. Statistics for the number of users of English as a second or foreign language are notoriously unreliable (Skutnabb-Kangas 2000: 37-39), and are invariably disconnected from a rigorous definition of proficiency. Demographically speaking, only a minority of the world’s population has any proficiency in English.

There is a similar terminological obfuscation when English is called the ‘lingua franca’ of business or scholarship or ‘Europe’. In The last lingua franca. English until the return of Babel, Ostler (2010; reviewed in Phillipson 2011) sees English as a ‘language of convenience’, a definition that neglects the power dimension, and fits poorly with the use of coercive military force, on which all empires are founded. Ostler calls English ‘the world’s lingua franca’, ‘the world’s language of choice’ (like Gordon Brown), and ‘anyone who wants to participate beyond the nation will have to use it [English] or come to terms with it’ (2010: xix, 8). Such claims are patently false over-generalisations. They relate to one section of the world’s elites, though many of these are not proficient in English. This advocacy for English represents a project rather than current reality (Phillipson 2009: 170-172).

This profoundly classist, anglocentric discourse is common in the ‘English-speaking’ world, and often used by British politicians. In reality many languages are used in international politics, business, media products, tourism, scholarship, etc., as anyone living in continental Europe, Latin America, Asia, or Africa is aware. It is true that English is useful and necessary in myriad contexts, but ‘the world’ is far from exclusively anglophone. Analysis of English as a lingua economica, lingua academica, lingua cultura, lingua bellica, etc. would lead to more conceptual rigour (see the Forum ‘Lingua franca or lingua frankensteinia? English in European integration and globalisation’ in World Englishes, 27/2, 2008: 250-284, reprinted in Phillipson 2009).

These examples all represent special pleading for English, the uncritical endorsement of its current dominance and of the interests behind it, without consideration of the rights and interests of speakers of other languages. This may diminish the vitality of other languages and ultimately promote the disappearance of ecolinguistic diversity.
3. Ecolinguistic diversity maintenance

3.1 What is ecolinguistic diversity?

Hierarchies dominance, and (lack of) linguistic human rights (LHRs) may first lead to language endangerment, then to language shift and ultimately to language extinction. Analysing this requires input from law, political science, education, sociology, economics, and ideally other relevant social science fields (see Skutnabb-Kangas & Dunbar 2010). If language maintenance and revitalisation, opposites to endangerment and shift, are to be placed within educational practices, these cannot be covered by linguistics ‘proper’ and the choice of approaches cannot be discussed within more or less monodisciplinary theories. If all of this is to be placed within the recent field of ecolinguistics, it also requires input from biological sciences (see Moran’s synthesis 2010).

To discuss theories and methods involved in the maintenance of ecolinguistic diversity we need to define several concepts, starting with ecolinguistics. Language plus ecology = language ecology, linguistic ecology, ecolinguistics? The terms have often been used interchangeably. The first serious sociolinguistic attempts to explore linguistic ecology pleaded for linguistics to be grounded in societal context and change. Trim 1959 and Haugen’s seminal 1971 article entail multidisciplinarity and ability to use publications in several languages. Of the works cited by Trim, 45% are in German, 33% in English, and 23% in French; academia has become more monolingual in globalization processes. Many researchers use ‘ecology’ simply as a reference to ‘context’ or ‘language environment’, to describe language-related issues embedded in (micro or macro) sociolinguistic, educational, economic or political settings, rather than de-contextualised. Here ‘ecology’ has often become a fashionable term for simply situating language or language study in some way, i.e., it is a metaphor. Others have more specific definitions and sub-categories (e.g., articles in Fill & Mühlhäusler 2001; Mufwene 2001; Mühlhäusler 1996; 2003, Bang and Døør, http://www.jcbang.dk/main/ecolinguistics/index.php). In this chapter, we use Wendel's definition: “The ecological approach to language considers the complex web of relationships that exist between the environment, languages, and their speakers” (Wendel 2005: 51). ‘Environment’ here means the physical, biological and social environments. Many sociolinguists pay only lip-service to the first two.

To discuss linguistic diversity we would need to know a) what a language is - a question that still begs definite answers and probably always will; b) to what extent languages are countable - and even if they are not, in the sense that borders between ‘languages’ and geographical, social and gender varieties are hazy; we have dynamic changing continua rather than anything fixed - we have to operate with some quantification for pragmatic purposes, and c) which methods to use for measuring linguistic diversity. If we could define and count languages, we might then measure reliably the relative linguistic diversity of geographical units, for instance countries/states, through the number of languages spoken natively in the country (i.e. excluding recent immigrants, for instance those who have arrived during the last 100 years). The most linguistically diverse countries would then be the ones with most languages. Papua New Guinea, with its over 850 languages would be the uncontested world champion.
But this way of measuring *linguistic megadiversity* has also been contested. Clinton Robinson (1993) argues that the most diverse country is not the one with the largest number of languages, but the one where the largest linguistic group represents the lowest percentage of all linguistic groups. There is a very big difference in the list of the world's linguistically most diverse countries, depending on which of these measures we use – except for the first, Papua New Guinea, on both lists.

Bearing in mind the intrinsic pitfalls in identifying and quantifying languages, some basics follow about linguistic diversity. There are probably between 6,500 and 10,000 *spoken (oral)* languages in the world. The 16th edition of *Ethnologue* ([http://www.sil.org/ethnologue/](http://www.sil.org/ethnologue/)) is the most comprehensive global source list for (mostly oral) languages, edited by Raymond G. Gordon, Jr. of the Summer Institute of Linguistics. It lists 6,909 languages (but 41,186 names or labels for various languages). Not even the World Federation of the Deaf ([http://www.wfdeaf.org](http://www.wfdeaf.org)) knows the number of *Sign languages*; they estimate that there are some 70 million Deaf people in the world. Europe and the Middle East together account for only 4% of the world's oral languages. The Americas (North, South and Central) together account for around 1,000 of the world's oral languages, 15%. The rest, 81%, are in Africa, Asia (around 30% each) and the Pacific (just under 20%).

The top 10 oral languages in the world, in terms of number of mother tongue speakers (again a disputed term) are (Mandarin) Chinese, Hindi, Spanish, English, Bengali, Portuguese, Arabic, Russian, Japanese and German (see also Skutnabb-Kangas, Maffi and Harmon 2003). They represent only 0.10–0.15% of the world's oral languages, but account for around half of the world's oral population. Fewer than 300 languages are spoken by communities of 1 million speakers and above. Most languages are spoken by fairly few people. Over half of the world's (oral) and most of the Sign languages are spoken by communities of less than 10,000 speakers. Around a quarter of the world's languages, are spoken by communities of 1,000 speakers or less; around 10% have fewer than 100 speakers each. Languages are today being killed at a much faster pace than ever before in human history. As a consequence, linguistic diversity is disappearing.

Just as the number of languages has been used as a proxy for linguistic diversity, the number of species has been used as a proxy for biodiversity. We have very little solid knowledge of these numbers too. Figures of between 5–15 million separate species are ‘considered reasonable’ (Harmon 2001: 63), with a working figure of about 12.5 million. But figures as low as 2 million and as high as 50 million (Maffi 2001: Note 1) or even 100 million (Solé et al. 2003: 26) have been mentioned. The highest figures are based on the estimate that most of the world's species (maybe up to 90%, Mishler 2001: 71) have not yet been ‘discovered’, i.e., named and described by (mostly Western) scientists; only some 1.5 million different species (from plants and animals to fungi, algae, bacteria and viruses) have so far been identified by natural scientists. Many may become extinct before having been studied at all.

Here too several methods to estimate biological diversity have been used. *Megadiversity countries* (Russell and Cristina Mittermeier's 1997 concept; see [http://www.af-info.or.jp/eng/honor/essays/1997_2.html](http://www.af-info.or.jp/eng/honor/essays/1997_2.html)) are ‘countries likely to contain the highest percentage of the global species richness’ (Skutnabb-Kangas, Maffi & Harmon, 2003; see also Conservation International at [http://www.conservation.org/xp/CIWEB/publications/videos/index.xml](http://www.conservation.org/xp/CIWEB/publications/videos/index.xml)). The concept *ecoregion* covers larger units with a high concentration of species: ‘A relatively large unit of land or water containing a geographically distinct assemblage of species, natural communities, and environmental conditions’ (The World Wide Fund for Nature, WWF’s definition, quoted from Oviedo and Maffi 2000: 1). WWF has identified nearly 900 ecoregions. 238 of them have been
termed ‘Global 200 Ecoregions’ because they are found ‘to be of the utmost importance for biological diversity’ (Oviedo and Maffi 2000: 1). Most of them are in the tropical regions, just as over half of the world’s endemic languages are (Smith 2001: 107). Another global measure is biodiversity hotspots, a concept created by Norman Myers (see Center for Applied Biodiversity Science, http://www.biodiversityhotspots.org/xp/Hotspots). These are ‘relatively small regions with especially high concentrations of endemic species’ (Skutnabb-Kangas, Maffi and Harmon 2003: 55).

Ecolinguistic diversity covers both linguistic/cultural and biological diversity.

3.2 Threats to ecolinguistic diversity

“In the last five hundred years about half the known languages of the world have disappeared”, according to Hans-Jürgen Sasse (1992: 7). The most optimistic prognoses of what is happening to the world's languages suggest that around the year 2100 at least half of today's spoken languages may be extinct or very seriously endangered (with elderly speakers only and no children learning them). This estimate, originating with Michael Krauss (1992) is also used by UNESCO4. Pessimistic but still completely realistic estimates, also by Krauss himself, claim that as many as 90–95% of today's spoken languages may be extinct or very seriously endangered in less than a hundred years’ time. UNESCO's Intangible Cultural Heritage Unit's Ad Hoc Expert Group on Endangered Languages uses this more pessimistic figure in their report, Language Vitality and Endangerment5. There may be only 300 to 600 oral languages left as unthreatened languages, transmitted by the parent generation to children. These would probably include most of those languages that today have more than one million speakers, and a few others. Almost all languages to disappear would be Indigenous languages, and most of today's Indigenous languages would disappear, with the exception of a very few that are strong numerically (e.g., Quechua, Aymara, Bodo) and/or have official status (e.g., Māori, some Saami languages). Cochlear implants and next to no education through the medium of Sign languages may decimate these even faster than spoken languages.

Research over two decades by David Harmon and Jonathan Loh (2010) in developing an Index of Linguistic Diversity (ILD) provides trend data on linguistic diversity. ILD measures changes in the numbers of mother-tongue speakers of the world’s languages over time (see Terralingua’s Newsletter Langscape, Vol. II, Issue 5 with an interview with Harmon).

At the global level, the ILD measures how far, on average, the world’s languages deviate from a hypothetical situation of stability in which each language is neither increasing nor decreasing its share of the total population of the grouping. The ILD can also be used to assess trends at various subglobal groupings. Key findings:

• Globally, linguistic diversity declined 20% over the period 1970–2005.
• The diversity of the world’s indigenous languages declined 21%.
• Regionally, indigenous linguistic diversity declined over 60% in the Americas, 30% in the Pacific (including Australia), and almost 20% in Africa (Harmon and Loh 2010: 97).

According to conservative (i.e. optimistic) assessments, more than 5,000 species disappear every year; pessimistic evaluations put the figure at around 150,000. The three main reasons for the disappearance of biodiversity can be summarised as follows:
• the powerless economic and political situation of people living in the world's most diverse ecoregions;
• habitat destruction through logging, spread of agriculture, use of pesticides and fertilisers, deforestation, desertification, overfishing, etc.;
• knowledge about how to maintain biodiversity and use nature sustainably disappears with disappearing languages.

Even if all the reasons are also vital in accounting for the disappearance of languages, it is especially the third factor that is central for the maintenance of ecolinguistic diversity. Here we find some of the most powerful arguments for the maintenance of all the world’s languages.

Linguistic diversity and biodiversity are correlationally and causally related. A comparison of the world's linguistic and biological megadiversity countries shows a very high overlap; both languages and biological species become thicker on the ground the closer to the equator one moves, and arctic areas have fewer species and languages. Conservationist David Harmon (1995) was probably the first scholar ever to put figures on the high correlations between biodiversity and linguistic and cultural diversity. Using many species as indicators, there is a high correlation between countries with biological and linguistic megadiversity (see also Harmon 2002). More detailed correlations are shown in the Index of Biocultural Diversity (IBCD) by Harmon and Loh (2004; Loh and Harmon 2005; see follow-ups on www.terralingua.org). Oviedo and Maffi (2000: 2) showed that some two thirds of the world’s ethnonational groups live in the Global 200 Ecoregions. Their conclusion, after surveying many detailed measures, is:

Correlations between Global 200 ecoregions as reservoirs of high biodiversity and areas of concentration of human diversity [including linguistic diversity] are clearly very significant … [Th]ere is evidence from many parts of the world that healthy, non-degraded ecosystems – such as dense, little disturbed tropical rainforests in places like the Amazon, Borneo or Papua New Guinea – are often inhabited only by indigenous and traditional peoples. This also means that where we others have settled, meaning often in temperate climates, we have been a disaster to the world's biodiversity. We would obviously also have colonised and inhabited those areas which are still today relatively less degraded, had we been able to. Jarred Diamond shows convincingly that what has kept us out is the fact that we westerners have not been able to manage the climate …(emphasis added).

However, the evidence for a correlational relationship between biodiversity and linguistic and cultural diversity does not prove anything about a causal relationship. Ethnobiologists, human-ecologists and others have proposed 'theories of human-environment co-evolution', including the assumption that 'cultural diversity might enhance biodiversity or vice versa' (Maffi 1996): biodiversity in the various ecosystems and humans through their languages and cultures have mutually influenced each other (e.g., Maffi 2001; Maffi et al. 1999; Skutnabb-Kangas, Maffi and Harmon 2003). Linguistic and cultural diversity seem to be decisive mediating variables in sustaining biodiversity itself, and vice versa, for as long as humans inhabit the earth. To be able to 'prove' this causal relationship, several types of knowledge would be needed. Some exist, some we have only partially at the moment; many issues have not been investigated yet. UNEP's (United Nations Environmental Program, http://www.unep.org/) mega-volume Cultural and Spiritual Values of Biodiversity. A Complementary Contribution to the Global Biodiversity Assessment (Posey 1999) summarises some of this evidence of causality. Likewise, articles in Maffi (ed.) (2001) and Maffi & Woodley (2010) analyse and illustrate it. But the criteria and the whole nature of the evidence obviously also depend on the kind of scientific paradigms used. Likewise, whether
the already existing evidence is seen as sufficient to lead to rapid action depends on who or what decides: whether short-term corporate profit or the Precautionary Principle, or the Global Commons, just to take some possibilities.

Since the degradation of biodiversity is mainly created by humans, a conclusion is that those Indigenous peoples who have not been colonised by others have been and are important agents in the maintenance of biodiversity. The knowledge they have when interacting with (the rest of) nature in non-degrading ways is part of traditional ecological knowledge (TEK), ‘in-depth knowledge of plant and animal species, their mutual relationships, and local ecosystems held by indigenous or traditional communities, developed and handed down through generations.’ (Skutnabb-Kangas, Maffi and Harmon 2003: Glossary: 56). In many cases, as Oviedo and Maffi state (2000: 6), TEK ‘is found to be more complete and accurate than Western scientific knowledge of local environments’ (2000: 6–7). The 2002 report Science, Traditional Knowledge and Sustainable Development by the International Council for Science (ICSU – see http://www.icsu.org) shows clearly that TEK is seen as containing a great deal of knowledge unknown to and of utmost importance to (western) science, and that scientists are worried about the diminishing transmission of it. Stanford Zent is developing for Terralingua a Vitality Index of Traditional Environmental Knowledge (VITEK) for measuring trends in persistence or loss of TEK; this will, according to Terralingua’s Luisa Maffi (2010: 11) provide trend data on a key aspect of cultural diversity.

Michael Warren, one of those first to use the concept of Indigenous knowledge, echoes ICSU when he concludes (2001: 448):

Of major concern is the rapid loss of the knowledge of many communities as universal formal education is enforced with a curriculum that usually ignores the contributions of local communities to global knowledge. The loss of knowledge is linked indelibly to language extinction since language is the major mechanism for preserving and transmitting a community’s knowledge from one generation to another.

We can summarise the threat as follows: Most of the world’s megabiodiversity is in areas under the management or guardianship of Indigenous peoples. Most of the world’s linguistic diversity resides in the small languages of Indigenous peoples. Much of the detailed knowledge of how to maintain biodiversity, including TEK, is encoded in the languages of Indigenous peoples. If we continue as now, most of the world’s Indigenous languages will be gone by 2100. ICSU states (2002) that ‘actions are urgently needed to enhance the intergenerational transmission of local and Indigenous knowledge … Traditional knowledge conservation therefore must pass through the pathways of conserving language (as language is an essential tool for culturally-appropriate encoding of knowledge).’ Since TEK is necessarily encoded into the local languages of the peoples whose knowledge it is, this means that if these local languages disappear (without the knowledge being transferred to other, bigger languages, which it isn’t) the knowledge is lost. Through killing the languages we kill the prerequisites for maintaining biodiversity. Ecolinguistic diversity is essential because it enhances creativity and adaptability and thus stability ‘Ecological multiples are insurance. In any crisis, uniformity is the worst way to respond; diversity is resilience’ (Shiva 2008: 29).

To maintain the ecolinguistic diversity, central for the long-term planetary survival of humankind, formal education of Indigenous/tribal peoples and minorities (ITMs) has to be changed so that it enables the maintenance of and further development of their languages, and TEK. This necessarily
means mother-tongue-based multilingual education (MLE). Most of the world’s Indigenous and tribal children are today forced to use either a dominant regional or ‘national’ language or a former or present colonial language (English, Chinese, French Portuguese, Russian, Spanish, etc) as the main medium of education. This violates the children’s right to education. In most cases it can be described as linguistic genocide in education, from an educational, psychological, linguistic and sociological point of view. Much of this education can probably already be seen as a crime against humanity also from a legal point of view (see Skutnabb-Kangas & Dunbar 2010 with a detailed argumentation). In the next section we relate ecolinguistic diversity maintenance to the role of English, in particular in education.

4. Implications of the expansion of English for other languages

4.1 Vignettes of expanding English

While linguicide was government policy in ‘English-speaking’ countries, with mixed success, in former colonies less drastic policies have been the norm. However in Singapore, English is the sole medium of instruction in schools, which provide only limited support for mother tongues. As a result more than half the population now use English as the dominant language in the home as well as in political and economic life. A small elite population is moving in this direction in some African countries (the Afro-Saxons) and in India. Two generations of English-medium schooling can result in children having no language in common with grandparents. The emergence of monolingual English-speakers in such countries entails detachment from local cultures, languages and history, and failure to understand and identify with local problems and needs.

The African Union to has established an African Academy of Languages with a mandate to promote mother-tongue based multilingual education, so as to ensure that a greater proportion of African children succeed in education. The Bamako International Forum on Multilingualism, 19-21 January 2009, approved a set of recommendations to African governments and to ‘aid’ organizations that should facilitate a reversal of current educational paradigms (see www.acalan.org). Many Africans are shifting from their language of origin to a regional lingua franca, but to claim that English is no threat to African languages (Mufwene 2010: 49) is invalid. Teaching English as a foreign language subject in African or Asian schools does not marginalise local languages. It is the widespread use of ex-colonial languages as a medium of instruction that marginalises local languages in education, when these languages are not actually taught and used as media of instruction. A triglossic pecking order of languages with a European language at the summit does not exonerate the forces behind a linguist privileging of English being a threat, direct and indirect, to African and Indian languages. This is the case in all former British colonies in Sub-Saharan Africa and in the settler states South Africa and Namibia.

One might think that European countries with strong national languages are unaffected by greater use of English, that its use and learning represent merely the addition of a foreign language. However the international prestige and instrumental value of English can lead to linguistic territory being occupied at the expense of local languages and the broad democratic role that national languages play. An increasing use of English in the business, entertainment and academic worlds in Scandinavia has led to a perception of threat that tends to be articulated as a risk of ‘domain loss’. This term tends to be used loosely, and minor empirical studies suggest that there has been an expansion rather than a contraction of linguistic resources hitherto (Harder 2009, Ravnholt 2009). If linguicism results in significant functions being monopolised by English, this would constitute
English linguistic capital accumulation by dispossession, with identifiable external and internal agents. The Nordic countries are committed to maintaining the vitality of national languages while promoting competence in international languages, particularly English. A Declaration on a Nordic Language Policy was approved in 2006 by the Nordic Council of Ministers, and promulgated in Danish, Faeroese, Greenlandic, Finnish, Icelandic, Norwegian, Saami, Swedish, and English (www.norden.org). The document specifies the language rights of all residents in a Nordic country, and sets out goals for language policy. It encourages key institutions to develop long-range strategies for choice of language, the parallel use of languages, and language instruction. Since this is the first time that government-level language policy in this area has been made explicit, it is positive that language policy is not merely being left to market forces. The underlying thinking is both/and rather than either/or: not a focus on a single medium of instruction (an English-medium or local language-medium school or university) but a combination. Each school in the Nordic countries generally operate with a single national language as the medium of instruction.

One way in which English is being strengthened in continental Europe is through the policies and activities of the European Union. This has progressively expanded from six member states and four official languages in 1958 to 27 member states and 23 languages that in theory have the same rights in speech and writing, and with legislation promulgated with equal validity in all languages (Phillipson 2003). The translation and interpretation services ensure use of all languages for certain purposes in the key institutions, but all documents on the Commission’s websites are in English, fewer in French, and far fewer in the other languages. Internally French was primus inter pares until the arrival of the UK and Ireland in 1973. Three-quarters of all key texts are now drafted in English. This affects content as well as the medium of expression, and puts fluent users of English at an advantage. Some central fields of activity such as finance function entirely in English. So does the Directorate-General for Research (applications, reporting, evaluation), though in theory all languages are eligible for use. The linguist favouring of English represents serious discrimination against those researchers for whom English is not the primary working language. Language issues are a frequent source of disagreement (for instance, an attempted reform of patent law) but market forces are in force rather than equity or strict equality.

The EU energetically promotes the ‘internationalisation’ of European higher education that has gone under the label ‘the Bologna Process’ since 1999, brings together the Ministers for Education of 47 European countries, and has formal links with the Council of Europe. The EU Commission largely sets the agenda, funds activities, and produces policy and planning documents, exclusively in English. The communiqués from the bi-annual meetings of Ministers responsible for higher education and research never refer to language policy, to bilingual degrees or multilingualism. Implicitly this means that ‘internationalisation’ can be seen as equating with ‘English-medium higher education’. The explicit current determination to expand the Bologna process from Europe to the rest of the world is likely to reinforce the hegemony of English and to increase the marginalization of other languages.

4.2 Multilingual alternatives

There is recent evidence of success in mother-tongue-based multilingual education, MLE, throughout Africa, including some of the poorest countries (e.g. Burkina Faso and Ethiopia, see articles in Skutnabb-Kangas and Heugh, eds. 2012). There are positive results, also presenting fundamental pedagogical pedagogic and linguistic principles and the challenges of MLE, from India, Nepal, Peru, Bolivia, and other parts of the world in several articles in García et al. (eds.) 2006,
Skutnabb-Kangas, Phillipson, Mohanty and Panda, eds., 2009 and Skutnabb-Kangas and Heugh eds., 2012. It is important to stress that children who benefit from literacy and concept development in their mother tongue are more likely to succeed in learning additional languages, including English and French, than is currently the case (Thomas and Collier 2002). Such policies are intended to promote multilingualism and to combat linguistic misuse of any languages. They are manifestly not ‘against’ people learning English; they are against any kind of subtractive language learning. But nothing short of using the mother tongue as the main teaching language for the first six to eight years while teaching English (or any other dominant language) as a subject (see e.g. the large scale Ethiopian evaluations, reported in Benson et. al. 2012, and Heugh et al., 2012) and in the later years having some instruction through the medium of English, can achieve this. In their 18-year study, with over 2 million student records in the USA, Collier and Thomas’ conclusion (2004: 5) is:

In every study conducted, we have consistently found that it takes six to eight years, for ELLs [English language learners] to reach grade level in L2, and only one-way and two-way enrichment dual language programs have closed the gap [between their initial proficiency, often zero, and native English-speaker grade-level competence] in this length of time. No other program has closed more than half of the achievement gap in the long term.

These ‘other programes’ include those in Africa and Asia which teach children in English from grade one, and those which have two-three or even four years through the medium of the children’s L1 and transfer then to English. Similar criticism of the limited utility of English-medium education is beginning to appear even in British Council publications (e.g. Coleman (ed.) 2011), though the research on the advantages of bilingual education has been unambiguous since the 1970s.

While listing and documenting endangered languages is important, it is vital to try to influence the conditions that lead to the endangerment in the first place. Formal education and media in dominant languages are the most important direct causal factors in linguistic genocide – behind them are the macroeconomic, techno-military, social and political causes.

On the other hand, while work on the economic and political causes of language endangerment continues, it is also possible to influence the learning and use of even very small languages in revitalisation projects of various kinds. The Master/Apprentice programmes started by Leanne Hinton, of the University of California at Berkeley, together with Indigenous peoples, are an example. Old speakers are paired with young people who want to learn the language; they get nominal reimbursement, conditional on spending minimally some 20 hours per week together, using only the endangered language. They are free to choose any activities, provided the language is used (Hinton 2002, Hinton & Hale 2001). Such programmes are spreading to other parts of the world.

One of the smallest Saami languages, Inari Saami, spoken only in Finland, is experiencing spectacular revitalisation. Some 20 years ago there were no child speakers and only a couple of young speakers. Today there are three language nests (day care centres-cum-preschools) where only Inari Saami is spoken (since 1997), and children can attend their primary school with Inari Saami as the teaching language (since 2000) (see Aikio-Puoskari 2009). To createnew Saami speakers in the ‘lost generation’ between the children/youngsters and grandparents, Marja-Liisa Olthuis, herself Inari Saami, organised in 2009-2010 a full-time one-year intensive fully-financed Inari Saami course for people from professions where competence in the Saami language was lacking – teachers,
pre-school teachers, social workers, journalists, one priest etc (see Olthuis, Kivelä, & Skutnabb-Kangas, 2013). In Norway, many Saami children can have their first 9 years of school through the medium of mainly North Saami. There are two upper secondary schools, and the Saami University College in Guovdageaidnu uses Saami only as the teaching language (see http://www.samiskhs.no/). Subtractive English promotes the ecolinguistic homogenisation of the world.

References


1 When receiving an honorary doctorate at Harvard University, 6 September 1943.
2 Our own approach builds on familiarity with research published in in Danish, Finnish, French, German, Norwegian, and Swedish.
3 One cannot define what ‘language’ is if one does not analyse those power relations which are decisive for whose definitions are valid about whether something is a language or not, and why it is this definition that prevails (see Skutnabb-Kangas 2000, Chapter 1, for a discussion of what a language is; see also Macaulay 1997).