



Sirje Runge "9 ruutu" (19...mis aasta pilt?). kus asub? veel midagi?.....

Principles of language sustainability

Martin Ehala

2004). The critics of the theory of language ecology (e.g. Edwards 1995; 2001), however, have stated that the theory has not contributed much to the research into language relations and language environments. This criticism has considerable truth in it, as very different research at different levels has been presented under the label of language ecology, and no common research area has been established.

Abstract. The chapter aims to contribute to the development of the theory of language ecology. It is hypothesised that language communities can be understood as autopoietic systems aimed at their own reproduction, i.e. guaranteeing their own sustainability in time. A language is sustainable when, despite the changed circumstances and (social) environment, it still is used. Factors influencing the sustainability of a language community can be divided into three wide-ranging categories: (1) factors of the external environment, (2) factors of the internal environment, (3) the ethnolinguistic vitality of the community. Changes in the external environment can be considered the most important ones that contribute to language extinction. Like biological species that are unable to adapt to the changing environment, cultures and languages also become extinct when they are unable to function in the changed environment. To react to the changes in the external environment and to preserve their integrity, autopoietic systems attempt to develop their internal environment as fully as possible. The internal environment of a language community comprises its social institutions. The stronger and more fully developed are the social institutions the better are the possibilities of withstanding the impact of the changes in the external environment. The strength of the internal environment depends, crucially, on the third factor: ethnolinguistic vitality, the ability of a community to behave in interethnic communication as a united collective force. The chapter presents the main components of all three sustainability factors and characterises their interaction.

Language ecology

The concept of language ecology was first applied by Einar Haugen (1972). In sociolinguistics, this concept has usually been used metaphorically, although there are scholars who have attempted to develop the field of language ecology in greater depth (Mackey 2001; Haarmann 1986; Mühlhäusler 1996; 2000; Garner

2004). The fact that language ecology has not been able to establish itself as a serious branch of research does not mean that the concept of language ecology would be untenable in itself. Ecology is a science about the connections of the organism with its environment, a science of how to preserve the natural diversity and balance in the conditions of sprawling civilization. Thus, language ecology would be a science on the interaction between the language and its environment, about how to preserve the linguistic diversity of the world. Such studies are practised within the framework of language policy, language maintenance as well as language sociology, language ideology and contact linguistics. For some reason, it has not become customary to call them jointly language ecology.

This chapter deliberately applies the ecological approach, attempting to outline the main relations in the interaction between language and environment, focussing on language sustainability, i.e. its ability to function as the main means of communication and identity marker of an ethnic group.

Social functions of the language

A language is sustainable when, despite the changed circumstances and (social) environment, it still is used. The most direct guarantee of sustainability is transmission of the language from a generation to another. Until the language is transmitted from one generation to another and used daily, at least at home, the language is sustainable. The **generational** sustainability of a language depends on parents' motivation to transmit the language to their children, i.e. to communicate with them in that language from their birth.

The motivation for the valuation of a language results from the social functionality of that language. In principle, a language always fulfils two functions in society – it enables the members of a society to exchange information, and to express their collective identity. Based on the functionality of language, Lambert (1963, 114) has distinguished between two types of motivation for language acquisition: instrumental and integrative motivation. Instrumental motivation derives from the benefits the command of a particular language gives someone in the area of information exchange – how it broadens the opportunities for information obtainment, study and career. Integrative motivation derives from

the benefits that the command of a particular language gives someone in the area of collective identity – whether it is prestigious to belong among the speakers of that language or not really. In principle, these two motivation factors also form the basis for **generational** transmission of a language – until the command of a language is useful either in the instrumental or integrative sense, the language is transmitted from parents to children. The smaller these benefits are in the parents' opinion, the lower is their motivation to transmit the language.

From here, an essential conclusion can be drawn: from the viewpoint of language ecology, the mutual dynamism between languages is based on their two main functions, instrumental and integrative. Obviously, not all languages can perform these functions equally well in all areas. Because of small human resources, it is more difficult for small languages to build up all the social institutions and simultaneously offer a desirable collective identity.

Still, it would be erroneous to think that small languages are totally unable to compete with larger ones. A good example is Faroese which has approximately 50,000 speakers on the Faroe Islands. For a long time, the language has felt great pressure from Danish, but nonetheless it has become the official language of the Faroe Islands, being the language of tuition at schools and three faculties of the islands' only university, and the language of sermons in church. Notwithstanding this, the islanders are bilingual, as they have no resources for translating all the films, television programmes, comic strips, labels on goods, manuals of household appliances, etc., into Faroese (Benati 2009). The Estonian language community is approximately 20 times bigger and, therefore, the Estonian language has greater opportunities. Nonetheless, the Estonians have a rooted opinion that the Estonian language is small and uncompetitive.

Along with the instrumental function, the integrative function of the language is equally important. Although there are exceptions, for example the Jews (Myhill 2003), for many ethnic groups their language is one of the core values of their culture (Smolens 1984), which distinguishes them from other ethnicities (Barth 1969). For such ethnic groups, their language is often the organizing axis of their identity, which maintains solidarity between the members of the group, and, if threatened, mobilises the community for action.

In the same way that languages do not perform the integrative function either. On the one hand, large nations always have more achievements on which to build up their positive collective identity. Their languages are also often spoken as second languages as the economic and cultural power attracts immigrants. They also have many native speakers who differ by their residence, social status or other features. As the speakership of the language is numerous and its limits fuzzy, acquisition

of the language as such is not of great integrative use for people. In the case of languages with a great number of speakers, the integrative function is rather performed by various regional and social varieties and ethnolects.

As it is difficult to find instrumental motivation for acquisition of small languages, they are not widely learnt as foreign languages or spoken as second languages. This, however, means that everyone who has a command of the language belongs to the inner circle and is treated as a compatriot. This usually creates a stronger feeling of togetherness in the speakership of a small language than among the speakers of a large language.

Dialectics of the functions of the language

The instrumental and integrative functions of a language are somewhat contradictory in their essence. Thus, from the instrumental point of view, the best state of affairs would be if there were only one universal language used by all. In such a case, information exchange between everyone would be possible with no expense or energy spent on translation; mutual understanding would improve, etc. Although the idea of one global language has fascinated humankind since Biblical times, all the attempts to create a universal language have failed. Likewise no language in the world has acquired a status that would have enabled it to oust all the other languages.

Such a situation will hardly ever come, as the integrative function of a language works against the disappearance of linguistic differences. Most sustainable ethnic groups value their languages as essential parts of their identities, and, as people generally do not want to change their identities, they do not want to change their language either. Until now, success has been achieved only in creation of national languages based on fragmented dialect communities. The process of nation building, which has a history of about a couple of centuries in Europe and has spread outside its borders, has managed to level the differences between dialects and to swallow smaller ethnic groups in the territories of nations, but, at the level of nations, the differences have increased rather than diminished.

Thus, it could be stated that the process of nation building is, to a certain extent, the achievement of a universal language ideal in a limited territory. In the ideal case, this has brought about a balance between the integrative and instrumental functions within one society because the language functions as a common language of communication for everyone and defines all of its speakers as one group. This balance, however, will remain only an ideal. In the mobile present-day world, larger or smaller immigrant communities have emerged within nation states. They value the language of their country of origin for integrative reasons

and use the language of their target country mostly for the instrumental function only. As human groups are attracted to more universal information exchange on the one hand, and to the preservation of their identity on the other, the full overlapping of the instrumental and integrative functions of the language cannot be foreseen. At that, some languages will inevitably disappear in the course of this process. Next, we will observe which factors influence the sustainability of languages.

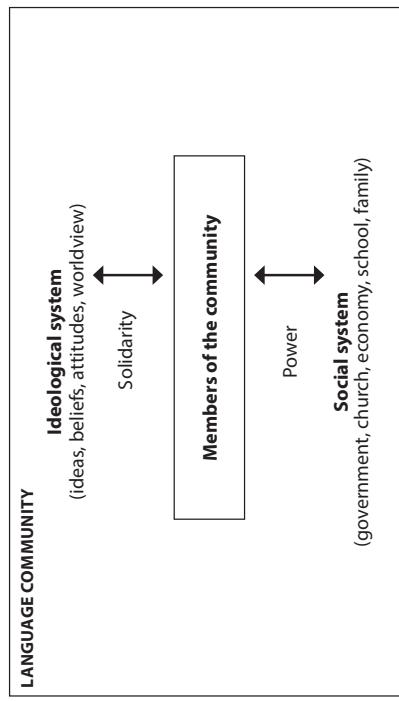
The language community as an autopoietic system

An autopoietic system is a system that reproduces itself through its functioning. The concept of autopoietic systems was first applied in biology in order to describe living systems (Maturana & Varela 1973); later the concept was extended to society (Luhmann 1990; Capra 1997), language (Ehala 1996) and culture (Livingston 2006). In a sense, an autopoietic system has no other aim than the reproduction of itself, i.e. guaranteeing its sustainability. As systems do not exist in a vacuum but in a constantly changing environment, which also includes other autopoietic systems, then guaranteeing sustainability is not monotonous vegetation but constant stressful interaction with the environment.

The language and cultural communities also constantly reproduce themselves as a result of their daily activities. Strictly speaking, they have no other aim than guaranteeing their sustainability (some such systems, like the Republic of Estonia, even have auto poiesis inscribed in their constitution); thus, language and cultural communities can be viewed as autopoietic systems. Although the aim of autopoietic systems is to guarantee their continuity across time, not all languages, language communities and ethnic groups are sustainable; the disappearance of ethnoses through language and identity change, sometimes even by physical destruction has become outright epidemic today.

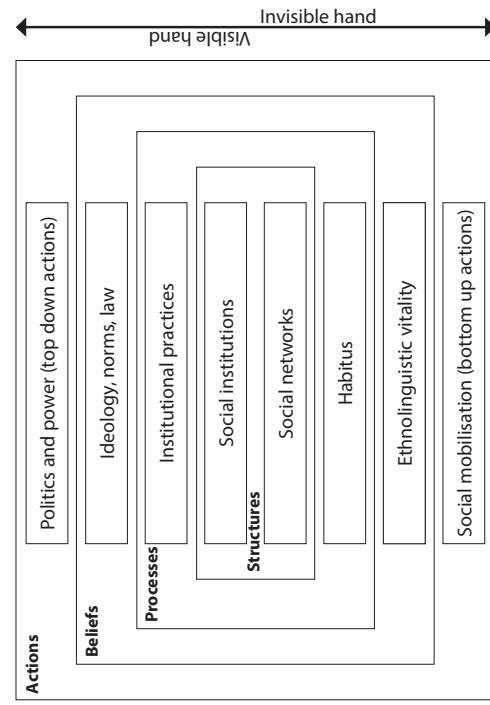
As said at the beginning, a sustainable language is such a language that is in daily use and is transmitted from one generation to another; in other words a sustainable language has its community of users. Although we speak about the sustainability of a language, we actually speak about the continuation of the use of a certain language as a cultural practice. In a sense, the survival or decay of a language is comparable to the survival or decay of any other practice. The only difference is that a cultural custom may entirely fall into oblivion and not be replaced by anything else, but in the case of a language, the only possible solution is language shift, not complete abandonment of language. This also means that the maintenance or shift of a language can be viewed as part of the ability of a cultural community to preserve its cultural identity and continuity. There are

Figure 1. Model of the language community (Harris Russel 2001)



numerous examples in which language communities with small cultural capital undergo identity shift simultaneously with language shift or immediately after it, so that the whole treasury of cultural practices falls into oblivion. This has happened, for example, to the Estonian language islands on the eastern shore of Lake Peipsi and also to small indigenous communities like the Livonians or Prussians. As the language is only a part – although an essential part – of cultural identity, then language shift need not always mean assimilation of the cultural community. The community of American Finns with its long traditions still exists as a separate cultural community. In its practices, the Finnish elements (sauna, folk dancing, symbols) have an essential role, although command of the Finnish language has almost disappeared (Virtaranta et al 1993). Thus, it is entirely possible that, in distress, a community undergoes language change, but still retains its identity, i.e. its sustainability as a cultural community. Here a good example is the Irish, although the Russian-speaking nationalism of Ugric and Samoyedic peoples has also been considered possible. Thus, when speaking about the sustainability of languages, the theme should be approached more broadly and one should rather concentrate on the sustainability of the communities speaking those languages.

When describing a cultural community as an autopoietic system, Harris Russel's (2001, 142) model of the language community proves useful. According to this model, the language community has two essential dimensions: ideological (ideas, beliefs, attitudes, values, worldview, identity, etc.) and social (political

Figure 2 The Extended Model of the speech community

system, economy, church, family, etc.). The ideological system produces solidarity, the social system establishes power. Harris Russell's model of the language community is depicted in Figure 1.

This model is robust, but not detailed enough to describe the functioning of an autopoietic social system. To build a more comprehensible model, four basic categories of ethnic group should be specified: structures, processes, beliefs and actions. All of them could be of the nature of the invisible hand (self-organising), i.e. hard to control and influence; or of the nature of the visible hand, i.e. the results of conscious decisions and societal design. So the four categories all have an invisible hand and a visible hand component. For example, the structures are divided by social institutions like church, school, defence, etc., that are organised and maintained by the governing structures, and the social network that is formed by individuals without government control. The social network is an invisible hand structure; it could not be redesigned in an easy way, using governmental or managerial tools.

Similarly, the processes are either norm based and regulated, such as institutional practices. Or they could be of the type of habitus which is not consciously controlled but emerges just as a consequence of people's daily practices. The same holds for the beliefs. Ideology, law, customs, and religion is a consciously

designed set of beliefs that the elite in power establishes and disseminates through the mass media. Ethnolinguistic vitality is a belief system that is formed as a self-organising process of group members' symbolic interactions and their perceptions of the social situation. It is an 'invisible hand' belief system that cannot be easily influenced by ideological manipulations. The model ends with two types of action, i.e. deliberate goal-directed activities. Top down actions are those that a government initiates and fulfils using its power structures, if necessary. Bottom up actions are those that group members collectively engage in because of their internal desires. Bottom up actions can be spontaneous; they can be consonant with the top down power wishes (social mobilisation in the case of threat or war), or against them (a revolution against the establishment).

From the viewpoint of language ecology, the object of research should be the language community in its full functioning as pictured on the Extended Model of speech community (see Figure 2). The aim of research should be to establish the main factors on which the sustainability of the research object depends, its ability to preserve its integrity and identity, and the factors that cause the disintegration of the community and the processes that lead to the formation of new language communities.

Factors influencing the sustainability of a language community

Factors influencing the sustainability of a language community can be divided into three wide-ranging categories: (1) factors of the external environment, (2) factors of the internal environment, (3) the ethnolinguistic vitality of the community. Let us take a closer look at these influencing factors.

Studies of endangered languages reveal that in most cases these languages have a very long history. This means that, for a long time, these language communities were sustainable, but not anymore. When we analyse the reasons for their endangered situation, we see that among the many influential factors, the clearest underlying causes are changes in the external environment. These changes can be both natural and social. Natural changes can worsen, for example, the economic conditions of the community. This can be accompanied by internal conflicts, migration or other social phenomena that destabilise the system. One of the best examples is the great famine in mid-19th century Ireland, which was destructive for the sustainability of the Irish language community – the starvation and collapse of the traditional economic system of the community forced people to join the English-speaking society (either in local cities, or through emigration to the USA). As both the instrumental and integrative values of the Irish language deteriorated considerably, the result was language shift.

More often, however, changes in the external environment have been social. What proved fatal for American Indians were the European immigrants with their technologically more advanced culture. Even today, establishment of contact with economically more advanced cultural communities is the main change in the external environment that disturbs the balance of previously sustainable language communities. For example, the traditional environment of small Siberian peoples has become industrialised and polluted, which is a great hazard for their sustainability. Such contacts need not always be a result of direct immigration. Often, the construction of an efficient network of roads in a previously isolated region is sufficient for the younger generation of the local population to leave their traditional habitats and abandon their indigenous language and cultural customs.

Like biological species that are unable to adapt to the changing environment, cultures and languages also become extinct when they are unable to function in the changed environment. Mufwene (2004) argues that if a language loses its sustainability because of changes in the environment, there is no other possibility for its revival than restoration of the environment in its earlier state, just as in the case of endangered animal species. As this is usually impossible, language and identity shift should be considered inevitable, he claims. Still, Mufwene does not take into consideration the fact that biological evolution and cultural evolution are not the same. While biological species can only adapt to the changing conditions, cultures and ethnic groups are able to influence the environment by their activity, thus actively contributing to their sustainability. The efficiency of such an influence also depends on the internal organisation of the community.

To react to the changes in the external environment and to preserve their integrity, autopoietic systems attempt to develop their internal environment as fully as possible. The internal environment of a language community comprises its social institutions. Traditionally, distinction has been made between five central social institutions that have existed and exist in all societies: economic, government and education systems, family and religion. As contemporary small language communities do not always form separate societies but function as parts of larger societies, they have not always developed all the five social institutions and use, at least partly, the institutions of the dominant ethos. If, however, a small language community forms a separate society, it has all these institutions, although not in as sophisticated a form as in large societies.

According to the typical scenario of language and identity change, the disintegration of the endangered language community begins with the dominant ethnoscapes taking over its social institutions. Usually, this begins with education and economy, but often the catalyst of the process has been religion. The last social

institution of the endangered language community is usually the family. Thus, one can state that from the viewpoint of sustainability of languages, the existence and competitiveness of their genuine social institutions is most essential. Taking the Faroese language community as an example again, this small language community has developed all the essential social institutions. Through these institutions, the Faroese language community guarantees its instrumental function because efficient institutions enable society to react to environmental changes. Even communities that have come into being as a result of migration, attempt to form their own social institutions in their target countries. A good example is provided by nearly all émigré Estonian communities, which, from their initial years, started to establish Estonian institutions, like the Estonian school, church and house, which functioned as parallel structures to the institutions of the receiving country. Their aim was to help the emerging language community guarantee its sustainability under the new conditions. Thus, one might state that, in order to resist changes in the external environment, the language community needs its own social institutions, but that these must be competitive with the parallel structures available to the members of the group. Thus, the institutions of the émigré Estonian communities have to offer at least partial competition to those of the target country. The history of émigré Estonians has shown that the sustainability of each community has depended on its ability to create and keep up social structures parallel to those of the receiving country. Naturally, success greatly depends on the size and dispersion of the community, although the size is certainly not the most essential factor.

In the world there are even language communities with several millions of members that are severely endangered. For example, there are approximately 8–12 million Quechua speakers in South America (mostly in Peru, Colombia and Ecuador). Only 1% of them are literate in their own language, while literacy in Spanish exceeds 60%. Although the Quechua language is taught as a subject in primary schools, parents residing in urban areas prefer their children to speak Spanish (Gordon 2005). From 1940 to 1982, the share of Quechua monolinguals dropped from 31% to 11%, while the share of bilinguals remained the same, although the proportion of those who have switched to Spanish grew from 50% to 72% (Hornberger & King 2001). Thus, the sustainability of the Quechua language is quite problematic, despite its sizeable number of speakers. Simultaneously, there are small language and cultural communities that are entirely sustainable. For example, the ethno-religious communities of the Amish in the US, each of them smaller than 50,000 people (Kraybill 2000), are surrounded by one of the most powerful ethnolinguistic groups in the world – the Americans. The total number of the Amish is a few hundred thousand. Despite their small number,

they have been sustainable for more than 200 years, and in recent decades, their number has grown about 4% a year (Erickson et al 1979). This makes them one of the most rapidly growing communities in the world.

In the same way that size does not always matter, neither does the weakly developed internal environment always determine the sustainability of the language community. The whole history of the Estonian nation is a good example of how the will of a group to behave as a collective actor has always been a few steps ahead of the available social institutions. Thus, the internal ecology of the system is essential for the sustainability of the system, but it is not an inevitable or sufficient factor. To sum it up briefly, this means that the sustainability of any community does not depend entirely and ultimately on the factors of its external and internal environment. The key question is rather the collective will of the community to exist as a language and cultural community.

The ability to “to behave as a distinctive and active collective entity” is called ethnolinguistic vitality (Giles, Bourhis & Taylor 1977, 307). This is a socio-psychological phenomenon that rests on the shared belief in the strength and sustainability of one's group. Such shared beliefs are created more or less deliberately in public discourse, and leaders can raise the vitality of their community with enthralling rhetoric and vision. Nonetheless, the ethnolinguistic vitality of the community greatly depends on the external and internal environment of the group. It is quite clear that the ethnolinguistic vitality of a small language community with an undeveloped internal environment and in the sphere of influence of large and influential groups cannot be very high, as the perception of the weakness of one's group does not increase people's willingness to behave collectively. In such a situation, it is often difficult to find realistic aims that would mobilise the community. Notwithstanding this, the practice of language maintenance has shown that without ethnolinguistic vitality, external attempts to raise the sustainability of a community will fail. Thus, the only indispensable precondition for the sustainability of a language community is the ethnolinguistic vitality of the group – the ability to function as a unitary collective actor.

However, even high ethnolinguistic vitality does not guarantee the continuity of a community through time. The most telling example could be the destruction of the Melians by Athenians in the Peloponnesian War in 416 BCE. Unarguably, the small community on the island of Melos was ethnolinguistically vital when it decided to resist the overwhelming forces of the Athenians and not surrender. Unfortunately, the gods did not interfere with the siege. Finally, the Athenians conquered the town and killed all the men they could catch; women and children were taken into slavery, and 500 loyal colonists were settled on the island (Shelton

& Cengage 2005). Because of this genocide, the Melian community ceased to exist despite its high ethnolinguistic vitality.

A short summary of what has been said above would be that the sustainability of a language community depends similarly on all three factors, the influences of the external environment, the strength of the internal environment, and ethnolinguistic vitality. The core of sustainability is high ethnolinguistic vitality, but overwhelmingly unfavourable external environment factors can endanger even the most vital ethnic groups with a most developed internal environment. The correlation of all the three factors with sustainability could be expressed by the following formula:

$$\text{sustainability} = (\text{strength of the internal environment} + \text{vitality}) - \text{threats from the external environment.}$$

In other words, if vitality and the strength of the internal environment exceed the threats from the external environment, the group is sustainable; if, however, the threats from the external environment prove stronger, the community will cease to exist. Next, we will view these three factors separately.

Factors relating to the external environment

As said above, the external environment of a group consists of natural and social factors, three of which are of decisive significance for the group's sustainability: its geographic location, access to resources, and neighbours.

As for the geographic location, a naturally isolated settlement area is a factor supporting sustainability. Johanna Nichols' (1992) studies in language geography have shown that small language communities are most vital on islands and peninsulas (e.g., Icelandic, several variants of Gaelic, Welsh and Breton), in the mountains (e.g. the Caucasus is a region of notable linguistic diversity) and in other difficultly accessible places, such as tropical rain forests (where linguistic diversity is the greatest in New Guinea). The settlement area of the Estonian language is also relatively clearly defined geographically, being bounded by the sea on two sides, and a large lake and marshes on one side. Natural border elements are lacking only on the southern border of Estonia. A settlement area without geographically marked borders is generally the least favourable for sustainability, and the worst is the situation when a group entirely lacks a fixed territory.

Existence of resources is decisive for the sustainability of every community. Typical resources that influence sustainability are hunting and fishing grounds, arable land, water, forest, and minerals, the exploitation of which requires

Figure 3. External factors influencing sustainability

Sustainability index (SI)	Settlement area	Resources	Neighbours
+1	Entirely isolated or hardly accessible settlement area	Environment is rich in resources that can be processed using available technology and enable the growth of the community.	Neighbours are lacking or are numerically smaller and/or at lower level of technological development.
0	One's own fixed settlement area.	Environment provides sufficient resources for the community.	Neighbours are equal to the community in their number and development.
-1	No settlement area of their own	Few resources in the environment or a necessity to compete for them with other communities.	The community is surrounded by one big and hostile neighbour.

corresponding technology. The geopolitical location can also be a resource if it is used, for example, for management of transit flows and earning a living from such flows. It is essential that the community would be able to exploit its available resources. For example, the settlement areas of the Khantis and the Mansi are rich in oil and gas, but this has not increased their sustainability, as they have not had technology for oil and gas extraction.

The social environment, i.e. the existence of competing communities in a region, is equally important. Of that, the size, disposition and economic development of the neighbours are of utmost significance. The worst situation is to be surrounded by one large and hostile community, regardless of its economic situation. Somewhat better is to be near a large, neutral and wealthy nation, or being surrounded by it. The smaller the neighbours in their size and wealth in comparison with one's own group, the more favourable the external environment is. Most favourable for sustainability is the lack of direct contact with neighbours (e.g. Iceland and other island ethnicities).

The concurrence of these three factors creates types of external environment with different influence on the sustainability of the community. It is possible to calculate the influence of each combination on the sustainability of a group by giving +1 to the most favourable situation, -1 to the least favourable situation and 0 to a neutral or average situation for each of the three environmental factors. The greater the summary index of sustainability, the more favourable is the environment; a negative value of the index refers to unfavourable environmental conditions (see Figure 3). Naturally, it should be kept in mind that all three factors

are constantly changing, and are not clearly delimited categories. Therefore, the boundaries between types resulting from their different combinations are fuzzy.

Factors relating to the internal environment

As said above, the internal environment of an ethnic group comprises five central social institutions: economy, government, education, family and religion. For sustainability, each language and cultural community needs the whole system of social institutions if possible. The communities who are unable to create it have to integrate into the social institutions of other, larger or stronger groups. As the aim of institutions is to guarantee the sustainability of the groups who created them, integration into the internal environment of some other groups inevitably means weakening of one's own sustainability.

In the economic system, sustainability is most greatly influenced by the ability to produce values and the division of wealth between the group's members. The weakest economic systems are only able to provide subsistence; no economic surplus is created. The more surplus is produced, the better for the community, even if wealth is distributed very unevenly. In societies producing an economic surplus, so-called creative industries can emerge, which is essential for the formation of the collective identity and self-consciousness of the community. However, economic systems with an uneven distribution of wealth are worse for the sustainability of a community than systems with a more even distribution, as the former weaken in-group solidarity.

For the sustainability of government system, its centralization and sovereignty are essential. Governance at the level of the village community probably exists in all ethnic groups; the maximum level of centralization would be a government that unites the whole community. Sovereignty is also gradual. In the least favourable situation, there is no form of cultural self-government at all; ethnic autonomy is already an averagely favourable status, and the maximally favourable situation is independent statehood.

For education, the worst situation is the lack of a formal system of education; the best situation is an education system in one's own language and culture from the lowest to the highest level, including full-scale higher education and research.

For the family, the average number of children and the rate of exogamy, and also the size of the group, are essential. 'The greater the number of children who reach adulthood and the smaller the rate of exogamy, the better it is for the sustainability of the group. In very small communities where exogamy is biologically justified and balanced, the latter marker should be viewed conditionally.'

Figure 4. Internal factors influencing sustainability

SI	Economy	Government	Education	Family	Religion
+1	The economic system is capable of maintaining versatile and developed creative industries.	Centralised sovereign government.	Complete system of education.	Family is characterised by endogamy and large number of children.	Strong original messianic religion, high religiosity.
0	Economy is able to guarantee subsistence for the community; creative economy is lacking or weak.	Uncentralised self-government and/or cultural autonomy.	Partial formal education system.	Endogamic family which guarantees demographic reproduction of the community.	Existence of ethnic church and cultural religiosity.
-1	Economy is unable to guarantee subsistence for the community.	No (self-) government system for the community.	No formal education system.	Low fertility and/or high rate of exogamy.	Lack of church but great religiosity.

The task of religion is to create social cohesion and a shared worldview between the members of the community. A strong original messianic religion, which presents a vision about the historic mission and chosenness of the community, is the best for the sustainability of the group. A distinctive national church based on a widespread religion is of average sustainability, even if it represents a cultural tradition rather than internal religiosity. Being a part of a church of another ethnic group is the worst variant, even worse than the lukewarm religiosity typical of Estonians.

Ethnolinguistic vitality

As said before, ethnolinguistic vitality is the ability of a community to behave in interethnic communication as a united collective force. For a community to behave collectively, two principal components are needed: readiness of group members to act collectively and existence of leaders who set aims to be collectively achieved. Both components are equally necessary, as a community without leaders is capable of spontaneous manifestations but not of organised action. Good leaders, however, are useless if an inert people will not follow them. Naturally, leaders can somewhat increase vitality with their rhetoric and personal bravery; it can also be expected that someone will always be ready to lead spontaneously agitated masses. Thus, ethnolinguistic vitality is very much formed in the rhetorical dialogue between the collective and its leaders.

Next, let us examine which components influence the readiness of a collective for joint action. Socio-psychological studies have shown that collective identity has three components – cognitive, evaluative and emotional –, although only the emotional aspect, fidelity to the group and its ideals, makes the group act in order to achieve its aims (Ellenmers, Kortekaas & Ouwerkerk 1999, 386). Emotional connection with the group has several facets, one of the most essential of which is appreciation of traditional values and customs. Members who esteem the cultural customs and values are in tighter emotional connection with the group than the members who do not care about them and prefer to behave out of utilitarian motives (profit, personal well-being, etc.).

Naturally, emotional connection with the group is not the only factor influencing vitality. It is also essential to realise the strength of one's own group in comparison with neighbouring groups. This might be called 'the winner effect'. If the group is small, weak and suppressed by others, the members' readiness for collective action can easily decrease, as life has shown that nothing comes of it. Experience of earlier collective success, however, has a positive influence on vitality.

This factor, in its turn, is closely related to the probability of the positive effect resulting from collective action for the community as a whole and its individual members. Tajfel and Turner (1979) argue that group behaviour can be depicted on an axis, at one end of which is social mobility and at the other end social change. If people perceive that they have good chances for individual improvement of their lives and achievement of their aims, they opt for the strategy of social mobility – i.e. they attempt to build a career and climb the social hierarchy, which often brings about assimilation into the dominant group. If, however, the society inhibits social mobility by rigid barriers of class, caste, race, ethnicity or language, collective action is the only way for people to improve their living standards. In a situation of interethnic contact, this dilemma can be reduced to the question of whether it is more useful to change one's identity, i.e. to assimilate into the group with a higher status, or to struggle collectively for the improvement of the status and living standards of one's own group. In conclusion, the choice of individual or collective tactics depends on two factors: the distance and discord between the groups.

The distance between the groups consists of the sum of racial, ethnic, linguistic and cultural differences. The greater the differences between the two groups, the more difficult it is for them to apply the strategy of mobility to improve their living standards, as regardless of efforts, it would be impossible to hide one's heraldry identity, which will inevitably hinder identity change. Thus, the greater the distance, the greater is the motivation for collective action. If the differences

Figure 5. Vitality factors influencing sustainability

SI	Utilitarianism	Strength	Distance	Discord	Leaders
+1	Very high emotional attachment to the group's traditions and values.	The group is perceived as stronger than neighbouring groups; its status is high.	Very big racial, linguistic and cultural distance from the neighbouring groups.	Direct intergroup hostility and/or stigmatisation of the out-group.	One leader with indisputable authority.
0	Valuation of traditions and utilitarian motives are balanced.	The status of the group is perceived as equal with the neighbouring groups.	No racial distance; linguistic and cultural distance is noticeable.	Common feeling of superiority over the out-group without substantial hostility.	Existence of many good leaders, rivalry between them.
-1	Behaviour influenced by the aim of pragmatic gain; no emotional attachment to traditions.	Strength and status of the group is perceived as weaker than that of the neighbouring groups.	Small linguistic, cultural and racial distance from the neighbouring groups.	No discord; friendly relations between the groups.	Lack of capable leaders.

matter how complicated the conditions of the external or internal environment are, there is always the possibility to collectively improve the group's situation. Making use of this possibility depends on the vitality of the ethnos and its ability to behave as a unified collective factor on the arena of history. Therefore, ethnolinguistic vitality is the key factor in the sustainability of an ethnos. There is no doubt that the elites of successful ethnicities have guaranteed the sustainability of their ethnicities by deliberate or intuitive management of ethnolinguistic vitality. Systematic research of these processes also makes it possible to use this knowledge to secure the sustainability of endangered languages and cultures. This should in fact be the main aim of language ecology as a research area.

Internet sources

Shelton, D. L. & Cengage, G. (2005) Athens and Melos – Genocide and Crimes Against Humanity 1. eNotes.com <http://www.enotes.com/topics/athens-melos/reference#reference-athens-melos> [accessed 18 October 2013].

References

- Barth, F. (ed) (1969) Ethnic groups and boundaries. – Barth, F. (ed) *Ethnic Groups and Boundaries: The Social Organisation of Culture Difference*, 9–37. George Allen and Unwin, London.
- Benati, C. (2009) Faroese: a national language under siege? – Pertot, S., Williams, C. & Priestly, T. (eds) *Rights, Promotion and Integration Issues for Minority Languages in Europe*, 189–196. Palgrave Macmillan, Basingstoke.
- Capra, F. (ed) (1997) *The Web of Life*. Random House, New York.
- Edwards, J. (ed) (1995) *Multilingualism*. Penguin, London.
- Edwards, J. (2001) The ecology of language revival, *Current Issues in Language Planning* 2–3, 231–241.
- Ehala, M. (1996) Self-organization and language change, *Diachronica* 13 (1), 1–28.
- Ellemers, N., Kortekaas P. & Ouwerkerk, J. W. (1999) Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity, *European Journal of Social Psychology* 29, 371–389.
- Erickson, J. A., Erickson, E. P., Hostettler, J. A. & Huntington G. E. (1979) Fertility patterns and trends among the old order Amish, *Population Studies* 33, 255–276.
- Garnet, M. (ed) (2004) *Language: An Ecological View*. Peter Lang, Oxford.
- Giles, H., Bourhis, R. Y. & Taylor, D. M. (1977) Towards a theory language in ethnic group relations. – Giles, H. (ed) *Language, Ethnicity and Intergroup Relations*, 307–348. Academic Press, London.
- Haarmann, H. (1986) *Language in Ethnicity: A View of Basic Ecological Relations*. Mouton de Gruyter, Berlin.

are small, then identity change is relatively easy or even unnoticeable, and people rather prefer the strategy of social mobility. Even in the latter case, the strategy of mobility can prove difficult if the discord between the groups is great. Discord is usually caused by historical injustice, intergroup conflict or just banal xenophobia. In any case, great discord between groups can make the use of the strategy of social mobility impossible even if the cultural distance is small. For example, the discord between Serbs and Croatians is so big that changing group membership is impossible, even though the ethnic, linguistic and cultural differences between both groups are small. The impact of the vitality factors on sustainability is summarised in Figure 5.

Conclusion

Language sustainability is a multifaceted phenomenon dependent on the complicated interaction between natural, economic, social, cultural and socio-psychological factors. Some of these factors are outside the control of humans and the members of an ethnos; some of them can be influenced by the activity of the ethnos. Thus, it can be said that, although sustainability depends on factors outside a group's control, no ethnos is entirely at the mercy of external factors. No

- Harris Russell, S. A. (2001) Towards predicting ethnolinguistic vitality: a sociocultural approach. – Ammerlaam, T., Hulsen, M., Stratting, H. & Yagnur, K. (eds) *Sociolinguistic and Psycholinguistic Perspectives on Maintenance and Loss of Minority Languages*, 139–152. Waxmann, Münster.
- Haugen, E. (1972) The ecology of language. – Dil, A. S. (ed) *The Ecology of Language: Essays by Einar Haugen*. Stanford University Press, Stanford.
- Hornberger, N. H. & King, K. A. (2001) Reversing Quechua language shift in South America. – Fishman, J. A. (ed) *Can Threatened Languages Be Saved?*, 166–194. Multilingual Matters, Clevedon.
- Kraybill, D. B. (ed) (2000) *Anabaptist World USA*. Herald Press, Scottsdale, PA.
- Lambert, W. E. (1963) Psychological approaches to the study of language Part II: on second language learning and bilingualism. *Modern Language Journal* 47, 51–62.
- Lewis, M. P., Simons, G. F. & Fennig C. D. (eds) (2013) *Ethnologue: Languages of the World*. Seventeenth edition. SIL International, Dallas, Texas. <http://www.ethnologue.com/> [accessed 25 October 2013].
- Livingston, I. (ed) (2006) *Between Science and Literature: An Introduction to Autopoetics*. University of Illinois Press, Urbana.
- Luhmann, N. (ed) (1990) *Essays on Self-Reference*. Columbia University Press, New York.
- Mackey, W. F. (2001) The ecology of language shift. – Fill, A. & Mühlhäusler, P. (eds) *The Ecological Reader*, 67–74. Continuum, London.
- Maturana, H. & Varela, F. (1973) Autopoiesis and cognition: the realization of the living. – Cohen, R. S. & Wartofsky, M. W. (eds) *Boston Studies in the Philosophy of Science* 42. D. Reidel Publishing Co, Dordrecht.
- Mufwene, S. (2004) Language birth and death. *Annual Review of Anthropology* 33, 201–222.
- Mühlhäusler, P. (ed) (1996) *Linguistic Ecology: Linguistic Change and Language Imperialism in the Pacific Region*. Routledge, London.
- Mühlhäusler, P. (2000) Language planning and language ecology. *Current Issues in Language Planning* 1 (3), 306–367.
- Myhill, J. (2003) The native speaker, identity, and the authenticity hierarchy. *Language Sciences* 25, 77–97.
- Nichols, J. (ed) (1992) *Linguistic Diversity in Space and Time*. University of Chicago Press, Chicago.
- Smolicz, J. J. (1981) The three types of multiculturalism. – Garner, M. (ed) *Community Languages. Their Role in Education*, 1–12. River Seine Publications, Melbourne, Sydney.
- Tajfel, H. & Turner, J. C. (1979) An integrative theory of intergroup conflict. – Austin, W. S. & Worchel, S. (eds) *The Social Psychology of Intergroup Relations*, 33–47. Brooks/Cole, Monterey, CA.
- Virtaranta, P., Jönsson-Korhola, H., Martin, M. & Kainulainen, M. (1993) *Amerikansuomi*. *Tietolipas* 125. Suomalaisen Kirjallisuuden Seura, Helsinki.