With over 60 regional minority languages recognised in the EU, these languages form a big part of multilingual Europe. Despite this, attitudes towards regional minority languages are often indifferent or even negative, both at the speaker-level as well as at the policy-maker-level. This is partly due to the lack of understanding (description and analysis) of these languages. Although multilingualism in general is widely acknowledged to yield economic, social and cultural benefits (see for example the 2002 Barcelona Commitment), multilingualism including regional minority languages does not seem to be part of this picture. In other words, multilingualism is frequently recognised only with respect to (high-status) standard languages and not so much with respect to regional minority languages. Language policies should reflect and stimulate bi- and multilingualism with regional minority languages in order to fully embrace the European linguistic diversity.

While language policy is currently determined on the national level, the EU can support, coordinate or supplement actions of the Member States. The European Charter for Regional and Minority Languages, ratified in 1998, obliges signatories to protect and promote regional minority languages, but not all Member States are party to it, and it is up to the states themselves to determine which regional minority languages to recognise (see for example the EP Briefing 2016 ‘Regional and minority languages in the EU’). Given this complex landscape, there is a need for comprehensive policies on bi- or multilingualism targeting regional minority languages based on interdisciplinary research combining linguistic, cognitive and social aspects. A subsequent step is to intensify efforts to preserve and promote regional minority languages in the context of multilingualism, thereby taking full advantage of the EU’s linguistic diversity.
Many of Europe’s regional minority languages are ‘vulnerable’ or ‘endangered’, to varying degrees; they are learned by fewer and fewer children and therefore spoken by a declining number of people. However, regional minority languages provide a natural opportunity for multilingualism from childhood, a fact that is often not properly recognised or appreciated. Regional minority languages acquired within families have to compete with the official majority language. Bilingualism with regional minority languages is undervalued and often perceived as having a negative influence on the linguistic standards of both the majority language and the minority language. In this context, these languages are perceived as having less (instrumental and/or economic) value.

In an effort to increase the general understanding of multilingualism with regional minority languages, from a linguistic, cognitive and social perspective and to explore strategies of successfully maintaining regional bi- and multilingualism, the AThEME project investigated the following regional minority languages: Frisian, Basque varieties, Scottish Gaelic, Sardinian, Germanic and Romance varieties in Trentino-South Tyrol and neighbouring areas (Cimbrian, Ladin, Mòcheno, Trentino, Tyrolean), Gallo, the Fiuman dialect in Croatia, and Primorska Slovenian dialects. Naturally, this wide range of geographical context but also the variety of issues and types of bilingualism investigated mean that, when it comes to regional minority languages, ‘one size fits all’ recommendations are impossible.

One of the main findings of AThEME research is that regional minority languages need not be seen as substandard when compared to standard majority languages. Moreover, by not paying special attention to the rich set of regional minority languages, policy-makers are missing a straightforward opportunity for tapping into the full multilingual potential in the EU, leaving the social, cultural, political and economic benefits unexplored. Evidence from AThEME shows that indifferent or negative attitudes towards regional minority languages are largely unjustified:

- Language change, including grammatical change, is a natural phenomenon in all situations of language contact. Often these changes are regarded in a negative light as ‘loss’ of original features (in the case of the minority language influenced by the standard language) or as ‘contamination’ (in the case of the standard language influenced by the minority language). An important result of the AThEME research is that change is selective (it happens only when there is linguistic alignment between the two systems) and does not necessarily entail deterioration of language standards.
- Bilingualism involving minority languages presents many of the same cognitive characteristics and consequences as bilingualism with standard languages.

Besides having gathered information on language use, some AThEME researchers have also investigated in what ways such a regional minority language can best be maintained (i.e. language maintenance). These research results show that language maintenance relies heavily on the way a speech community experiences and values its own regional language.

**Evidence and Analysis**

1.) The first relevant finding is that language change is a natural phenomenon induced by the contact between languages in bilingual communities. Languages in contact affect each other, but in a selective way that depends on the characteristics of the two languages and of their particular grammatical structures.

ATHEME researchers in the Netherlands provided evidence from Frisian, a West-Germanic regional language spoken in Friesland, a province in the North of the Netherlands. All speakers of Frisian are bilingual; they speak Dutch as well. Dutch and Frisian are also closely related languages, with only small differences in structure. This research shows that the way change works is not just conditioned by social and contact factors but is also dependent on the degree to which the languages have the same structural make-up or build (i.e. structural alignment). Dutch constructions do not replace Frisian constructions as a result of language contact; rather the two constructions co-exist in the grammars of Frisian speakers.
Consistent with these findings, researchers in Slovenia established that language contact through bilingualism may have contributed only in part to changes in standard Slovenian and in Slovenian dialects spoken in areas neighbouring Italy: the change is similar to change found in dialects not affected by Italian, all following well-established patterns of language change occurring in natural languages.

Researchers in the Basque Country (Spain) focused on the interaction between Standard Basque and Basque local varieties in younger speakers (speakers with two dialectal varieties: ‘bilectal’). Bilectalism again shows an enrichment of expression possibilities and confirms that language change as a result of language contact should not be interpreted as “contamination” of one language by the other language: the communicative function and efficiency of the language system remain stable. At the same time, bilectal speakers are under pressure to ‘correct’ dialectal varieties under the normative influence of Standard Basque. This research, consistent with other results, found a high degree of resilience of Basque-specific linguistic forms in the context of language contact: the fact that only some structures are open to change confirms that change is not an automatic effect of language contact but it responds to precise linguistic constraints.

Researchers in Italy investigated contact-induced language change in the particularly interesting Trentino-Alto Adige (South Tyrol) region. In this area three minority languages (Rhaeto-romance, and the Germanic dialects Mòcheno and Cimbrian) and two groups of dialects (the Romance-Trentino group and the German-Tyrolean group) are spoken besides the official languages Italian and German. More than 200 speakers from all age groups (from 20 to 80 years old) participated in the research, which used the methodologically innovative crowdsourcing website VinKo (Varieties in Contact https://www.dipsco.unitn.it/vinko/index.php). Focusing on word order phenomena, researchers found that contact with Italian as the majority language cannot be the only factor responsible for observed shifts in regional minority languages; rather, these changes appear to be internally motivated, albeit accelerated by language contact.

Similar conclusions about the naturalness and selectivity of grammar change due to language contact was found by researchers in France investigating Gallo, a regional Romance language of Brittany, which seems to be undergoing a fast decline in intergenerational transmission. The geographical proximity to Breton (a Celtic language, regarded as the main language of Brittany) has had negative effects on the maintenance of Gallo. Proper description work on this regional language has been rare up to now, especially with regard to the features that distinguish it from French. While there are no monolingual speakers of Gallo, its speakers can be classified in two groups with respect of their bilingualism: successive and simultaneous. Simultaneous bilinguals seem to have two grammars coexisting to varying degrees, depending on the speaker’s degree of active bilingualism. Consistently with the other findings, this research shows that syntactic change involves a competition between variants, with one of them becoming more prominent and accepted while the other declines. From this point of view, dialectal variation of Gallo is not only due to contact with French but also presents the typical patterns of language change over time.

To summarise: language change is often regarded as negative; the linguistic standards of languages in contact are seen as deteriorating, either from the minority language point of view (losing original features) or from a majority language point of view (contamination). ATHEME researchers have investigated a variety of regional minority languages cross Europe and have found that these languages (minority and majority) do affect each other, but only in selective ways. These findings may already go some way to challenging this negative perception; minority languages in situations of language contact prove more resilient than perhaps previously thought. At the same time, our findings do show changes in specific language structures, but this is considered a natural phenomenon attributable to many different factors. All languages undergo changes over time and these changes can therefore not be described as being a deterioration of linguistic standards.
2.) The second relevant finding is that when looking at the brain and cognition, knowing and using a majority language and a minority language (say, Italian and Sardinian) is not qualitatively different from bilingual knowledge and use of two standard majority languages (say, Italian and English). This means that the cognitive characteristics and consequences of bilingualism with minority languages, such as speed of language processing and the ability to switch between cognitive tasks, are similar in nature to those of bilingualism with majority languages.

ATHEME researchers in Edinburgh (United Kingdom) experimentally investigated bilingualism with regional minority languages from the point of view of language processing and its interaction with general cognitive abilities, especially the control of attention. This research was conducted in two contexts, both involving regional minority languages: Sardinian-Italian bilingualism in Italy and Gaelic-English bilingualism in Scotland, comparing the influence of variables such as age of acquisition and type of exposure on bilingual access to words.

This research showed that life-long bilingualism - independently of the languages spoken and their status - is associated with good performance in both linguistic and cognitive tests: this is evident in the performance of Sardinian-Italian active bilinguals in cognitive tasks tapping the control of attention and in linguistic tasks involving the use of pronouns (i.e. words such as 'he' and 'she'). Language similarity does not play an important role in the way bilingual speakers access their languages: both the structures that are similar across languages and those that are different are connected in bilingual speakers’ mental grammars. This is shown in experiments on ‘priming’ (the tendency of speakers to follow each other’s linguistic choices in dialogue) carried out with Gaelic-English bilinguals.

The comparisons between Sardinian-Italian and English-Italian bilinguals also show that individual variation should be considered a critical factor in language knowledge and processing. The type and quality of the bilingual experience, in terms of age of first exposure to a second language, length of exposure, and active use of both languages, are individual differences that play an important role in any type of bilingualism, whether with regional minority languages or with standard official languages.

The general conclusion from these research findings is that bilingualism with regional minority languages, while commonly associated with a lack of instrumental usefulness, is just like any other kind of bilingualism. Bilingualism with regional minority languages shows the linguistic and cognitive characteristics of having more than one language in the brain, just like in the case of bilingualism with standard majority languages. The reputation regional minority languages have as being substandard when compared to majority standard languages is therefore unjustified.

At this stage it is perhaps also good to point out the difficulties associated with bilingual-monolingual comparisons, which are common in research on bilingualism. Bilingual-monolingual comparisons, especially in Europe, are difficult to make because pure ‘monolinguals’ are disappearing. The focus of research should instead be a bilingual continuum ranging from speakers immersed in their native language with only limited passive knowledge of another language, to highly proficient speakers immersed in the second language who make regular active use of both languages. In any case, more research specifically focused on bilingualism with regional minority languages is needed to further evaluate the cognitive and linguistic effects of different bilingual modes in families and schools, and should be actively supported by policy makers.
3.) The third relevant finding is that **the way a speech community experiences and values its minority language is a key ingredient for language maintenance**, and making regional minority languages ‘real’ for young people, for example through **social media, can contribute to their active use within a community**.

AThEME researcher in Rijeka (Croatia) focused specifically on speakers’ perception of their own bilingualism and their participation in language maintenance. This team conducted a sociolinguistic study of speakers of the Fiuman dialect, which is an indigenous minority language in Rijeka belonging to the group of Romance languages, and is spoken in a Croatian-dominant language environment. The number of Fiuman speakers has decreased notably over the past century; nevertheless, it continues to be spoken in private domains. There are still both intergenerational language transmission and awareness of its importance, and speakers feel a very high level of emotional attachment to their collective identity. One of the most interesting findings of this research is that Fiuman speakers are aware of the fact that speaking more languages enriches them, but they consider the Fiuman dialect to be less sophisticated and modern in comparison with standard Italian. While they lack instrumental motivation, they are motivated mostly by integrative reasons, such as acceptance among other Fiuman speakers, interaction with their family members, or personal satisfaction. It emerges from the research that technology and the new media, such as mobile phones and social networks, have lately contributed to the increase in the use of the Fiuman dialect in the written form and probably to a change in perception about its relevance to everyday life. This clearly points to the importance of social media for language maintenance, particularly among young speakers.

**Policy Implications and Recommendations**

The ATHEME project cannot generate ‘one size fits all’ recommendations for all regional minority languages, as the research involves a wide range of geographical contexts as well as types of bilingualism. Nonetheless, the research findings summarised above point to the similar linguistic and cognitive characteristics of regional minority languages and standard majority languages. At the policy level, this implies that regional minority languages should enjoy a comparable status as standard majority languages. The findings will also go some way towards challenging indifferent or even negative attitudes that people have towards regional minority languages. Policies built based on such a premise will help the EU take full advantage of the EU’s linguistic diversity, and towards the goal of establishing multilingual citizens. Within this context, we offer the following recommendations.

**Promote knowledge and practice of bilingualism with regional minority languages.**

This can take different forms, for example:

- developing policies that are based on research and connected with the speakers’ communities, which enhance the status of minority languages and increase awareness of their value as cognitive resources and positive markers of cultural identity. Policies should include steps to disseminate information among families about the linguistic and cognitive effects, as well as the challenges, of bilingualism. In schools, educational policies should implement curricula and provide age-appropriate material in local schools aimed at multilingual education, and train teachers in the benefits and challenges of using the minority language in the classroom. Learning minority languages as second languages should be encouraged, for example by organising summer schools for children visiting their grandparents during vacation and community courses for immigrants;

- promoting the use of minority languages in the media (e.g. social media, radio, dedicated digital TV channels) and in tools favouring multilingual communication (e.g. dictionary apps, translation programmes);
• encouraging the active usage of the minority language in official situations, such as meetings of municipal councils and other public occasions, with the support of interpreters and translation systems when appropriate;

• promoting a written and literary tradition in the standard version of minority languages, at the same time increasing awareness of the possibilities of use in a variety of registers;

• collaborating with researchers at the local and international level to carry out research projects and systematic evaluations of existing policies.

Raise awareness of the naturalness of language change in all situations of language contact and involve speakers of regional minority languages in language documentation.

This may involve:

• maintaining a strong connection and an active cooperation between researchers, staff in cultural institutes and speakers in minority languages communities;

• relying on updated descriptions of linguistic norms (based on actual language use) for regional minority languages and local varieties of official languages, and promote their status in speech communities;

• creating the conditions for speaker involvement in language documentation and description by developing new web-based crowdsourcing technologies (e.g. the VinKo project) and other ways of eliciting data in which speakers actively participate in scientific investigation.

RESEARCH PARAMETERS

AThEME is a 5-year collaborative research project studying multilingualism in Europe. Researchers from 17 partner institutions across 8 European countries worked on (1) investigating cognitive, linguistic and sociological issues in multilingual Europe, (2) assessing existing public policies and practices within the areas of education and health and (3) contributing to evidence-based policy making.

The project focused of four main research themes: (a) regional minority languages, (b) heritage languages, (c) atypical bilingualism and communicative impairment, and (d) the cognitive aspects of being multilingual. The aim is to advance knowledge of the various factors that contribute to successful multilingualism in different environments and in typical and atypical contexts, as well as to understand how multilingualism affects language comprehension in human interaction, and what the effects of multilingualism are at the neuro-cognitive level.

The main research objective relating to regional minority languages was to increase the understanding of what multilingualism with regional minority languages entails from a linguistic, cognitive and social point of view. To this end the following underlying objectives were identified and addressed:

• to complement and extend the description and analysis of grammatical diversity across regional languages;
• to investigate the effects of multilingualism on grammar changes in a situation of contact between regional and official languages;
• to analyse the reciprocal effects of language and cognition in contexts of regional multilingualism;
• to explore the consequences of regional bilingualism from the point of view of speakers’ own perception and use of their languages.
A defining feature of the AThEME project is its interdisciplinarity, involving researchers from theoretical linguistics, experimental linguistics and cognitive psychology working together to address complex research questions arising in different contexts of bilingualism. AThEME research combined theoretical and empirical work. Most of the linguistic research was qualitative, but some teams used a range of quantitative methods. Most of the psycholinguistic research was experimental and relied on a variety of methods to collect both online and offline data.

**Dissemination** plays an important role in the AThEME project and was coordinated jointly by Bilingualism Matters centre in Edinburgh (through a network of branches set up in each partner country) and De Taalstudio in Amsterdam. Dissemination meetings were organised every other year in order to establish and facilitate contact and exchange between research teams and different groups of practitioners.

More details on the AThEME project, its activities and research outcomes are available on [www.atheme.eu](http://www.atheme.eu).
| Universitat Pompeu Fabra  
| Department of Information and Communication Technology  
| Barcelona, Spain |
| Université de Nantes  
| Département de Sciences du Langage  
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**FURTHER READING**  

