

# Domain loss of a language and its short- and long-term consequences

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Modern European science and culture evolved in the process of emancipation of various national languages from medieval Latin. At present, this development from monolingualism to multilingualism seems to be reversed in several scientific disciplines and in higher education. The former linguistic diversity turns gradually into a modern monolingualism of scientific English, especially in the natural and some social sciences. A short-term consequence is that researchers and professors with other first languages need extra time and sometimes money to prepare their publications and lectures in English. Long-term consequences are, among others, that all languages except English are devaluated as media of science and learning and, thus, a diglossia might develop if only English be used for the important domains and other languages be limited to the domains of private communication and folklore. The way out can only be through a cultivation of at least bilingualism of researchers, professors, and their students in the natural sciences and trilingualism in social sciences and the humanities.

Sodobna evropska znanost in kultura sta se razvili v procesu osamosvajanja različnih nacionalnih jezikov iz srednjeveške latinščine. V sodobnem času pa ta razvoj od enojezičnosti k večjezičnosti na mnogih znanstvenih področjih in v visokem šolstvu poteka ravno v obratni smeri. Predhodna jezikovna raznolikost se postopoma spreminja v sodobno obliko enojezičnosti v okviru znanstvene angleščine, še posebej v naravoslovnih in nekaterih družboslovnih znanostih. Na kratki rok to pomeni, da bodo raziskovalci in profesorji, katerih materni jezik ni angleščina, potrebovali več časa in tudi denarja za pripravo svojih publikacij in predavanj v angleškem jeziku. Na dolgi rok pa lahko pričakujemo, da bodo vsi jeziki razen angleščine kot orodje znanosti in izobraževanja razvrednoteni, zaradi česar bi lahko prišlo do diglosije, v kolikor bi se angleščina še naprej uporabljala na vseh pomembnih strokovnih področjih, preostali jeziki pa le v zasebnem sporočanju in folkloru. Rešitev bi lahko bila spodbujanje dvojezičnosti pri raziskovalcih, profesorjih in njihovih študentih v naravoslovnih vedah ter trojezičnosti v družboslovnih znanostih in humanistiki.

## 1. Domains in science

What do we mean when we talk about domain loss of a language? Who or what loses what? I will not discuss at length the concept of linguistic domains as introduced by Joshua Fishman (1970: 51) some forty years ago and elaborated in several variants by other sociolinguists.<sup>1</sup> For our discussion, the definition given by Iwar Werlen (2004) may suffice:

<sup>1</sup> Various concepts of domain are presented and discussed in Haberland 2005.

*“Domains of language use or language choice are defined as abstract constructs that are determined by appropriate locations, relations of roles, and themes ... Examples of domains are family, neighbourhood, work place, church, and public administration.”* (transl. G. S.)<sup>2</sup>

Within the thematic context of this conference, loss of domain should obviously refer first of all to the fact that within the communicative domain of science many professionally involved persons nowadays use English instead of their first language for publication and sometimes also for teaching and also in certain institutions of higher learning, and the instruction of certain university departments is not or no longer given in the native language of the students but in English. Due to this lack of use, the language in question and its speakers might lose the communicative domains of scientific research and academic teaching on account of English. To put it differently, the scientific domains as such do not get lost, of course, because communication in research and teaching goes on. However, the communicative needs of the scientists and their students involved are no longer fulfilled by a language other than English. The speakers of the other language thus lose the possibility, and perhaps also the faculty, of using their own language in science.

Before I discuss this loss and its possible consequences in more detail let me briefly mention some historical facts of language use in science. Concerning the word *science*, we know that English *science* other than French *science*, Spanish *ciencia*, German *Wissenschaft*, or Russian *наука* usually refers only to the natural sciences, perhaps including medicine and mathematics. I will sometimes use the word *science* in a broader sense to refer to all fields and disciplines of academic research and teaching, i.e. including social sciences and the humanities, and some other times only in the sense of the so-called ‘hard sciences’. I hope the context will make these different uses clear. Similarly the vague term ‘domain’ will sometimes be used to refer to language use in all sciences and their disciplines and sometimes only to language use in a single discipline or a group of related disciplines.

## **2. Historical outline: the case of German**

As we know the present European standard languages were not always the media of science and higher learning. In the Middle Ages the early forms of our languages existed mainly as bundles of vernacular varieties with very limited regional and social range. It took several centuries and demanded the efforts of many writers, scholars, and scientists to develop, expand, and standardise the various vernacular languages of the medieval Europe to a degree where everything that can be thought, asked, said, and written in science can also be expressed. One should remember that until the 16<sup>th</sup> and 17<sup>th</sup> centuries, in some countries even until the 19<sup>th</sup> century, Latin was the dominant communicative medium of science and the humanities and also the medium and object of higher education. Traces of this are revealed by the many Latinisms preserved not only in the daughter languages of Latin but also in other European languages.

<sup>2</sup> “Domänen (engl. domains) des Sprachgebrauchs oder der Sprachwahl sind definiert als abstrakte Konstrukte, die zu einander passende Orte, Rollenbeziehungen und Themen bestimmt sind ... Beispiele für Domänen sind *Familie, Nachbarschaft, Arbeitsplatz, Kirche und staatliche Verwaltung*.“ (Werlen 2004, p. 335)

Allow me to take my own *lingua materna*, my mother tongue, German as a prototypical example for the change from Latin to a developing national language as a medium of scientific communication. At the end of the 17<sup>th</sup> century, Gottfried Wilhelm Leibniz, the great philosopher, jurist, mathematician, physicist, and inventor, still wrote primarily in Latin, sometimes in French, and only very rarely in German. In one of his few German writings, he complains about the shortcomings in the development and uses of the German language. He argues that scholars themselves were to blame for the miserable state of their own language. Most of them were not interested in professional uses of German, because – as he put it - they thought that their wisdom could only be expressed by Latin or Greek. Others were afraid that the world might discover their concealed ignorance if it was not hidden behind big Latin words.<sup>3</sup> Another negative aspect was, as Leibniz states, that most scholars of his time wrote only for other scholars and because of this all those who had not learnt Latin were excluded from science.<sup>4</sup> This could also be our observation 300 years later if we exchanged the Latin example with English.

It is remarkable that Leibniz repeatedly pleaded for the development of German as a language of science. In this, he differs from his older contemporaries who focused their efforts on the cultivation of their mother tongue for literary uses. Leibniz argued that language use in science and education had a greater impact on the general development of a language than progress in its use for poetry and fictional literature. With his admonitions, Leibniz and some other intellectuals initiated a gradual emancipation of the German language since the Age of Enlightenment until it could be used in all domains of science and the humanities in the German-speaking states and regions. Leibniz could only stimulate this process. It was scholars such as the jurist Thomasius (1655-1728) and the philosopher Christian Wolff (1679-1754), who substituted Latin with German as an LSP (Language for Special Purposes, *Fachsprache*) in the minds of their disciplines against the protest of their academic colleagues. It was only in the second half of the 18<sup>th</sup> century that the development of German as a language for all sciences and the humanities was finally achieved. After that Immanuel Kant could write his great “critiques” in German, later on Hegel his “Phenomenology” and Marx his “Capital”, still later at the beginning of the 20<sup>th</sup> century Einstein his “Theory of Relativity”. In the course of the 19<sup>th</sup> century, German as a language of natural sciences, medicine, and philosophy became relevant even beyond the borders of the German-speaking countries and regions. To give just two examples: until the first half of the 20<sup>th</sup> century, students of chemistry all over the world had to study German in order to read important international journals and handbooks of their field. German medical terminology was used in Japan even until the middle of the 20<sup>th</sup> century.

### 3. Multilingual science in Europe

With certain temporal differences and different names of protagonists, similar linguistic histories can, probably, be sketched for other European languages. However, the development of a transnational use in science was not the same for all European languages, even

<sup>3</sup> "... teils weil einige unter ihnen gemeint, daß die Weisheit nicht anders als in Latein und Griechisch sich kleiden lasse; oder auch weil manche gefürchtet, es würde der Welt ihre mit großen Worten verlarfte [maskierte] geheime Unwissenheit entdeckt werden." (Leibniz in Pörksen 1984, p. 62)

<sup>4</sup> "...Denn die Gelehrten, indem sie fast nur Gelehrten [nur für Gelehrte] schreiben, sich oft zu sehr in unbrauchbaren Dingen aufzuhalten; bei der ganzen Nation ist aber geschehen, daß diejenigen, so kein Latein gelernt, von der Wissenschaft gleichsam ausgeschlossen worden [...]." (Leibniz in Pörksen 1984, p. 63)

if regional and minority languages are not considered. Some languages gained a wider use and distribution than others. Since the 14<sup>th</sup> century, Italian was important in the international domains of banking and music. During the 17<sup>th</sup> and 18<sup>th</sup> centuries French dominated the political and scientific scenes in Europe and became important in the French colonies in Africa and Asia. From the 16<sup>th</sup> century onwards the use of Spanish expanded to all public domains in Central and South America, English to North America, parts of Asia and Africa, and Australia. German, as mentioned before, became an international language of science in the 19<sup>th</sup> century. On the other hand there exists a certain reservation: scientists of smaller linguistic communities always had to use another language when wanting to be internationally recognised. Hungarian and Finnish scholars, for instance, used to publish in German until the last century, Polish scientists in either French or German, meaning that although the European world of science and learning was multilingual, international linguistic diversity in science was never quite as rich and colourful as some of us might think and wish it to be.

It is, however, important to be aware of the fact that the developing diversity of various European languages did not hamper the progress in science and learning. In the late Middle Ages, thinking and teaching of the European intellectual elite came to a certain canonical dogmatism and sterility in its Latin monolingualism. With the emancipation of the various vernacular languages in combination with religious reformations and the spread of philosophical enlightenment, intellectual Europe woke up and increased its creativity – it became modern. The great literatures of the European peoples, Renaissance in art, modern philosophy, and the many scientific and technical discoveries did not develop within one and the same standard language but in a variety of developing European cultural languages. The idea that Dante, Cervantes, Molière, Shakespeare, Goethe, Andersen, Pushkin, and others could all be writing in Latin is absurd. They and other writers, philosophers, scientists, and inventors wrote in those various languages that had become fully developed national languages, i.e. languages that could be used for all purposes in all communicative domains, including those of science.

#### **4. The turn towards English**

In the last century the linguistic situation changed. The development Leibniz and others had advocated seems to be reversed, moving backwards. As far as the German language is concerned, everything in science can, perhaps, still be expressed in German with sufficient effort, however, a lot is not being said and written in German any longer. The mostly uncritical use of anglicisms as terms and working phrases in several sciences is only part of the development.<sup>5</sup> What is more relevant is the fact that scientists in various fields have left their native tongue behind and started using English, at least in their publications. The European multilingualism of scientific communication that overcame the medieval Latin monolingualism is now being gradually substituted by the new monolingualism of scientific English. More than 20 years ago, the then president of the renowned Max-Planck-Society, Hubert Markl, declared: "Top science speaks English".<sup>6</sup>

As far as the German language is concerned, there are several obvious reasons for its decline as an international language of science.<sup>7</sup> There were first of all the two World Wars that were started by Germany. In addition, German was the propaganda language of the Nazis;

<sup>5</sup> Concerning anglicisms in various (16) European languages, see Görlich 2002.

<sup>6</sup> "Die Spitzenforschung spricht Englisch". Hubert Markl in Kalverkämper/Weinrich 1986, pp. 20-25.

<sup>7</sup> This was carefully studied and described by Ulrich Ammon (1998).

the plans for terrible crimes were made in German and the orders to execute these plans were shouted out in that language. Many people, therefore, felt that during the so-called Third Reich not only the Nazis but also the German language were guilty. This is, of course, an anthropomorphism of language. Only people can be guilty, not a language. Although this gives some explanation for the decline of German as a language of science, it does not explain the recent development of other European languages. The attractiveness of English, especially the American variety, is not limited to Germany and Austria, but it has also become prevalent in many other countries where no guilt or collective shame due to Nazi crimes exists. The outcome of the two World Wars and the end of the Cold War favoured the rise of the United States of America as the leading economic and military power, which also supported the increasing importance of English as an international vehicular language in trade and commerce, politics, and science.<sup>8</sup>

Let us have a closer look at what happened recently and is still happening. For this, I would like to distinguish between language use in research and the use of language for instruction in higher education, i.e. I distinguish between two sub-domains within the macro-domain of science, research and teaching. For the domain of scientific research, I concentrate again on the situation in Germany. The decreasing use of German in international communication has been investigated in several studies (Skudlik 1990, Ammon 1998). Ten years ago I made a survey among the 80 institutes of a publicly financed research network<sup>9</sup> in Germany with about 5,000 scientists. I will not go into the details of the questionnaire and the many resulting data, but let me only present a few statistical figures. Among other questions, the participants were asked to what extent English had gained acceptance for written professional communication within Germany.<sup>10</sup> Around 86% of the participating natural scientists, medical researchers, mathematicians, and engineers answered that English had been mainly or completely accepted for written communication even within Germany. Half as many social scientists (40.9%) assessed this for their disciplines. For the researchers in the humanities, the percentage was much lower (23.3%). These figures do not quantify the actual written use of English in the various scientific disciplines in Germany but are only assessments of the scientists who answered the questionnaire. However, these estimates are not independent of the actual situation.

The use of English for oral communication among scientists and scholars in Germany was estimated as less common than the use of English for written use. However the majority of those who participated in the survey stated that English was gaining importance, especially in the natural sciences, engineering, medicine, and mathematics. Scholars of the humanities considered the oral use of English as least important, which is not surprising. A cross-table of the answers with the age of the subjects showed that younger scientists considered English as more established in oral communication than the older ones. That is, with the retirement of the older generation and the former young generation still in office, the use of English in science will have increased in the meantime. Unfortunately I do not have more recent empirical data at my disposal. However, I conclude from the many punctual impressions that the trend towards the use of English as a medium of professional communication even within the internal context of German research institutes is increasing. The share of international publications written in English in several natural sciences and medicine has been mentioned in several studies during

<sup>8</sup> I avoid in this context the ubiquitous phrase *lingua franca*, because the historical *lingua franca* was never a medium of science and learning: It was just a primitive pidgin of sailors and traders along the coasts of the Mediterranean.

<sup>9</sup> Leibniz-Gemeinschaft (WGL) = Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz; [www.wgl.de](http://www.wgl.de).

<sup>10</sup> See the table in the appendix.

the nineties of the last century. The figure that has been repeatedly given is 80%, sometimes even 90%. Though these percentages are not safely founded<sup>11</sup>, the actual share of scientific publications in English will have undoubtedly risen in the meantime.

Now for some observations on language use in higher education. Teaching at the university level is based in various ways on research, or at least should be. We therefore find similar facts and tendencies in language use. For this, we have at our disposal extensive results in a study conducted by the German linguist Ulrich Ammon and his Canadian co-author Grant McConell (2002). They investigated the use of English as an academic language in 22 European countries. The problem with a study like this is that within limited time and with limited financial means the actual linguistic reality in many countries can hardly be observed directly, that is, by visiting lecture halls and classrooms. The two investigators, therefore, had to rely on the answers that they received from government offices, university administrations, and other agencies involved in the organisation of university teaching. Anyhow, they tested the reliability of at least their general results by two in-depth studies. Let me give only a brief and simplified summary of some of their results.<sup>12</sup>

The overall European picture concerning the use of English in university teaching is not homogeneous. They found differences in three aspects – the main domains of science, the size of languages (in the numbers of their speakers), and geographic distribution. The data they got proved and confirmed that the situation differs between various fields of science. As my survey showed for language use in research institutions, the domains of natural sciences, social sciences, and the humanities differ in the extent of their “anglisation”. As we can all also observe or suspect at present, the largest amount of teaching in English is to be found in programmes and courses in several disciplines of natural sciences, smaller amount in the social sciences, and the smallest amount in the humanities. A difference was also found between big-language countries such as France and Germany that were more reluctant to introduce English in university teaching and small-language countries such as Denmark and the Netherlands. The third aspect of the difference in the extent of the use of English according to Ammon and McConell was between countries in northern and southern Europe. “The southern European countries seem to be generally less prone to use English (or any other foreign language) for university teaching than do the northern European countries.” Their main conclusion was “that English as a foreign language and major European *lingua franca* has by now widely spread into most European countries as a language of university teaching, alongside national official languages”. (Ammon, McConell 2002: 171)

Their data and conclusions, which deserve more attention and discussion than I can give in our context, do not, unfortunately, offer a clear distinction between the use of English **along with** individual national languages and **instead** of them; domain loss could be diagnosed only in the latter case. Anyway, their findings indicate at least a trend towards an increasing loss of an increasing number of scientific domains in all European national languages except English. Further surveys and studies will have to look for more recent data also in connection with the effects of the Bologna Process on language use in various scientific fields in various European countries. Even without those necessary studies, a partial loss of linguistic domains in scientific research and university teaching can no longer be questioned.

<sup>11</sup> Percentages and other figures can be found among others in Swales (1991) and Schröder (1998). The 80% often given for English as the language of scientific publication does not seem unreliable. See Schröder (1998, 834) who also cites Swales (1991, 97).

<sup>12</sup> See this and the following quotes Ammon/McConell 2002, p. 171ff.

## 5. Consequences

What are the consequences of this domain loss for languages other than English? I would like to distinguish between short-term and long-term consequences. Short-term consequences can be directly observed. Concerning long-term consequences only reasonable speculations are possible, especially since there are no linguistic or sociological methods that allow reliable prognoses of language development.

At first, we must consider that most people in Europe do not feel any loss because they do not teach at a university, read scientific journals, or attend medical conferences. Those who do, however, suffer from a disadvantage when expected to prepare their lessons and lectures or write articles or books in a language different from their mother tongue; they need more time than when they would use their native language. In most disciplines of natural sciences research articles written in other languages than English are not accepted by international journals. Many scientists interviewed in our survey mentioned earlier admitted that for the preparation of their papers and other publications they also needed the help of native speakers of English, which also needs extra time and often money. These short-term disadvantages that we all know of may diminish with new generations of scholars and scientists who started learning English in kindergarten.

A consequence graver than the often poor command of English of many scientists in comparison to their native language concerns the shift of essential sub-domains of scientific communication to a foreign language, i.e. English, which excludes a large part of a non-Anglophone society from participation in science, although science is financed by the whole society. I do not want to indulge in the myth of an ideal science that can be made comprehensible to everyone. However, access to difficult scientific topics, questions, and results should not be made even more difficult for laymen by forcing them to use a foreign language. We must not forget that with regards to a specific discipline, most colleagues from other scientific fields are also laymen or laywomen.

In addition, there are long-term consequences for languages and their linguistic communities. In those scientific disciplines where communication is conducted mainly or exclusively in English, the native idiom of scientists does not develop with scientific progress, among others in terminology. As a professional language, the native language may, thus, decline until it becomes useless as a medium of communication within a particular field. It loses even more of its use in communication between different sciences and beyond them. The expectation that the competence in English of continental Europeans is continuously improving is not a comforting argument. It will take at least two or three more generations before the majority of the population of continental Europe becomes bilingual or trilingual. (Even in Switzerland with its long tradition of official multilingualism, many people are still monolingual. The same can, probably, be said of Belgium.) During the two or three generations that are necessary for the spread of multilingualism among the European population, non-English standard languages are in danger, especially since the partial domain loss is not limited to science. Language use in science is not isolated in closed compartments. A similar shift of language use and partial loss of domains can be observed in business and commerce,<sup>13</sup> in international politics, not to mention tourism and pop-music. The more English becomes the dominant or even exclusive language in these

<sup>13</sup> Reports from several European countries on the linguistic situation in these domains can be found in Stickel (ed.) (2010).

domains and, perhaps, others as well within the present non-Anglophone countries, the more the standard languages of these countries are devaluated. With time this may lead to a diglossia, i.e. a split of communicative functions of the indigenous languages and English. This means that important matters in politics, economics, and science would be dealt with mainly or exclusively in English, and the use of native languages would be limited one day to the f-domains of family, friends, and folklore. The existing national languages would become socially and functionally limited regional languages under English as the all-European standard language.

The standard varieties of national languages would then also come into conflict with their dialectal varieties and minority languages that have always been preferred by many people for the f-domains. For limited communication on issues of family, friends and spare time, the standard variety of a language is less suitable than the local dialect or minority language. It has less practical and emotional value in these domains. Thus, it might happen that the developed national standard languages get into a clash between global English that expands to ever more domains on the one hand and locally and socially limited dialects and minority languages on the other, which due to their diminishing usefulness gradually die out. In the end there would be – apart from English as an all-European standard language and some leftovers of a few languages with extra-European distribution and, perhaps, also single “stubborn” languages such as Bask – only regionally and functionally limited dialectal remains of existing continental European languages. This is, of course, only a speculative negative scenario of a future development that may not occur. However, in view of the observations and data we already have, it is not impossible.

We must, therefore, remind each other and our contemporaries that the preservation of each language, especially its standard variety, is essential for social and cultural continuity of a society, also a multilingual society, and by this also for the socialisation of the individuals that belong to it. Since individuals do not gain most of their knowledge from their own experiences but from utterances and texts of other people, the continuity of social groups – that is from families, clubs, religious communities, professional organisations to nations – is linguistically based. And this basis is not only represented by oral and written texts of the present – including narrations of parents and grandparents – but also older texts such as legal codifications, classical literature as well as historical, philosophical, and religious writings. Substantial changes of language use, including partial or entire abandonment of the proper language, not only diminish or delete the value of a language for the present and its link with the past, but also make access to history more difficult for future generations.

## 6. Conclusion

Of course, the way out cannot be a return to the individual national languages as exclusive media of science within various countries. Scientists should continue to speak and write in English within the international world of their discipline whenever they want to be understood beyond the borders of their national language. Scientists should, however, be obliged to also publish and teach in their national languages whenever they are in their native environment. Professors of biology, chemistry, physics, other natural sciences, medicine, and mathematics should cultivate their own bilingualism or trilingualism and also encourage their collaborators and students to publish and lecture in English as well as in their native language.

Through this, both relevant demands can be met: the demand of science for international communication and the demand of each linguistic society to preserve its language and culture and

participation in science. A rough distinction between the three main domains of science can be kept. In the so-called hard sciences, English has already proved its usefulness as an international and interlingual auxiliary mode of communication in many cases. For research and publications where essential results are only in part verbally presented and are mainly given in tables, graphs, or formulas, the limited command of English of most natural scientists in comparison to their mother tongue is sufficient. There remains, however, the responsibility also of natural scientists towards their native linguistic society that makes science possible and which needs science. This requires some effort among others in the development of terminologies along the progress made in various sciences – i.e. efforts that cannot be entirely left to special institutions for norms and terminology. It may also be useful for the individual scientist to sometimes translate a paragraph written in English into his native tongue. This can be as revealing as translating the text of an English pop song into another language, thus exposing the semantic triviality of the English version.

For publications and teaching in the humanities and social sciences where theoretical concepts, methods, and results are developed and presented in a discourse and with interpretative arguments, the dominant use of English represents a grave methodical and heuristic hazard. In these disciplines, the use of the mother tongue besides English and other languages is essential. Individual multilingualism of scholars and their students is required. In order to profit from the stimulating quality of different semantic structures inherent in different languages, each scholar in the humanities and social sciences should cultivate at least trilingualism in his or her research and should also encourage his or her students to follow suit. Researchers and students in the humanities and social sciences can, of course, never be prevented from learning other foreign languages when studying cultures and societies based on languages other than English.

The various disciplines of science will thus not only keep and develop the stimulating multilingualism of their own domains but will also contribute to the preservation and further development of European linguistic diversity that is essential for cultural and social diversity as well as prosperity of our continent. Let us argue, plead, and hope that this will be the case.

## Appendix

### Written use of English in institutes of the WGL (2000)<sup>14</sup>

Subjects / Engl. written frequency in %	not yet	starting	partially	mainly	completely	no answer	total
humanities	22.6	30.5	22.0	<b>21.5</b>	<b>1.7</b>	1.7	100.0
social sciences, economics	6.9	34.9	17.0	<b>32.5</b>	<b>8.4</b>	0.3	100.0
bio-sciences	1.1	9.1	2.1	<b>45.1</b>	<b>41.1</b>	1.5	100.0
physics/chem./engineer./ math.	0.9	10.4	1.9	<b>51.6</b>	<b>34.9</b>	0.3	100.0
environmental sciences	3.6	21.8	5.6	41.1	27.4	0.4	100.0
others	7.1	25.0	17.9	25.0	14.3	10.7	100.0
no answer	6.9	10.3	17.2	31.0	34.5	-	100.0
total average	4.6	18.1	7.5	41.6	17.2	0.9	100.0

<sup>14</sup> WGL = Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz. For detailed results of the survey (in German) see Stickel (2001).

## 7. Literature

- Ammon, U., 1998: *Ist Deutsch noch internationale Wissenschaftssprache? Englisch auch für die Lehre an deutschsprachigen Hochschulen.* Berlin/New York: de Gruyter.
- Ammon, U., McConnell, G., 2002: *English as an Academic Language in Europe. A Survey of its Use in Teaching.* Frankfurt am Main etc.: Peter Lang.
- Debus, F., Kollmann, F. G., Pörksen, U. (Hrsg.), 2001: *Deutsch als Wissenschaftssprache im 20. Jahrhundert.* Mainz: Akademie der Wissenschaften und der Literatur / Stuttgart: Franz Steiner.
- Fishman, J. A., 1970: *Sociolinguistics. A brief introduction.* Rowley/Mass.: Newbury House.
- Görlach, M. (ed.), 2002: *English in Europe.* Oxford / New York: Oxford University Press.
- Haberland, H., 2005: Domains and domain loss. B. Preisler et al.: *The Consequences of Mobility.* Roskilde: Roskilde University, Dept. of Languages and Culture. 227-237.
- Pörksen, U. (Hg.), 1983: *Gottfried Wilhelm Leibniz, Unvorgreifliche Gedanken, betreffend die Ausübung und Verbesserung der deutschen Sprache.* Zwei Aufsätze. Kommentiert v. U. Pörksen und J. Schiewe. Stuttgart: Reclam.
- Rannut, M., 2009: Threats to national languages in Europe. G. Stickel (ed.), *National and European Language Policies.* Peter Lang: Frankfurt am Main etc. 35-51.
- Schröder, H., 1998: Heutige Fachsprachen im internationalen Austausch III: die Stellung der englischen Wissenschaftssprachen in der Welt. L. Hoffmann, H. Kalverkämper, H. E. Wiegand (Hrsg.), *Handbücher zur Sprach- und Kommunikationswissenschaft. Fachsprachen.* 1. Halbband. Berlin / New York: Walter de Gruyter. 828-840.
- Skudlik, S., 1990: *Sprachen in den Wissenschaften. Deutsch und Englisch in der internationalen Kommunikation.* (= Forum für Fachsprachenforschung, Bd. 10) Tübingen.
- Stickel, G., 2001: Deutsch als Wissenschaftssprache an außeruniversitären Forschungseinrichtungen. F. Debus, F. G. Kollmann, U. Pörksen (Hrsg.), *Deutsch als Wissenschaftssprache im 20. Jahrhundert.* Stuttgart: Franc Steiner Verlag. 125-142.
- Stickel, G. (ed.), 2006: *Brussels Declaration on Language Learning in Europe in the 20 Official Languages of the European Union.* EFNIL. Mannheim: Institut für Deutsche Sprache.
- Stickel, G., 2008: Europäische Hochsprachen in der Klemme: Zwischen globalem Englisch, Dialekten, Minderheits- und Regionalsprachen. G. Lüdi et al. (Hrsg.), *Sprachenvielfalt und Kulturfrieden. Sprachenminderheit – Einsprachigkeit – Mehrsprachigkeit.* Fribourg: Academic Press / Stuttgart: Kohlhammer.
- Stickel, G. (ed.), 2010: *Language Use in Business and Commerce in Europe. Contributions to the Annual Conference 2008 of EFNIL in Lisbon.* Frankfurt am Main etc.: Peter Lang.
- Swales, J. M., 1991: *Genre Analysis. English in Academic Research Settings.* Ann Arbor: The University of Michigan Press.
- Werlen, I., 2004: Domäne / Domain. Ammon et al. (eds.): *Sociolinguistics / Soziolinguistik Vol. 1,1 (=HSK 3.1, 2. Aufl.).* Berlin / New York: de Gruyter. 335-341.