

Förkortningar

AN	=Afdeling for Navneforskning, Nordisk Forskningsinstitut, København	NI	=G. Kvaran & S. Jónsson, Nöfn Íslendinga (1991)
ANF	=Arkiv för nordisk filologi	NIYR	=Norges innskrifter med de yngre runer
APhS	=Acta philologica Scandinavica	NLÆR	=Norges Indskrifter med de ældre Runer
AS	=Anthroponymica Suecana	NK	=Nordisk kultur
BNF	=Beiträge zur Namenforschung	NN	=Namn og nemne
BØ	=Bustadnavn i Østfold	NO	=Norsk ordbok
DAG	=Dialekt-, ortnamns- och folkminnesarkivet i Göteborg, SOFI	NoB	=Namn och bygd
DAL	=Dialekt- och ortnamnsarkivet i Lund, SOFI	NPL	=K. Kruken & Ö. Stemshaug, Norsk personnamnleksikon (2. utg., 1995)
DAUM	=Dialekt-, ortnamns- och folkminnesarkivet i Umeå, SOFI	NRA	=Riksarkivet, Oslo
DD	=Diplomatarium Danicum	NRL	=L. Peterson, Nordiskt runnamnslexikon (http://www.sofi.se)
DGP	=Danmarks gamle Personnavne	NRO	=Norsk riksmålsordbok
DI	=Diplomatarium Islandicum	Nä	=Närkes runinskrifter (SRI 14:1)
DN	=Diplomatarium Norvegicum	OAU	=Ortnamnsarkivet i Uppsala, SOFI
DR	=Danmarks Runeindskrifter	ODS	=Ordbog over det danske Sprog
DRA	=Rigsarkivet, København	OGB	=Ortnamnen i Göteborgs och Bohus län
DS	=Danmarks Stednavne	or.	=original
DSt	=Danske Studier	OUÅ	=Ortnamnssällskapets i Uppsala årsskrift
FMU	=Finlands medeltidsurkunder	Rep	=Repertorium diplomaticum regni Danici mediævalis
FRA	=Riksarkivet, Helsingfors	SAOB	=Ordbok över svenska språket utg. av Svenska akademien
Fv	=Fornvännen	SAS	=Studia anthroponymica Scandinavica
G	=Gotlands runinskrifter (SRI 11–12)	SD	=Svenskt diplomatarium
Gs	=Gästriklands runinskrifter (SRI 15:1)	SDns	=Svenskt diplomatarium [ny serie] från och med år 1401
hd	=härad	SkO	=Skånes ortnamn
KA	=Kammararkivet (i SRA), Stockholm	Sm	=Smålands runinskrifter (SRI 4)
KL	=Kulturhistoriskt lexikon för nordisk medeltid	SMP	=Sveriges medeltida personnamn
l.	=län	SMPs	=SMP:s samlingar, Uppsala, SOFI
LB	=M. Lundgren, E. Brate & E. H. Lind, Svenska personnamn från medeltiden (1892–1934)	SMR	=Svenska medeltidsregister 1434–1441
Lind	=E. H. Lind, Norsk-isländska dopnamn och fingerade namn från medeltiden (1905–15)	sn	=socken
Lind Bin.	=E. H. Lind, Norsk-isländska personbinamn från medeltiden (1920–21)	SNF	=Studier i nordisk filologi
Lind Suppl.	=E. H. Lind, Norsk-isländska dopnamn och fingerade namn från medeltiden. Supplementband (1931)	SOB	=Sveriges ortnamn. Ortnamnen i Blekinge län
LUP	=L. Peterson, Lexikon över urnordiska personnamn (http://www.sofi.se)	SOD	=Sveriges ortnamn. Ortnamnen i Dalarnas län
MM	=Maal og minne	SOFI	=Språk- och folkminnesinstitutet
NG	=Norske Gaardnavne	SOH	=Sveriges ortnamn. Ortnamnen i Hallands län
		SOJä	=Sveriges ortnamn. Ortnamnen i Jämtlands län
		SOJö	=Sveriges ortnamn. Ortnamnen i Jönköpings län
		SoK	=Sprog og Kultur

Forts. på bakre omslagets insida

DAMARIS NÜBLING and KONRAD KUNZE

New perspectives on *Müller, Meyer, Schmidt*

Computer-based surname geography and the German Surname Atlas project

1. The emergence and structure of German surnames

In order to understand the specific structures and features of the German surnames the most important facts about their emergence and history should be outlined and, at the same time, be compared with the Swedish surnames because there are considerable differences (for further details cf. Nübling 1997a, b). First of all, surnames in Germany emerged rather early, with the first instances occurring in the 11th century in southern Germany; by the 16th century surnames were common all over Germany. Differences are related to geography (from south to north), social class (from the upper to the lower classes) and urban versus rural areas. Therefore, German surnames contain linguistic material from Middle High German (MHG), Middle Low German (MLG), and Early New High German (ENHG). This is different from Swedish, indicated in Table 1.

Furthermore, the semantic sources are rather different: The following list provides the five most important, i.e. the most frequently used motives (for Swedish, see Table 1):

- (1) Surnames derived from professions: *Müller, Meier, Schmidt, Koch, Richter* etc.
- (2) Surnames derived from first names (patronymics): *Nikolaus, Werner, Hartmann, Peter/Peters/Petersen* etc.
- (3) Surnames derived from bynames concerning character or physical attributes such as hair, body, etc.: *Schwarz(e), Klein(e), Groß(e), Kurz(e), Stolt(e)* etc.
- (4) Surnames derived from the place of residence, denoting, e.g., the surrounding, the position, the material of the house, the farm etc.: *Bach* 'river', *Steinhäuser* < *Steinhaus* 'stonehouse', *Steger* < *Steg* 'footbridge', *Struck* and *Strauch*, both originally meaning 'bush', etc.
- (5) Surnames derived from the provenance of the recently arrived person: *Schwarzwälder, Hamburger, Sachs(e), Bayer* etc.

Among the 100 most frequent surnames there are 43 original profession names, 17 bynames, 20 patronymics, one provenance name (*Böhm/Boehm*), and one residence name (*Busch*). For the remaining 18 names, one may not

Table 1. Some differences in the emergence of German and Swedish surnames.

	Germany	Sweden
Emergence	from the 11th to the 16th century	from the 16th to the 20th century
Most important sources	1. professions (pos. 1–13) (<i>Müller</i>) 2. bynames (<i>Klein, Schwarz, Weiß, Jung, Alt</i>) 3. patronymics (<i>Werner, Walter, Peters, Jacobi</i>) 4. place of residence (<i>Bach, Steger</i>) 5. provenance (<i>Hamburger</i>)	1. patronymics (pos. 1–18) (<i>Andersson</i>) 2. burgher names (<i>Lindström</i>) including noble names (<i>Liliehöök</i>): bipartite nature names 3. names with suffixes of Latin origin (<i>Lundin, Noreen</i>) mostly deriving from places of residence or farms 4. soldiers' names (byname) (<i>Svärd</i>)
Surname change	not possible (except in special cases)	possible (common)
Linguistic material	MHG, MLG, and ENHG	Modern Swedish

definitely conclude from which name source they have been derived, such as *Wolf* which was either derived as a byname from the animal designation *Wolf* or as a patronymic from *Wolfgang* (for further details, cf. Kunze 2004: 198–199).

A further typical German phenomenon is the fact that many dialect words entered the surname inventory, as, e.g. *Struck* and *Strauch*, the first occurring in Low German, the latter occurring in High German (cf. Map 7; all maps are placed at the end of the article).¹ To get an impression of the extent of the variety, we take the patronymics derived from *Nikolaus*: Far more than 400 different surnames emerged from this biblical name, among them *Nikolausen*, *Nicolaisen*, *Nicolay*, *Niclas*, *Nicklisch*, *Nikol(s)*, *Nickel(e)*, *Nickelmann*, *Nickl*, *Niggli*, *Nicke*, *Nitz*, *Nitsch*, *Nietzsche*, *Nix*, *Kohlhaas*, *Klose*, *Klaus*, *Glaus(er)*, *Kla(a)s* etc. This short list does not include all the different ways of spelling (<k> vs. <c> vs. <ck>) (for further examples cf. Kunze 2004: 80–81). Over the course of its adaptation to the German language the original foreign name was shortened and varied by having been divided into different parts and then often lengthened by suffixes.

In contrast to Sweden, the change of one's surname in Germany is very difficult and only rarely realized. Thus, German surnames preserve linguistic material that is at least 500 years old. Therefore, the research of German surnames requires knowledge of historical linguistics, dialectology, and social and cultural aspects of German history in general.

¹ The expense for printing the colour maps has been defrayed by the authors. – *The editors.*

2. Facts about the *Deutscher Familiennamenatlas* (DFA)

In February 2005, the German Surname Atlas project was launched as a co-operation between the Universities of Freiburg and Mainz. The exact project name is: "Deutscher Familiennamenatlas – Sprach- und kulturwissenschaftliche Untersuchungen des Familiennamenbestandes in Deutschland (DFA)" ('The German Surname Atlas – a Linguistic and Cultural Investigation of Surnames in Germany (DFA)'). This project is financed by the Deutsche Forschungsgemeinschaft ('German Research Foundation') and will be supported for the next seven years (for further information, cf. www.familiennamenatlas.de). The database consists of all fixed network telephone lines from 1995 (all the following maps are based on the data of 1995). There are roughly 1,000,000 different types of surnames in Germany; the number of tokens (network lines) is roughly 30,000,000. On average, every 2.8 persons share one fixed network line. A specially-developed computer program enables us to create maps which show the exact distribution of the surnames in Germany. Postal code areas from one to five digits serve as a point of reference. In order to understand the basis for distribution points on the map, a few words about German postal codes are in order. All addresses in Germany come with a five-digit postal code (e.g. 55128 in Mainz). When creating these maps we have a choice of basing the points on only the first three digits (three-digit map) or on all five digits (zoom) (including, of course, all the other digits). The five-digit map provides the most detailed picture and allows us to see differences between towns and villages within a small region. These maps also allow us to locate what we term a *nest*, a centre for a name which is found almost nowhere else. Because the DFA project is interested primarily in surname landscapes, however, most maps shown in this paper are three-digit maps, which provide an overall picture of the relative distribution of names throughout Germany. As an example for a three- and a five-digit map, cf. Map 1 for *Hass(ß)denteufel*, a sentence name originally meaning 'hate the devil'. This surname occurs only within a restricted area around Saarbrücken, the capital of the federal state of Saarland. The spellings with (orthographically correct) <ß> predominate with 311 tokens against <ss> with 46 tokens. Map 2 presents a five-digit map.

As already mentioned, relative and absolute maps can be produced. The absolute maps represent the absolute occurrence of a name, meaning that, in general, the major urban centers produce the biggest spots. Since we are primarily interested in onomastic landscapes, we usually produce relative maps. There remains, of course, the problem that there are different population densities in the federal states (North Rhine Westphalia with the highest population density and Mecklenburg-Vorpommern with the lowest one). Maps 3 and 4, *Richter*, show the difference between an absolute and a relative map.

Most important is the fact that we don't produce many so-called one-name maps but rather combination maps concerning a special question. If, e.g., the apocope isoglosses shall be demonstrated, different original adjectives (such as *Link* vs. *Linke*, *Lang* vs. *Lange*, *Kurz* vs. *Kurze*) are combined to mark the border between the areas with and without apocope. Another important aspect is that we always concentrate on words of the same word class membership because the apocope isogloss could vary between adjectives (*Lang* vs. *Lange*), common names (*Haas* vs. *Haase*), and proper names (*Fritsch* vs. *Fritsche*). Isoglosses may vary even inside the same word class, however. The comparison of these isoglosses with common nouns and adjectives leads to new insights, as shown by Kunze & Kunze (2003), where not only many astonishing parallels are observed, but also some clear divergences between these lines. Since we are interested in the distribution of linguistic phenomena and not of single names, most of the following maps are combination maps.

Every map is accompanied by a detailed commentary which contains all the relevant information about the motivation for the map (what we are trying to illustrate), the exact query (exactly what we entered) and the different output types, the token frequencies of the different types, a listing and an explanation of the names which are excluded (mostly those with competing semantic sources), some information about the origin, the history, and the etymology of the respective name, a list with the absolute and relative frequency of the name on the basis of two-digit postal code areas, a description and an evaluation of the map, and some further details. This commentary requires a lot of work and time because the data have to be cleared up both thoroughly and cautiously. The goal of the Surname Atlas is to document only the linguistic phenomena, not to explain them. It often occurs that we stumble upon very interesting onomastic landscapes which only can be explained by interdisciplinary research. For example, we often find surprising parallels between the structure of Bavarian and Westphalian surnames, areas which are not connected geographically in any way (cf. Maps 20 and 21 for *Meyer* and its compounds).

There are also some problems we have to deal with, e.g., mobility. Of course there are many foreign names in Germany but we can exclude them by not looking for them (and, on the other hand, we also can find them by entering an appropriate query as, e.g., "...ski" to extract the Polish surnames in *-ski*). More important are the many refugees after the Second World War which imported many German surnames. We estimate ten to twelve million migrants from Eastern Europe. Altogether, mobility leads to a certain distortion factor of around 20 %. For every name, distribution is represented by small spots or small parts of the pie charts within the bigger spots. On the other hand, we also have maps which show an astonishing stability of surname landscapes, especially if we concentrate on surnames with a very high token frequency, such as

the different spellings and forms of *Schmi(e)d/Schmitt/Schmitz*. Map 5 provides the distribution of these variants, whereby the most frequent spelling with <dt> was excluded because it occurs everywhere in Germany. This map illustrates that the original genitive form *Schmitz* ('the smith's son') occurs in western Germany (and correlates with many other profession names such as *Schneiders*, *Krämers*, *Meiers*, *Beckers*) whereas *Schmitt* is located in central Germany and *Schmi(e)d* (with [i:]) is found in the south. – In order to avoid, or, at least minimize the mobility problem, we have decided to take only surnames with a minimum of 2,500 tokens (= fixed network lines). On the maps the number of tokens is always added directly after the names.

Another problem is the fact that many surnames can be derived from different semantic sources. Sometimes it is possible to exclude one or more sources. If not, we no longer take the respective name into consideration. For example, it is not possible to create a map with the surnames containing different (former) German currency units, such as *P(f)enni(n)g*, *T(h)aler*, *Kreu(t)zer*, *Mar(c)k* etc. because *T(h)aler* cannot be separated from the homonymous residence and/or provenance name *T(h)aler* 'living in or coming from a valley', and *Mar(c)k* cannot be separated from a short form of the Christian name *Markus*.

The plan for the Surname Atlas project is to produce four volumes: the first two volumes with linguistic and the last two volumes with lexical topics. Most of the following examples concern the first two volumes. Some of the maps which will be shown below have been produced by Rita Heuser, Antje Dammel, Mirian Schmuck, and Rudolf Garski.

3. Fields of research

In working with the DFA computer program many questions emerge and these questions are often completely new and unexpected. This section provides some examples. First, we turn to topics concerning language history.

3.1. Surnames and language history

The most important isogloss in German is the so-called *Benrather Linie* which separates High German from Low German (and all the other Germanic languages) and which is based on the German sound shift which took place between 500 and 800 A.D. See Table 2.

The *Benrather Linie* 'Benrath Line' (which crosses Benrath near Düsseldorf) only concerns the change between [k] and [χ] (*maken* vs. *machen*). It consti-

Table 2. The German sound shift in surnames.

Change from Germanic to Old High German	German surname (Low vs. High German)	Literal translation
-tt- > -ts- < (t)z (geminate)	<i>Schütt(e)</i> vs. <i>Schütz(e)</i>	'marksman'
-t- > -s- < (ß/ss) (postvocalic position)	<i>Witte</i> vs. <i>Weiß/ss</i> , <i>Gro(o)t(e)</i> vs. <i>Groß/ss(e)</i>	'white', 'big, tall'
p- > pf- (initial position)	<i>Pieper</i> vs. <i>Pfeifer</i>	'piper'
-p- > -f(f)- (intervocalic position)	<i>Pape</i> vs. <i>Pfaff(e)</i>	'priest'
-k- > -ch- (postvocalic position)	<i>Struck</i> vs. <i>Strauch</i>	'bush'

tutes the uppermost border of a complex of isoglosses called the *Rheinischer Fächer* 'Rhine Fan' (which is so named because the geographical distribution of the isoglosses on a map results in a form similar to that of a fan). It contains further isoglosses such as the *Eifelschranke* 'Eifel Boundary', the *Hunsrück-schranke*, the 'Hunsrück Boundary', etc. These lines are located south of the Benrath Line. On the one hand, the distribution of the surnames confirms these lines. On the other hand, they sometimes diverge from them, leading to interesting findings, e.g. that the respective sound shift line differs from name to name (cf. Kunze 1998). In general the isoglosses represented in the surnames can provide us with information about the exact position of these lines in Early New High German. It is well known that these lines are still in flux today in the respective dialects. Thus the study of surnames provides us with information about historical dialects and dialect borders. Maps 6 and 7 show the shift -tt- > -tz- (*Schütt(e)* vs. *Schütz(e)*) and -k > -ch (*Struck* vs. *Strauch*). Map 7 reveals a further problem: As lexemes, *Struck* and *Strauch* occur frequently only in northern Germany because there are different dialect words for 'bush', e.g. *Busch*, *Stande*, in the southern part. In those cases we produce combination maps looking for other words containing the k > ch-shift (but only if they share their isogloss – if not, we produce different maps). Maps 8 and 9 show the sound shift p- > pf- (word initial) and -p- > -f(f)- (postvocalic) as in *Pape* vs. *Pfaff(e)* and *Pieper* vs. *Pfeif(f)er*. The latter map contains some partly-shifted items such as *Peifer* which is expected because the lines differ depending on the position in the word (p- > pf- is located farther south than -p- > -f(f)-; cf. König 2004: 64). These maps also illustrate the fact that they cannot be combined: The lines between *Pape* vs. *Pfaff(e)* and *Pieper* vs. *Pfeif(f)er* differ greatly (for an explanation, cf. Kunze 1998).

Another important historical development was umlaut a > ä/e, o > ö, u > ü, and au > äu/eu, when followed by a syllable containing [i(:)] or [j] in Old High German. The standard language is mainly (though not always) based on the umlaut forms but this is not the case for every German dialect. Here we can

expose the so-called 'umlaut-friendly' and 'umlaut-hostile' dialects. This topic shows that language history and dialectology are closely linked. The following two maps (10 and 11) provide the distributions of *Maurer* vs. *Meurer* 'brick-layer' (an example for non-umlaut in standard German and umlaut in some dialects) and of compounds ending in -hofer vs. -höfer. In both cases it becomes obvious that the southern dialects avoid umlaut. Going into the five-digit maps would enable us to draw the exact lines between the umlaut and the non-umlaut areas. More such nouns must of course be included, such as *Brauer* vs. *Bräuer* and *Forster* vs. *Förster* in order to get a more watertight picture. The lines between -au- vs. -eu/äu- and -o- vs. -ö- are not congruent. The same holds for the other umlaut isoglosses.

Last but not least, a lot of lexemes and word formation techniques which have died out are preserved in the extensive inventory of surnames. As one example, which could be interesting for Scandinavian readers, we provide the names *Lachner* and *Lachmann*, two old words for 'doctor', still found in Swedish *läkare* (cf. Map 12). However, this name is a further example of potential homonymy: *Lachner* may also derive from residence and provenance names, originally meaning 'who is living next to a puddle/who moved from Lachen (a toponym)'.

3.2. Surnames and dialectology

As already mentioned, language history and dialectology can not be separated clearly. There are, however, many dialectal phenomena which did not have any significant impact on the standard language. For example, the metathesis of -r- is primarily of dialectological interest: Map 13 provides the distribution of *Born/-born* vs. *Brunn/-brunn* (the former containing metathesis) and classifies metathesis as a typically northern phenomenon. The unrounding of ü > i and ö > e is a further dialectological feature: Here we can refer to Maps 22 and 23 (*Müller* vs. *Miller*), where the red portions of the pie charts in southern Germany west of Munich represent the unrounding area with *Miller*.

So far we have only considered phonological phenomena. Our anthroponomic database also provides a great deal of information about former orthographic landscapes, e.g., the doubling of (f) in *Wolf(f)*, *Wulf(f)*, *Kauf(f)mann*, *Hof(f)mann*, etc., or the different Latinized forms of original first names such as *Jakob*, where four different spellings can be distinguished: *Jacobi*, *Jacoby*, *Jakobi*, *Jakoby*. Map 14 shows the different spelling areas of this typically middle German phenomenon. *Jakoby* (yellow) predominates in western areas, *Jakobi* (red) in the eastern part, and in between we find *Jakobi* (green) (cf. also Maps 20 and 21 for the different spellings of *Maier*).

A very instructive map concerns the morphological issue of diminutives.

Map 15 provides the distribution of the two most frequent southern German diminutive allomorphs (*Bäuerl*, *Bäuerle* or *Eberl*, *Eberle* or *Dieterl*, *Dieterle*). The Low German suffix *-ke* (*Kurzke*) couldn't be considered because it cannot be separated from the many Slavic names ending in *-ke* (*Huschke*).

Map 16 clearly indicates that patronymics ending in *-sen* are prototypical for the northern part of Schleswig-Holstein, which was historically closely connected to Denmark.

A huge number of maps could be created with lexical issues. Here, the different historical naming landscapes can be provided, including the respective dialectal sound changes and word formation strategies. Map 17 shows the different heteronyms of the profession name *Töpfer* 'potter', accompanied by Map 18 representing a dialect map for the same word as a common noun from the dtv-Atlas "Deutsche Sprache" (König 2004: 192).²

3.3. Surnames and cultural history

Many maps reveal facts that can only be explained by other scientific disciplines, such as history, migration research, social history, theology, biology, genetics, etc. One example is the former byname *Klein* 'small' which only occurs in the western part of Germany. The first assumption could be that the other regions used different words. But maps with the alternative, *Kur(t)z* 'short', only confirm the described distribution. Map 19 provides these former bynames. These facts could possibly be explained by a large number of small people which might have lived in the western area. There are grounds for the supposition that this goes back to the immigration of a Gallo-Roman population, but this is not yet confirmed. It can generally be observed that the motive to name people after their appearance (bynames) is frequently represented in this area.

Another source of interesting findings is the many provenance names which attest various migrations. The huge variety of medieval profession names tells us about the historical division of labour. Another chapter is opened by the many saints' names: By looking for the derivations of names such as *Severinus*, *Lambert*, *Kilian*, *Pirmin*, *Florian*, conclusions can be drawn for the former veneration of the different saints. Finally, various surnames derived from patronymics allow us to gain insight into medieval naming landscapes. These are issues for volume three and four of the Surname Atlas.

3.4. New findings and surprises

The potential of the Surname Atlas is the amount of new insight, new findings and of many surprises. Until now, one explanation for the surname *Hunger* was 'a hungry person'. Since we can exactly locate the occurrence of surnames we can exclude many earlier etymologies. Entering a query for *Hunger* and *Unger* clearly shows that both occur in precisely the same environment (a restricted region near Dresden). This confirms that both names go back to 'people coming from Hungary' (even the English word for this country reveals the unorganic *H-* at the beginning of the word).

Finally, by using *Maier* and *Müller*, we intend to demonstrate that we bump into surprises even when using two of the most frequent surnames: Map 20 clearly reveals that the different spellings of *Maier* are geographically conditioned: First, most of these names occur in the northwestern and southern parts of Germany (the heteronym *Hof(f)mann* fills in the area in between). Forms with ⟨e⟩ cover the north and some small areas in the northern (Nuremberg) and in the extreme western part of southern Germany. The ⟨a⟩-forms are typical for the south. If we now turn to the compounds containing *-maier* etc. as the second part (cf. Map 21) we get a different picture altogether: In the north, the expected ⟨e⟩-spellings still predominate. In the south, however, the compounds are restricted to Bavaria (and no longer to Baden-Württemberg) but surprisingly we now find significantly more ⟨e⟩-spellings than in the simplexes of the same area. This means that in compounds the ⟨e⟩-spelling replaces many ⟨a⟩-spellings. To date there is no satisfactory explanation for this deviance.

The other case is *Müller*. In contrast to *Maier*, the profession name *Müller* never had heteronyms in German dialects. In northern areas we find many occurrences of the lowered form *Möller*, and in a small area in southern Germany we have unrounded *Miller* forms. Map 22 provides the distribution for the simplexes. If we look for the same word again as the second element of a compound, however, the picture varies considerably: The share of unrounded forms is much greater than before (Map 23). In surnames of dialectal origin we always find cases of "Verhochdeutschung", i.e., a change to the form considered to be more in line with standard German. Here, a possible explanation could be that the *Millers* were transformed into *Müllers*. In compounds, however, such as *Stadtmüller*, *Moosmüller*, and so on, the second part was perhaps not as easily identified as a 'Müller'. This could explain the larger number of *-miller* as an integrated part of a word. Complete, autonomous words are more salient than mere parts of words. However, these and many other questions have to be explained soundly by further research in this onomastic field. The Surname Atlas only provides a well documented and thoroughly revised database for many future research tasks.

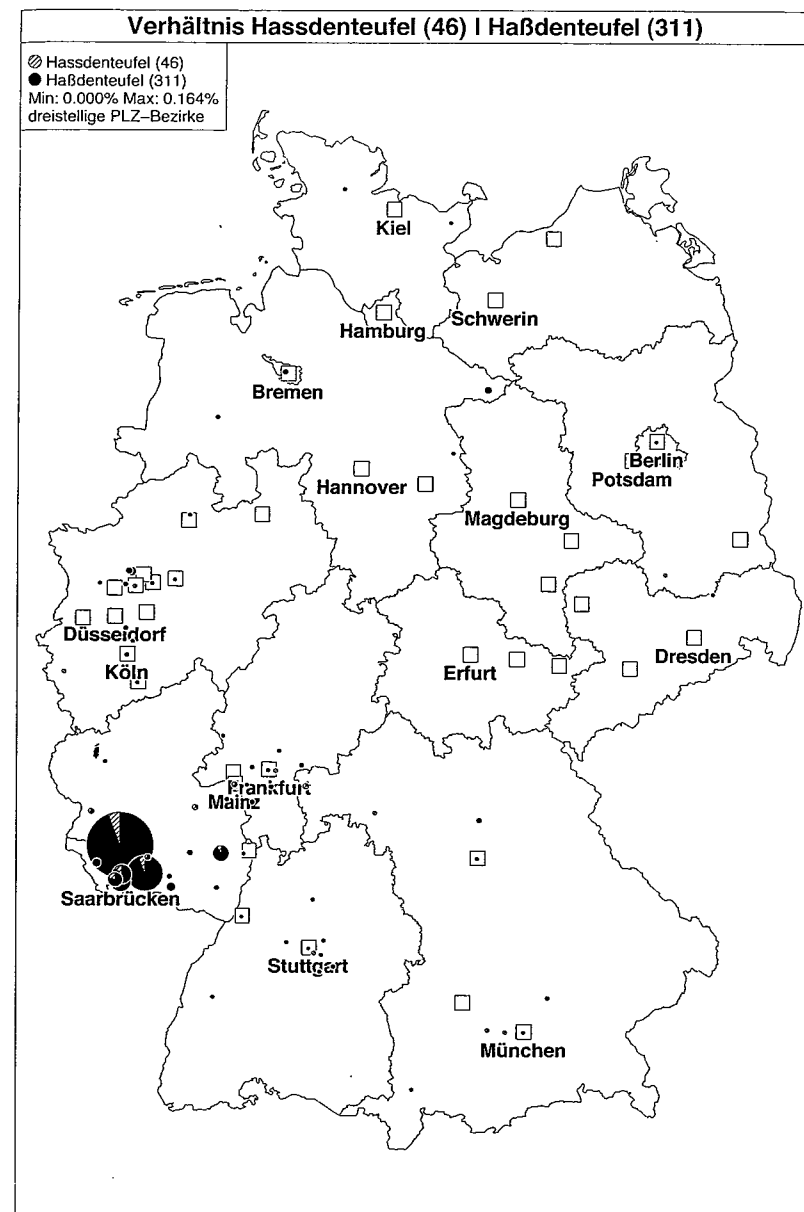
² We would like to thank dtv-Verlag for allowing us to make use of this map in this paper.

4. Summary

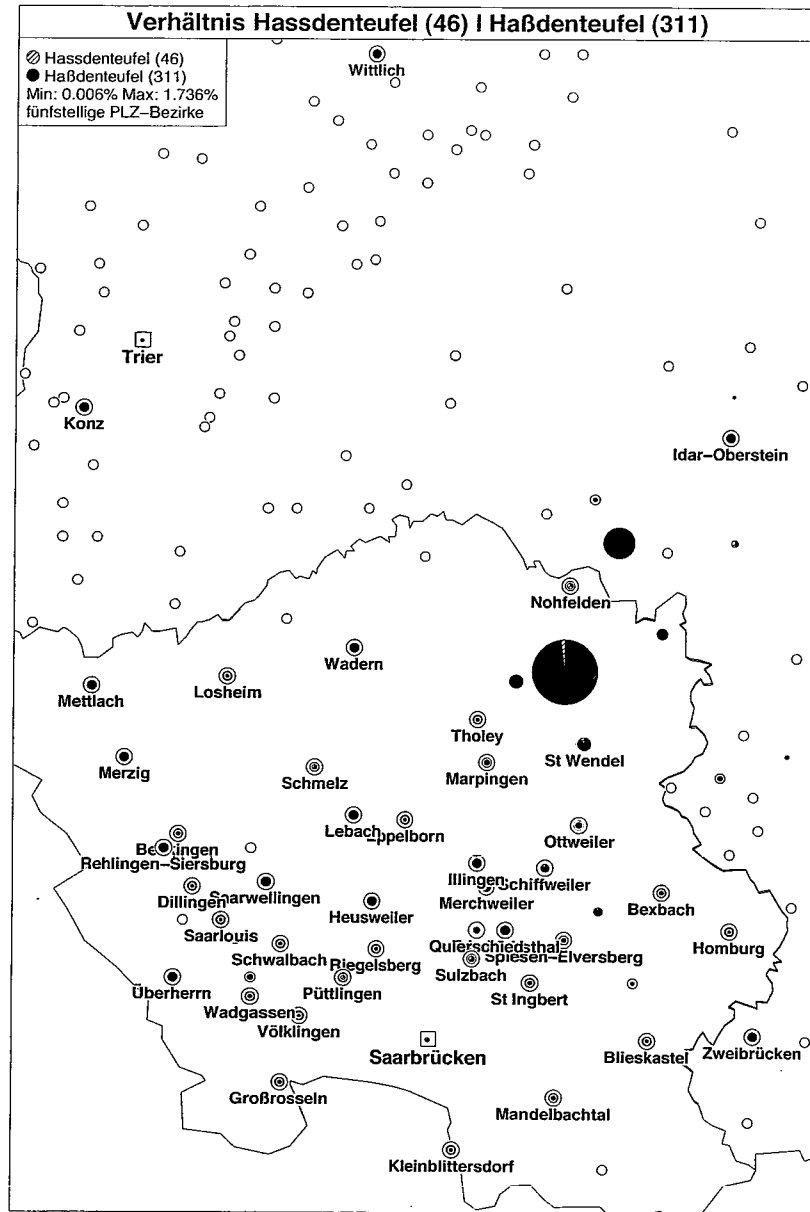
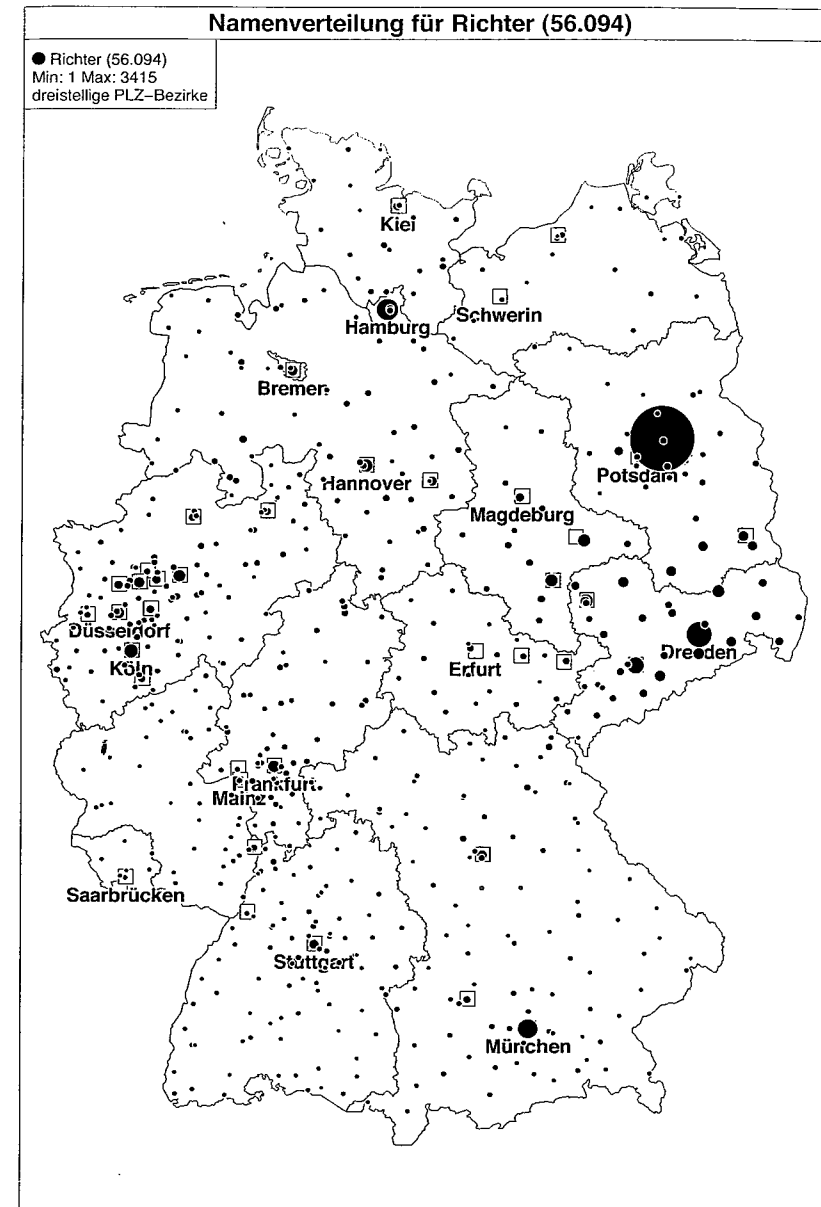
In this article we have presented the project of a German Surname Atlas (Deutscher Familiennamenatlas) and described the procedures through which maps are made which show the exact areal distribution forming characteristic landscapes of the different types of surnames in Germany. The maps are based on German fixed network telephone lines from the year 1995. First the emergence and structure of German surnames were presented, then the most important facts about the German Surname Atlas. Section 3 showed some possible perspectives and sketched new areas of research, such as surnames and language history, surnames and dialectology, and surnames and cultural history. Finally, some new findings and surprises were depicted which only arise when working with the computer-based program.

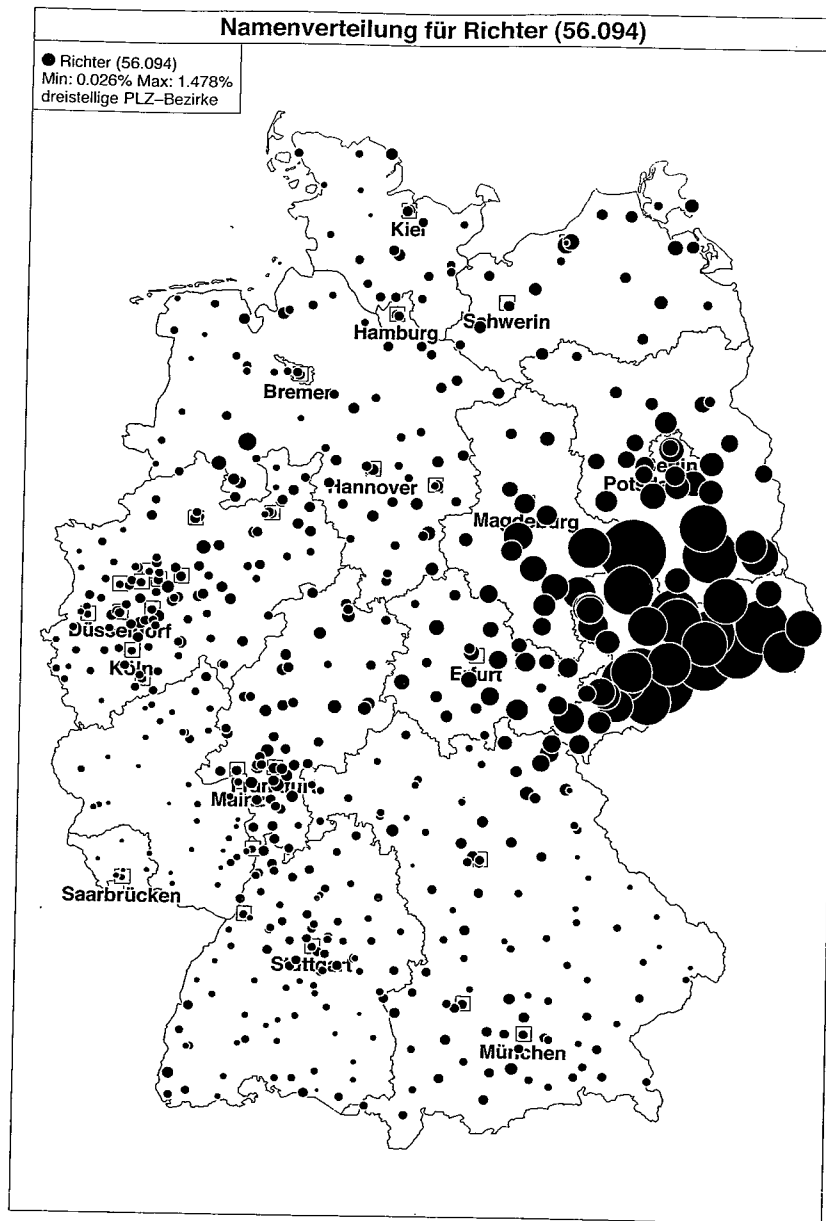
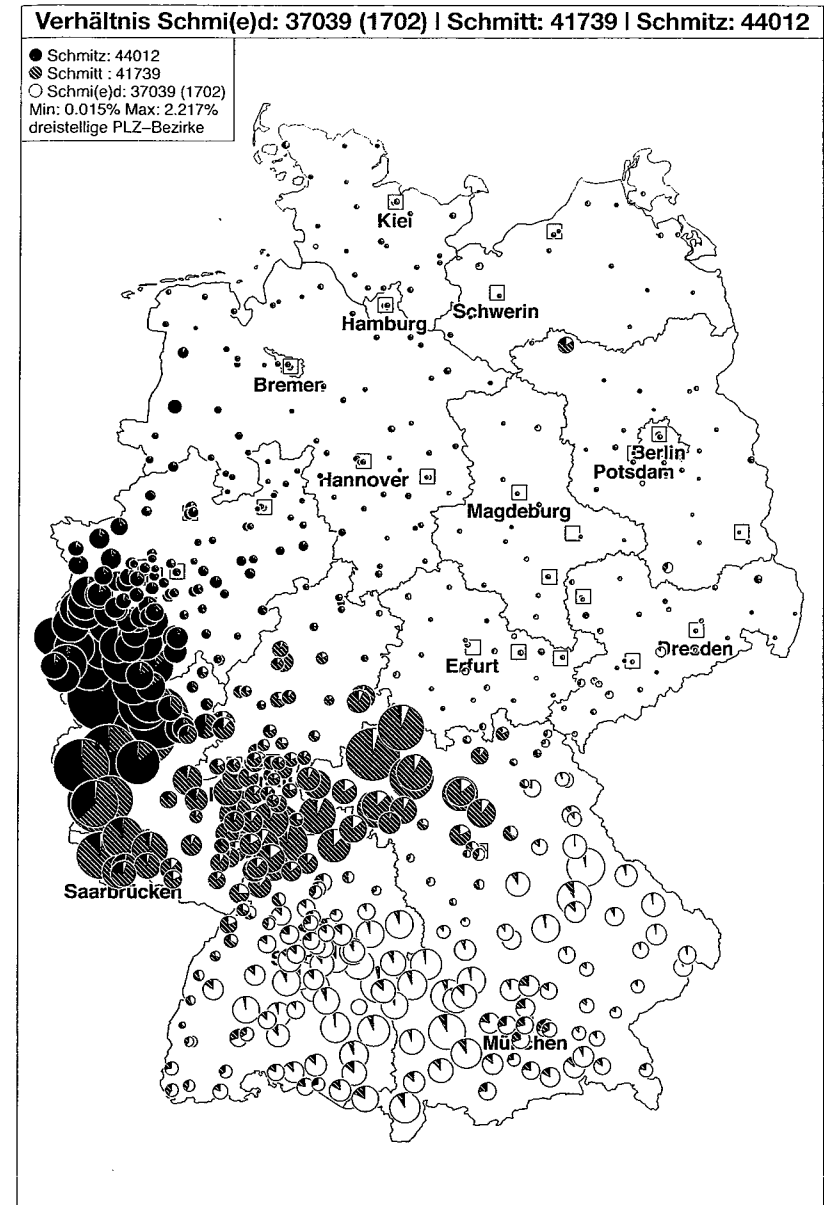
References

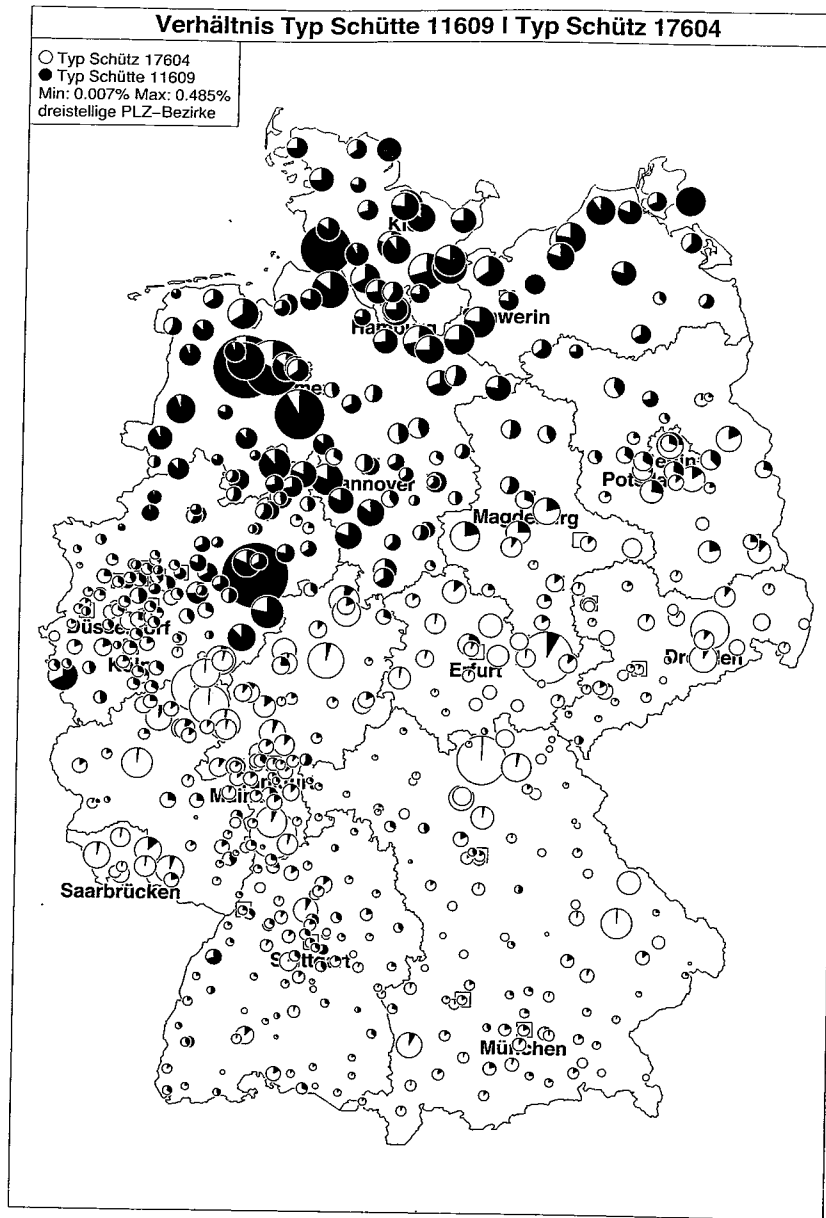
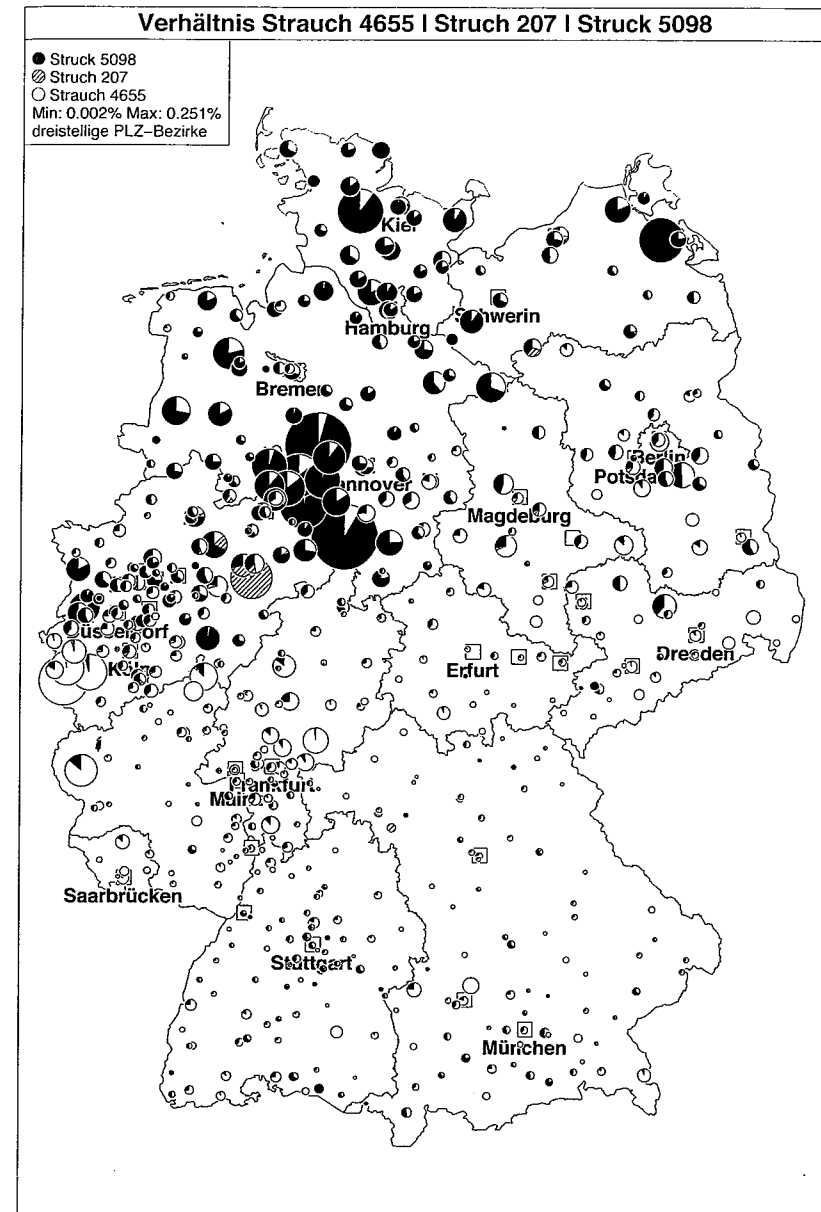
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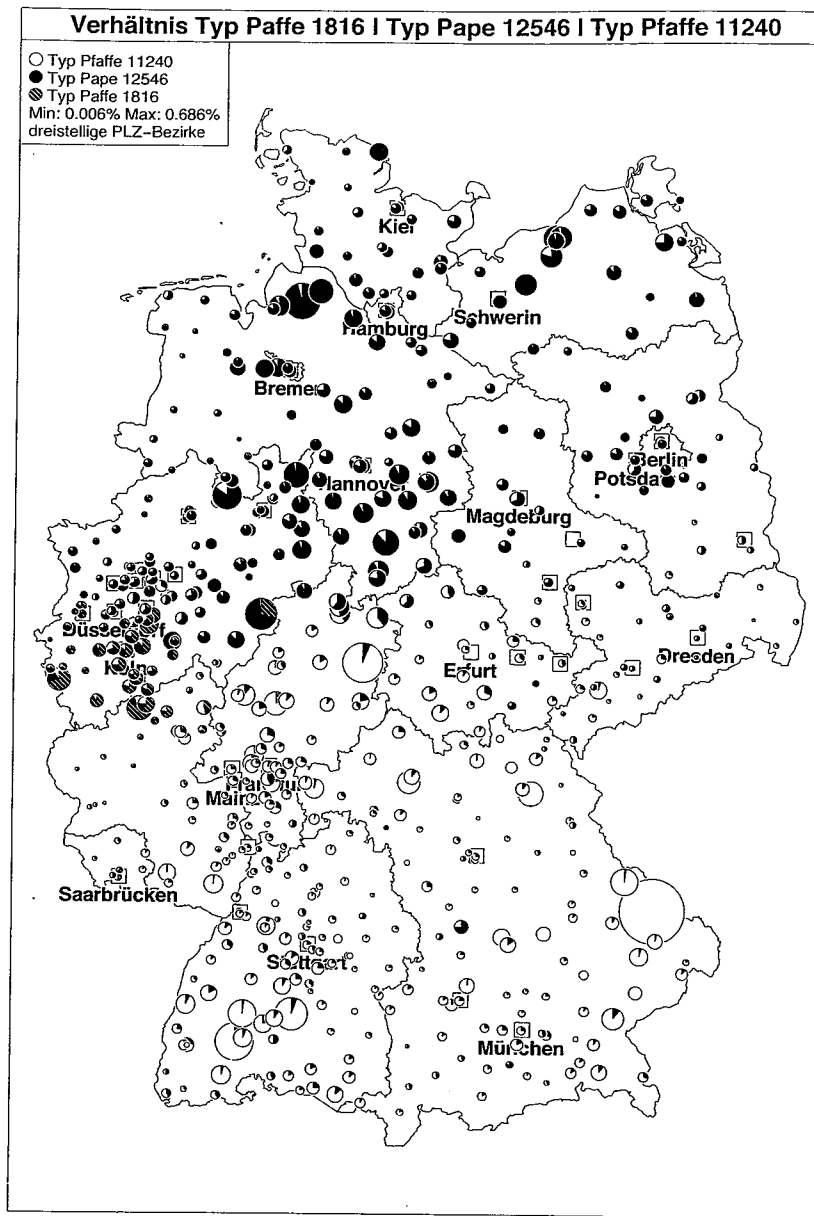
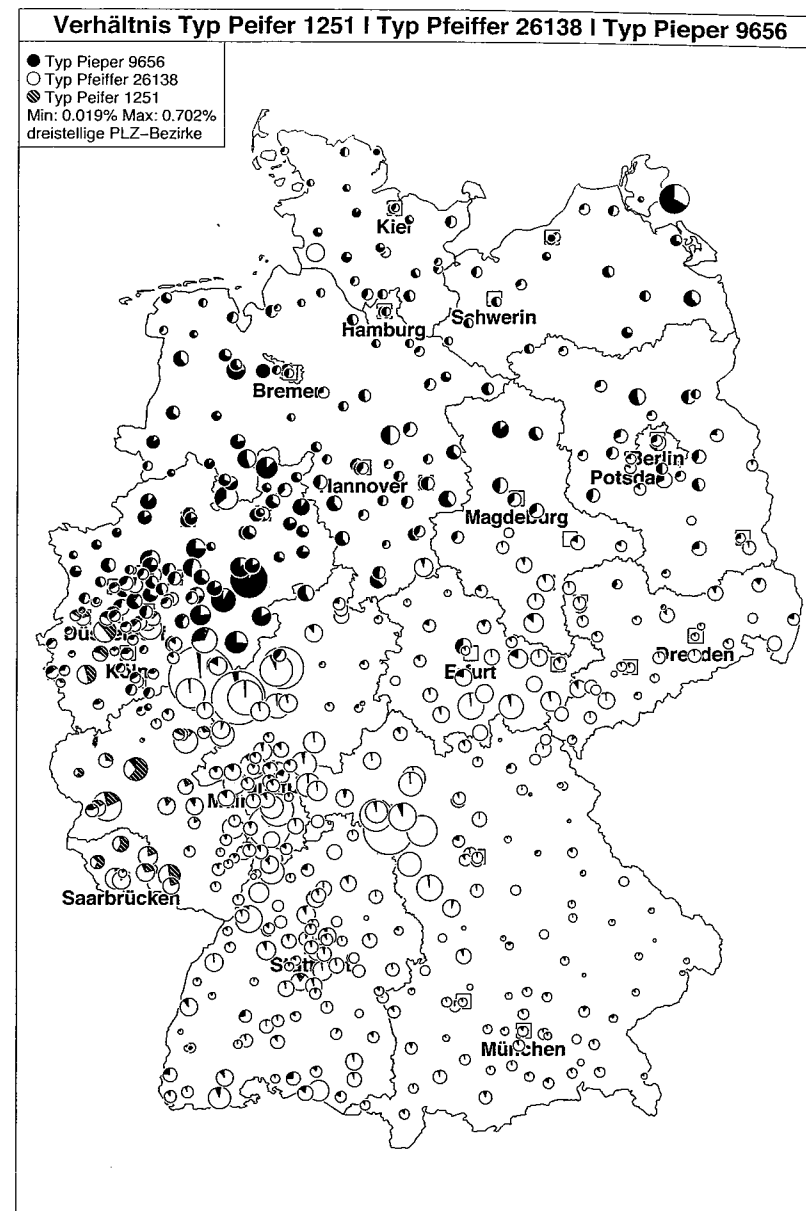


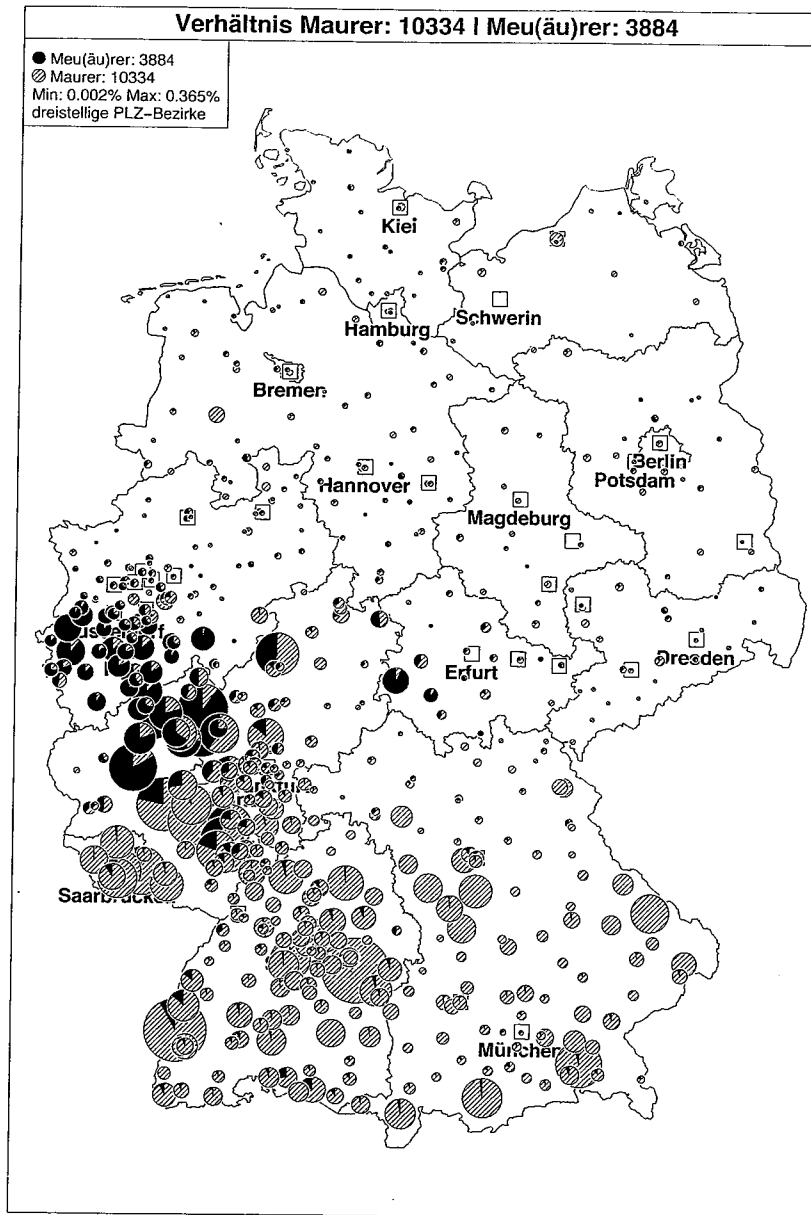
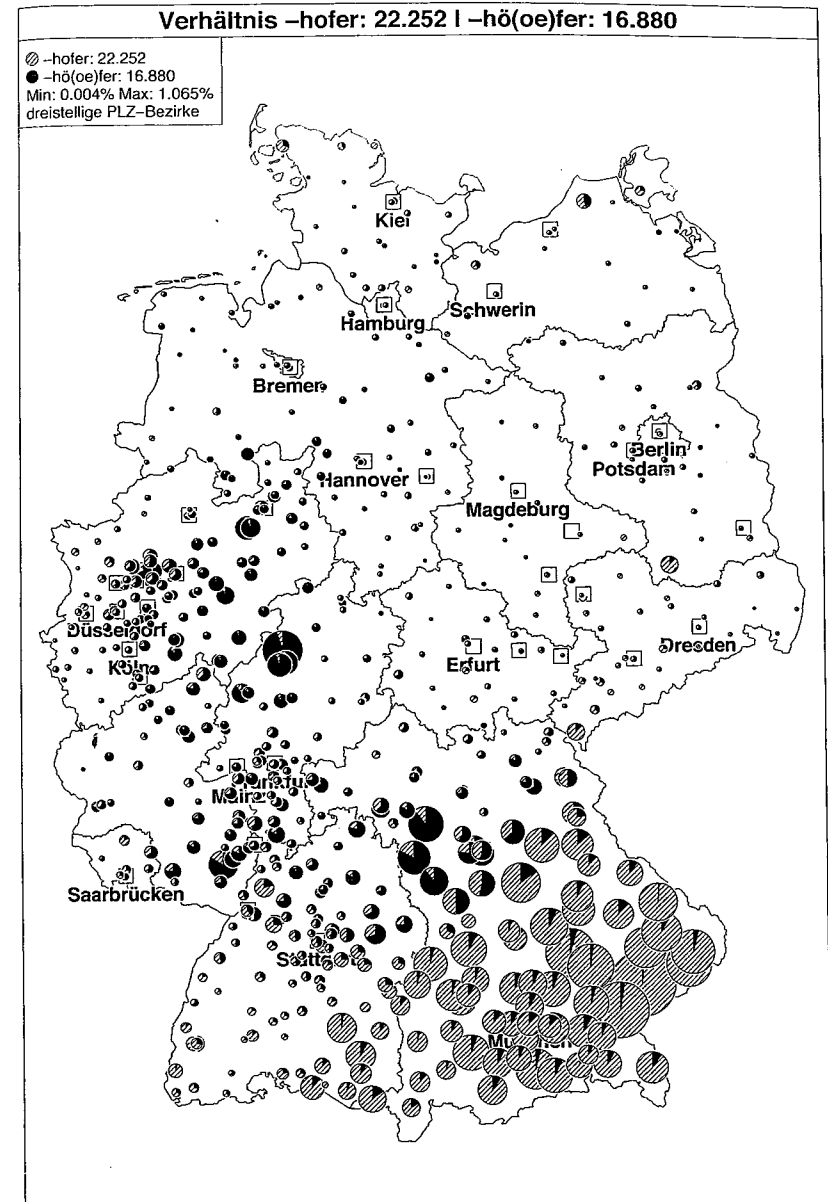
Map 1. Three-digit map for a nest (*Haßdenteufel*).

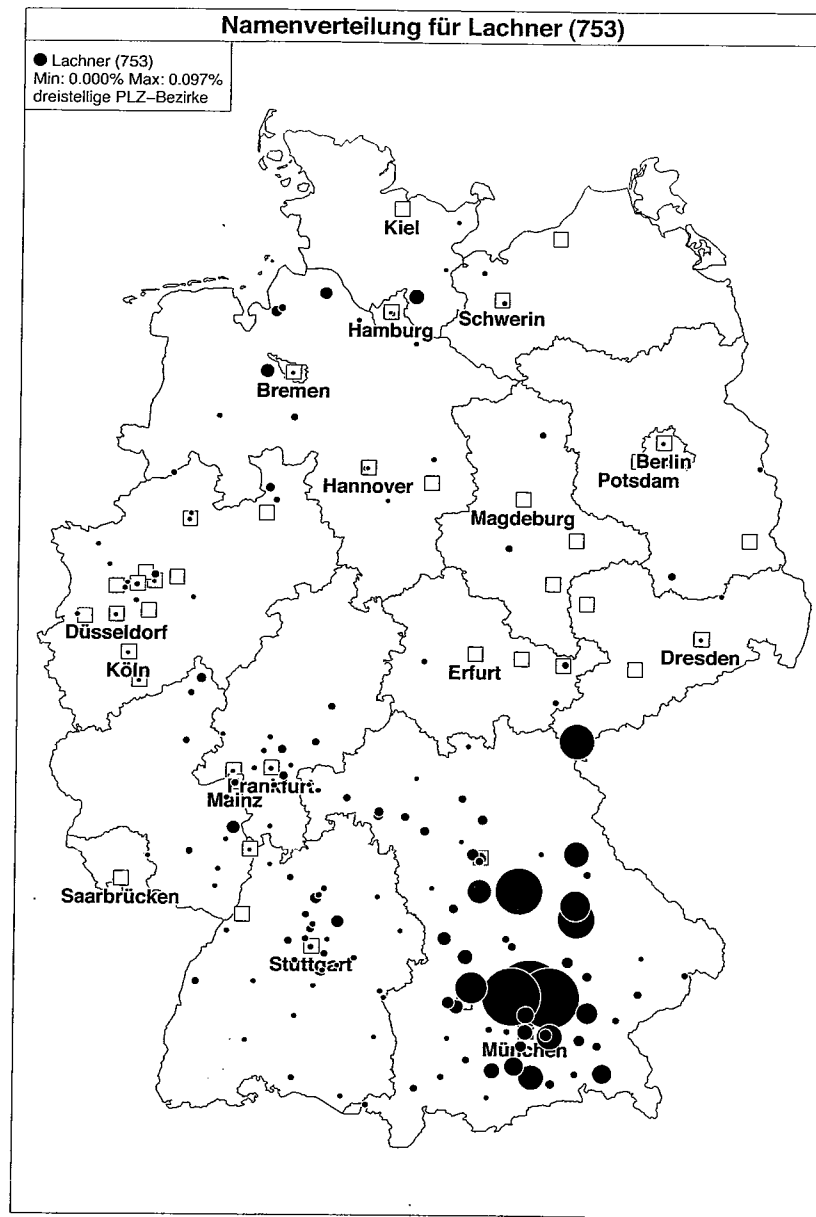
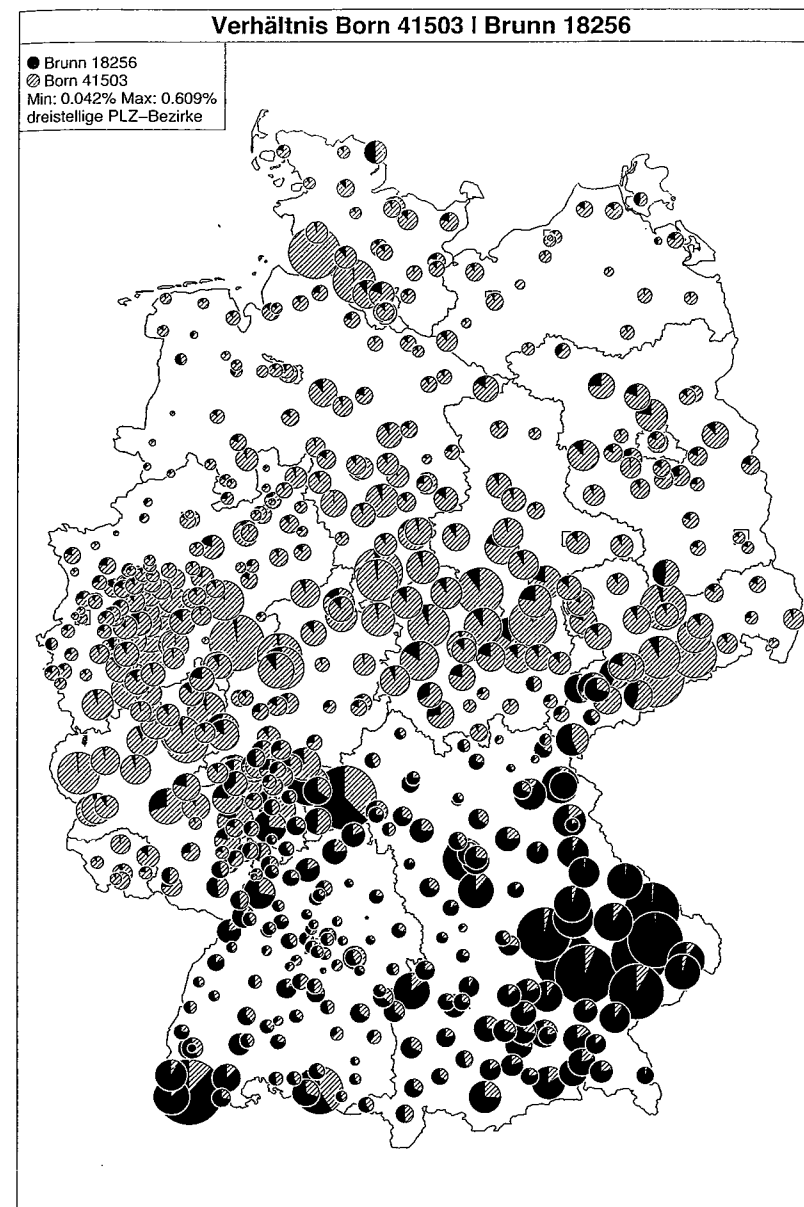
Map 2. Five-digit map for the nest (*Haßdenteufel*).Map 3. Absolute distribution for *Richter*.

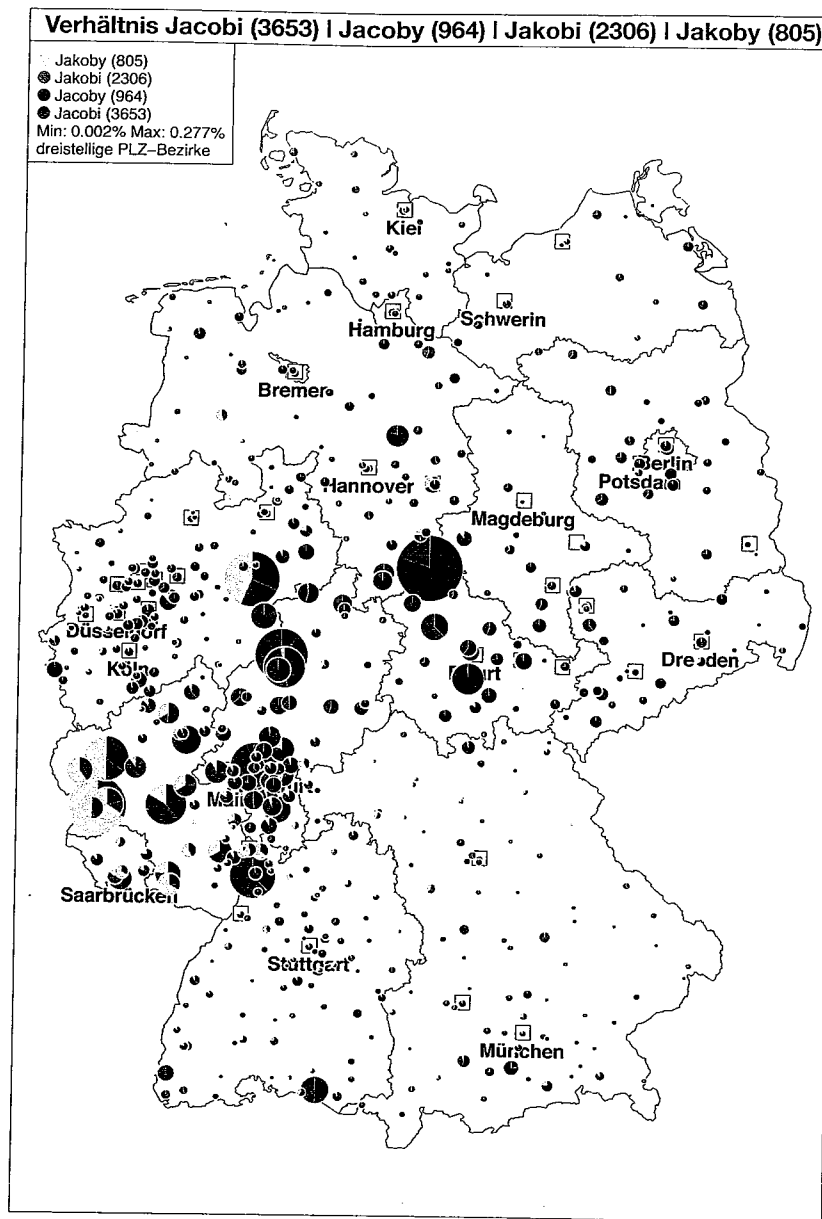
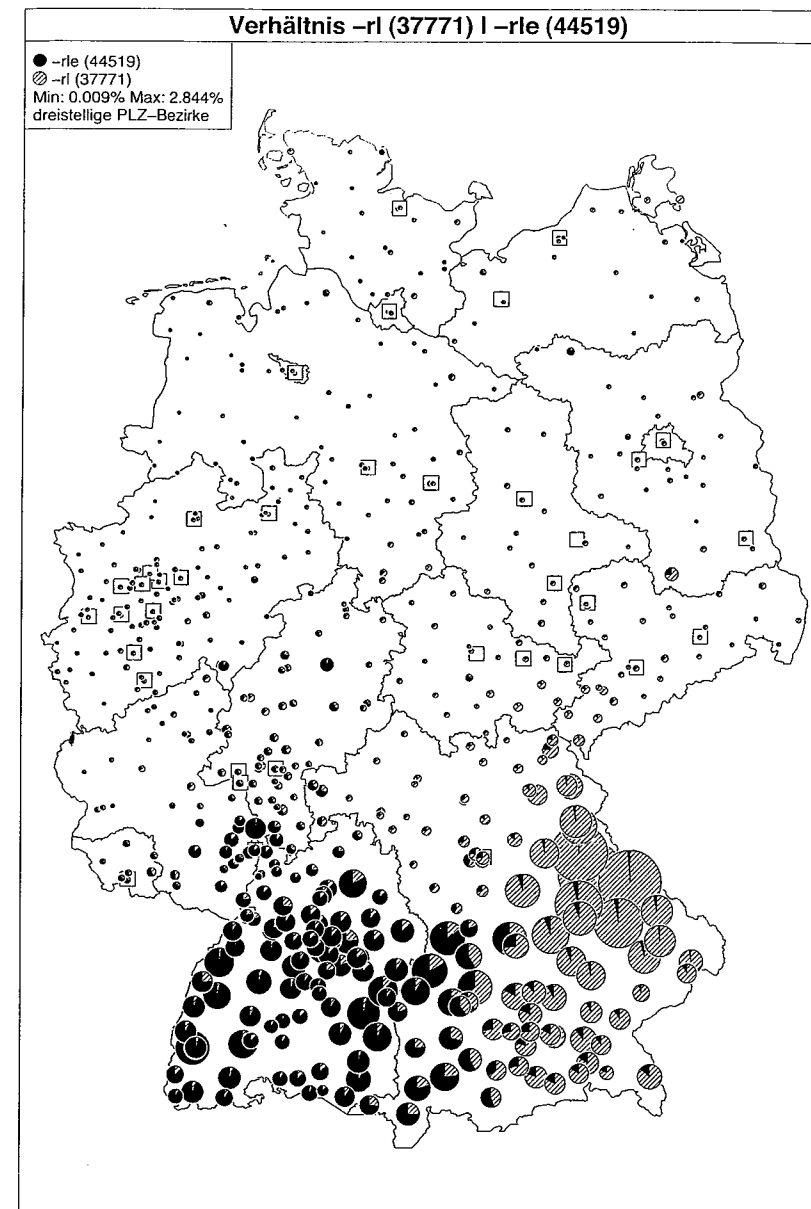
Map 4. Relative distribution for *Richter*.Map 5. Distribution of *Schmitz*, *Schmitt*, and *Schmi(e)d*.

Map 6. German sound shift in *Schütte* vs. *Schütz*.Map 7. German sound shift in *Struck* vs. *Str(a)uch*.

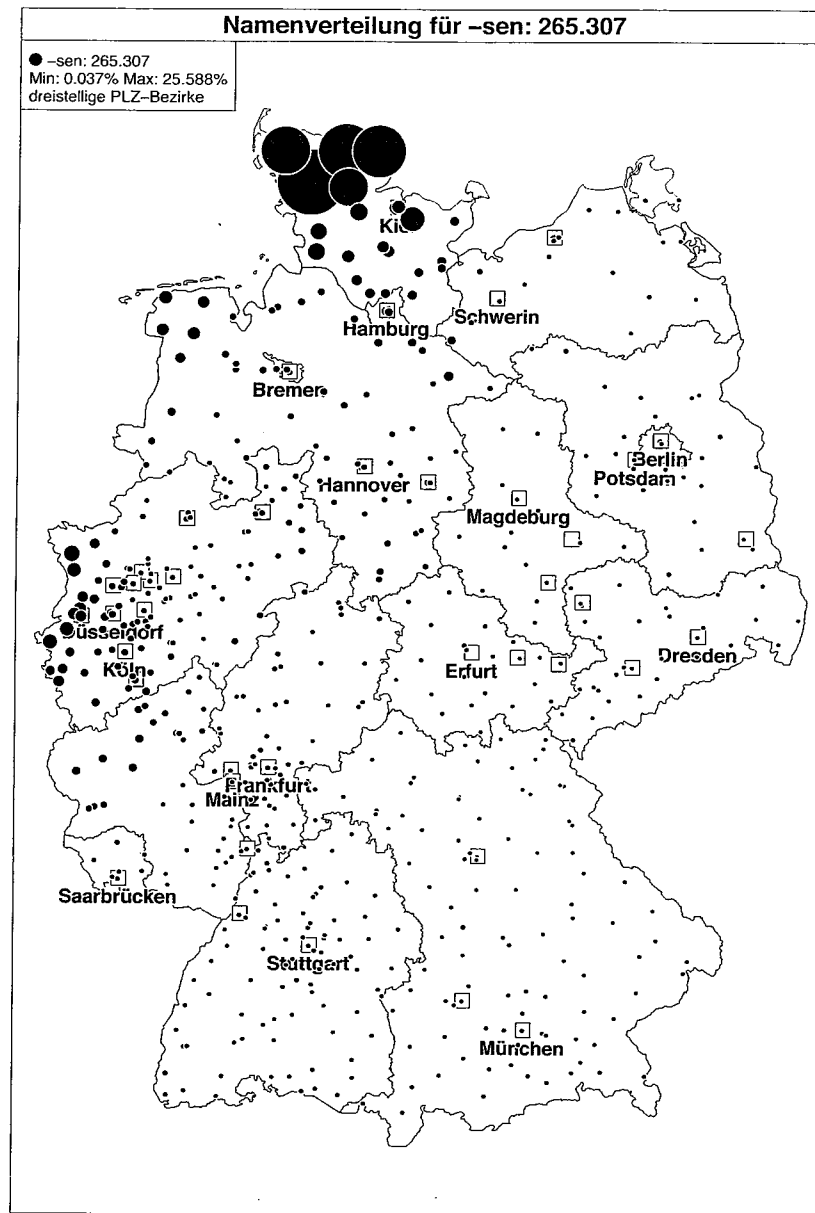
Map 8. German sound shift in *Pape* vs. *Pfaffe*(e).Map 9. German sound shift in *Pieper* vs. *Pfeifer*.

Map 10. Umlaut in *Maurer* vs. *Meurer*.Map 11. Umlaut in *-hofer* vs. *-höfer*.

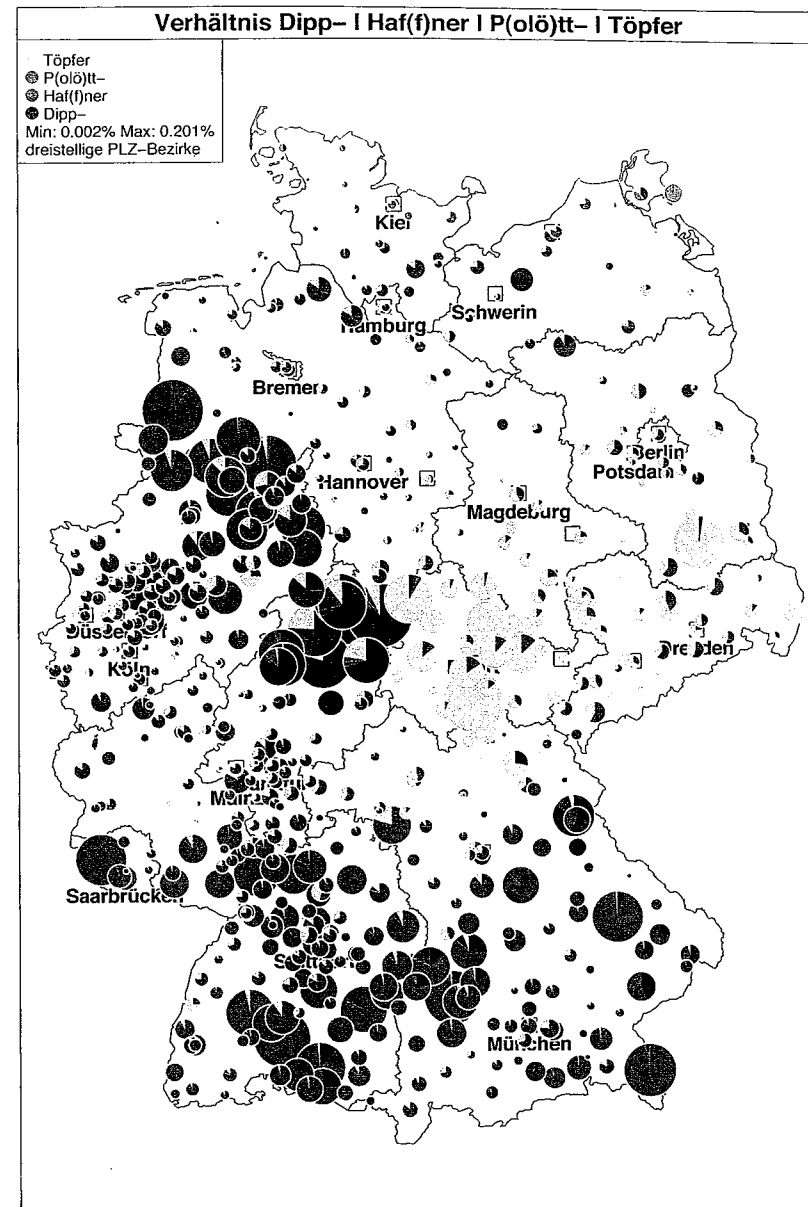
Map 12. *Lachner* as an example for a lexical fossil.Map 13. Metathesis in *Born/-born* vs. *Brunn/-brunn*.

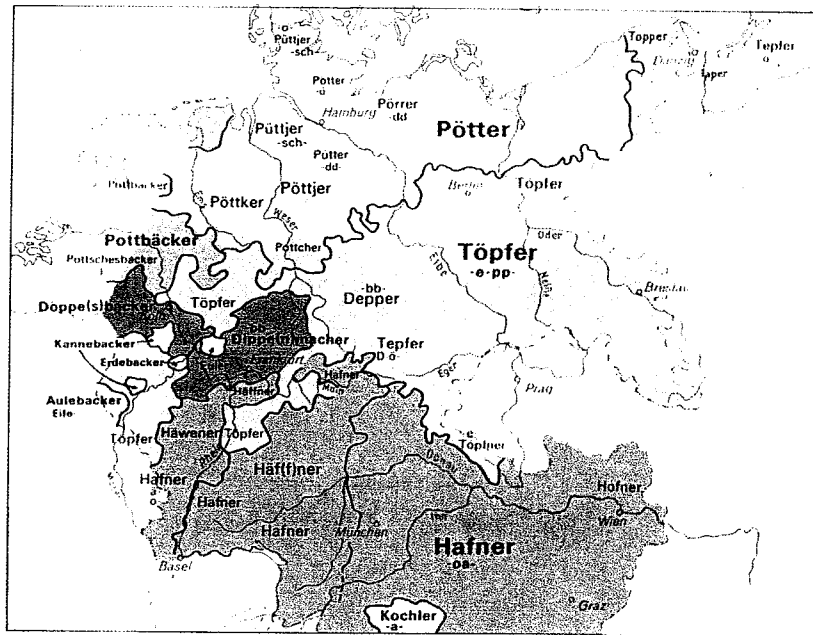
Map 14. Orthographic landscapes for *Jacobi* etc.

Map 15. Diminutives in southern German surnames.

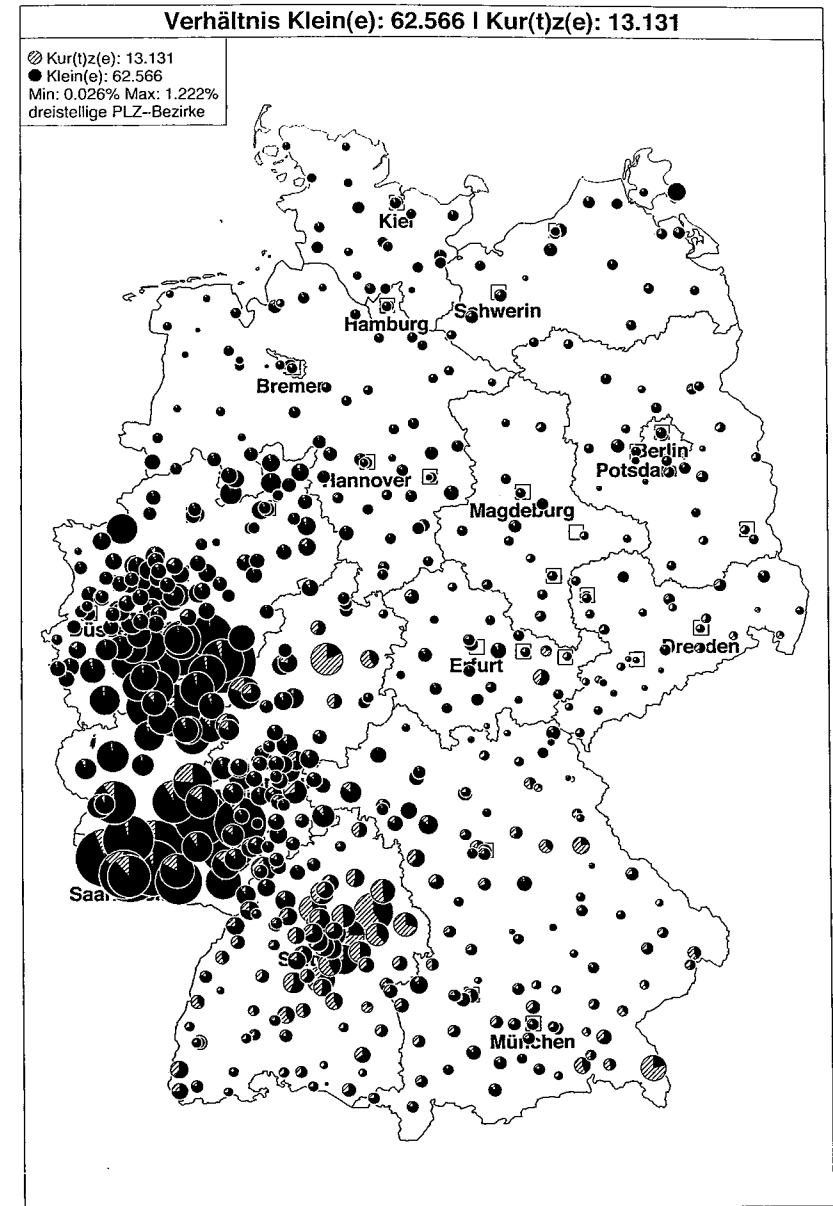


Map 16. Patronymics in -sen.

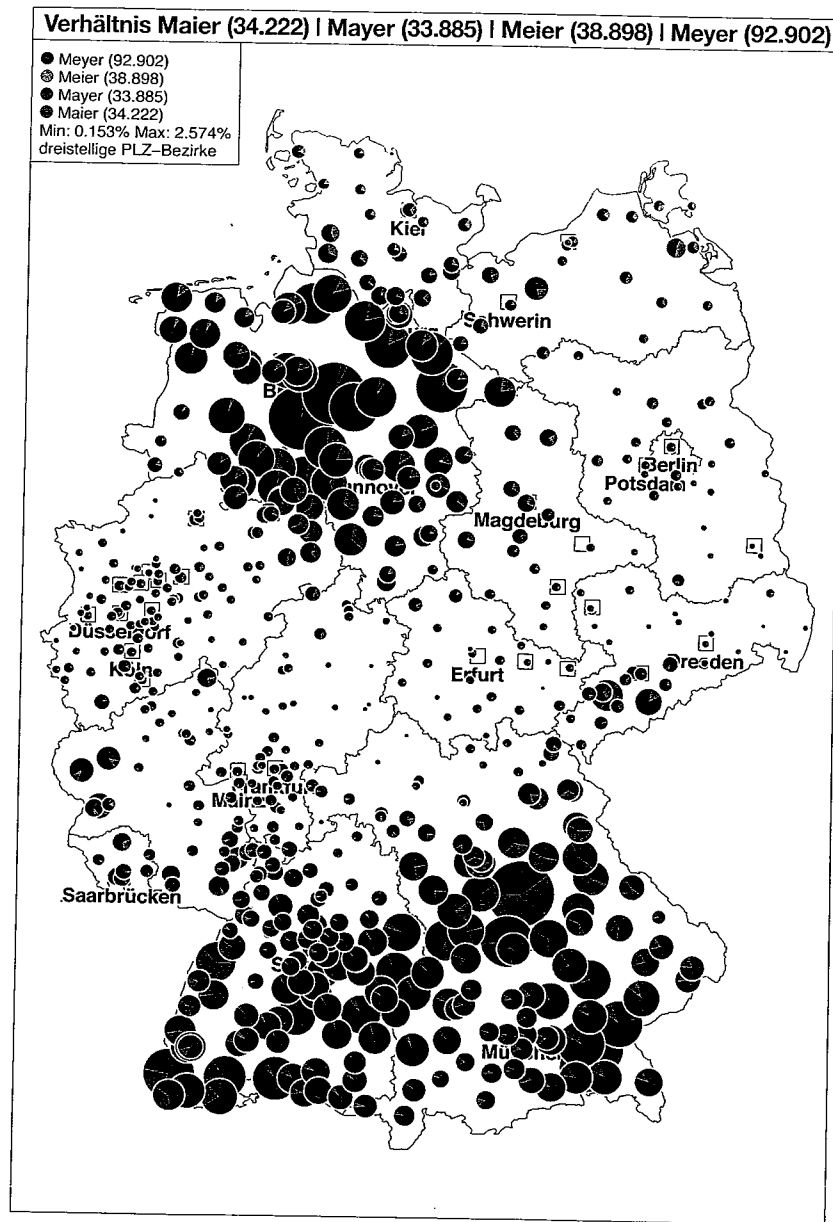
Map 17. Distribution of onomastic heteronyms of *Töpfer* 'potter'.



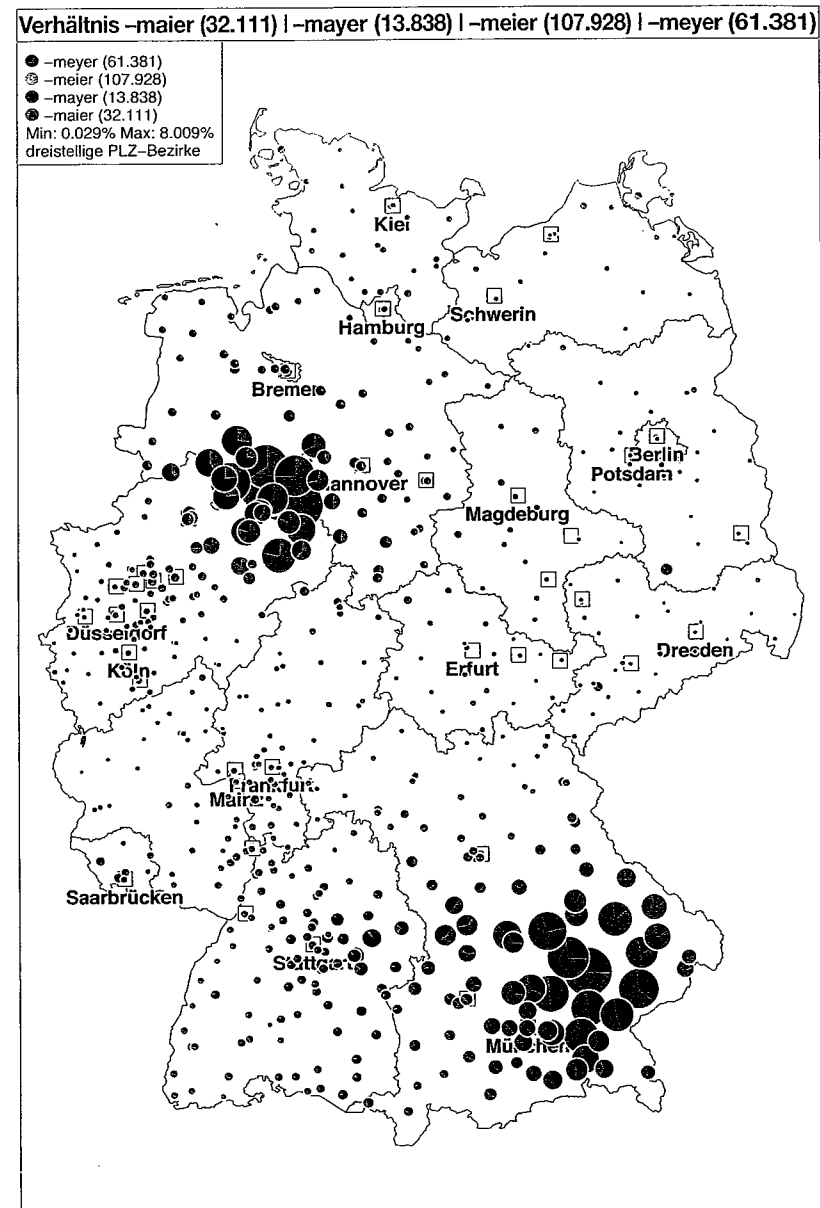
Map 18. Distribution of dialectal heteronyms of *Töpfer* 'potter' (after König 2004: 192).



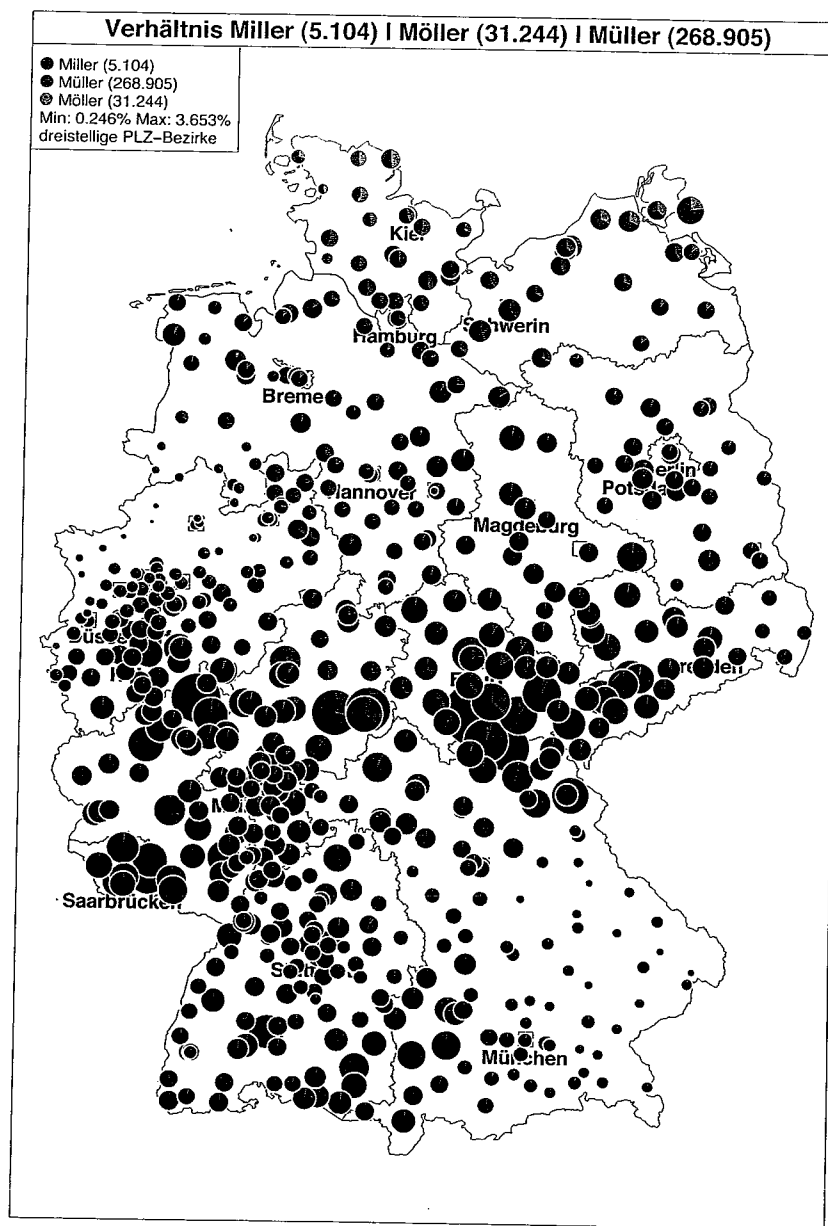
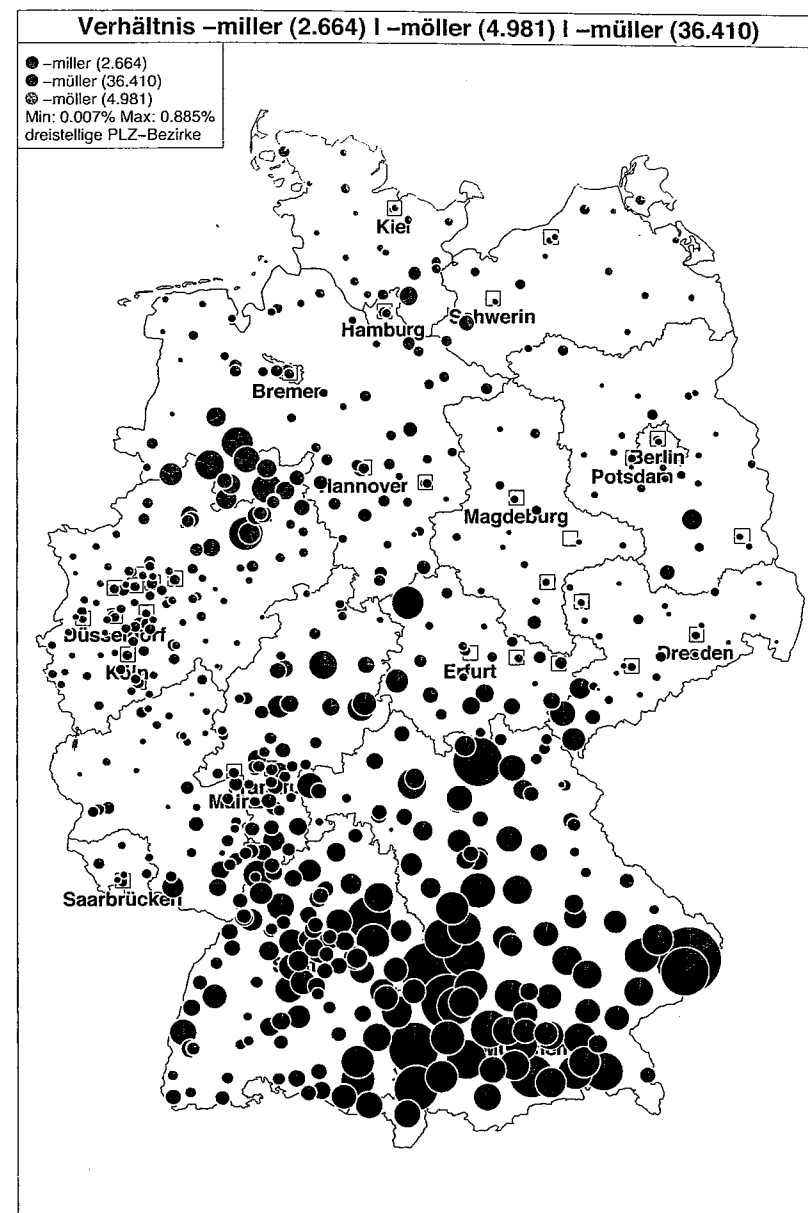
Map 19. Distribution of *Klein(e)* and *Kur(t)z(e)* 'small'.



Map 20. Distribution of Meyer etc. as a simplex.



Map 21. Distribution of -meyer etc. as second element of compounds.

Map 22. Distribution of *Müller* etc. as a simplex.Map 23. Distribution of *-müller* etc. as second element of compounds.

Forts. från främre omslagets insida

SOKo	=Sveriges ortnamn. Ortnamnen i Kopparbergs län	SRI	=Sveriges runinskrifter
SOL	=Svenskt ortnamnslexikon. Red.: M. Wahlberg (2003)	SRP	=Svenska riks-archivets pergamentsbref
SOSk	=Sveriges ortnamn. Ortnamnen i Skaraborgs län	SvLm	=Svenska landsmål och svenskt folkliv
SOU	=Sveriges ortnamn. Ortnamnen i Uppsala län	Sö	=Södermanlands runinskrifter (SRI 3)
SOV	=Sveriges ortnamn. Ortnamnen i Värmlands län	U	=Upplands runinskrifter (SRI 6-9)
SOVm	=Sveriges ortnamn. Ortnamnen i Västmanlands län	u.d.	=utan dag
SOVn	=Sveriges ortnamn. Ortnamnen i Västernorrlands län	u.o.	=utan ort
SOÅ	=Sydsvenska ortnamnssällskapets årsskrift	UUB	=Uppsala universitetsbibliotek
SOÄ	=Sveriges ortnamn. Ortnamnen i Älvsborgs län	u.å.	=utan år
SOÖg	=Sveriges ortnamn. Ortnamnen i Östergötlands län	Vg	=Västergötlands runinskrifter (SRI 5)
SRA	=Riksarkivet, Stockholm	vid.	=vidimtion
		Vr	=Värmlands runinskrifter (SRI 14:2)
		Vs	=Västmanlands runinskrifter (SRI 13)
		Ög	=Östergötlands runinskrifter (SRI 2)
		Öl	=Ölands runinskrifter (SRI 1)
		ÖNON	=Övre Norrlands ortnamn. Ortnamnen i Norrbottens län
		ÖNOV	=Övre Norrlands ortnamn. Ortnamnen i Västerbottens län

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