An online atlas of colloquial German: The *Atlas zur deutschen Alltagssprache*

1. Introduction

The *Atlas zur deutschen Alltagssprache* (AdA) project began in 2003, when crowdsourcing was still a rather unusual method to obtain linguistic data. The first attempt provided convincing results and motivated us to follow it with a second survey round a year later. Since then, the project has evolved continuously in the course of the 12 survey rounds that have taken place up to now. The number of participants has increased from about 2,000 in the early rounds to over 20,000 in the most recently completed one (11th). To date, 550 maps of mainly lexical but also morphosyntactic and phonetic variation have been published online, and a further 48 maps will be produced from the ongoing 12th round.

Unlike traditional dialect atlases, the AdA does not focus on traditional local dialects, but on "what is really used" in current everyday life. This is what the German term *Alltagssprache* (literally, 'everyday language') refers to, which can be defined as:

Registers and variants used in everyday communication, i.e. in the social and functional domains of private life, of spontaneous speech among friends, relatives, acquaintances, or in informal situations among people from the same place who are not necessarily close to each other, e.g. in the local corner shop (Möller/Elspaß 2019, 760; my translation).

In large parts of the German-speaking area, the speech types used in such informal situations are no longer the local dialects, but unstable regiolects with elements both based on dialects and the standard variety. And the specific position of *Alltagssprache* between the poles of local dialect and standard variety is itself subject to geographical variation (for a comparison of different regional variation spectra, see Kehrein 2019). In some regions, people speak almost standard German with just a slight regional colouring even in very informal situations; in other regions they will rather use a regiolect with a more or less significant amount of regional variants; and in some parts of the German-speaking area, above all in Switzerland, people normally use the local dialect in everyday life (see Christen *et al.* 2020).

From a systematic point of view, putting this twofold variation together by mapping speech forms that have different proximity to different dialects seems problematic. However, from a pragmatic point of view, such maps do make sense – our aim is to map what people actually say. In contrast, German-language dialect atlases might

map something that is widespread in one region, while in another region a feature might be known only to a small number of older people.

In order to map what is normally used, the best approach is certainly to analyse records of natural speech, as has been done in several recent large-scale projects (Deutsch Heute; Sprachvariation in Norddeutschland; Regionalsprache.de; Deutsch in Österreich: Task-Cluster B Variation – see Kleiner 2015, Elmentaler/Rosenberg 2015, Ganswindt *et al.* 2015, Budin *et al.* 2019). However, in order to gather comparable data of less frequent syntactic or lexical phenomena for an adequate grid of localities, the only possibility is the use of questionnaires – but rather than asking informants about the form used in their dialect, asking them about the form used in informal "everyday" speech.

The first researcher to approach variation in colloquial German in this way was J. Eichhoff with his *Wortatlas der deutschen Umgangssprachen* (WDU, 1977-2000). In his survey, which was mainly carried out in the 1970s, Eichhoff asked his informants to indicate which variants people normally used where they lived, i.e., "What I would really normally hear if I could visit your town – no matter if it is more dialect or more standard German". This resulted in four volumes of maps that revealed, for the first time, the considerable diatopic variation that has continued to exist in the German language, even though the local dialects had already widely fallen into disuse by the 1970s. Other atlas projects focusing on *Alltagssprache* in more restricted areas followed the WDU (for an overview, see Möller/Elspaß 2019, 765).

2. AdA: Approach and survey method

2.1. Informants

The AdA project follows the WDU approach exactly, adopting Eichhoff's question: "Please indicate for each of the following questions which expression one would normally hear in your town – no matter if it is more dialect or more High German"². This also means that the participants are not asked to state what their individual use is, but what they think people in their city or town would usually say (and expect to hear). This helps to avoid bias due to stigmatization of forms that are known to be nonstandard or considered "false", which informants might be reluctant to reveal as their own usage.

[&]quot;Mit diesem Fragebogen möchte ich ein Überblick darüber gewinnen, was für Wörter man in Ihrer Stadt in der täglichen Rede normalerweise verwendet. [...] Ich möchte gern wissen, was ich wirklich normalerweise hören würde, wenn ich Ihre Stadt besuchen könnte, einerlei, ob es mehr Dialekt oder Hochdeutsch ist" (WDU, vol. I, 17).

² "Bitte geben Sie bei den folgenden Fragen jeweils an, welchen Ausdruck man in Ihrer Stadt normalerweise hören würde – egal, ob es mehr Mundart oder Hochdeutsch ist" (www.atlas-alltagssprache.de/runde-12-fragebogen).

Similarly to the WDU, the AdA comprises all types of linguistic phenomena, with a main focus on lexis but also including grammar and even phonology, as far as this is possible in an indirect survey. However, unlike Eichhoff in the 1970s, we can use the internet, which provides two important advantages: Firstly, we can reach and involve a very large number of informants. Secondly, the AdA project is not preplanned from start to finish, but rather consists of a more or less regular series of surveys which are always presented in combination with the results of the previous survey. In this way, we are free to adapt the new survey rounds to include new insights and new questions; we are even able to make alterations in later rounds if a question turns out to be imprecise, or we can take into account any necessary differentiations that may have become apparent.

Whereas the WDU surveys, like traditional dialect atlas projects, had to be conducted with a very limited number of preselected informants (two for every location in the grid), the AdA is a crowdsourcing project in which anyone can participate. Initially some effort had to be made to find informants in the different towns and cities of the grid; we took the WDU grid as a starting point, and for each of these 402 locations we contacted 5-10 email addresses that we could find online (associations, etc.), with a success rate of about 20-30%. Participants were also invited to provide their email address, which has been used in all later rounds. Those who do so are contacted once the results of the survey that they contributed to are online, and at the same time they are invited to fill in the new questionnaire.

Over the course of the project, the number of informants has increased without further effort on our part:

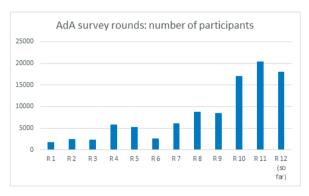


Fig. 1. Number of participants in the AdA survey rounds 1-12

(The lower participation rate in the 6th round must be explained by the exceptional character of that round, which was dedicated to questions concerning perception of similarity between usage in different areas rather than questions about specific variation phenomena.) A significant rise can be noted in the 10th round, wich differed from the prior rounds only in that it was online for a longer time

(i.e., 2.5 years instead of 0.5-1). This reveals the role played by the "snowball effect": in one way or another people have come to know about the atlas and want to participate, and many of them have provided their email address. In general, the high participation can be explained by the fact that the survey is easily accessible and many people find it fun to fill in. In addition, in the German-speaking regions personal experience leads many people to be interested in regional variation in language. Examples of this can be seen in many online forums where such questions are discussed: a Google search of "wo sagt man" ('where do people say') resulted in about 30,500 hits [June 2020].

In a quiz app developed by Leemann *et al.* together with *Spiegel Online* and Zurich-based *Tagesanzeiger* in 2015 (Leemann *et al.* 2015; see also Leemann *et al.* 2018, 2019), even 700,000 participants took part. However, this quiz app, which is even more fun for participants, already requires data from previous surveys: the app could guess the participants' location by comparing their choices among the proposed regional variants for 24 variables with the data from the respective (already existing) AdA maps. This gamification approach is thus attractive for investigating developments, but cannot be used for exploring variation that is not known yet.

2.2. The questionnaires

When using a crowdsourcing approach online, it is crucial to continue to motivate participants, because it takes only one click for them to leave the page. Taking this into account, we try to make the questionnaires as varied as possible and refrain from presenting longer series of questions concerning a single phenomenon, even if this would be very instructive. In addition, we try to alternate between questions that may not be interesting for everyone (e.g., grammatical questions) and questions about other phenomena that are well anchored in the everyday experience of many speakers and can be illustrated by pictures, etc.



Fig. 2. Part of the 12th questionnaire

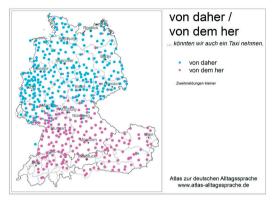
Pictures also help to avoid already using one of the possible variants in the question. However, in most of the AdA questions, the possible variants we have become aware of in previous investigations are provided as answer options. The practical advantages of this are obvious: firstly, this approach is comfortable for the participants and also saves them the trouble of reflecting about the spelling of nonstandard forms; and secondly, it avoids the problem of dealing with a multitude of different spellings of the same words, thus allowing for a largely automatic evaluation of the data. The other side of the coin is the necessity to present lexical variants in a phonetic form that may not be appropriate to the local usage in all regions. As far as possible, we try to deal with this by presenting alternative forms that take into account largescale phonetic differences. Nevertheless, it seems that the participants are in general able to make the distinction between lexical questions where the phonetic details do not matter and other questions concerning specifically phonetic issues. However, participants can use an additional blank space to add further variants that are not provided on the list. This involves more effort than selecting the options that are supplied, and therefore such variants are at a disadvantage, but if it is apparent that a certain variant is repeatedly added that was missing among the options, it is always possible to ask a question again in a later round.

2.3. Risks

As stated above, the AdA online questionnaire is accessible to everyone. There are no conditions for participation. The questionnaire does include some questions concerning age and mobility, but only at the end, in order to make it possible to filter the data at a later stage. However, at least in regard to age, the use of the Internet medium still ensures a certain homogeneity for the majority of informants; although the average age has increased somewhat over the years, in the current 12th survey round, 60% of the informants are still under 40 years of age.

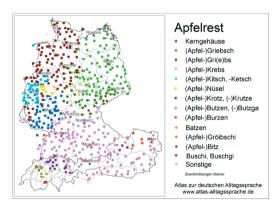
It is evident that the use of this medium involves risks. Given their easy and rather impersonal access online, the surveys might lead some participants to give answers that are not sincere. However, this is counterbalanced by the advantage that the Internet provides: the large number of participants guarantees a certain degree of security on the reliability of the data. Individuals making a joke of the survey cannot produce a coherent result; unless a majority of malicious informants were to somehow coordinate their answers, such users cannot falsify the overall picture. As Goossens (1979, 67) has already stated concerning the WDU, if the outcome shows clear regional distributions and sometimes surprisingly exact borders, the basis must be reliable in spite of its vagueness. As a matter of fact, the maps based on the survey data rather often do show clear regional distributions and sometimes surprisingly exact borders. However, some questions remain: perhaps these distributions are so clear because this data reflects more the informants' stereotypes than real local differences in usage. How realistic are these results, and what about non-diatopic variation? Stereotypes can certainly play a role, but clear areal distributions also appear in maps of features

which are not stereotypical of any region nor salient in any way, e.g., the variants *sich pellen* and *sich schälen* ('to peel', referring to skin peeling from sunburn), which show an extremely clear north-south distribution (AdA 11-5c), or *von daher* vs. *von dem her* ('therefore', AdA 11-7c) or *die zwei* vs. *die beiden* ('these two', see map 3 below).



Map 1. von daher (AdA 11-7c)

The words designating an apple core (AdA 11-1a) may be more expressive; however, most people do not know that there exist other variants than that of their own region.



Map 2. 'apple core' (AdA, 11-1a)

On the other hand, even for phenomena that are traditionally associated with strong regional stereotypes, apparently the informants do not always stick to the stereotypical variants. The progressive construction am [+ infin.] sein is known as the "Rhenish progressive" or "Westphalian progressive" (see <de.wikipedia.org/wiki/Am-Progressiv>), but depending on the verb used, people throughout the German-speaking region consider it to be "usual" in their town (*Ich bin noch*

am überlegen, ob... 'I am still considering whether...', AdA 10-10a), or at least throughout the western portion from the North Sea to Switzerland (*Er ist am Äpfel schälen* 'He is peeling apples', AdA 10-10b). (However, a consequence of the stereotype seems to be that teachers in North Rhine–Westphalia mostly consider this construction incorrect, whereas Swiss teachers mostly accept it; see Wyss 2017, 172.)

Even if it could be assumed that people prefer typical regional forms when filling out the AdA questionnaires, those who no longer know a dialectal/regiolectal variant cannot specify one, and even participants who still know a variant but would never use it will probably not indicate it as "usual". This becomes evident in the comparison between the AdA maps and corresponding dialect maps or WDU maps (see 4.2).

3. Mapping

The localization of each data set is based on the postcode that the participants indicate. As it would be impossible to represent each postcode district as a symbol on the map, the data is aggregated according to the extended WDU grid (498 locations). With its focus on "everyday language", it is still more natural than with dialects for there to be variation in the data for one and the same location. As we do not question selected individual informants but have many informants per location, such local variation is not ruled out by the approach, as is often the case in traditional dialect atlases. The inclusion of as many informants as possible automatically leads to insights into local variation. For every point on the grid, the variants that have been indicated are evaluated as to their relative frequency. The main symbol at each location always represents the most frequently reported variant, adjacent to which a smaller symbol can appear for a second variant that has received more than a third of the answers at this location. Depending on the case, an accumulation of such smaller dots can indicate either a smaller-scale variant being replaced by a regional or standard variant, the influence of the usage of a neighbouring region, or an early stage of the expansion of an innovation.

Since access to the survey is free, the number of informants represented by one dot can vary considerably from one point to another, and in the early rounds we did not always obtain enough data to keep the grid constant. However, if it is already a simplification to rely on a few informants' competence for local dialects, this is all the more true for colloquial language. So, in order to gain information about usage and internal variation in a given area, it is always necessary to take into account more than one single location in the AdA maps.

In recent times it has become rather common to use geostatistical methods to map internal variation and transition areas, as well as to reduce the role of outlier data even at locations with few participants; such methods have also been used with the AdA data (density estimation following the method described in Pickl/Rumpf 2011). However, mapping transition areas using intermediate hues is possible only if there are few variants involved, whereas in the AdA maps – most of which

concern lexical variation – often a wide range of hues is already necessary in order to map the different variants themselves. Another problem is that such methods also smooth the representation of sharp linguistic contrasts (see Pickl *et al.* 2014), e.g., the contrasts that in the lexis of colloquial German can often be found along extralinguistic borders (see below). The solution proposed by Pickl *et al.* (2014), using linguistic distances rather than geographic distances as the basis for density estimation, is at least problematic if it cannot be excluded that certain patterns of distribution are overrepresented in the corpus, since the selection of questions in the survey rounds does not follow a predefined design. However, the continuous increase in the number of maps in the corpus reduces this problem.

4. Main research questions

The main objectives of the AdA project are 1) to document the diatopic variation in German today, and 2) to shed light on the development of this diatopic variation and the factors behind it, comparing distributions in colloquial German to those in dialects as well as studying recent developments in colloquial German. The latter is possible using apparent time methods and especially comparing the recent AdA maps with the corresponding WDU maps, which show the usage about 40 years ago.

4.1. Documentation of actual language usage

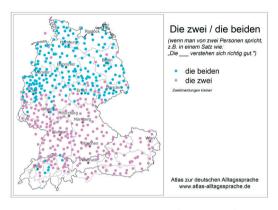
The primary aim of the AdA is comprehensive documentation of diatopic variation in contemporary colloquial German. In recent times the situation has improved as information on geographical variation based on written corpora has become more available (VWB, Variantengrammatik). However, the information provided in dictionaries is often still vague and not always reliable. Geographical indications may or may not be given in a haphazard manner; in particular, such indications are often missing for variants that are used only in Germany or in the north(east)ern part of the country, because usage there has traditionally been considered, and is presented as, supraregional standard German (see Sutter/Dürscheid 2019; Elspaß 2005; Möller 2001, 4-6). For example, the AdA map for 'carpenter' (AdA 10-5f) shows that the German-speaking area is divided into two more or less equal parts, one using Schreiner and the other Tischler. However, the former is specified in the Duden dictionary³ as being especially west-middle German, south German, and Swiss, whereas the latter has no geographical specification. Likewise, the mainly north German variant Krümel ('bread crumb') (AdA10-3j) is listed in the Duden dictionary without a diatopic specification and Brösel appears as its "Austrian" synonym, but according to the AdA survey Brösel is also the usual variant in most of southern Germany; the apparent national contrast turns out to be a regional contrast across borders. Such cases suggest that

As the Duden Online dictionary, which also indicates geographical distributions, is more popular than the GWDS (i.e., more relevant for people's knowledge and beliefs), it is the online dictionary that is used here.

codification might overaccentuate national differences within the German language, presenting variation as being pluricentric where it is actually pluriareal (see Elspaß et al. 2017, Niehaus 2015), even if the phenomenon of regional variants becoming national variants (see below) may indicate a tendency towards a pluricentric structure (at least in the recent past).

In the case of *anrufen/anläuten* ('to call someone by phone'), analysis of written corpora (Variantengrammatik) has led to diverging results concerning the case of the complement in Switzerland – accusative or dative. In regional newspapers, the dative did not play a significant role⁴. However, this seems to hold only for written language; in the AdA survey, the Swiss participants unanimously opted for the dative, as did many south German informants (AdA 11-7b).

Beyond providing better insight into the distribution of variants already known to coexist, the AdA project has also provided many maps with clear geographic distribution of phenomena previously unknown to show diatopic variation at all. Neither the Duden nor the VWB mentions any geographic restriction for the use of *beide* or *zwei*, but in the latest 12th AdA survey round it emerged that *die beiden*, designating two people ('the(se) two'), is usual only in the northern part of Germany and partly in Switzerland, whereas *die zwei* is used in the other regions.



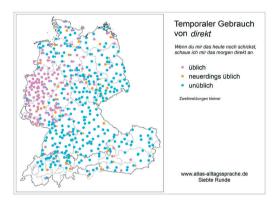
Map 3. die beiden / die zwei (AdA 12-4k)

A rather similar distribution resulted for *von daher* vs. *von dem her* ('therefore', AdA 11-7c), which was not to be expected from the Duden entry. *Eszett* as designation of the letter (B) (combination of the letter names *es* for (s) and *zett* for (z) does not have any geographical indication in the Duden dictionary either, but it has been shown to be usual only in the northern half of Germany, whereas in the southern half along with Switzerland and Austria the letter is consistently termed *scharfes s* (AdA 7-5d). The verbs *einlaufen* and *eingehen* can both designate the shrinking of items of clothing, and both appear without further indication in the Duden; in

⁴ See Variantengrammatik: <mediawiki.ids-mannheim.de/VarGra/index.php/Telefonieren>.

the VWB, einlaufen is marked as "D" ('Germany'), whereas eingehen is explicitly labelled as "gemeindeutsch". However, map AdA 10-13a shows a clear geographic division between eingehen and einlaufen, the latter being usual only in northern Germany and the northern part of the Rhineland, with some signs of spreading to south (west) Germany.

Beyond the existence of regional variants in an onomasiological perspective, there is also semasiological diatopic variation that is not yet sufficiently known. No entry in the Duden nor in the VWB indicates that in most regions *Teppich* means only 'carpet', but in southwest Germany it is also the word used for 'blanket' (AdA 11-4f). In contrast, the temporal use of *direkt* ('directly', 'immediately') is mentioned in the Duden dictionary, but it is not stated that this sense variant is common only in part of western Germany (AdA 7-11d).



Map 4. Temporal use of *direkt* (AdA 7-11d)

The idea for such AdA maps is often sparked by individual experiences (misunderstandings, surprise, discussions) of informants, colleagues, or friends, who propose including a certain question in a future survey (there is an extra field in every questionnaire where participants can recommend further questions). The cyclic and economical design of the survey makes it possible to include such questions, and there is no disadvantage if it emerges that the hypothesis of geographical distribution cannot be confirmed (as in the case of *gleich*: there does not seem to be a clear regional pattern of its use in the sense of 'immediately' and in the sense of 'not now, a bit later' – AdA 7-11bc).

Beyond individual phenomena, the AdA surveys have also been used to explore more complex questions, such as the geographical pattern of different phases of language change, e.g., the standardization of the already mentioned *am* progressive, with and without a direct object (AdA 2-18a-b, AdA 10-10a-d), the grammaticalization of the passive with GET verbs (AdA 4-21a-b, 4-22a-f), or the development of an intensifying adverb *mords* from a prefixoid (AdA 12-3f-h). However, as stated above, series of related questions such as these imply the risk of boring the participants, so they

must therefore remain an exception and the series of relevant questions cannot be as differentiated as would be desirable from the linguistic point of view.

4.2. Exploration of the evolution of areal distributions

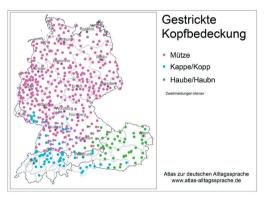
Besides exploring and documenting the full extent of current geographical variation in colloquial German, the AdA project aims to determine how this variation developed in the past and continues to develop today. On the one hand, this means investigating the relation between variation in today's colloquial German and variation in dialects (if the latter is documented); on the other hand, a comparison of the current AdA maps with WDU maps from approximately 40 years ago helps to shed light on recent developments in colloquial usage.

4.2.1. Variation in colloquial German and local dialects

Variation in colloquial German must be considered against the background of traditional local dialects. For many lexical phenomena, traditional dialectal usage is documented in the Deutscher Wortatlas (DWA), which was based on surveys from 1939-1940. More recently, several regional atlas projects have collected and mapped lexical dialect data (see Lötscher 2019, 683; Post 2019, 714; Ruge / Schröder 2019, 738). In comparison to the dialectal distributions documented in these dialect atlases, the AdA maps mostly show a reduction of diversity. There is geographical variation, and some of the dialectal variants are still in use in colloquial speech, but their number is reduced. This holds true even for names for small or trivial objects of everyday life (as opposed to commodities or merchandise, for example), even though conditions would favour diversity in such cases. To take one example, the words for 'apple core' (see above, map 2) preserve some dialectal diversity, but comparison with the dialect map for the Rhineland RWA 15 (data collected in 1996) nevertheless reveals that, in the colloquial language of this region, two of the five main dialectal designations are replaced by the less expressive and more transparent word Kerngehäuse, which is also used in northern Germany. For 'match' (an article of merchandise), in the entire German-speaking area, practically the only two variants with the largest area in the dialect map (DWA III, 12), Streichholz and Zündholz, are still in use (AdA 4-9). Streichholz is used throughout Germany except in Bavaria, whereas map RWA 38 shows 13 different dialectal variants for Rhineland alone (Streichholz, Fixfeuer, Fixholz, Fixspan, Feuerspan, Feuerzeug, Spänchen, Streichspan, Schwefel, Schwegel, Fimp, Feuer, Fix).

Less widespread dialectal variants have generally tended to disappear, above all in the northern part of Germany. The development also depends on the distribution itself. If dialectal contrasts are well preserved in colloquial German (or even standard German), they are primarily large-scale contrasts with a certain balance between larger regions, mostly north-south, e.g., Junge/Bub ('boy') (AdA 1-1 – DWA IV, 11), Schreiner/Tischler ('carpenter') (AdA 10-5f – DWA 9), or hier/da ('here') (AdA 2-17a – DSA 181).

Besides the recurring picture of a north-south division separating Germany approximately through the middle, a tendency towards national homogenization can also be observed: dialectal variants that were located primarily in one of the German-speaking states but were also common in smaller parts of neighbouring states spread within the borders of the national territory in which they were predominant, whereas in neighbouring regions they are replaced by variants that prevailed in the respective national territory. For example, in the dialects a woollen hat was known as



Map 5. 'woollen hat' (AdA 8-3a)

Mütze in the northern half of Germany only, while Kappe was used in the south (west) and in Switzerland, and Haube (Haubm) in parts of Bavaria and most of Austria, including Vienna (DWA 12). In recent colloquial usage, the former similarities between southern Germany and Switzerland and Austria are vanishing: Mütze now dominates in southwest Germany up to the Swiss border, and is also frequent in the (former) Bavarian Haube area up to the Austrian border – but it does not play any role in Switzerland or Austria, and in Austria the area of Haube has enlarged against competing Kappe (AdA 8-3a).

4.2.2. The development of colloquial German: Comparison WDU - AdA

Findings from comparisons between variation in dialectal and in colloquial German have already been provided by the WDU maps. However, these are based on data collected in the 1970s, when the border between East and West Germany was still an enormous obstacle to contact and when the systematic expansion of upper secondary and tertiary education (i.e., extended teaching of the standard variety) was still at its beginning.

Comparing the WDU maps to the recent AdA maps now makes it possible to better grasp the development of colloquial language in recent decades. As it has always been a goal of the AdA project to shed light on this development (see Elspaß 2005), a considerable number of AdA maps are concerned with phenomena included in the

WDU, and where possible the questions they are based on are formulated in exactly the same way they were in the WDU survey.

In many cases, comparison shows that regional variants continue to decline in colloquial German. Variants that were still in use according to Eichhoff's informants (mostly born about 1945-1955, some of them older) are no longer mentioned by the AdA informants. For example, the picture of the words signifying 'blueberry' in Germany has been narrowed down to competition between *Blaubeere* and *Heidelbeere*, with regional predominance of one or the other of these two words (AdA 11-1). Only a few isolated dots on the map remain as traces of *Bickbeere* and *Waldbeere*, which in the WDU map still dominated in large swaths of the north and west of Germany, respectively (WDU 2-96). The use of *Schwarzbeere* in the southeast has also considerably declined. *Blaubeere* has supplanted the variants that have disappeared, spreading to the south too, where it hardly appears in the WDU map.

Such diffusion of northern variants in southern Germany can be found rather frequently when comparing AdA and WDU maps. This is no surprise, as northern German variants are considered to be more prestigious, corresponding to the proximity of today's colloquial language to standard language in the north (where colloquial language is not based on the local Low German dialects but on the High German standard language).

Nevertheless, in recent times lexical change in the opposite direction is also observed. Quite a few maps show that variants from the south have increasingly been adopted by speakers in the north (e.g., Lauch 'leek' instead of Porree, AdA 2-8 vs. WDU 2-91; or halt instead of eben 'just', AdA 9-5e vs. WDU 2-103). This may be due to the economic dominance of the south (including the dominance of TV media companies based in Munich) in the last decades. However, another factor might also play a role, at least in the case of modal particles and discourse markers, (e.g. halt): as a consequence of the proximity of colloquial language to standard language in the north, speakers might be looking for new markers of informality, and may be borrowing them from the south (see Elspaß 2005, 18-20), certainly with the added help of the media.

However, change in recent colloquial German does not automatically mean uniformization – we also find "horizontal" changes, i.e., the new map shows the same variants as the old one, but with modified areas (see below). Frequently, such "horizontal" changes track towards convergence with political boundaries – above all at national borders (as seen above in the case of 'woollen hat'), but also at borders of federal states (*Bundesländer*). For example, *heuer* 'this year' instead of *dieses Jahr* (WDU 1-42/AdA 8-4d) is completely stable not only in Austria, but also in Bavaria; on the other hand, its use is receding in Switzerland and it has completely disappeared in Germany outside Bavaria. Even if these administrative boundaries do not have the character of real borders today, they can influence contact to a certain degree (e.g., with regard to public transport or club membership, not to mention school districts, which today channel contact over a long and significant period of life);

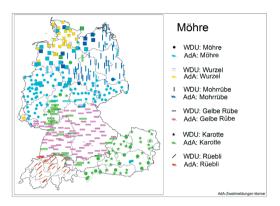
besides, up to now, nationally and regionally organized media have also had an influence on language use. Moreover, such administrative, and often also historical, boundaries can also influence mental maps and thus perceptions of whether other speakers and the variants they use belong to "your" region or not (Möller 2012; see also AdA 6th survey round; Schmidt/Herrgen 2011, 173; Auer 2004).

This is particularly interesting in the case of eastern Germany. It has often been stated that 40 years of political division had only a marginal influence on the language. There are a few examples of specific East German variants such as Broiler 'grilled chicken' and Plaste 'plastic'. In both cases, in the WDU survey the eastern variant was considered the (only) usual designation by all East German informants (WDU 4-35, 2-77), whereas in the AdA survey 20 to 30 years after reunification some of the eastern German informants have adopted the West German variant; however, Broiler and Plaste still prevail very clearly as "normal" words in the eastern regions (AdA 9-1b, 2-13a). What is more striking is the observation that, in a few cases, eastwest differences have actually become more pronounced after the fall of the wall instead of disappearing. For example, map 2 shows the word Griebs(ch) (Krebs) as the usual designation for an apple core throughout eastern Germany up to the Baltic Sea, with a rather clear contrast to the designations used in the western regions, whereas, according to the WDU map, in the 1970s there was no east-west difference at all in the northern regions, with (Kern-)gehäuse being used on both sides of the Inner German border. Other examples are Eierkuchen ('pancake'), which has become a practically exclusive eastern German variant in the AdA map (AdA 7-1a), whereas its area still goes beyond the border in the WDU map (4-24); or *Mohrrübe* ('carrot') (see 4.2.3), which has spread specifically in the eastern part of northern Germany.

4.2.3. WDU - AdA: Combination maps

Comparisons between the WDU and AdA are easy to make insofar as the map area and even the grid of localities are the same. However, whereas in the pilot project (<www.atlas-alltagssprache.de/pilotprojekt/>; Elspaß 2005) the map symbols were identical to those in the WDU in order to facilitate comparison, the symbol system ultimately adopted for the AdA differs from Eichhoff's. In an online presentation, it is easy and clearer to use colours instead of monochrome symbols of different shape. Moreover, the WDU symbols often differ considerably from each other with regard to the use of black shading (e.g., thin bar vs. filled circle), which can lead to a biased perception of competing forms when different variants coexist in the same region, as the "heavier" symbols with more black tend to dominate the optical impression and so the corresponding variants may be perceived as prevailing.

The different symbol systems do make it more difficult to compare the WDU and AdA situations at a glance. Conversely, it is possible to make use of just this difference in order to allow for an exact comparison, presenting both the WDU data and the AdA data in one combination map (as far as we have digitized some of the WDU maps). In map 5 (variants for 'carrot'),



Map 6. 'carrot' (combination WDU II, 89 – AdA 9-1k)

the shapes of the symbols are the same as those used in the WDU map indicating the situation in the 1970s, whereas the colours are those of the AdA map of 2012. The map legend shows which shape corresponds to which colour – if there has been no change from the WDU survey, the pairing should be as it is in the legend; otherwise, the usage has changed (in order to highlight these cases, the symbols are slightly bigger). For example, the variant *Möhre* is represented by a filled circle in the WDU system and by the colour light blue in the AdA, and the variant *Wurzel* by a square in the WDU and the colour yellow in the AdA. Consequently, light blue circles in the map indicate that nothing has changed – that *Möhre* is still used in areas in which it was used in the 1970s – whereas light blue symbols with another shape indicate an expansion of the *Möhre* area. The light blue squares in northern Germany show that *Möhre* has expanded into a region where, according to the WDU, the normal word in the 1970s was *Wurzel*. Conversely, squares with a colour other than yellow indicate that the *Wurzel* area has become smaller, in favour of *Möhre* where the squares are light blue and in favour of *Mohrrübe* where they are dark blue.

Several developments can be seen in the combination map. The typical north German variant *Wurzel* has mainly retreated to Schleswig-Holstein and the surroundings of Hamburg and Bremen, replaced in the rest of its former area by other regional variants: by *Möhre* in the west, but mostly by the East German variant *Mohrrübe* in the north of eastern Germany. Whereas *Möhre* has spread in northwest Germany, it has been almost completely replaced by *Karotte* in Austria and South Tyrol, *Karotte* becoming the only "normal" variant in Austria (with the exception of Vorarlberg). In contrast to this development towards national uniformity, the spread of *Karotte* beyond its small dialectal area in Germany introduces new variation in the formerly homogeneous south German *Gelbe Rübe* area, probably due to the fact that, in commercial contexts, only *Möhre* and *Karotte* are used, the latter often in order to designate a finer type of carrot (see Elspaß 2005, 15f).

5. Statistical evaluation

Digitized comparisons such as those described above will also allow for a quantitative evaluation of the developments in the decades between the WDU and the AdA surveys, once there are a sufficient number of parallel maps. Regarding current usage, the AdA material gathered so far could already be used for statistical analyses of the dominating patterns of distribution (in spite of the aforementioned risk that certain patterns might still be overrepresented in the corpus). Cluster analysis of the data of 222 AdA maps from the first survey rounds has confirmed the statistical prevalence of the abovementioned north-south division (Lang 2008, 47), which interestingly enough does not coincide with the border between High German and Low German but runs farther to the south; an explanation might be found in a still well-known mental border going back to the political situation in the 19th century (see Durrell 1989). Moreover, the cluster analysis has underlined the relevance of the national borders as dividing lines in colloquial lexical usage, and not only national borders but also the borders of federal states (Bundesländer) turn out to be dominating division lines (Möller/Elspaß 2019, 778). So the pattern clearly differs from the situation in the dialects, at least with respect to the familiar pattern based on phonological features of the dialects (see Lameli 2013, 186).

Factor analysis of the data of 191 more recent maps from AdA survey rounds 8-10 (Pickl *et al.* 2019, 47) has also corroborated most of these results: a north-south division, differences between Germany and Switzerland and between Switzerland and Austria, the latter in accordance with the state border, against the dialectal situation. However, in the east the results of this study are more in line with the dialectal conditions: here the factor loads show a stronger connection between Bavaria (apart from Franconia) and Austria. The localization of the east-west division in southern Germany also coincides less with the border between the federal states and more with the dialectal contrast between Bavarian and Swabian. Yet a restriction of the analysis to the Austrian data once more shows a coincidence between the main contrasts in colloquial speech and the borders of federal states. Factor analysis of the Austrian data moreover revealed a spreading of east Austrian–Viennese variants to urban centres in other regions (*ibid.*, 51-53).

6. Conclusion

The success of the *Atlas zur deutschen Alltagssprache* shows that crowdsourcing via the Internet is a powerful and – in comparison to traditional survey methods – extremely cheap means of gathering data on geographical variation in language use. Concerns that this access might be less reliable than traditional survey methods seem to be unfounded. The online approach makes it possible to run the project over a period of years, as the regular presentation of the results can be linked to new surveys, which allows for remaining in contact with a growing core group of informants. Moreover, the low-threshold access to the maps can help to develop laypersons'

knowledge of linguistic variation and counteract the still widespread idea that the main difference between linguistic variants is that one is "correct", and the others are "wrong" (and that the work of linguists consists in making such decisions). The data collected up to now provide information on long-term and recent developments in regional variation in everyday speech, and show that although small-scale diversity is declining, the German language is still characterized by an omnipresent areal diversity that still needs further exploration.

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References

- AdA = Elspaß, Stephan/Möller, Robert, 2003ff. Atlas zur deutschen Alltagssprache (AdA), www.atlas-alltagssprache.de.
- Auer, Peter, 2004. «Sprache, Grenze, Raum», Zeitschrift für Sprachwissenschaft 23, 149-180.
- Budin, Gerhard/Elspaß, Stephan/Lenz, Alexandra N./Newerkla, Stefan M./Ziegler, Arne,
 2019. «The Research Project (SFB) 'German in Austria'. Variation Contact Perception»,
 in: Bülow, Lars/Fischer, Ann Kathrin/Herbert, Kristina (ed.), Dimensionen des sprachlichen Raums: Variation Mehrsprachigkeit Konzeptualisierung, Berlin/Bern, 7-35.
- Christen, Helen/Ender, Andrea/Kehrein, Roland, 2020. «Sprachliche Variation in Deutschland, Österreich, der Schweiz und Luxemburg», in: Bohnert-Kraus, Mirja/Kehrein, Roland (ed.), Dialekt und Logopädie, Hildesheim/Zürich, 83-135.
- Duden Online-Wörterbuch, <www.duden.de/woerterbuch>.
- Durrell, Martin, 1989. «Die 'Mainlinie' als sprachliche Grenze», in: Putschke, Wolfgang/Veith, Werner/Wiesinger, Peter (ed.), *Dialektgeographie und Dialektologie*, Marburg, 89-109.
- DWA = Mitzka, Walther/Schmitt, Ludwig Erich (1951ff). Deutscher Wortatlas, Gießen.
- Elmentaler, Michael/Rosenberg, Peter, 2015. Norddeutscher Sprachatlas (NOSA), vol. 1: Regiolektale Sprachlagen, Hildesheim/Zürich/New York.
- Elspaß, Stephan, 2005. «Zum sprachpolitischen Umgang mit regionaler Variation der Standardsprache in der pluralistischen Sprachgesellschaft», in: Kilian, Jörg (ed.), Sprache und Politik. Deutsch im demokratischen Staat, Mannheim, 294-313.
- Elspaß, Stephan/Dürscheid, Christa/Ziegler, Arne, 2017. «Zur grammatischen Pluriarealität der deutschen Gebrauchsstandards oder: Über die Grenzen des Plurizentrizitätsbegriffs», in: Sieburg, Heinz/Solms, Hans-Joachim (ed.), Das Deutsche als plurizentrische Sprache. Ansprüche Ergebnisse Perspektiven (Zeitschrift für deutsche Philologie 136, thematisches Sonderheft), 69-91.
- Ganswindt, Brigitte/Kehrein, Roland/Lameli, Alfred, 2015. «Regionalsprache.de (REDE)», in: Kehrein, Roland/Lameli, Alfred/Rabanus, Stefan (ed.), Regionale Variation des Deutschen: Projekte und Perspektiven, Berlin/Boston, 425-457.
- Goossens, Jan, 1979. «Een woordatlas op taalpragmatische grondslag», Taal en tongval 31, 64-68.
- GWDS = Duden. Das große Wörterbuch der deutschen Sprache. Die umfassende Dokumentation der deutschen Gegenwartssprache, Mannheim, Duden, 2011 (electronic edition).

- Herrgen, Joachim/Schmidt, Jürgen Erich with Fischer, Hanna/Ganswindt, Brigitte (ed.), 2019.
 Sprache und Raum. Ein internationales Handbuch der Sprachvariation, vol. 4: Deutsch, Berlin/Boston.
- Kehrein, Roland, 2019. «Areale Variation im Deutschen 'vertikal'», in: Herrgen/Schmidt (ed.), 121-158.
- Kleiner, Stefan, 2015. «'Deutsch heute' und der Atlas zur Aussprache des deutschen Gebrauchsstandards», in: Kehrein, Roland/Lameli, Alfred/Rabanus, Stefan (ed.), Regionale Variation des Deutschen: Projekte und Perspektiven, Berlin/Boston, 489-518.
- Lameli, Alfred, 2013. Strukturen im Sprachraum: Analysen zur arealtypologischen Komplexität der Dialekte in Deutschland, Berlin/Boston.
- Lang, Benjamin, 2008. Zur dialektometrischen Analyse des "Atlas zur deutschen Alltagssprache". Thesis, Universität Augsburg. http://www.atlas-alltagssprache.de/wp-content/uploads/2012/05/Lang-2008-Dialektometr.-Analyse-des-AdA-anon.pdf.
- Leemann, Adrian/Derungs, Curdin/Elspaß, Stephan, 2019. «Analyzing linguistic variation and change using gamification web apps: The case of German-speaking Europe», *Plos One* 14/12: e0225399, (journals.plos.org/plosone/article?id=10.1371/journal.pone.0225399).
- Leemann, Adrian/Elspaß, Stephan/Möller, Robert/Grossenbacher, Timo, 2018. *Grüezi, Moin, Servus! Wie wir wo sprechen*, Reinbek bei Hamburg.
- Leemann, Adrian/Kolly, Marie-José/Brupbacher, Marc/Grossenbacher, Timo/Wanitsch, Daniel, 2015. *Grüezi, Moin, Servus!*, Internet app. <www.tagesanzeiger.ch/extern/interactive/2015/sprachatlas_v8/#/questions>.
- Lötscher, Andreas, 2019. «Die areale Lexik im Oberdeutschen», in: Herrgen/Schmidt (ed.), 756-781.
- Möller, Robert, 2001. «Wortgebrauchsräume in der nord- und mitteldeutschen Alltagssprache: eine Untersuchung zum Wortatlas der deutschen Umgangssprachen», Niederdeutsches Wort 42, 1-31.
- Möller, Robert, 2012. «Der Sprachgebrauch 'bei uns': Arealbildung in Karten des Atlas zur deutschen Alltagssprache, objektive Grenzen und subjektive Räume», in: Hansen, Sandra/Schwarz, Christian/Stoeckle, Philipp/Streck, Tobias (ed.), Dialectological and Folk Dialectological Concepts of Space: Current Methods and Perspectives in Sociolinguistic Research on Dialect Change, Berlin/Boston, 96-118.
- Möller, Robert/Elspaß, Stephan, 2019. «Die rezente Dynamik im arealsprachlichen Lexikon», in: Herrgen/Schmidt (ed.), 756-781.
- Niehaus, Konstantin, 2015. «Areale Variation in der Syntax des Standarddeutschen. Ergebnisse zum Sprachgebrauch und zur Frage Plurizentrik vs. Pluriarealität», Zeitschrift für Dialektologie und Linguistik 82/2, 134-168.
- Pickl, Simon/Rumpf, Jonas, 2011. «Automatische Strukturanalyse von Sprachkarten. Ein neues statistisches Verfahren», in: Glaser, Elvira/Schmidt, Jürgen Erich/Frey, Natascha (ed.), Dynamik des Dialekts Wandel und Variation. Akten des 3. Kongresses der Internationalen Gesellschaft für Dialektologie des Deutschen (IGDD), Stuttgart, 267-285.
- Pickl, Simon/Spettl, Aaron/Pröll, Simon/Elspaß, Stephan/König, Werner/Schmidt, Volker, 2014. «Linguistic distances in dialectometric intensity estimation», *Journal of Linguistic Geography* 2/1, 25-40.

- Pickl, Simon/Pröll, Simon/Elspaß, Stephan/Möller, Robert, 2019. «Räumliche Strukturen alltagssprachlicher Variation in Osterreich anhand von Daten des 'Atlas zur deutschen Alltagssprache (AdA)'«, in: Bülow, Lars/Fischer, Ann Kathrin/Herbert, Kristina (ed.), Dimensionen des sprachlichen Raums: Variation Mehrsprachigkeit Konzeptualisierung, Berlin/Bern, 39-59.
- Post, Rudolf, 2019. «Die areale Lexik im Mitteldeutschen», in: Herrgen/Schmidt (ed.), 709-732.
- Ruge, Jürgen/Schröder, Ingrid, 2019. «Die areale Lexik im Niederdeutschen», in: Herrgen/Schmidt (ed.), 756-781.
- RWA = Lausberg, Helmut/Möller, Robert, 2000. Rheinischer Wortatlas, Bonn, 2000.
- Schmidt, Jürgen Erich/Herrgen, Joachim, 2011. Sprachdynamik. Eine Einführung in die moderne Regionalsprachenforschung, Berlin.
- Sutter, Patrizia/Dürscheid, Christa, 2019. «Die Darstellung standardsprachlich-diatopischer Variation im Wörterbuch (k)ein Erfolgsmodell?», in: Bülow, Lars/Fischer, Ann Kathrin/Herbert, Kristina (ed.), Dimensionen des sprachlichen Raums: Variation Mehrsprachigkeit Konzeptualisierung, Berlin/Bern, 87-104.
- Variantengrammatik = Dürscheid, Christa/Elspaß, Stephan/Ziegler, Arne et al., 2018. Variantengrammatik des Standarddeutschen. Ein Online-Nachschlagewerk, <www.variantengrammatik.net>.
- VWB = Ammon, Ulrich et al., 2016. Variantenwörterbuch des Deutschen. Die Standardsprache in Österreich, der Schweiz, Deutschland, Liechtenstein, Luxemburg, Ostbelgien und Südtirol sowie Rumänien, Namibia und Mennonitensiedlungen, 2nd ed., Berlin.
- DSA = Wrede, Ferdinand/Mitzka, Walther/Martin, Bernhard (ed.), 1927-1956. Deutscher Sprachatlas auf Grund des Sprachatlas des Deutschen Reiches von Georg Wenker. Begonnen von Ferdinand Wrede, fortgesetzt von Walther Mitzka und Bernhard Martin, Marburg (Lahn), digitized version, https://regionalsprache.de/SprachGIS/Map.aspx>.
- WDU = Eichhoff, Jürgen, 1977ff. Wortatlas der deutschen Umgangssprachen, vol. I/II: Bern [1977/1978]; vol. III: München [1993]; vol. IV: Bern/München [2000].
- Wyss, Eva L., 2017. «Sprachnormurteile im Dilemma. Deutschlehrerinnen und Deutschlehrer an Deutschschweizer Gymnasien beurteilen Sprachkompetenzen, Sprachgebrauch und Zweifelsfälle», in: Davies, Winifred V./Häcki Buhofer, Annelies/Schmidlin, Regula/Wagner, Melanie/Wyss, Eva Lia (ed.), Standardsprache zwischen Norm und Praxis. Theoretische Betrachtungen, empirische Studien und sprachdidaktische Ausblicke, Tübingen, 147-185.