REGIONAL LINGUISTIC KNOWLEDGE AND PERCEPTION.
ON THE CONCEPTUALIZATION OF HESSIAN

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Abstract

The paper reports on the results of a German perceptual dialectology study conducted in different areas of Hesse. Several groups of Hessian and non-Hessian listeners are surveyed in perception experiments (mental mapping, localization of dialect recordings, dialect imitation) in order to find evidence about the semantic motivation for and the structuring of the subjective language-area concept *Hessian*. It is argued that language-area concepts are semantically complex entities which are part of the individual knowledge about regional linguistic variation and that the structure and complexity of these concepts largely depends on knowledge-related factors like age, dialectal competence, and provenance. Furthermore, the results are discussed in conjunction with a general model of regional language conceptualization.

Keywords

perceptual dialectology, Hessian, conceptualization of language areas, regional linguistic knowledge

CONOCIMIENTO LINGÜÍSTICO REGIONAL Y PERCEPCIÓN.
SOBRE LA CONCEPTUALIZACIÓN DE LA VARIEDAD DE HESSE

Resumen

Este artículo presenta los resultados de un estudio sobre dialectología perceptiva alemana realizado en diversas áreas de Hesse. Varios grupos de oyentes pertenecientes o no a la variedad de Hesse fueron

examinados mediante experimentos de percepción (mapas mentales, localización de grabaciones dialectales, imitación dialectal) con el fin de encontrar pruebas relacionadas con la motivación semántica y la estructuración del concepto subjetivo asociado con el área lingüística de Hesse. Se argumenta que los conceptos relacionados con el área lingüística son entidades semánticamente complejas que forman parte del conocimiento individual sobre la variación lingüística regional y que la estructura y la complejidad de estos conceptos depende en gran medida de factores relacionados como la edad, la competencia dialectal y la procedencia. Además, los resultados se analizan juntamente con un modelo general de conceptualización de lengua regional.

Palabras clave

dialectología perceptiva, variedad de Hesse, conceptualización de las áreas lingüísticas, conocimiento lingüístico regional

1. Introduction[1]

Over recent years, research into lay speakers' awareness of linguistic variation has been developing into an influential paradigm in German variational linguistics which focuses mainly on the complex interdependencies between language variation and individual perception, especially with reference to the individual construction of language-area concepts. For the German language area, some revealing studies, which provide insight into how untrained speakers/listeners linguistically structure the German language area, have been carried out.[2] Lameli, Purschke & Kehrein (2008) find evidence for the existence of eight prominent regional language concepts which Hessian pupils (secondary school, 12th grade) constantly refer to in perception experiments using different types of maps.[3] Although these eight concepts can be seen as prototypical for the German language area, they seem to be based on different semantic motivations. *North German* for example seems to reflect a concept that is principally shaped by cultural-geographic factors, whereas pupils' drawings for other concepts, like *Swabian,*

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[1] This text presents a modified and translated version of the study published as Purschke (2010b). Special thanks go to Mark Pennay for the revision of the English text. See also Purschke (2010c) for further information about the theoretical, methodical, and empirical problems that are discussed in this paper.

[2] See for example Lameli, Purschke & Kehrein (2008), Anders (2010), Hofer (2004), Lameli (2009), Kehrein (2009), Purschke (2008), or the studies published in Anders, Hundt & Lasch (2010).

[3] These eight concepts are *Bavarian, Swabian, Saxon, Hessian, Berlin dialect, Cologne dialect, Northern German*, and *High German*.

are oriented to political borders as a primary influence.[4] Anders' (2010) study of lay linguistic knowledge about the Saxon dialect region shows that concrete linguistic identifiers play only a limited role in the constitution of untrained listeners' spatial concepts of dialects. Although her informants seem to have a clear idea of the areal structure of their linguistic environment, they could not align these concepts with concrete linguistic information. The listeners were not able to identify and localize dialectal recordings correctly in perception experiments, even though they had previously named several distinct language areas within the *Upper Saxonian* area.

These results suggest that the knowledge about regional linguistic variation does not necessarily need to be based on linguistic facts, but can arise out of different sorts of knowledge that are not inevitably related to linguistic reality. It can be assumed that linguistic laypersons' concepts of linguistic variation are composed of different components that should not be seen as discrete categories but rather as complexes of regional linguistic knowledge including geographical, cultural and social knowledge.

2. Knowledge and perception — a theoretical sketch

For our purposes, and following the discussion in Purschke (2010c), *regional language knowledge* shall be defined as the entirety of acquired, cross-linked, weighted, implicit and explicit contents of memory about (regional) linguistic variation, which derive from everyday frameworks of action and circumstance and also serve as the basis of any (linguistic) action.[5] This knowledge has to be seen as part of an individual's linguistic knowledge as well as knowledge of the world and hence as a complex mental structure, influenced by every (linguistic and non-linguistic) aspect of everyday life (communication, the media, travel, etc.). As a consequence, this structure cannot be deduced solely from linguistic phenomena; rather, it results from the entirety of experiential content and defines the framework for (linguistic) interaction in the form of everyday categories (i.e., *concepts*).

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[4] The pupils identify the federal state of Baden-Württemberg with *Swabian*, which suggests a chiefly geographically/politically shaped concept in contrast to the complex linguistic situation in Baden-Württemberg.
[5] This definition is closely related to common concepts of knowledge in neighboring disciplines such as psychology and neuroscience. See for example Solso (2005: 242), Reinmann-Rothmeier/Mandl (2001: 466), or Gottschalk-Mazouz (2007).

Knowledge thus implies the result of perceptual processes on the one hand and the availability of the percepts in terms of mental images of environmental objects or circumstances on the other. *Perception* in this regard, can be defined as the process of reception, realization, and integration of sensory stimuli by an individual (Purschke 2010c). The interaction between an individual and the environment can be seen as the most important factor in the formation of regional linguistic knowledge components. This process of *conceptualization* — the conversion of objects and circumstances from an individual's experiential spaces into knowledge units — can be described as follows (see Figure 1): experienceable environmental objects and circumstances are named as *representables* and their mental images as *representees*. The process of converting a representable into a representee is termed *representation* (or *perception*). The opposite process — the operationalization of a representee as an element of interaction between the self and the world — shall be defined as *mental representation* (or *projection*).[6] The result of a projection consists of a *representative,* which, although it refers to underlying concepts (and, with concrete objects, to the experiential content they represent), is not identical with them, instead being subject to the specific conditions of the interactive context. Further, the underlying representees and concepts should not be thought of as exact images of environmental information, because they are the product of a subjectively colored perception (distorted by sensory or emotional factors for example). Although there is the possibility of congruence between a representee and a concept (and even a representative), it must, however, normally be assumed that a concept consists of several representees and that specific representees can be elements of several concepts.[7] This leads to an understanding of *concepts* as bundlings of representees that may be ranked in a specific hierarchy. For instance, it is very likely that specific knowledge components govern the structure of both a concept and the referring representatives, subject to a) the individual conceptual configuration and b) the contextual requirements. Such primary representatives are *prototypes*. On this basis, *conceptualization* can be defined as the summation of representational processes that result in the formation of a specific concept.

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[6] This terminology is largely inspired by philosophical and psychological approaches. See for example Herrmann (1993).
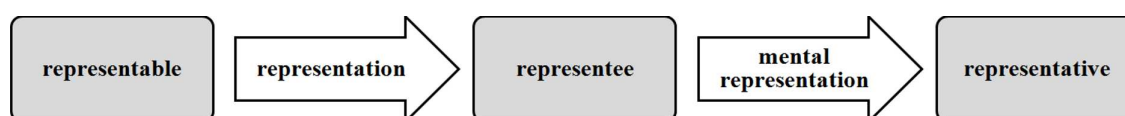[7] See Kehrein, Lameli & Purschke (2010: Ch. 3.3).

Figure 1. Representational processes.

3. Hessian as an example for the conceptualization of language areas

3.1. Research design

Based on this theoretical sketch, the aim of the following is to explore the structure of language-area concepts from speakers'/listeners' viewpoints using the example of Hessian. The study focuses on individual language-area concepts as the product of conceptualization processes. The semantic motivation for and structure of the concepts shall be explored on the basis of representatives that informants generate in perception experiments. Unlike the Kehrein, Lameli & Purschke (2010) study, which concentrates on methodical and theoretical aspects, this present study focuses on the relevance of individual environmental experience to the formation and structure of language-area concepts:

Does the controlled variation of stimuli in perception experiments produce evidence about the semantic motivation for and structuring of subjective language-area concepts?

Needless to say, a complete analysis of the relevant concepts and knowledge components is not possible here. For instance, evaluation issues relating to language variation (attitudes) are hardly touched upon.[8] But the present study nonetheless tries to identify and correlate the most important parameters.

The principal focus of this study, the Hessian regional linguistic area, is characterized by a unique linguistic situation. Several related but distinct language areas adjoin within a relatively small area (the federal state of Hesse) of the Western Central German dialect area.[9] Wiesinger (1980) distinguishes three Hessian language areas:

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[8] See for example Casper (2002) or Anders (2010) for more detail.
[9] See Wiesinger (1983) or Barbour & Stevenson (1990) for a quick overview of the most important dialect divisions in the German language area. A combination map of the relevant Hessian language areas and their location within Germany can be found at

North Hessian, which shares similarities with Thuringian; Central Hessian, which was in contact with Moselle Franconian for a long time; and East Hessian, which shares some features with East Franconian.[10] In addition, Rhine Franconian dominates southern Hesse. Aside from these, and following Dingeldein (1994), another Hessian language area known as New Hessian has to be taken in account. Its linguistic and spatial centre of gravity lies in the city of Frankfurt and it currently extends over an area that roughly includes the cities of Mainz, Darmstadt, Aschaffenburg, and Bad Nauheim.[11] Furthermore, the Hessian language area is markedly subject to regional linguistic dynamics: Kehrein (2008) demonstrates a clearly limited, predominantly monovarietal, substandard-based competence for speakers of Central Hessian as a result of a considerable decline in dialectal competence.

This complex linguistic situation seems to stand in contrast to a perceptual homogeneity in the supra-regional perception that equates Hessian with the language of the Frankfurt area. The representation of Hessian in the national media, mainly shaped by the linguistic features of the Frankfurt area, provides evidence for this assumption. Additionally, informants (especially non-Hessians) mention only speakers and features that can be associated with New Hessian as representative of the Hessian regional linguistic area.[12] In this light, an examination of the correspondences and discrepancies between linguistically constructed and individually perceived language-area structures would appear to be particularly worthwhile.

The approach to the study is a deductive one, working from global manifestations of regional linguistic knowledge up to specific components of language-area concepts. We focus thus on indicators of individual representation strategies for language-area knowledge that can be deduced from informants' answers and that allow conclusions about the semantic motivation for and structural organization of the concept of Hessian. Previous studies have shown the answers of untrained informants in perception experiments to be clearly affected by the method used to collect data (Kehrein, Lameli

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<http://www.diwa.info/DiWA/atlas.aspx?layer=18724,10521,910&layerOpt=true,1,1,1,true,1,1,1,true,0.54,1,1&world=4330909.85891242,10148772.108479358,5000334.055102893,9762150.274469001>.

[10] See Wiesinger (1980) for a more detailed division; map 24 gives a general overview of the situation.

[11] Schirmunski described this development as early as (1962). Representing a — explicitly regionally marked — prestige variety of the spoken language present in both the regional and supra-regional media, New Hessian is very likely to expand into the older surrounding areas, especially Central Hessian, as suggested by Dingeldein (1994). See also Purschke (2008) and Brinkmann to Broxten (1986).

[12] See section 3.3, Purschke (2010a), and the pupils' statements concerning the celebrity issue in Lameli, Purschke & Kehrein (2008).

& Purschke 2010), the quality and density of the stimulus presented (Lameli, Purschke & Kehrein, 2008), and the informants' regional linguistic knowledge (Lameli 2009, Purschke 2008, Purschke 2010a). These effects shall be tested in light of their function as indicators for the semantics of language-area concepts.

Several perception experiments were conducted, systematically varying some methodical parameters that have proved to be important factors influencing informants' answers in the Kehrein, Lameli & Purschke (2010) study: the *stimulus type*, the *base map*, the *type of language material*, and the *provenance of the informants*. By dint of comparison with previous studies, the age factor can also be included. The following task types were used in the experiment (in the given order):

1. Drawing known language areas on national maps (map type: major cities)
2. Drawing known language areas on state maps (detailed map of Hesse)
3. Localization of standard-oriented and dialect-oriented speech recordings from all Hessian language areas on state maps.

According to the findings of Lameli, Purschke & Kehrein (2008), the usage of the "major cities" map type constitutes a methodical compromise, aiming at language knowledge that is as spontaneous as possible but nevertheless locatable. Specifying city names on the map activates some concepts that would not be evoked by a blank map, for example *Hamburg dialect*. At the same time it can be assumed that the drawings focus on "major cities as conceptual regional centers and cultural identifiers" (cf. Kehrein, Lameli & Purschke 2010; my translation), leading to more distinctive centers than other map types.

The state map is characterized by a comparatively high information density. Besides larger cities and autobahns, the map also contains topographical information such as rivers and mountain ranges. This type of map should help the informants make an exact differentiation and localization of the known language areas at a regional level. At the same time it was supposed to prevent an overall orientation toward the larger cities, given Lameli, Purschke & Kehrein's (2008: 82; my translation) suspicion that "given a certain level of detail, the informants stop mapping regional similarities and start mapping local (and often objectively nonexistent) differences". In addition, the use

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of this map type was intended to elicit individual orientation strategies as indicators for the semantic motivation concepts.

Similar considerations guided the use of near-standard (*regional accent*) and dialectal (*base dialect*) speech recordings. Lameli (2009) suggests that older informants achieve much better results than students when asked to localize dialectal speech recordings. Older informants seem to refer to small-scale, dialect-oriented concepts, whereas students are more geared to large-scale, near-standard language areas. In addition, Purschke (2008) showed that, for Central and New Hessian listeners, even standard-oriented speech recordings can to a certain degree be correctly localized and that the ability to do so is linked to an individual's dialectal competence. The present study tries to identify which types of linguistic representatives are likely to form an active part of specific language-area concepts.

24 North Hessian (age: 33-51) and 25 East Hessian (age: 31-53) informants (non-linguists), representing the regions of Kassel and Fulda respectively, were recruited for the sample. The age distribution of both groups of informants thus concentrates on the generation between those investigated in the previous studies (pupils and retirees). The informants were asked to complete the three map-based tasks in a questionnaire, alongside essential questions about their individual linguistic biography. In order to check the presumed effect of individual varietal competence on the conceptualization of language-area structures, the dialectal competence of the informants was rudimentarily tested at the end of the experiment using a so-called *quick competence test.*[13]

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[13] For details on this test see Purschke (2010c) and (2008). It focuses on two fundamental domains of regional linguistic competence, dialect comprehension and active dialectal knowledge. The listening comprehension is captured via the translation of base dialectal Wenker sentences into Standard High German. The active competence is diagnosed from the translation of syntagmas into the local dialect by means of a representative sound paradigm (Modern High German correspondents of MHG *ei* and *î* in the particular dialects). The informants' answers afford insights into the individual configuration of their varietal spectra. For instance it is impossible to translate the syntagmas correctly if you are not familiar with the regularities of the phoneme distinction between MHG. *ei* and *î* and their lexical distribution in your local dialect.

3.2. Results

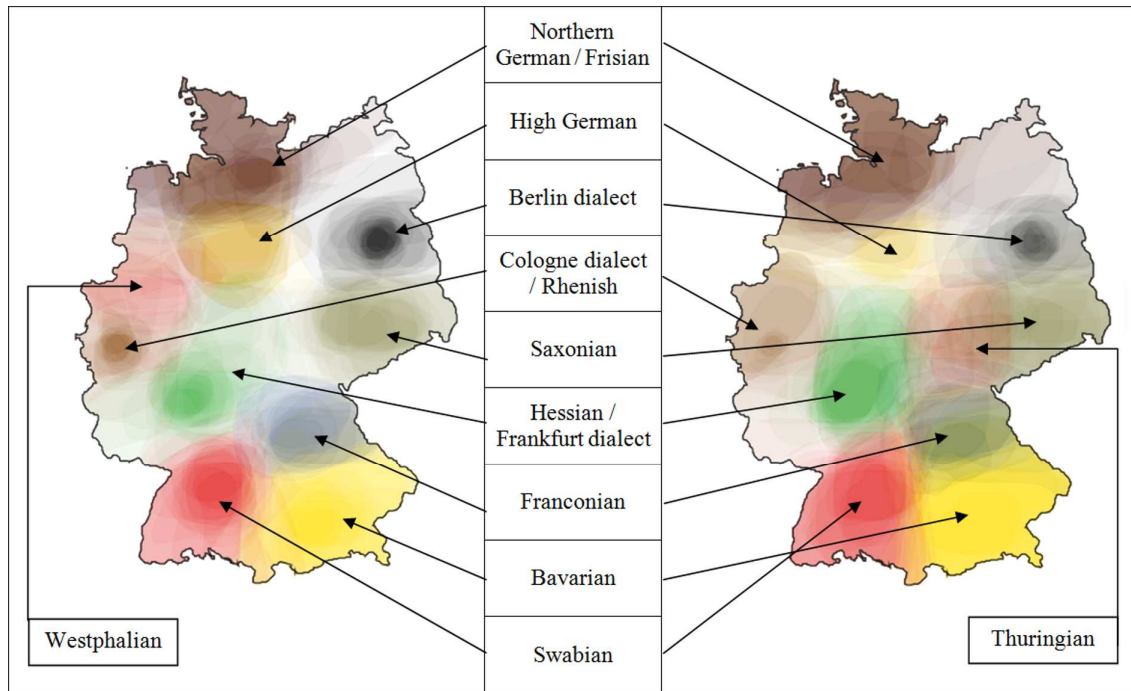3.2.1. Global concept level — national maps

Figure 2. Prominent large-scale regional language areas for the Northern Hessian (left) and Eastern Hessian informants (right).

With reference to the language-area references and localizations, the informants' projections on the map of the whole of Germany basically show a very similar picture to that found in Marburg by Lameli, Purschke & Kehrein (2008). However the informants in the present study came from considerably more areas than those in the previous study. Once again, *Bavarian*, *Swabian*, *Saxon*, *Hessian*, *Berlin dialect*, *Cologne dialect*, *North German* and *High German* can be singled out as prominent and frequently nominated language areas.[14] But in the present study, additional areas also have to be considered as significant, namely *Franconian*, *Frisian* and *Rhenish* (both groups), *Thuringian* (East Hessian group), and *Frankfurt dialect* and *Westphalian* (North Hessian group).[15] *Frisian*, *Rhenish* and *Franconian* are also evident in the Lameli,

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[14] The statistical relevance of the particular areas was determined with the help of a hierarchical cluster analysis.

[15] The responses of the informants were digitized and overlaid using subtractive transparency. Areas of higher color intensity represent areas where more drawings overlap. In doing so, the drawings for

Purschke & Kehrein (2008) study, but lie just below the statistical cutoff point. The increased prominence of these areas in the present study can be seen as an effect of the informants' greater communicative experience compared to the Marburg pupils. In contrast, the status of *Westphalian* for the North Hessians and *Thuringian* for the East Hessian informants is striking. These areas, which are only very rarely mentioned in the Marburg study, lie in the immediate vicinity of the places where the study was conducted. This points to a clear communicative proximity effect on regional linguistic knowledge, in this case with respect to the delimitation of the local dialect from the bordering dialects.[16]
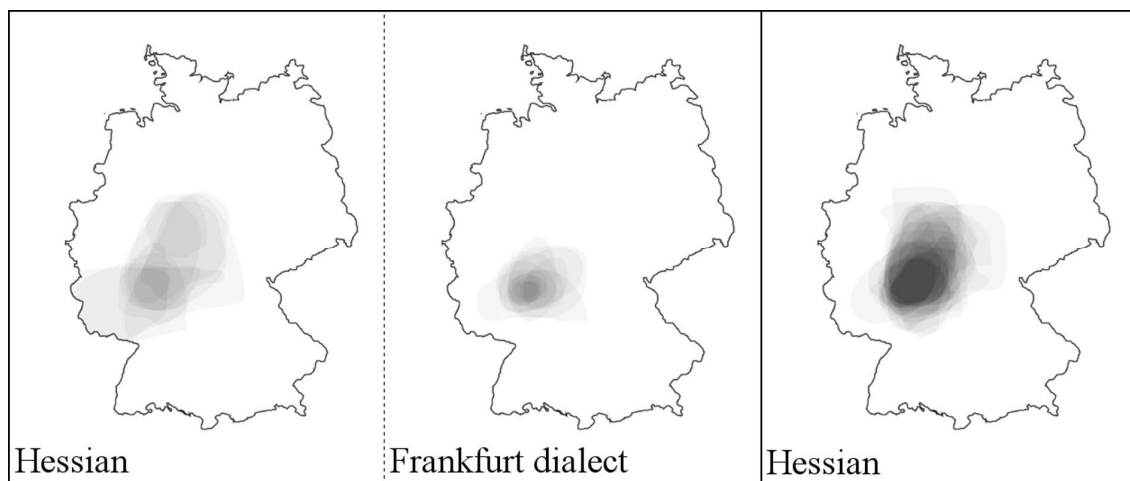

Figure 3. Prominent Hessian language areas on the national maps for the North Hessians (left, center) and East Hessians (right).

Furthermore, it is remarkable that North Hessian informants structure the language area of *Hessian* in an obviously different way from the East Hessians and even the Marburg pupils. In the maps of the North Hessians a second prominent area, labeled as *Frankfurt dialect*, is represented alongside *Hessian*, which is mentioned comparatively infrequently by this group. Superposing the *Hessian* drawings also shows two areas of higher overlap, a northern one and another which corresponds with the location of Frankfurt. This leads to the assumption that these two concepts are closely linked. That aside, the North Hessian informants draw a number of other small-scale variants of *Hessian*: Given the use of the *Hessian* label, *North Hessian* (5), *South Hessian* (3), *East*

Northern German and *Frisian* and for the *Cologne dialect* and *Rhenish*, which were not clearly separable with reference to their conceptual content, were overlaid in the same color. For further information about the special cases of *Frisian* and *Rhenish* see Lameli, Purschke & Kehrein (2008: 84).

[16] See Montgomery (2007).

Hessian (2), and *Upper Hessian* (1) can be identified as substructures of the higher-level concept of *Hessian.* Other areas like *Westerwald* (1) and *Odenwald* (1) can be at least topographically associated with Hesse. The group of East Hessian informants only indicates two additional areas on the map, namely *Frankfurt dialect* (6) and *Rhön Platt* (4), their own local dialect.

Thus, unlike the pupils' maps in the Marburg study, the present maps show a basic tendency toward small-scale regional differentiations, even on the national maps, although the level of differentiation turns out to be quite different for the two groups. Several explanations for this finding can be advanced. First, the (age-induced) greater communicative competence of the informants may result in an enhanced ability to differentiate areal language structures. Second, and in line with the findings of Lameli (2009), these older informants seem to refer to a more small-scale, regional type of linguistic variation than the pupils in the Marburg study, who appear to be mainly influenced by broad regional, near-standard ways of speech.[17] Third, the differences between the two groups in the present study can be linked to regional linguistic competence: the North Hessians performed much better in the competence test than did the East Hessian informants.

Furthermore, it can be concluded that the city of Frankfurt is of prime importance for the *Hessian* concept. Admittedly, its mention is not surprising, because its location was marked on the map. However, it does seem remarkable that the comparison group in Lameli, Purschke & Kehrein (2008) does not exhibit a comparable differentiation pattern. The impact of Frankfurt-oriented forms of regional variation, primarily conveyed by the media, on the pupils' spatial concepts is supported by their nominations of prominent representatives for the language areas drawn: the pupils mostly nominate comedians like Martin Schneider, Bodo Bach, Badesalz, and Mundstuhl, all of whom are national media figures known especially for their use of stereotypical linguistic features of the Frankfurt area. At the same time, the pupils' responses are thus a sign of the relevance of cultural aspects, along with linguistic and geographic factors, for the formation of language-area concepts. Given the spatial overlap of the drawings for *Frankfurt* and *Hessian* as well as the labeling of certain

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[17] The impact of primarily media-borne, near-standard forms of regional variation on pupils' spatial concepts is supported by their nomination of prominent representatives for the language areas drawn: the pupils predominantly nominate comedians, sportsmen, and politicians, all of whom manifest a regionally colored but standard-oriented manner of speech. See Purschke (2010c) for further detail.

areas as subtypes of *Hessian,* it can also be concluded that different types of conceptualizations of *Hessian* are available to the informants, or rather, that the language area of *Hessian* features multiple self-contained conceptual levels that are nonetheless semantically intertwined. Furthermore, the fact that some informants draw subdivided areas on the national maps while others seem to refer to a more global concept of *Hessian* indicates that some conceptual layers may not be represented individually, or rather, that not every stimulus represents an adequate layer of projection for the individual configuration of a concept.

3.2.2. Regional concept level — state maps

The tendency toward a fine-scale differentiation of the Hessian language area is confirmed by the informants' drawings on the regional maps. These entries prove that this map type triggers a different concept level than the large-scale map. The tendency becomes manifest in the fact that not a single informant draws just one *Hessian* area. The statistically prominent areas for this map type are *Frankfurt dialect* (18), *Kassel Platt* (13), and *North Hessian* (9) for the North Hessian informants plus *Frankfurt dialect* (17) and *Rhön Platt* (9) for the East Hessian informants. These results again point to Frankfurt's representative role for Hessian as well as once more underlining the specific provenance of the informants.

	North Hessian informants	East Hessian informants
reference to a place	Frankfurt, Kassel, Marburg, Offenbach, Darmstadt, Waldeck	Frankfurt, Kassel, Fulda, Bad Hersfeld
reference to a region	North Hessian, East Hessian, Middle Hessian, South Hessian, Rhenish Hessian	North Hessian, East Hessian, Middle Hessian, South Hessian, Rhein-Main area
reference to a topographic area	Westerwald, Odenwald, Rhön, Vogelsberg, Bergstraße, Schwalm	Rhön, Vogelsberg, Wetterau, Odenwald, Knüllgebirge, Rheingau
reference to a variety		Platt, High German

Table 1. Structuring patterns on the state maps.

In general, the responses are less consistent than they are on the national maps, because informants orient themselves to varying spatial structures. It thus proved impossible to assemble these answers onto a composite map. Nevertheless important evidence regarding individual representation strategies can be gathered from the results.

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The informants' references to the small-scale areas can be classified into four structuring patterns pictured in table 1: a) reference to a place, b) reference to a region, c) reference to a topographic area, and d) reference to a variety.

These structuring patterns reflect different types of conceptualization of language-area structures at a regional level (cf. Anders 2010) and thus provide an explanation for the small number of prominent language areas, in that there is virtually no mixing of the individual types. Instead, each informant preferentially orients himself to a single spatial structure. It can be safely assumed that the viability of individual structuring patterns, e.g., the topographical orientation, depends on the projection level of the map (national, regional, local). For instance, there are virtually no drawings that relate a language area to a topographical feature on the national maps. Other structuring patterns, like the reference to a place, change their resolution in line with the scale of the map. For example, different cities serve as regional identifiers on the regional maps than on the national maps. The spatial category remains unchanged, however.
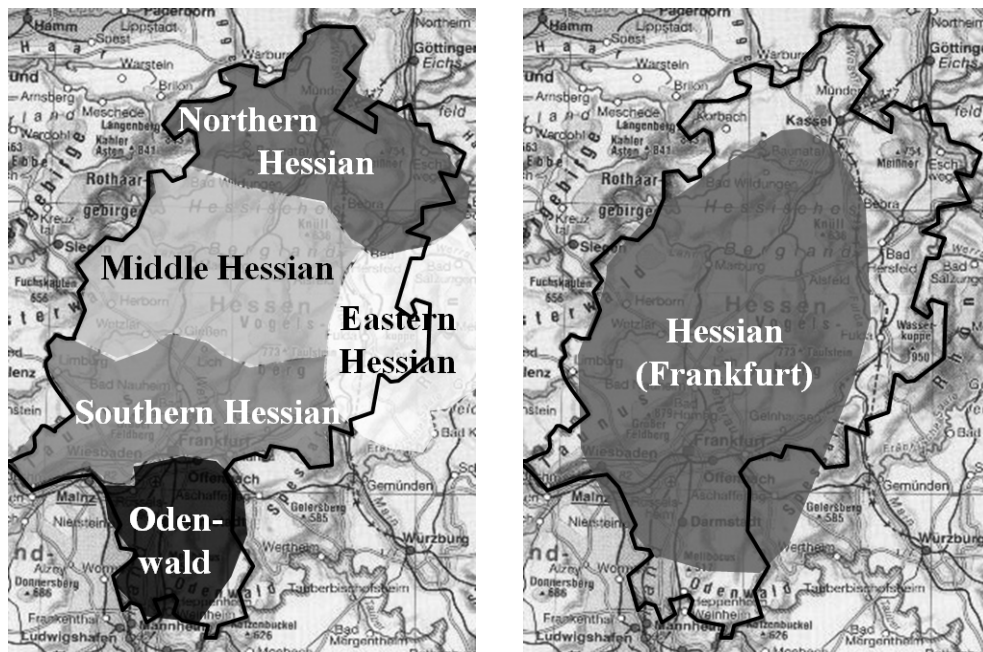

Figure 4. Typical regional maps for a Hessian (left) and a North German informant (right).[18]

The extent to which the ability to differentiate conceptual substructures of *Hessian* depends on individual knowledge is illustrated by the results from a comparison group of North German informants (N = 24, from Itzehoe and surrounds, aged between 24 and

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[18] The maps have been redrawn to make them clearer.

57), who completed the same three map experiments as did the two Hessian groups. For the national maps, the results show virtually no differences to the maps of the Hessian informants.[19] On the state maps in contrast, the non-Hessians failed to perform a clear-cut interior structuring of the Hessian language area. Instead, the data show (Figure 4) an overall identification of *Hessian* with the variety of the Frankfurt area, presumably owing to the informants' lack of specific knowledge about small-scale linguistic divisions within Hesse.

The drawings made on the regional maps suggest that the Hessian informants at least have an operationalizable spatial pattern for the concept of *Hessian* that is functional on a regional but not a global level. In this way the informants use different types of information for the structuring, all of which feature a spatial dimension although they refer to different aspects of the environment. Based on the present data, it cannot be determined if labels like *Middle Hessian* or *Frankfurt dialect* represent self-contained, specifically semantically coded language-area concepts as components of a higher-level concept (*Hessian*) or if they merely function as structuring patterns for the concept in question. However, there is evidence that, alongside the global representation of a *Hessian* area, the Hessian informants have at their disposal operationalizable conceptual substructures at a regional level.

3.2.3. Localization of speech recordings — local concept level?

The localization of recordings of regional linguistic speech on state maps provides further evidence for an internal structure to the language-area concept of *Hessian*. Since every recording has a defined point of origin, it can be assumed, at least for the dialectal recordings, that these activate an even finer-grained level of the concept of *Hessian*. In this way, fine-scale, location-dependent language knowledge that requires concrete linguistic experience is asked of the informants. At the same time, the use of both dialectal and standard-oriented speakers of the same linguistic communities (e.g., North Hessian) allows for the fact that knowledge about regional linguistic variation, and with it a point of reference for the regional differentiation of linguistic stimuli, differs quite markedly from individual to individual. It seems possible that, dependent on the

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[19] The most striking discrepancy between the North German informants and the others is that *North German* and *Frisian* do not emerge as a mixed *North German/Frisian* concept but are instead accurately differentiated.

individual regional linguistic competence, for some informants both standard-near and dialectal forms of regional speech are part of complex socio-linguistic conceptions (e.g., *Hessian* or *North Hessian*), while other informants only conceptualize standard-oriented varieties as parts of their individual concepts of *Hessian*.

The results show two things (Figure 5):[20] on the one hand, a small-scale differentiation of language-area structures based on acoustic stimuli is fundamentally possible. On the other hand, and due to the far greater amount of specific information that is required, the accuracy of the differentiation reaches a limit. In this regard, the results are in line with the studies of Lameli (2009) and Purschke (2008). The precise localization of the recordings on a regional map with high information density (cities, rivers, contours, frontiers) is only rudimentarily successful. In fact, informants mainly make use of the location-dependent and topographical structuring patterns to localize the recordings that seem to form part of the regional concept level. In doing so, their localization performance is much better for the regional accent recordings than for the base dialect recordings, which is not surprising, given the standard-oriented characteristics of the regional accent recordings, which are directed towards supraregional acceptability and comprehension. The most striking examples for this tendency are the New Hessian accent and North Hessian dialect recordings (Figure 5). Both speakers are localized correctly by the majority of informants in both groups.[21] The majority of East Hessian informants identify the East Hessian accent as their own local accent, while most of the North Hessian listeners associate that recording with their own (North Hessian) region, centered on Kassel.[22] Lastly, the localization of the Central Hessian accent recording turns out to cause the most difficulties, although the general direction of the localization attempts (southward/westward from the listeners' homes) is correct.[23]

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[20] Only two exemplary maps are printed here. The remaining maps are published in the German version of this article (cf. Purschke 2010b) as well as in Purschke (2010c).

[21] In order to check the accuracy of the localizations, the informants' drawings were superposed on a dialect map of Hesse.

[22] These results support the assumption of Dingeldein (1992), who characterizes the whole of northern and eastern Hesse as a barely differentiable region poor in regional linguistic features. Nonetheless, the East Hessian listeners' differentiation of the North and East Hessian recordings is accurate.

[23] These difficulties may be linked to the linguistic characteristics of the recording. The speaker lives in the south of the Central Hessian language area, which has been shown to be susceptible to the adoption of New Hessian features (cf. Purschke 2008). This speaker does use some linguistic features typical of the south of Hesse alongside typical Central Hessian features.

The informants had far greater difficulties localizing the dialectal recordings. Only the East Hessian informants were able to identify their own local dialect in the majority. The Central Hessian and Rhine-Franconian (i.e., southern Hessian) recordings tended to be localized correctly by both groups. Lastly, the North Hessian dialect recording (see Figure 5) could not be accurately assigned to an area by the informants, which at first glance is remarkable, given the North Hessian informants' better dialectal competence. It seems possible that dialectal knowledge does indeed form part of the individual linguistic competence that listeners from both groups have at their disposal, but this knowledge diverges considerably from the old local base dialect of older speakers that was presented in the localization task. Listeners also seem to lack concrete experience with dialect speakers from other regions, the base dialect being a communication medium usable only in a confined area. The study of Schmitt (1992), which focuses on interdialectal intelligibility, supplies evidence for such an assumption.
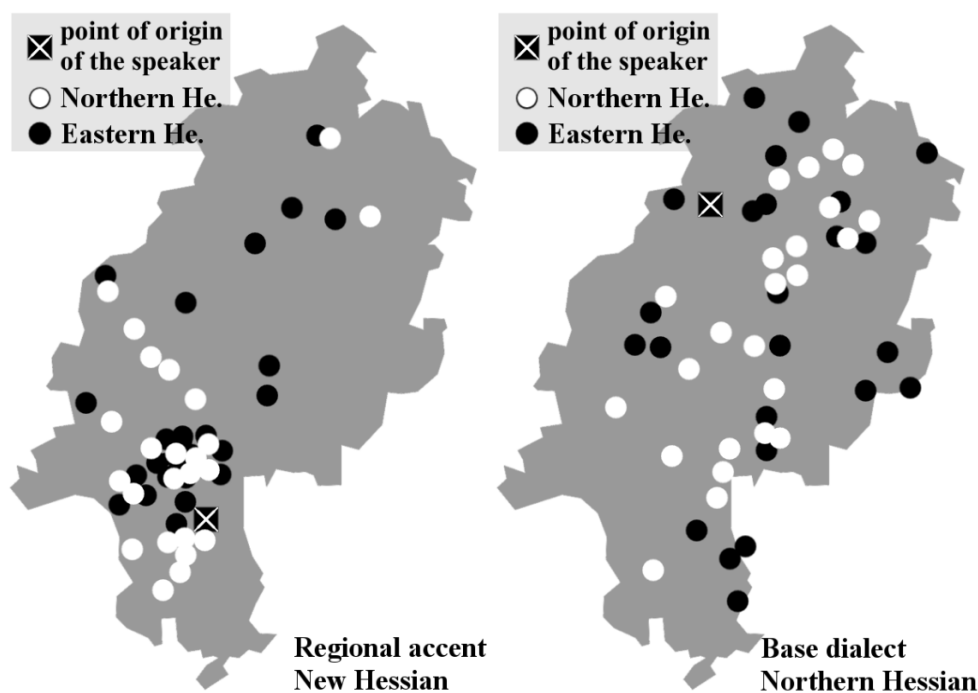

Figure 5. Localizations of two speech recordings made by North Hessian (white dots) and East Hessian (black dots) informants.[24]

The results provide indications about the existence of a third, fine-scale regional level to the concept of *Hessian*. Although individual knowledge about the linguistic

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[24] The base map shown here is not identical to the map used in the map task. Additional information (rivers, contours, etc.) have been removed for clarity.

subdivision of *Hessian* may contain concrete linguistic representees, that knowledge does not need to be distinctive. The informants only have significant knowledge about the linguistic features of the near-standard, supraregionally oriented accents at their disposal, in particular about the media-borne prestige variety of the Frankfurt area and their own regional accent. In this regard, the results are in line with the study of Purschke (2008). The characteristics of base dialects do not seem to be a fundamental part of individual conceptualizations of *Hessian* (or maybe only those of the particular local dialect), at least for these two groups of informants. In this regard, the listeners in the present study differ from the older informants in Lameli (2009), who were able to localize base dialectal speech recordings relatively accurately on a map of Germany. Maybe the different representation strategies employed by these two age groups reflect different types of linguistic competence in the context of the regional linguistic dynamics currently affecting the Central German area. This assumption is commensurate with the results of the competence test. Indeed the North Hessian informants perform better in the test than the East Hessians, but in comparison with base dialect speakers of the previous generation (comparable to the older informants in Lameli 2009) they exhibit a clear erosion of their base dialectal competence. For instance, only two of the twenty-four North Hessian informants got full marks for both the translation test and the listening comprehension test.

Lacking concrete knowledge about small-scale linguistic variation within Hesse, listeners orient themselves in the localization task toward the same special elements that they used with the regional maps as structuring patterns. Their localizations show generally similar characteristics to those revealed in the scale-based test in Purschke (2008), [25] in which the majority of informants also orient themselves to cities as representatives of (linguistic and cultural) regions.[26] It can thus be assumed that these categories function as primary representatives for the individual structuring of the concept of *Hessian* in the listeners' perceptions. According to the results, the existence of a third, local concept level seems likely, but it has to be considered largely dependent upon individual dialectal competence. Further evidence for such a local concept level comes from the study by Stoeckle (2010), in which informants were asked to map the

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[25] In Purschke (2008) the informants were asked to localize speech recordings based on given city names and corresponding regions.
[26] The speech recordings used in the two studies being identical, the results can be seen as directly comparable.

communicative radius of their local dialect, and from the maps produced using the "little arrows" method in the Netherlands.[27] The present data also provide some evidence for such a small-scale spatial concept level. For example, some of the East Hessian listeners are able to precisely localize the East Hessian accent recording, and both groups correctly diagnose the Central Hessian dialect recording as not part of their own local dialect system.

3.3. Dialect imitations — on the prototypicality of specific representatives

Since the localizations of the speech recordings suggest that linguistic representees are normally an active part of individual language-area concepts, in a last step the question is posed of how this linguistic knowledge is structured with respect to the Hessian language areas. To this end, imitations of Hessian were collected from adult non-Hessian speakers (and one Hessian speaker without base dialectal competence) in a separate study (cf. Purschke 2010a). The speakers were asked to mimic a Hessian accent/dialect using as many Hessian features as possible in two different contexts: a prepared text read aloud and sequences of free speech. Speakers were deliberately not given any pre-categorizations of the Hessian language area prior to the task, lest their imitations be framed to a specific concept of *Hessian*.[28] A variable analysis of the imitation recordings was conducted, and then the linguistic characteristics of the imitations were compared with those of speech recordings of Hessian dialect speakers, who had been asked to perform the same two exercises. In contrast to the imitators, the Hessian speakers were asked to avoid as many of their regional linguistic features as possible.[29] Afterwards, all of the recordings were presented to two groups of adult listeners (non-linguists), a Hessian group (from the south of the Central Hessian area) and a non-Hessian group (from southern Schleswig-Holstein, i.e., northern Low German area), in a perception experiment. The listeners were asked to rate the

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[27] See Preston (1999) for a quick overview.

[28] A subsequent study would need to investigate precisely this aspect, namely the question of whether non-Hessian and Hessian speakers can activate different versions of *Hessian* (i.e, regional level conceptual substructures) in imitation experiments.

[29] All three speakers originated from the southern part of the Central Hessian language area, which has been shown to be particularly susceptible to the dynamics of regional linguistic features (cf. Purschke 2008). In addition, this procedure aimed to prevent the authentic speakers from sounding different from the imitators right from the outset, given the assumption that the majority of the imitators would predominantly use features characteristic of *New Hessian*.

recordings' authenticity, provenance, and perceived distance from standard spoken German.

Firstly, the findings demonstrate that non-Hessian speakers are able to deliberately activate linguistic representees which form part of their individual concepts of *Hessian*. The imitations exhibit both consonantal and vocalic features, most of which are evident in all Hessian language areas, such as the commutation of tense and lax plosives in all positions. Apart from this, however, the imitators use a set of features typical only of either New Hessian or the Rhine-Franconian part of Hesse, for example, coronalization, hyper-open pronunciation of <-er> suffixes as [ɛ], or extremely closed short upper vowels.[30] A general orientation toward the media-borne variety of the Frankfurt area in the speakers' *Hessian* concepts can thus be deduced from the data. Indeed, different feature patterns can be detected for the imitators: some imitators use a few highly nonstandard, low-frequency features, while others make use of many less standard-divergent but high-frequency features.[31] However, taken together, the quality and frequency of the features used turn out to be quite alike across all imitators.

Furthermore, the imitations and the standard-oriented recordings of the Hessian speakers strikingly match each other in terms of both their characteristic features and their average phonetic dialectality, even though the test settings were oriented in opposite directions (dialect imitation for the non-Hessians and standard approximation for the Hessian dialect speakers). The imitation of the Hessian speaker who had no dialectal competence exhibits the same regional linguistic characteristics as the imitations of the non-Hessians. It can thus be assumed that the non-Hessian speakers' concepts of *Hessian* are fundamentally oriented to the regional accent typical of southern Hesse. Therefore the prestige variety of the Frankfurt area functions as an interindividual, similarly conceptualized linguistic prototype for the concept of *Hessian*. Insofar it is not astonishing that the imitators consider their imitation representative of the whole of Hesse (and/or the Frankfurt area).

Further evidence for this assumption can be deduced from the listeners' judgments. For instance, both groups of listeners perceive the degree to which all the

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[30] In addition, there are sporadic occurrences of false (i.e., regionally inappropriate) features and features that are regionally appropriate but wrongly used.

[31] The degree of divergence from Standard German was measured via what is known as a *dialectality index,* which reflects the relationship between the frequency with which a feature occurs and its phonetic distance from the standard pronunciation.

recordings diverge from the standard similarly. On the other hand, there are clear differences with regard to the authenticity ratings. Whereas the Hessian listeners identify all imitators (except one) as non-authentic, the North German listeners are not able to differentiate between the authentic speakers and the imitators. Only one imitator, who makes some striking mistakes in the reading exercise, is perceived as inauthentic. In contrast, the Hessian listeners even identify the recording of the dialectally incompetent Hessian speaker as an imitation.

Yet the regional classification of the recordings seems to pose many more difficulties for the Hessian listeners. Although they differentiate the recordings with respect to their assumed provenance, the answers only very seldom match the characteristics of the particular recording. The non-Hessian listeners on the other hand show a clear tendency to assign all recordings to the Frankfurt area. In the case of the Hessian listeners, it can be assumed that they do indeed perceive at least some of the regional linguistic features used by the imitators as typical, but that these features are insufficient to assign the recordings to a specific area, the more so since the majority of them are classified as inauthentic. For the non-Hessian listeners there are two possible explanations. Either the non-Hessians fail to differentiate the provenance of the recordings because of their limited knowledge about Hessian regional languages, leading them to globally relate all of the recordings to the only supraregionally well-known Hessian language area of Frankfurt, or the North German listeners, precisely because of their lack of knowledge, identify and correctly assign the linguistic variety the imitators intend to reproduce using a few, widely known features of New Hessian. That would imply that non-Hessian listeners and imitators possess similarly structured cognitive prototypes, which are successfully activated by the imitations. This latter premise can be substantiated insofar as the North German listeners clearly react sensitively to deviations from this prototype, be they noticeable mistakes or the use of regionally inappropriate features, both of which result in considerably lower authenticity ratings. For the Hessian listeners, this is even the case for the imitation by the non-dialect-competent Hessian speaker.

With regard to the semantic structure of the *Hessian* language-area concept, these results imply the following: firstly, non-Hessian listeners lack sufficient knowledge of the Hessian regional languages to achieve an appropriate regional differentiation beneath the level of a global concept, as evidenced by North German comparison

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group's drawings on the state maps. Secondly, this global concept is, however, connected to concrete linguistic representees that relate to a supraregionally oriented, near-standard, media-borne prototype, the regional language of the Frankfurt area. For the Hessian informants, a substantial knowledge about regional variation within Hesse can be assumed, as suggested by their localizations of the recordings on the state maps. However, this knowledge seems to be closely related to individual linguistic experience and varietal competence.

4. Discussion

The present data indicate that individual language-area concepts have to be seen as complex mental structures that can be activated and reproduced in different ways and with reference to different conceptual levels, subject to a) the research method applied and b) knowledge-related factors, such as provenance, age, and the regional linguistic competence of the informants. The concept of *Hessian* has to be seen as significantly influenced by the regional language of the Frankfurt area. Therefore, and against the background of the theoretical sketch presented at the outset, first an attempt is made to model the relationship between representational processes and potential structural components of language-area concepts.[32] Finally, the semantic motivation and structure of the concept of *Hessian* shall be outlined on the basis of this model, as far as it is supported by the present data.

4.1. Representational processes and potential structural components of language-area concepts

Conceptualization, following the definition at the outset, is a perceptual process. Hence, the form and structure of concepts are directly dependent on the condition and potentials of an individual's perception.[33] Furthermore, the semantics of concepts is of course conditioned by the quality and quantity of contact the individual actor has had

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[32] Naturally such a model is closely linked to thematically related theories in semantics, semiotics, philosophy, and cognitive science. Additional models with different cognitive interests can be found in Preston (1999, 2010) and Anders (2010).

[33] Purschke (2010c) operationalizes the complex process of perception by use of four psychological parameters within the context of a comprehensive theory of listener judgments.

with particular environmental objects and circumstances: the higher the frequency and specificity of concept-related experience is, the more complex the concept in question and semantically connected concepts become.

The process of projection on the other hand is largely dependent on the circumstances and requirements of a given context, as in the perception experiments we discussed for example. Here, the representative of a concept is configured according to the *object* of study, the chosen *dimension* (projection plane), the *requirement* (task) to be accomplished, and the specific *configuration* (stimulus) of the task.[34] In connection with Figure 1, Figure 6 illustrates the important key parameters for the individual context-dependent configuration of concepts as representatives (= projection). Furthermore it depicts potential components of spatial knowledge, which substantially contribute to the semantic structure of concepts.[35]
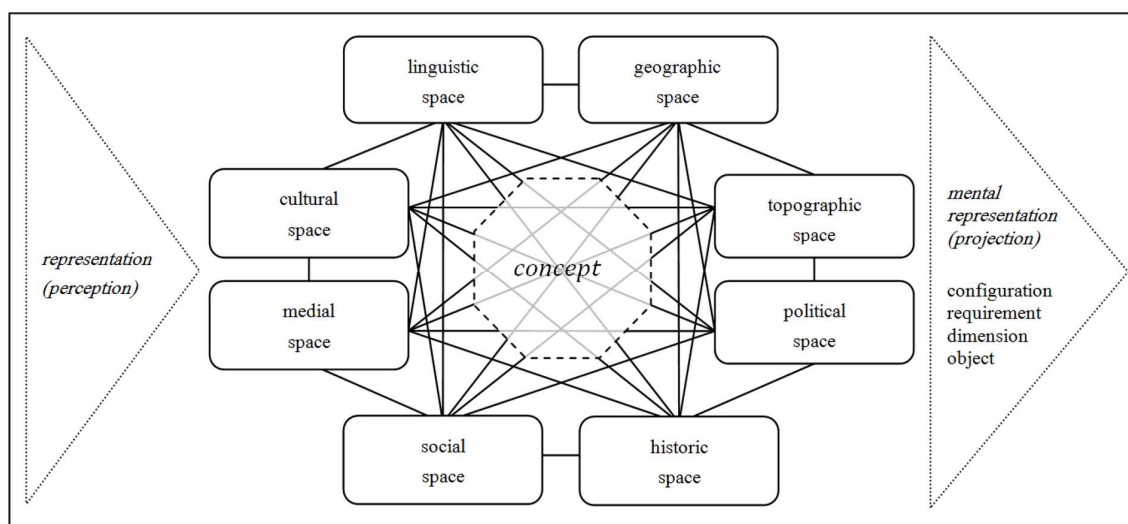

Figure 6. Representational processes and structural components of language-area concepts.

The form and structure of language-area concepts are determined by different potential knowledge components, all of which map the individual frame of experience of an acting self. Basically, at least eight different knowledge components have to be seen as potential semantic elements of concepts, each of which in turn consists of cross-

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[34] These aside, several other individual parameters affecting perception and projection are of importance, e.g., the physiological and psychological limits of short and long-term memory, motivation, and concentration (see for example Robertson (2001).

[35] Neither the processing of information within the brain, i.e., the relevant *cognitive* parameters, nor the specifics of the situation (*contextualization*) are addressed in this model. See Purschke (2010c) for further information.

linked concepts and/or representees:[36] *linguistic space*, *geographic space*, *topographic space*, *political space*, *social space*, *historical space*, *media space*, and *cultural space*. These knowledge components have to be seen as categorically interdependent (and at least in part semantically closely interconnected) but dimensionally discrete, as well as stable in the long term but modifiable. Beyond that, they have to be perceived as potential, but not essential substructures of concepts: depending on the configuration of the individual experiential framework, individual components can function as central structuring units for concepts, while other components feature hardly any specific, concept-related representees. For example, the informants' drawings on the regional maps show several structuring patterns indicating structuring knowledge components: linguistic, cultural, geographic, and topographic patterns have to be seen as typical central components of the realized representatives on a particular concept level (and with it of the affected concept). In contrast, no informant in the present experiments refers to historical spatial structures. Normally, however, it can be assumed that the conceptualization of language-area related information implies all of the spaces mentioned, albeit to different extents, which means that language-area concepts are actually complex mental structures, in which a multiplicity of different knowledge components participate in the form of specific (sub)concepts and representees.

4.2. Hessian as a language-area concept — a semantic sketch

Based on the model and the results of the perception experiments, the conceptual structure of and semantic motivation for the *Hessian* language-area concept can now be sketched. Needless to say, it is virtually impossible to describe the concept as a whole. However, the informants' responses do provide some interesting evidence for substructures of the concept.

We are dealing with a concept that is prominent for speakers/listeners at a global level and thus an active part of the informants' large-scale regional linguistic knowledge, independent of factors like age, provenance, or varietal competence. The location of the Hessian language area is primarily geographically and politically (and

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[36] This understanding of space operates at a very global level, ascribing all potential experiential dimensions to abstract spatial categories. In a sense, these categories function as superstructures within the semantic net.

hence, indirectly, culturally) motivated: the informants orient themselves to political borders or locations/cities as leads. In reverse, this means that particular locations (Frankfurt alone on the national maps) and political units (the state of Hesse) are semantically part of the concept *Hessian*. The geographical/political space "Hesse" is linked to specific linguistic/cultural representatives in the perception of (mainly non-Hessian) speakers/listeners, especially mass-media comedians who have a stereotypical regional manner of speech oriented to the Frankfurt area. At the same time, there are if anything near-standard, supraregionally oriented ways of speech represented at this concept level. For instance, the majority of the concrete linguistic representatives that the informants are able to activate in imitations also come from the Frankfurt area and from near-standard speech levels. Interestingly, this is also true of the non-dialect-competent Hessian speaker and her imitation.[37] Thus the Frankfurt area has to be considered as a primary representative for the structure of the concept of *Hessian*, playing a predominant role in both geographical/cultural and linguistic/media contexts. The Frankfurt area, or rather the regional language of the Frankfurt area, functions as a prototype for the concept of *Hessian* at a global level (for non-Hessian speakers/listeners in particular). This becomes apparent in the equation of *Hessian* with Frankfurt on the map of the North German informants (Figure 4) for example.

Whereas a conceptual structure organized in such a way tends to be typical for non-Hessian, younger, and/or non-dialect-competent speakers/listeners, a finer (and more complex) semantic differentiation ought to be expected of older, Hessian, and/or dialect-competent speakers/listeners. For instance, older and dialect-competent listeners perform much better in the localization of dialectal speech recordings. Further, some of the Hessian informants can even differentiate several sub-areas of *Hessian* on the national maps. The existence of a second, regional concept level shaped more by concrete linguistic experience than media content can thus be safely assumed, at least for these informants. This level is characterized by multiple sub-areas (at a minimum Frankfurt and the particular local variety) that are based on different individual structuring patterns: the present data provides evidence for the semantic influence of at least geographic, cultural, topographic, and linguistic spatial structures. It can be safely assumed that these sub-areas represent self-contained concepts as part structures of a

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[37] On the one hand, the fact that the speaker originates from the transition zone between Central Hessian and New Hessian seems to offer an explanation. On the other, this observation again points to the expansion of New Hessian into the Central Hessian area (cf. Purschke 2008).

higher-level concept of *Hessian*, all of which are more or less cross-linked with concrete linguistic representees (generally nonstandard rather than near-standard).

Based on the present results, the existence of a third, local concept level, which is finely spatially structured and refers to mainly dialectal speech levels, is highly likely. Nonetheless only minor evidence for this concept level can be deduced from the data. First of all the informants' answers prove that their ability to differentiate conceptual substructures at a less than global level is directly dependent on their age, provenance, and/or individual regional linguistic competence. This affects both the Hessian informants' more specific knowledge compared to that of the non-Hessians and the older informants' smaller scale structuring patterns in Lameli (2009) compared to those of the pupils in the Marburg study.

5. Outlook

In summary, the data provide evidence for structural types of regional linguistic knowledge. It seems likely that the density and quality of an individual's language-area knowledge, especially with regard to their own regional language, has to be seen as closely connected with the all-embracing regional linguistic dynamics currently affecting the Middle German language area. That implies that the knowledge about small-scale dialectal substructures of language areas inevitably disappears along with the base dialectal competence of older speakers. This assumption is in line with the results of Lenz (2003), who posits a fundamental erosion and modification of base-dialectal competence across three generations of Moselle-Franconian speakers, and Kehrein (2009), who finds evidence for the same processes among Central Hessian speakers.

Summing up, the results of the present study open up interesting perspectives for further research into the semantic structure of and motivations behind language-area concepts. For example the portability of both the structural organization demonstrated for the concept of *Hessian* and the modeling of representational processes needs to be investigated by examining other regional language areas (cf. Purschke 2010c). In these efforts, the concepts of *North* and *High German* would be of interest: the Lameli, Purschke & Kehrein (2008) study shows that these concepts do not seem to be

motivated primarily by geographical-political aspects: in the case of *North German* cultural-topographical factors appear to be central, whereas *High German* appears to be directly dependent on the awareness of one's own regionality (i.e., sociolinguistic factors).

The overall goal of this research remains the search for similarities and differences between scientifically constructed language areas and folk concepts of regional linguistic variation. The analysis of everyday inventories of knowledge by dint of perception experiments can provide a substantial contribution to a comprehensively conceived variational linguistics, which aims at an extensive and appropriate analysis of linguistic dynamic processes.

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