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[**Kučera, H.; Monroe, O.K. A comparative quantitative phonology of Russian, Czech and German**]

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untersuchten Sprachstufe sollen in gleicher Weise erforscht werden“ ist zu maximal. Außer Zweifeln an der Erfüllbarkeit dieser Aufgaben wäre noch zu erwägen, ob ein solcher Umfang für die Ermittlung der Ergebnisse, wie sie „das sekundäre Resultat“ bringt, unbedingt notwendig ist. Es ist zweifelsohne eine ideale Prämisse, die jedoch auch mit dem Einsatz von elektronischen Rechenanlagen kaum zu meistern wäre. Der Schlußteil dieses Kapitels ist den methodologischen Überlegungen gewidmet, die mit der konkreten Aufbereitung des Textes für die maschinelle Übersetzung der graphematischen Gegebenheiten in unmittelbarem Zusammenhang stehen.

In den folgenden beiden Kapiteln (39—226) wird der graphematische Stand des analysierten Textes sowohl im Bereich der Vokale als auch der Konsonanten nach der geläufigen Reihenfolge dargestellt. Es wird methodisch so verfahren, daß bei der Darstellung jeder Graphemgröße zunächst eine Tabelle mit der Repräsentation der mhd. Grapheme bei Krafft nach ihrer Häufigkeit und mit allen graphischen Entsprechungen angegeben wird. Dies bezeichnet P. als „primäres Resultat“. Auf jede Tabelle folgen dann die jeweiligen Beispielbelege sowie die quantitative Analyse der verschiedenen Entsprechungen auf der Ebene der Graphematik. An Hand der auf diese Weise ermittelten Fakten wird im „sekundären Resultat“ versucht, von der Graphematik her mittels der Rekonstruktion der lautlichen Verhältnisse in der Sprache Kraffts die mögliche Reflexion in der gesprochenen Sprache zu erfassen. Während bei dem primären Resultat mit absoluten Werten und exakten Fakten gearbeitet werden konnte, ist dies bei der phonematischen Auswertung aus verschiedenen Gründen bedeutend schwieriger. Dieser Tatsache ist sich der Verf. auch bewußt und formuliert deshalb sehr vorsichtig, um vorläufige Schlüsse zu vermeiden, die von weiteren Untersuchungen ähnlicher Art nicht bestätigt werden könnten.

In der Zusammenfassung (S. 229—233) geht der Verf. noch einmal auf die sprachtheoretischen und methodologischen Aspekte ein, die zu bewältigen waren. Sehr einleuchtend sind auch zwei Übersichtstabellen, die die graphematischen Verhältnisse bei Krafft im Vergleich zum Mhd. darstellen. Den Abschluß dieser sorgfältigen und nützlichen Untersuchung, deren Schwerpunkt außer bei anderen Aspekten vor allem im Methodologischen liegt — was diese knappen Bemerkungen besonders hervorheben möchten — bildet ein umfangreiches Literaturverzeichnis sowie Personen-, Sach- und Wortregister.

Zdeněk Masařík

H. Kučera—G. K. Monroe: A Comparative Quantitative Phonology of Russian, Czech and German, New York 1968, pp. 110.

The research reported in the book under review was carried out for the most part at the Computing Laboratory at Brown University. The first of the two authors, H. Kučera, is responsible for the selection and the development of the applied methods, for the analysis of the Czech and Russian language and for the final organization and formulation of the book. He, an American of Czech extraction and a pupil of Jakobson and Halle, has made himself known in linguistic circles by a number of studies treating Czech and Russian Phonology¹⁾ based on the Harvardian principle of consistently binary oppositions of distinctive features. G. K. Monroe, a graduate of Brown University, an assistant professor of German and Linguistics at Lafayette, performed the analysis of the German corpus and assisted in the computer processing of the results and in the writing of the text²⁾.

As the title indicates, the monograph describes the procedures and the results of a quantitative comparison of syllabic structures and of phonemic constraints, operative within the phonological syllable in the three languages, Russian, Czech and German. Included, is a discussion of an experimental analysis of the degrees of overall phonological similarity of the three languages and an

1) Cf. H. Kučera, "The Phonology of Czech", The Hague 1961; — "Mechanical Phonemic Transcription and Phoneme Frequency Count of Czech", International Journal of Slavic Linguistics and Poetics 6, 1963, p. 36—50; — "Entropy, Redundancy and Functional Load in Russian and Czech", American Contributions to the Fifth International Congress of Slavists, The Hague 1963, 191—219; — "Statistical Determination of Isotopy", Proceedings of the Ninth International Congress of Linguists, The Hague, 1964, 713—721; — "Distinctive Features, Simplicity and Descriptive Adequacy", To Honour R. Jakobson II, The Hague, 1967, 1114—1127; — "Some Quantitative Lexical Analyses of Russian, Czech and English", The Hague, 1968.

2) His Dissertation, 1965, is "Phonemic Transcription of Graphic Post-Base Affixes in English: A Computer Problem". — At present he is engaged in a preliminary analysis of the syllabic structure of English.

investigation of the qualitative and quantitative factors accounting for such a similarity. The said three languages were selected both for practical and theoretical reasons. They were within the fields of primary interest and competence of the authors and appeared reasonably suitable for automatic phonemic transcription, which made it possible to obtain the necessary body of phonemic data economically. From the theoretical point of view, it was thought potentially useful to analyze two languages which are genetically closely related and one which is more distantly related to them, in order to gain some indication of the extent to which the degree of genetic relationship might be reflected in procedures, outlined in the quantitative results. Moreover, it was considered to be of some interest for future research of this kind to have some indication as to whether highly inflected languages, as Russian and Czech are, significantly differ in syllabic entropy values from the less inflected German. H. Kučera's and G. K. Monroe's results bring the first answers to questions which call for further investigation.

The book is divided into 8 chapters and is organized in such a manner that the reader can get the needed exposition of the linguistic concepts, terms and procedures before he is presented with the details of the quantitative approach and with the results and interpretation of the quantitative analysis. After the *Introduction* in Chapter 1 he finds a description of the procedures employed in the *automatic processing of linguistic data* in Chapter 2. The Russian and Czech transcribed texts contain exactly 100,000 phonemes for each language. In case of German, whose transcription required a somewhat different approach, the transcribed text contained 105,174 phonemes. The samples constituting the corpora were selected from representative printed texts from the twentieth-century authors — about 60% from prose fiction, 20% from journalistic prose, 10% from poetry and 10% from scientific publications. For Czech and Russian the phonemic transcription was performed automatically by constituting an algorithm for the transformation of the graphic representation into the respective phonemic representation. The transcription system for Czech³⁾ presented only minor problems, when, e.g., the vowel letters were not in a one-to-one correspondence with the vowel phonemes (e.g. the graphemes *i* and *y* in contradistinction to a single phoneme /i/) or in signalling of consonant quality by means of the following vowel grapheme (e.g. the graphemes *t*, *d*, *n* when occurring before *i* or *é*). The principle complication of the Czech transcription was the correct handling of voiced and voiceless consonants in certain environments. The difficulty is due to the fact that, in many instances, the Czech orthography calls for the representation of voiced and voiceless consonants according to morphematic or etymological criteria rather than phonemically. An automatic transcription procedure thus has to apply the context rules to the graphic input in order to generate the correct phonemic interpretation.

The Russian transcription system, although it operated basically in the same manner, and with some problems being common to both languages, presented substantially greater difficulties. In addition to the problem of correct determination of voiced and voiceless consonants, the two major complications were the interpretation of the palatalized and non-palatalized consonants and the correct transcription of the unstressed vowels.

The problems in the phonemic transcription of the German texts were of a somewhat different nature. Because of the phonemic value of graphemes and grapheme combinations being frequently ambiguous, any algorithm for a complete automatic transcription of a German graphic input would have to rely on such an extensive dictionary look up that the necessary computer programs would be extremely complicated. The problem is particularly troublesome in regard to the correct determination of the length of the vocalic phonemes. For these reasons, an expedient semi-automatic transcription was adopted by G. K. Monroe. It consisted of a several computer programs, which, initially, segmented the running text into graphic words, sorted these words alphabetically and merged identical entries, keeping track of the frequency of occurrence of each such graphic word, and then performed a tentative phonemic transcription of each graphic word separately. This approach saved a great deal of processing time because the algorithm for phonemic transcription of any word, including a very frequent one, had to be applied only once in the processing of the whole German corpus.

Chapter 3 deals with the *segmental phonemes*. Regardless of disagreement among phonologists as to the concept and definition of a phoneme,⁴⁾ the authors dwell on two basic facts: first, that

³⁾ Details of the Czech transcription program may be found in Kučera's "*Mechanical Phonemic Transcription*...", cf. Note 1).

⁴⁾ Cf. e.g. that some adherent of the linguistic theory of transformational grammar have denied the existence of a separate phonemic level in the structure of language, while Chomsky in his "*Linguistic Theory*", New York 1966, p. 45 says that "the status of the concept "phoneme" is very much in doubt."

humans encode and decode linguistic messages as sequences of discrete phonological segments, not as an acoustic continuum; second, that various phonological segments of speech, no two of which are identical, are grouped into a rather small set of functionally relevant classes, i.e. "phonemes" according to a few distinctive properties which such sounds share.

In all three languages the inventory of segmental phonemes was determined by making use of the distinctive feature approach of R. Jakobson. At the same time, the authors justly point out that a feature which is distinctive in one language may not be utilized in another language, or may simply serve in the role of a redundant (i.e. predictable) feature⁵). The segmental phonemes for each of the three languages are displayed in Tables 1, 2, 3. Table 1 (p. 21) displays the phonemes and the distinctive feature specification of present-day Standard Czech. In Kučera's analysis, the system has 24 consonants, 10 vowels and the semi-vowel /j/. A few notes relate to several of the principle allophones, e.g. voiceless and voiced allophones of /ts/, /tʃ/, /x/ and /k/ or alveolar or velar allophones of the phoneme /n/. For a detailed discussion of the segmental phoneme analysis and of the allophone distribution he refers to his 1961 monograph, "*The Phonology of Czech*"⁶). Similarly, for details in Russian phonology, the reader is recommended to various works of R. I. Avanesov, especially to his "*Russkoe literaturnoe proiznošenie*", Moscow 1954. Kučera limits his attention to the nature of the differences between the older Moscow forms and the newer Standard. On aptly chosen examples, he illustrates the recent tendencies in the phonological development of Standard Russian. And it is the New Standard which serves as a basis for the transcription, and, concomitantly, for the quantitative results. As Table 2 (p. 24) displays, Kučera works with 32 consonant, 8 vowel and 1 semi-vowel phonemic inventory. As with Czech, so too with Russian, several major allophones of consonants are accounted for by predictable distribution of the *voiced vs. voiceless* feature. The asymmetry of the Russian system in velar phonemes is mentioned in this connection. In the vowel system, Kučera rightly points out that the Russian vowel system differs from the seemingly similar Czech vowel system with regard to prosodic and with regard to tonality features. As for the prosodic features, the contrast *stressed vs. unstressed*, with the increased vowel length being an optional manifestation of stressed vowels, is distinctive in Russian. In Czech, on the other hand, the feature *short vs. long* is distinctive in all vowels⁷) but the placement of stress is not, since it is predictable in terms of certain phonological boundaries. — Equally important is the difference in the tonality features. In Russian, vowels are differentiated as *rounded vs. unrounded* (i.e. *flat vs. non-flat* in acoustic terms). In Czech, however, the feature of rounding is predictable in terms of place of articulation and therefore redundant. Distinctive is, on the other hand, the feature *back vs. front* tongue position (i.e. *grave vs. acute* in acoustic terms).

The analysis of the Standard German phonemic system presupposes a form of the language mutually intelligible to educated German speakers. In Monroe's study, this is taken to be Standard High German as described in Siebs' "*Deutsche Hochsprache*" (ed. by H. de Boor and P. Diels, Berlin 1961), modified only where common practice indicates as established departure from Siebs' description. The segmental phonemes of present-day Standard German and their distinctive features are tabulated in the same way as were the segmental phonemes of Czech and Russian, cf. Table 3, (p. 29). Monroe's analysis is based on the phonemic inventory of 19 consonants and 14 vowels. His feature matrix differs somewhat from other distinctive feature analyses of German published previously. To mention at least the most important, The analysis given by G. Heike⁸) and W. G. Moulton⁹) should be quoted. The former, close as it is to Monroe's

⁵) Cf. e.g. the opposition between a *palatalized and non-palatalized* consonant is distinctive in Russian, but not utilized in Czech and German. On the other hand, the opposition between *long and short* vowels is distinctive in Czech and German but not in Russian.

⁶) In this connection J. Vachek's monograph "*Dynamika fonologického systému současné spisovné češtiny* [The Dynamism of the Phonological System of Present-day Standard Czech] Praha 1968, where Kučera's observations are discussed and further developed, should be consulted. — See also J. Vachek's review: H. Kučera, *The Phonology of Czech*, SPFFBU 1962, A 10, pp. 203—206.

⁷) It should be mentioned, however, that [o:] has a phonemic status only in the synchronically foreign component of the Czech wordstock, while in synchronically domestic words it only functions as a signal of the emotive approach of the speaker to the extralingual reality.

⁸) Cf. G. Heike, "*Das Phonologische System des Deutschen als binäres Distinctionssystem*" in *Phonetica* 6, 1961, pp. 162—176.

⁹) Cf. W. G. Moulton, "*Juncture in Modern Standard German*", *Language* 23, 1947, pp. 222 to 226; "*Syllabic Nuclei and Final Consonant Clusters in German*", For Roman Jakobson, *The Hague* 1956, pp. 372—381 and "*The Sounds of English and German*", Chicago 1962.

conception, differs in Heike's not including /z/ and including /j/ in spite of the fact that he at the same time recognizes both syllabic and non-syllabic allophones of /i/ and /u/. The only difference in the latter is that Monroe, unlike Moulton, regards the diphthongs /æi/, /ao/, /oæ/ as consisting of two segmental phonemes each. In agreement with both authors, the affricates [ts], [tʃ], [dʒ], [pf] are interpreted as two phoneme sequences in Monroe's German phonemic system, in contradistinction to Czech where the interpretation of /tʃ/ and /tʃf/ is rightly monophonemic. It should also be noted that Monroe interprets the glottal stop in German as an optional manifestation of disjuncture before vowels—and so does Kučera for Czech—the phones [ʔ] and [x] as allophones of /x/, [ə] as allophone of /e/ and [R] and [r] as free variants according regional and personal preferences.

To conclude the chapter on *Segmental phonemes*, the relative frequencies of all phonemes in Czech, Russian and German is given. Interpretations of the comparative frequency figures are attempted in Table 5 (p. 33), which gives a set of comparative phonological indices for the three languages. These indices offer some indications of how the typological and genetic relationship among Russian, Czech and German are reflected quantitatively. In all but two cases the Russian and Czech values are much nearer than either is that of German, suggesting clearly a correlation between such quantitative phonological indicators and close genetic relationship.

Chapter 4 is devoted to the delimitation of the *syllable*. It must be said at the outset, that the syllabic segment used in Kučera's and Monroe's analysis is the phonological, not phonetic syllable. The method applied follows in basic outlines and terminology the phonological segmentation of Hockett as presented in his "*Manual of Phonology*", (Baltimore, 1955), the analysis, however, differs in several ways. Utterances are analyzed here into sequences of macro-segments which are delimited by a complete intonational contour and bounded by terminal disjunctures. Macrosegments are then further analyzed as a) indivisible, b) divisible into two or more segments, each of which can constitute a macrosegment by itself, c) divisible into two or more segments of which some but not all can constitute a macrosegment. This conception enabled the authors to proceed with the minimum definition of the phonological word and of the phonological syllable. Their motive for selecting the phonological syllable as a basic unit of analysis resulted from several considerations: first, the syllable can be delimited consistently by hierarchical segmentation of utterances and by an application of ordered rules in a manner which gives satisfactory results for the three chosen languages and are—in the authors' opinion—well applicable also to other languages. Second, the phonological syllable is a unit which displays sufficiently the combinatory properties of phonemes characteristic of a given language, and thus offers a suitable basis for the contrastive study of phonotactics of several languages.

The authors' definition of the phonological syllable consists of specifying its minimum and maximum constituents. The minimum requirement is that it contains a syllabic nucleus which serves—in all three languages—as the centre of stress and of intonational levels. While the nucleus is a prerequisite, onsets, codas and interludes are optional. All these components are subsumed under the joint term of constituents of the syllable. The number of sequential phonemes which may compose any of such constituents is subsequently referred to as the number of possible positions of a syllabic constituent. The membership of each position within a constituent is then the set of those segmental phonemes which can occupy the given position. From the results obtained let us mention at least the following: in Czech and Russian, there is a strong tendency to avoid an imbalance in the structure of the syllable which would result from combining maximum and minimum length constituents. Combinations of zero onsets with a zero codas and, conversely, four-position onsets with a zero codas, occur only in a microsegment of marginal status. In German, on the other hand, there is much less resistance to combining maximum and minimum length syllabic constituents within the same microsegment, as the examples with three-position onsets and zero codas or zero onsets with four or even five-position codas illustrate. — At the opposite end of the scale, combinations of maximum length constituents, i.e. the longest possible onset and coda within a single syllable, are most severely restricted in Czech where there are no four-position onset and three-position coda syllables, or even three-position onset and three-position coda ones. Similarly, there is no four-position onset and four-position coda syllables in Russian and, combinations of a three-position onset and four-position coda syllables being very rare, they did not occur in Kučera's corpus. In German, on the other hand, three-position onsets and four-position codas were attested. For Russian and Czech, the actual occurrence frequencies of monosyllabic microsegments of different structure as well as their relative frequencies in percentage are tabulated, cf. Table 6 (p. 47). Altogether there are 10,280 monosyllabic microsegments in the Czech corpus and 8,380 in the Russian corpus. Not surprisingly, the frequency of occurrence is in inverse relationship to their length. Beside the interesting

numerical data in this analysis the well-known phenomena as e.g. the sparsity of zero onsets and the preference for initial clusters as opposed to final clusters in Slavic languages are once again confirmed.

The next problem the authors had to tackle, was the analysis of the *interludes*. The method applied in the present study is not the same as described by Kučera in the "*Phonology of Czech*" in 1961 (cf. pp. 81—83) but represents a further development of that approach. The governing principle of the present procedure has been to base the segmentation on the phonological structuring of the onsets and the codas already observed in the data. Operationally, the principle was implemented by two ordered rules: 1. the interlude should be divided in such a manner that the coda and onset obtained would not enlarge the set of distinct codas and onsets already established; 2. if the first rule does not provide a division, then that division is preferred which is statistically favoured because of the frequency distribution of onsets and codas of the various types occurring immediately before disjuncture respectively. After exemplifying the situation, the scale of preference of various interlude divisions in the three languages is shown in the Table 8 (p. 52). In Tables 9, 10, 11 (pp. 54—55) then the membership for all syllabic positions in the three languages¹⁰ is listed. Tables 12, 13, 14 (pp. 57, 58, 59) summarize the quantitative differences in phoneme memberships.

In Chapter 5 the reader is first acquainted with the statistical data on the syllable composition of the three corpora — viz. the number of syllables of various types, the ratios of running syllables to distinct syllables and detailed information about syllable length in phonemes. From the results obtained let us mention at least some: the ratios of running to distinct syllables decrease with the syllable length in all three languages; the rate of decrease, however, is much more gradual in German than in the Slavic languages. Hence the suggestion that the coding efficiency of German, as far as syllable use is concerned, is noticeable less than that of Czech or Russian. As for the average length of syllables the values reveal the following: German has longer syllables than the two Slavic languages and, in actual utterances, the longer syllables are used with a proportionately greater frequency in German than in Russian and Czech. For comparison, *Roberts'* figures for the statistical phonological analysis for American English is included to show that English resembles German in this respect.¹¹ — The second part of the chapter outlines the procedures and reports the results of several entropy computations for Russian, Czech and German, once again compared with English. The ranking of the four languages in order of increasing redundancy, i.e. Czech, Russian, English and German, shows no discernible correlation with the number of segmental phonemes (cf. Czech with the lowest redundancy has 35 phonemes, followed by Russian with 41 phonemes. Then comes English which has the lowest number of phonemes, i.e. 32; the highest redundancy is found in German with only 32 phonemes). Similarly, no discernible correlation between the number of phonemes and redundancy is apparent in the syllable-based calculation either. There is also no evidence that the number of vowel phonemes is a factor in the communicational properties of the syllable. Two sets of tentative conclusions are drawn from the entropy results: 1. redundancy figures show that the degree of constraint is smaller — and, conversely, the phonotactics "efficiency" greater — within the syllables of the two Slavic languages than it is for German. The entropy in bits per syllable is highest in German, as is the value of relative entropy, calculated for the syllable as the basic symbol for the source. Consequently, the redundancy of German, calculated for syllable units, is lower than in either Russian or Czech. This is of interest because it shows that the probability distribution of the syllables in German is closer to the optimal distribution in terms of information theory than is the case in the two Slavic languages. The fact that German has a significantly higher redundancy in calculations using the phoneme as the basic symbol of the source, points out even more strikingly that the higher redundancy here is due to the greater constraints on phoneme sequences in syllable formation and to the more frequent use of longer syllables, but not to the probability distribution of syllables as such in actual utterances. 2. The closeness of entropy and redundancy results for the two Slavic languages warrants the tentative suggestion that the similar degree of constraint may reflect similar principles of phonotactics in these two genetically related languages. This conclusion is confirmed in the calculations of the components of the Isotopy Index (cf. Chapter 6, p. 86). The results show that as far as the three analyzed languages are concerned, the phonological similarity between genetically closely related languages is largely a matter of distributional and quantitative properties of phonemes, i.e. of quantitative phonotactics, rather than a matter

¹⁰) i.e. all syllabic positions existing in the investigated corpora, not all admissible in general.

¹¹) Cf. Roberts A. Hood, "*A Statistical Analysis of American English*", The Hague 1965, pp. 44 and 113—117.

of close correspondences between the phonemic inventories of such languages. If this conclusion can be substantiated in the analysis of other language pairs, Kučera's and Monroe's method could be utilized not only to measure the degree of phonological similarity but perhaps also as a discovery procedure in establishing the probability of genetic relationship between two languages. On the other hand, the results can also be interpreted as possibly pointing to a "Sprachbund" phenomenon. Czech and German, two languages which have been in geographic proximity and in close contact for centuries, manifest the greatest similarity in phonemic inventory of the three languages compared.

In the preceding, the syllable has been dealt with as a statistically independent event. Empirically it is obvious, however, that syllables are not independent events and that every language has some restrictions, absolute as well as probabilistic, as to which syllables may or may not follow each other. The quantitative determination of the extent of these constraints is even more complex than the investigation of phonological restrictions within syllables. Only some aspects of this problem are examined in Chapter 7. Results are reported and summarized in Tables 23 and 24 (p. 99) only for Russian but the authors suppose that rather similar types of constraint are operative in Czech and in German as well.

Lack of space prevents us from commenting upon all observations and suggestions presented in the monograph. Some of them may, perhaps, be found disputable. Of such let us mention here the fact that Kučera does not differentiate between the central and peripheral elements (e.g. cf. the Czech phonemes /o:/, /g/, /f/ being unduly placed in Table 1 on the same level as such elements which are indisputably central, as /a:/, /i:/, u:/ or /b/, /d/, /z/). Rather disputable is also Monroe's biphonemic interpretation of the German diphthongs. That, of course, does not detract from the value of the book. In reading it, one cannot but highly appreciate several years' research work on the part of the two authors, the profundity and care in preparing the suitable methods and the computer programs and the exactness with which they tackle all the problems. It is this which makes the bulk of the monograph a valuable source of information, highly stimulating and inspiring for any expert worker in the field. It is therefore hoped that more work with both Indoeuropean and non-Indoeuropean languages will extend the conclusions and thus corroborate Kučera's and Monroe's pioneering findings.

Jaroslava Pačesová

M. A. Borodina: Sovremennij literaturnij retoromanskij jazyk Švejcarii. Izdatelstvo „NAUKA“, Leningrad 1969, 231 stran in 4°, za 1 r. 38 k.

K nejméně zkoumaným románským jazykům patří rétorománština, od r. 1938 čtvrtý zemský jazyk ve Švýcarsku. Doposud nemáme soustavné historické mluvnicе (srov. O. Ducháček, *Bibliografické uvedení do románské jazykovědy II*, Praha 1963²). Práce M. A. Borodinové, která vyšla jako publikace Akademie věd SSSR, podrobně zkoumá strukturu všech druhů slov, morfologie i syntaxe dvou hlavních variant, rýnské a innské. Téměř pětinu knihy zabírají přílohy:

1. vydání úryvku leningradského rukopisu Pouti do Jerusalema od opata J. Bundiho z konce 16. stol. z knihovny T. Toblera, švýcarského lékaře, folkloristy a cestovatele,
2. úryvky z tří současných prosaiků s transkripcemi a poznámkami,
3. juxtapozice úryvku Moliérova Lakomce s italským a engadinským překladem,
4. 8 lidových písní s notami.

Zatímco se autorka více věnovala innské variantě, my se zajímáme spíše o rýnskou, a to proto, že už v roce 1672 bylo v Praze vytištěno v této variantě dílo Balzera Aliga Passiun de nies Segner, o jehož vydání se postaral jeho krajan, stavitel pražského baroka Gion de Capaul, a dále že do ní byli přeloženi Karafiátovi *Broučci*, kteří vyšli dvakrát v Plzni těsně před druhou světovou válkou.

Nejstarší literatura je náboženská, a proto je vhodné demonstrovat obě varianty na známém biblickém textu Mat. VI 9—13. První varianta je současná rýnská katolická, druhá, starší, je rovněž rýnská, ale evangelická, a třetí je současná evangelická. Srovnání obou rýnských variant podává jistou představu o vývoji ze posledních sto let. Innská varianta se zřetelně odlišuje už pravopisem a s podivem zjišťujeme zde typické německé vokály *ö* a *ü*, kdežto v rýnské vůbec neexistují.