# Loanwords vs relics

# A new method in lexical borrowing studies exemplified by Yiddish-Slavic language contact

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One of the major issues in historical and contact linguistics is how to distinguish between inherited and acquired vocabulary in a given language: both traditional historical linguistics and modern contact linguistics are in this respect eventually forced to resort to inferences. The aim of this paper is to propose a diagnostic test to aid in the identification of putative substratum relics in the lexicon. The method for this test consists in juxtaposing and comparing word families in the source and recipient language. We use the example of Yiddish-Slavic language contact, in which contact-induced changes are still relatively transparent. We employ wordnets – digital networks of lexical entities connected by lexico-semantic relations – in order to visually "map" lexical and semantic relations of transferred lexemes within the recipient language onto the source language. The method allows us to combine contemporary empirical data with historical analysis.

Keywords: lexical borrowings, loanwords, lexical relics, Yiddish, Polish, language contact, substratum, adstratum

## 1. Introduction

Traditional lexical borrowing studies, as part of lexicology, have focused on etymologizing and classifying foreign lexical material (e.g., Betz 1959) as well as describing the degree of its integration (e.g., Eisenberg 2011). By contrast, although modern contact linguistics began with the study of transferred words, it has more recently concentrated on the transfer of linguistic patterns rather than linguistic matter (Heine & Kuteva 2005; Matras & Sakel 2007; Gardini 2020).<sup>1</sup> Yet,

<sup>1.</sup> Most contact linguists consider lexical transfer primarily in the context of codeswitching or as the vehicle of structural changes (cf. Thomason & Kaufman 1988; Muysken 2000; Thomason

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the study of vocabulary in language contact may still hold epistemic potential. A case in point is the crucial question of distinguishing inherited lexical relics from acquired loanwords, resulting from substratum and adstratum influence respectively. This is particularly important in complex, long-lasting contact situations in which both routes of lexicon transfer may have been involved. The traditional method of resolving this problem, based primarily on diachronic, comparative phonological analyses, can usefully be augmented by additional sources of argumentation, especially since the results of relic study eventually come down to an evaluation of pro et contra (cf. Thomason 2001:154). In a broader perspective, more certainty in the identification of relics may contribute to various efforts to establish the history and characteristics of linguistic strata. It is worth noting here that Thomason (2009) turned the attention to the topic of substratum-induced interference by introducing several requisites for establishing a history of contact-induced change. However, she was also primarily addressing the question of structural changes in the recipient language.

Despite its general focus on systemic features, canonical contact-linguistic literature (e.g., Thomason & Kaufman 1988: 39–40) does state the possibility of "inherited vocabulary" being retained by a group that has undergone a language shift, understood as the process of the replacement of one language by another in a given population. Such lexemes however are mostly few and far between, as the lexicon is usually the first thing to be exchanged for elements of the target language.<sup>2</sup> Identifying this inherited vocabulary is often problematic, as the researcher has to constantly weigh possible substratum elements against the results of adstratum influence. This is especially the case when the shift is accompanied by subsequent, long-lasting, related adstratum impact. If the group which shifted to another language remains under direct influence of its original idiom – or languages genetically close to it – this contact may support, extend and update the features left over from before the shift: still more so if the shifted group actively practices bilingualism, as this may partially uphold their inherited

<sup>2001;</sup> Myers-Scotton 2002, 2006; Matras 2009; Auer 2014 and others) often in cases of second language acquisition. In turn, Haspelmath & Tadmor have devoted a large research project (https://wold.clld.org/) to the subject of loanwords with a focus on borrowability (cf. Haspelmath & Tadmor 2009). For current research on lexical borrowing see also Zenner & Kristiansen (2014) and Poplack (2018). For a summary of current trends see Grant (2015: 431).

<sup>2.</sup> Different outcomes of language shift are discussed e.g., in Matras & Bakker (2003) and Bakker & Matras (2013). However, Bakker's theoretical claims have been challenged by McConvell based on his empirical observations of an actual language shift taking place, leading to the development of the mixed language Gurindji Kriol in Australia (McConvell & Meakins 2005).

linguistic worldview.<sup>3</sup> In such cases, identifying substratum vocabulary against the adstratum loanwords is particularly difficult, but all the more essential for understanding the make-up of the language in question.

The aim of this paper is to propose a diagnostic test to aid in this research, based on a digital humanities approach, developed in a research project conducted at the Faculty of Modern Languages, University of Warsaw.<sup>4</sup> The method applied in the test is described in §3.

We support our proposal with empirical data drawn from a study of vocabulary originating in Polish and transferred to Yiddish,<sup>5</sup> a contact language in which the existence of both a Slavic substratum and adstratum has been convincingly argued for. Since the role of the Slavic substratum has not gained as much attention in modern studies of the so-called Slavic Component of Yiddish as the contact-induced changes ascribed to the adstratum, we shall present the sociolinguistic and historical background of Slavic-Yiddish language contact in a separate section (§2). Even though the impact of the Slavic substratum on Yiddish remains a subject of disagreement among scholars, we would like to stress that this paper is not intended to engage in the debate on the origins and typology of the language itself (cf. Woodworth 2010; Beider 2013, 2015). Rather, its goal is to present a new, language-independent method in borrowing studies, employing the example of Yiddish-Slavic language contact. This approach consists in utilizing contemporary empirical data, interpreted in the framework of contactlinguistic and diachronic research.

Before the subject of distinguishing inherited and acquired vocabulary can be addressed properly, one must first deal with the problem of terminological ambiguity that has been causing confusion in studies on contact-induced changes and language strata in general. For example, Winford (2005, 2013), following van Coetsem (1988, 1995, 2000), has pointed out that the same contact-linguistic terms (e.g., borrowing, shift, transfer etc.) may be used to describe several separate phenomena. Borrowing, for instance, denotes at the same time the strategy, process, and result of introducing foreign features to a language. Winford has therefore argued for a terminological clarification, based on the agentivity of the language

**<sup>3.</sup>** This may happen when one language does not supplant the other completely but rather becomes the group's first, i.e., pragmatically dominant, language.

<sup>4.</sup> Details on the project may be found on its website: https://polonjid.wn.uw.edu.pl/?lang=en.

<sup>5.</sup> If not specified otherwise, we use the logonym Yiddish according to common parlance, i.e., to refer to "Eastern Yiddish", the idiom of Eastern European Jews from which modern standard Yiddish has developed. We separate it thus from "Western Yiddish", the language of Jews in German lands and other parts of Western Europe (as well as some Germanized lands in the East), which nearly went out of use due to a massive language shift to modern German and/or local languages at the turn of the 18th and 19th century (cf. Weinreich [1973] 2008: 241–242).

user. Most useful for our study is his and van Coetsem's understanding of "transfer" as an umbrella term for all types of contact-induced change. We have also adopted the more neutral terms of "source" (SL) and "recipient language" (RL) instead of "donor" and "target language" or L1 and L2. It is important to note that these two terms primarily focus on the direction of transfer, regardless of the sociolinguistic role (substratum, adstratum etc.) of the languages in question. Winford distinguishes between "borrowing" - the introduction of features from the SL into the RL by speakers of the latter - and "imposition" - the introduction of features from SL into RL by speakers of the former - based merely on speaker agentivity. Haspelmath & Tadmor (2009: 50-51) have relatively recently also applied the terminological distinction of "borrowing" and "imposition" to the matter of acquired and inherited vocabulary, describing them as "adopted" and "imposed vocabulary" respectively. The latter is a result of a language shift and includes what was traditionally defined as substratum or superstratum vocabulary. However, superstratal influence lies beyond the bounds of this study. They also state that the shifting speakers retain vocabulary from their original language intentionally (SL agentivity) and define possible conditions for these decisions.

The described terminology, however, is less useful for our purposes. The terms "borrowing" and "imposition", as defined by Winford and van Coetsem, focus too much on the individual, bilingual speaker, whereas in a diachronic study of a long-lasting contact situation on the level of relatively large speech communities, transfer is more a result of the interplay of source and recipient language agentivity. A feature "imposed" in one variety used within the community may then be borrowed by another and subsequently "imposed" on a third and so on. These alternations are rarely traceable. That is why, the most reliable material we have at our disposal is the attestation of historical, contact-induced changes transmitted by generations of speakers and woven into the contemporary language. Hence, we consider terminology that emphasizes the diachronic aspect of transfer better fitting to the subject of our research. Therefore, we have decided to revert to the traditional labels of "loanwords" and "imposition" respectively, leaving out the factor of agentivity.

Traditional historical linguists are credited with making the mentioned terminological distinction between the two types of transferred lexicon (cf. Bellmann 1971: 49–50, Bielfeldt 1982: 205). At the same time, those researchers were unable to formulate reasonable descriptions of the mechanisms of the transfer of relics and their lexical anchoring in the new language system, which impeded their identification efforts. They limited themselves to creating lists of words putatively identified as relics, founding their assumptions on diverse, mostly random attestation data. They did not take the process of relic imposition and the comparison of the original and new linguistic environment into account in their identification efforts.

In contrast, contact linguistics seems to have put the study of relics aside, concentrating, as already mentioned, on the transfer of systemic features, preferably in contemporary cases of bilingualism. Moreover, some linguists use terms such as substratum or imposition in very broad meanings, also in contexts of second language acquisition and imperfect learning (Thomason 2001: 277, Winford 2005: 379).<sup>6</sup> Thomason (2001: 276–7), however, criticizes the very term "substratum" as evoking the image of one people being subordinate in the process of shifting, which in many cases, especially in deliberate second language acquisition, is not true. Therefore, instead of speaking of a substratum (interference), she prefers to use the term "shift-induced change" which she defines as: "... the type of interference that occurs when imperfect learning plays a role in the interference process."

We define substratum and adstratum as the languages exerting influence on the idiom of another speech community. We understand the term substratum in the traditional meaning, as an original language exerting linguistic influence on a successor language in the course of a language shift. The results of this influence are referred to as substrate-induced or shift-induced changes, or simply as substratal features or elements, consisting of matter and patterns alike. Lexical substratal features are thus referred to as lexical relics. Conversely, we may describe an adstratum as the language that has influenced a group's first language through borrowing without replacing it. Adstratal lexical features are thus referred to as loanwords.

Contrary to earlier historical linguists who searched for proof of the given word's relic status in the attestations of the oldest layers of the language, we start with the analysis of contemporary lexical data. This new approach was made possible by advances in digital linguistics, particularly the development of "wordnets". A wordnet is a novel and convenient tool for connecting the lexical units of a given language, as well as a means of displaying and analyzing lexical systems or parts thereof, both within and between languages. Thus, the method that we have developed as a diagnostic test for recognizing relics utilizes contemporary linguistic data as a point of departure, moving top-down into the histories of both the recipient and source language. This makes it particularly useful in the study of languages, like Yiddish, for which historical forms are scarcely attested. All technical matters and details regarding the way wordnets are used in our research are provided in Geller et al. (2020).

**<sup>6.</sup>** Cf. Winford (2005: 379): "As Van Coetsem (1988: 18) points out, the process of 'imposition' is typical of second language acquisition..."

#### 2. Yiddish-Slavic language contact

The Slavic substratum of Yiddish has received significantly less attention than other aspects of Slavic-Yiddish contact. That is why, before presenting our diagnostic test, the main focus of the paper, we provide some necessary information on the historical and socio-linguistic background for our study.

Max Weinreich, the founder of modern Yiddish linguistics, while not using many of the contemporary, contact-linguistic terms such as language shift, contact language, imposition and adoption, recognized the heterogeneous character of the language of Eastern European Jews, thus introducing the notion of Yiddish being an independent fusion language. The primary components of modern Yiddish consist of diverse layers of historical, dialectal and stylistic varieties of Semitic (Hebrew and Aramaic), Germanic (southern and middle-eastern dialects of German) and Slavic (western and eastern) languages (Weinreich [1973] 2008:29, A21–A22).<sup>7</sup>

Weinreich himself was reluctant to explicitly acknowledge the Slavic substratal features present in Yiddish. He did, however, deliver many arguments for the existence of the Slavic substratum itself and provided an account of conditions in the history of Yiddish that strongly favored the hypothesis of a language shift. First of all, he cited proof for the existence of Slavic-speaking Jews before the birth of Eastern Yiddish (Weinreich 1956). He essentially repeated these statements in his *History of the Yiddish Language*, also quoting material evidence (Weinreich [1973] 2008:81–89, 525–545, 623–626).

Independently, another prominent Yiddish linguist, Weinreich's contemporary Jechiel (Fischer) Bin-Nun (1973: 47–49), has not only claimed the existence of a Slavic-speaking Jewish community, but also stated explicitly that it had shifted to Yiddish and left a linguistic mark on it. He enumerates several words that he describes as very likely remnants of that event (Bin-Nun 1973: 49).<sup>8</sup>

Admittedly, Bin-Nun does not provide an elaborate argumentation to support the relic status of these words. However, most of them reappear in Beider's (2015: 430–431) detailed scholarly analysis of the subject. In this most recent volume on the origin of Yiddish dialects, Beider supports the case for a Slavic substratum of Yiddish on many levels. In particular, his extensive list of relic words

**<sup>7.</sup>** We exclude the Hebrew component from our analyses as it cannot be considered a direct substratum in the inception of Eastern Yiddish.

<sup>8.</sup> His examples include: *koilen* 'slaughter', *thoir* 'polecat', *koiletsch* 'white bread, cake', *saide* 'grandfather', *plaize* 'shoulder', *bube* 'midwife', *tûter* 'Tatar', *sûd* 'orchard'. Bin-Nun's spelling is based on German orthography and reflects the pronunciation of the East-Galician dialect of Yiddish.

is made all the more credible, as he provides specific phonological and historical support for his assertions (Beider 2015: 428–433). Semantically and sociolinguistically, he argues that because these words mostly describe terms from domains such as religion, family or body parts, which are generally resistant to borrowing, they could not have been taken over from non-Jewish Slavs. Based on the same phonological and historical analyses, Beider identifies the language as a Jewish ethnolect of Old Czech. However, he also argues that, as the Czech-speaking Jews moved from Bohemia and Moravia into Polish territory, they most likely made a shift to Old Polish (Beider 2015: 456–8). Only later, with the increasing influx of the German Jews, did they adopt German as their everyday speech by the end of the 15th century. At the same time, this latest shift marks the beginning of Eastern Yiddish (Beider 2015: 9, 32).<sup>9</sup>

The implications of this statement on the study of Slavic lexical relics in Yiddish are twofold. First of all, there is the possibility of the existence of Polish relics, though Beider (2015: 450–451) himself states that there is no convincing proof for this. Secondly, some older, Slavic-origin words in Yiddish could have been updated to better resemble more current forms in co-territorial Slavic languages.<sup>10</sup>

The existence of a Slavic substratum in the inception process of Eastern Yiddish is not being contested anymore in modern Yiddish linguistics. It is rather the scope of its possible impact that is being discussed. The current task for the historical linguistics of Yiddish is thus to establish and identify substratal elements and distinguish them from adstrate-induced changes. Polish could have functioned in both roles – as a substratum and an adstratum of Yiddish. There are plenty of lexical items transferred from Polish to Yiddish, that may possibly be ascribed to both of these layers. That is why words of Polish provenance in the idiom of Eastern-European Jews make up a good proving ground for developing and testing new methods in relic identification.

**<sup>9.</sup>** Interestingly enough, contrary to Weinreich, Beider (2013:100–101, 2015:516) rejects the "fusion character" of Yiddish, remaining an adherent of its genetic classification as a Germanic language. This shows that, in principle, the existence of a Slavic substratum does not have to be rigidly ascribed to any specific stance on the origins of the language itself. For general criticism on applying the Family Tree Model in a contact situation cf. Noonan (2013:54).

<sup>10.</sup> On the subject of updating old Slavic-origin words in Yiddish see Weinreich ([1973] 2008: 560–561). In this context, subsequent references to Polish as a source language should not always be treated literally.

#### 3. Methods: The diagnostic test

A lexical unit transferred from one language to another, commonly referred to as a borrowing, should be treated as an element of the recipient language. Therefore, even relatively recent borrowing studies are still preoccupied with its integration and change within that language, rather than the mechanisms involved (e.g., Eisenberg 2011). The transfer itself may engage two different processes, already mentioned in the introduction: borrowing and imposition, in our case caused by adstratal (resulting in loanwords) and substratal (resulting in relics) influence respectively. Hence, the goal of the diagnostic test proposed here is to help distinguish between words resulting from either of these phenomena.

#### 3.1 Terminology and data collection

We designate one particular transferred word as a lemma (a lexicographic type), a nucleus of a word family, i.e. a set of lexemes (tokens), because such structures form around single focal points in the lexicon regardless of the mechanism of transfer. Thus, the method involves a comparison of the lexicosemantic features of a given word family in the recipient language with those of its cognate in the source language by mapping the specific semantic and derivational units that make them up.

The lexeme is to be understood here as a label that covers different senses, representable as numbered monosemous lexical units (cf. Figure 1). Within a word family, these units are connected by semantic, etymological and derivational relations. Because the units comprise lexemes or single words, we can also speak of relations between words. Thus, a word family is also understood as a network of interrelated lexemes, made up of interrelated monosemous units. This network has both a semantic and derivational dimension. Its semantic aspect includes the number of each word's particular senses, as well as the metaphors and concepts they represent within the users' linguistic worldview. This aspect is also expressed in the words' semantic collocability, in idioms, phrasal verbs, fixed expressions, phraseology and proverbs. The formal, derivational dimension regards word formation within the same or other parts of speech, primarily through prefixing and suffixing but also composition (cf. Figure 2).

The comparison of word families, comprising the diagnostic test, can obviously only be conducted after appropriate lexico-semantic data is gathered and analyzed, both qualitatively and quantitatively. On the level of semantics, the collection and analysis of the data involves determining the semantic scope and the number of senses (monosemous units) of the given lexeme. At the formal level, it consists in specifying the number of the units' derivatives and their wordformation models. The units isolated as a result of the above operations must next be connected through appropriate relations; for details see Geller et al. (2020).

The necessary data can essentially be obtained by any reasonable means: by using extensive, representative, digital text corpora, or based on queries in large, comprehensive traditional dictionaries (including lectal ones, if available). Regardless of data extraction methods, however, the query and preliminary analysis serve the creation of a network of units connected by ETYMOLOGICAL, SEMAN-TIC, and DERIVATIONAL relations.

A thorough study of transferred vocabulary – which is the goal of our research – requires that the initially (digitally or traditionally) collected contemporary data be extended to include the entire history of meaning and form ("Wortgeschichte") of the lexeme in question. This is done by consulting historical and diachronic dictionaries and early attestation sources, if such are available.

For the purpose of our research, we have utilized both digital and traditional resources. Since, so far, only limited digital text corpora are available for Yiddish, we were forced, in the preliminary stage, to use the traditional method of dictionary query and text excerption to extract the necessary data on the semantic and derivational features of Polish-origin words transferred into Yiddish. The most important paper-dictionary sources include: Harkavy (1928); Astravukh (2008) and Beinfeld & Bochner (2013). Digital and digitized dictionary sources include Stuchkoff (1950)<sup>11</sup> and Jiddisch-Nederlandse woordenboek.<sup>12</sup> Only after that, we verified and complemented our research material by searching in available digital repositories: EYDES,<sup>13</sup> Corpus of Modern Yiddish<sup>14</sup> and Digital Yiddish Library.<sup>15</sup> For preliminarily postulated relics we have also consulted a set of historical and etymological dictionaries of Polish (e.g., Słownik polszczyzny XVI wieku [Dictionary of 16th Century Polish]; Linde 1807–1814; Brückner 1927) and German (e.g., Wörterbuchnetz).<sup>16</sup> As already mentioned, there are no sources of historical Yiddish material like those listed above. A full list of sources is available as an addendum to the Online Dictionary of Slavic Borrowings in Yiddish.<sup>17</sup> Please note that contents of the dictionary are subject to change.

After collecting our data, supplemented by historical sources and word occurrence testimonies in scholarly literature, we started to connect the units into word

<sup>11.</sup> Available online: https://www.cs.uky.edu/~raphael/yiddish/searchOytser.cgi

<sup>12.</sup> https://www.jiddischwoordenboek.nl

<sup>13.</sup> http://www.eydes.de

<sup>14.</sup> http://web-corpora.net/YNC/search/

<sup>15.</sup> https://www.yiddishbookcenter.org/collections/digital-yiddish-library

<sup>16.</sup> http://www.woerterbuchnetz.de/cgi-bin/WBNetz/setupStartSeite.tcl

<sup>17.</sup> http://polonjid-dictionary.clarin-pl.eu/

families. For establishing and visualizing the connections between the collected units, as well as for the subsequent cross-linguistic mapping, we utilized tools used in the construction of "wordnets". Wordnets are digital databases of words of a single language grouped into synonym clusters and connected by various hierarchical semantic relations (Fellbaum 1998, 2014). Note that although our method was inspired by the general idea of wordnets as networks of lexico-semantic relations, they are not necessarily essential to perform our test.

Existing wordnets were used as sources of lexical and relational data for Polish – the postulated source language for the analyzed transferred lexemes and a representation of the Slavic component of Yiddish, German – the source of the majority of Yiddish core vocabulary, and English – an unrelated comparison language. It must be emphasized that the wordnets for the two listed component languages of Yiddish, i.e., German and Polish, made up of contemporary lexicon only, were also expanded by hand to include the historical vocabulary pertaining to our research. As opposed to its source and comparison languages, the historiclinguistic description of Yiddish is rather modest. There is no complete and comprehensive dictionary of modern vocabulary, let alone a diachronic one.<sup>18</sup>

Our own wordnet of Polish-origin words in Yiddish, created solely for the purpose of this project, has been structured according to our own needs, as explicated earlier in this section. Generally, it does not record hierarchical, conceptual relations between synonym sets, but rather derivational relations between monosemous lexical units. Thus, to sum up: each unit represents one sense of a specific word. These are connected with each other by the polysemy relation to visually form words. Each unit may also be connected to a derivationally and semantically related one, if available. Thus, word families are represented as networks. Every unit in the given family is also connected to a semantic equivalent in the other wordnets. In the case of Polish, the source language, these equivalent units are obviously also formally cognate most of the time. Thus, cognate word families in Polish may be recreated from data taken from plWordnet.<sup>19</sup> In contrast, the connection with data for German (from Germanet)<sup>20</sup> and English (from Princeton Wordnet)<sup>21</sup> shows how the same senses are expressed in other languages.

**<sup>18.</sup>** There are, however, more or less thorough descriptions of early literary works in Yiddish (e.g., Kerler 1999; Neuberg 1999; Timm 2005; Geller 2015) or academic studies on early Slavic vocabulary (e.g., Weinreich [1973] 2008; Wexler 1987, 2002; Gajek 2013; Moskovich 2013; Beider 2001, 2015) that make up a valuable source of historical lexical data.

<sup>19.</sup> http://plwordnet.pwr.wroc.pl/wordnet/

<sup>20.</sup> http://www.sfs.uni-tuebingen.de/GermaNet/

<sup>21.</sup> https://wordnet.princeton.edu/

# 3.2 The diagnostic test

Only after the full picture of the connections within the diachronically extended word family is established, can the process of cross-linguistic comparison begin. We compare word families through the procedure of "mapping", i.e., assigning the monosemous units from the recipient language to their semantic (and formal, if available) equivalents in the source language or another comparison language. For the sake of simplicity, we refer to the whole method as cross-linguistic mapping.<sup>22</sup>

# 3.2.1 Working hypothesis

Our lexical database, compiled into the *Online Dictionary of Polish Borrowings in Yiddish*<sup>23</sup> served as the basis for the development and validation of our method. The corpus consisted of some 1200 lemmas and 3600 monosemous units (senses).<sup>24</sup> Preliminary observations made during the elaboration of our research material have shown roughly two regularities, with three types of convergence between word families in the recipient and source language. These are:

- 1. Full or very high degree of lexico-semantic overlap:
  - with rich semantics and derivation in both the source and recipient language; type: y. *breg* '1. bank, shore, coast, 2. edge, brim of an object, 3. edge, border of an area, 4. hem' vs. P. *brzeg* 'idem',
  - 1b. with poor semantics and/or derivation in both the source and recipient language; type: Y. *belme* vs. P. *bielmo* 'cataract',
- 2. Minimal degree of overlap: rich semantics and/or derivation in the source language renders single or scant representation in the recipient language; type: Y. *večere* 'supper' vs. P. *wieczerza* 'dat. supper' (see §4.5.1 for details).

The initial observations described above have led us to the conclusion that the degree of convergence between respective families in the recipient and source language may be indicative of the two types of transfer: by (substratal) imposition,

**<sup>22.</sup>** Though technically speaking, "mapping" is merely the procedure of making the crosslinguistic connection between units. It is inseparable from the comparative process, therefore we took the liberty to metonymically call the entire method this way.

<sup>23.</sup> http://polonjid-dictionary.clarin-pl.eu/

**<sup>24.</sup>** It has to be noted that our aim in collecting the data was not completeness, but rather representativeness.

when the overlap is total or very extensive, or by (adstratal) borrowing when it is limited to single-unit or very scanty convergence.<sup>25</sup>

The basic criteria for stating one or the other type of transfer are rooted in several theoretical claims:

- 1. the idea of the "linguistic worldview" (cf. Głaz et al. 2013; Grzegorczykowa 2015), i.e., the language-entrenched interpretation of reality that is inseparable from a given group's culture (Stria 2018), and, as such, possibly more stable than lexical labels,
- 2. the cognitive-linguistic notion of "entrenchment", according to which words that are used frequently due to their importance are resistant to replacement and form the core vocabulary (Zenner et al. 2014),<sup>26</sup>
- 3. Zipf's law of meaning-frequency dependency, recently tested on several wordnets by Bond et al. (2019), according to which the most frequently used words tend to be the most diversified semantically,
- 4. the observation that loanwords derived from polysemous etymons typically take over only limited parts of their original semantic spectrum, that are available to the recipient-language speakers, while at the same time being necessary to fulfill their communicative needs; loanwords may then develop their own sets of additional meanings and distinct derivational patterns, if they are used frequently enough (cf. Fisiak 1970: 41; Nagórko 2007: 231; Gajek 2019: passim).

The need to verify the observations described above prompted us to develop the following procedure.

## 3.2.2 Procedure

Cases of full or very high degree of lexicosemantic overlap of families with rich semantics and derivation (type 1a above) are the most complex. They consist of large numbers of units forming intricate and wide-ranging networks. That is why they require an extensive diagnostic procedure, the steps of which will be demon-

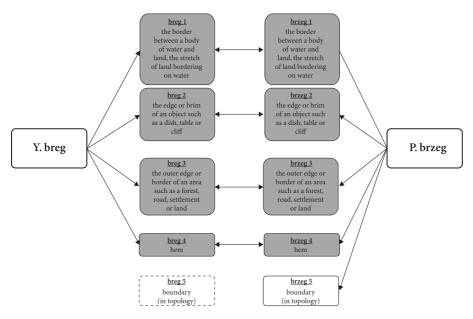
**<sup>25.</sup>** Naturally, it is theoretically possible to more precisely establish the degree of overlap, for example by proposing a percentage based on statistics of the successfully connected units in the recipient and source language in each case. At this stage of our research, however, we neither have the necessary technical resources, nor is our research material large enough to come up with reliable numbers of that sort.

**<sup>26.</sup>** This is corroborated by examples of Yiddish Slavicisms such as *nebex* 'unfortunate(ly)' which, according to Weinreich ([1973] 2008: 542), was so emotionally laden that it not only survived in Yiddish from the time when it was in contact with Judeo-Slavic languages, but was also retained in the English of former Yiddish speakers.

strated below with the example of the Yiddish lemma ברעג/*breg* 'shore, bank et al.', cognate to Polish *brzeg* 'idem':

#### a. Semasiological analysis

We start by establishing the number of monosemous units comprising a given transferred word in Yiddish and its cognate in Polish. We judge the degree of their semantic overlap by reviewing how many of their senses are identical or very similar in both languages.



**Figure 1.** The degree of semantic overlap between the transferred word Y. *breg* (represented as a set of monosemous units signifying each of its senses) and its source-language equivalent P. *brzeg* 

As mentioned above (§3.1), there are no sources that would allow us to include the diachronic semantics of v. *breg*. That is why, we were forced to limit ourselves to data derived from sources of modern Yiddish vocabulary (also listed above), when compiling the senses visible in the graphic. *Breg 5* is not attested, though one cannot deny its existence with absolute certainty. In contrast, the senses of P. *brzeg* were compiled from the most relevant dictionaries, representing all the stages of the language's development.<sup>27</sup> Older senses sometimes had slightly broader scope but the same essential semantic content has been retained to this day.

# b. Collocational analysis

Words show the nuances of their meanings only in connection with others. The comparison of semantic collocability in the recipient and source language is therefore of crucial importance for exploring their full semantics and the extent to which they have taken over parts of the source language's linguistic worldview. This information is encapsulated in idioms, proverbs, and typical ways of expression which are often idiosyncratic to a given language. A large degree of overlap within language-specific conceptual and lexical environments is an important indication of the historical status of a word. This step is especially significant while mapping lexemes of type 1b, when there are only one or two senses in both comparison languages to be connected. In such cases, collocational data constitutes an additional clue as to the postulated status of relic or loanword.

## c. Derivational analysis

The third step is to compare the word-formation patterns, potentials and productivity of the transferred word and its cognate. This is done by establishing how many of the former's derivatives have formal and/or semantic equivalents in the latter's word family, as illustrated in Figure 2.

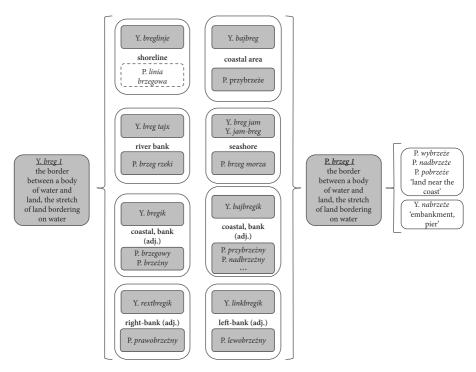
The graphic does not include specialist vocabulary, for the sake of transparency. Corresponding derivatives are placed in the middle. Dashed outlines denote derivatives that are not fully congruent in terms of word-formation patterns. Derivatives of P. *brzeg 1* that do not have attested equivalents in Yiddish are placed to the right.

## d. Onomasiological analysis

An additional fourth step is to compare the semantics and derivational patterns of the given Yiddish word of Polish origin with those of its equivalents in German, as illustrated in Figure 3. These languages were competing most actively with each other in forming the core vocabulary of Yiddish.<sup>28</sup> In particular, we are looking for contemporary and historical German cross-linguistic synonyms, i.e., words that share most or all the senses with the given Yiddish word. This is done to make sure that the relevant semantics was not derived from German.

<sup>27. &#</sup>x27;Słownik Staropolski' ['Old Polish Dictionary] (Urbańczyk and Deptuchowa (eds.) 1953–2014), 'Słownik polszczyzny XVI wieku' ['Dictionary of 16th Century Polish] (1966–2016), Linde (1807–1814); Doroszewski (1958–1965).

**<sup>28.</sup>** The subject of the sociolinguistic and linguistic competition between the Hebrew and Slavic component in making up the Yiddish lexicon is beyond the scope of this study, though it does constitute an important desideratum for further study.



**Figure 2.** The degree of derivational overlap of a part of the word family of v. *breg*, represented by just one of its monosemous units – v. *breg 1* – with its source-language cognate – P. *brzeg 1* 

Naturally, Polish also has partial synonyms to P. *brzeg*, such as *kraj*, *skraj*, *rant*, *kant*, *krawędź*, *granica*, *lamówka*, *borta* etc., some of which are of German origin (*rant*, *kant*, *borta*). Their existence, however, does not bear significantly on the discussion at hand, as it does not change the fact that the word's unique semantics is mirrored in v. *breg*.

#### 3.3 Limitations of the test

The requisites of our diagnostic test depicted above have been formulated for clear-cut cases under conditions of "all other things being equal". As every other method, it requires validation on larger datasets to fully establish its true capabilities. Therefore, its limitations also need to be addressed. They pertain to both the semantic nature of the transferred material and the incompatibility of the primary data sources. The potential constraints will be discussed further in detail in §5.

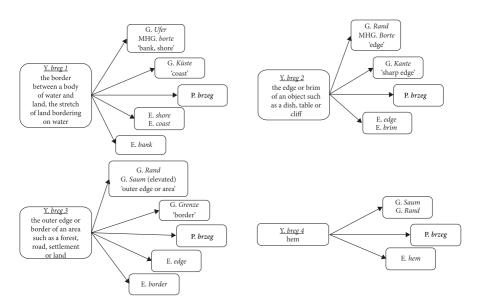


Figure 3. Cross-linguistic semantic comparison with Polish, German and English

# 4. Results

The results of such an extensive comparison of the lexical environments of a given word in the recipient and source language allow us to hypothesize that if

- a. the given word and its source-language cognate are nearly synonymous in all their senses (Figure 1),
- b. they show a high degree of collocational and conceptual similarity,
- c. they overlap significantly in their derivational patterns and productivity (Figure 2), and/or
- d. several different German words are necessary to account for all the senses (Figure 3),

then we can postulate that it is a relic rather than a loanword.

After performing our diagnostic test on the sample word – Y. breg < OP.  $br^{z}eg$  (P. brzeg) – we propose the following detailed findings.

# 4.1 Semasiological analysis

Both words are polysemous in their respective languages (see Figure 1). Y. *breg* has four different senses which are presented as monosemous lexical units *breg 1-4* in the database and described as follows:

- breg 1: the border between a body of water and land, the stretch of land bordering on water (G. *Ufer, Küste*, мнG. *borte*; E. *bank, coast, shore*)
- breg 2: the edge or brim of an object such as a dish, table or cliff (G. *Rand*, *Kante*; E. *edge*, *brim*)
- breg 3: the outer edge or border of an area such as a forest, road, settlement or land (G. *Rand, Grenze*; E. *edge, border*)
- breg 4: hem (in tailoring) (G. Saum, Rand; E. hem).

The four listed meanings of P. *brzeg* are basically identical. The fifth, modern and highly specialized one – 'boundary (in topology)' – could not be attested in either of the available Yiddish lexical resources (dictionaries, the thesaurus or the digital corpora). We can therefore say that the semantics of these two words is uncannily similar both quantitatively – the number of separate senses is very close – and qualitatively – an overwhelming majority of the senses describe the same conceptual entities.

As for the German equivalents, there is no one word, whether historical or contemporary, with a scope of meaning broad enough to cover all senses encapsulated under the label v. *breg*.

#### 4.2 Collocational analysis

In addition to the nearly complete semantic spectrum of P. *brzeg*, Yiddish also has a number of equivalent collocations, lexicalized in contemporary Polish. These include:

- a. common collocations, e.g., Y. breg (fun) tajx < P. brzeg rzeki 'river bank' (G. Flussufer), Y. breg fun daf < P. brzeg strony 'the edge or margin of the page' (G. Seitenrand), Y. ojfn breg (fun) < P. na brzegu 'on the edge/shore/bank/coast of' (G. am Rand/Ufer, an der Küste)</li>
- b. idiomatic expressions, e.g., P. *cušlogn cum breg* < P. *dobić do brzegu* (lit. 'hit to the shore') 'to reach the shore' (G. *die Küste erreichen*); Y. *opšlogn fun breg* < P. *odbić od brzegu* (lit. 'to hit from the shore') 'to leave shore' (G. *verlassen die Küste*)
- c. fixed prepositional constructions in adverbial function, e.g., Y. *fun breg cu breg < P. od brzegu do brzegu* 'all over, from edge to edge, coast to coast' (cf. G. *überall, landesweit*), Y. *bizn breg < P po brzeg* 'up to the brim' (cf. G. adj. *rand-voll* 'filled up to the limit')
- d. proverbs, e.g., Y. *ojfn breg fun opgrunt* < P. *na brzegu przepaści* 'on the brink of disaster, lit. on the edge of the chasm' (cf. G. *am Rande des Abgrunds* 'lit. on the edge of the chasm'), Y. *di štile vaserlex rajsn ajn di bregn* < P.cicha woda

*brzegi rwie* 'still waters run deep, lit. still water tares on the banks' (cf. G. *stille Wasser sind tief* 'lit. still waters are deep')

e. specialist expressions, e.g., y. *ibervarfn/aribervarfn breglex < p. obrzucić brzegi* 'to hem a cloth, lit. to throw the edges over' (G. *umsäumen die Ränder*).

Naturally, the congruence of such expressions does not mean that they were all taken over with the lexeme itself during the shift. They are often much younger. Their parallel occurrence in Yiddish indicates, however, that the lexeme was not only entrenched but also sensitive to the developments in Polish, the source language, from which it copied new expressions during the course of continued adstratal influence.

## 4.3 Derivational analysis

The lexemes Y. *breg* and P. *brzeg*, in all of their semantic profiles, are productive derivational bases in their respective languages. Their derivatives represent all the major non-nominal parts of speech, i.e., verbs (P. *obrzeżyć* – Y. *arumbregeven* 'to hem'), adjectives (P. *prawobrzeżny* – Y. *rextbregik* 'situated on the right bank of a watercourse') and adverbs (P. *bezbrzeżnie* – Y. *onbregik* 'limitlessly, without boundaries'). P. *brzeg* also has a significant palette of affixed nominal derivatives, e.g., P. *przy*|*brzeż*|*e* 'coastal area', *o*|*brzeż*|*e* 'margin', *bez*|*brzeż*|*e* 'infinity, limitless space', *brzeż*|*ek* 'hem + DIM', while Y. *breg* seems to have a limited number of attested examples: e.g., Y. *breg*|*l* 'hem + DIM', Y. *baj*|*breg* 'costal area'. Most nominal forms derived from Y. *breg* seem to fall into two categories:

- 1. synthetic constructions: based on the typical German compound pattern, where the determinans precedes the head (determinatum), with v. *breg* serving as both determinatum or determinans e.g.:
  - Y. *jam-BREG* < G. *Meeresküste* 'seashore' (determinatum)
  - Y. BREGlinje < G. Küstenlinie 'shoreline' (determinans)
- 2. analytic constructions replicating the Slavic pattern, where a determinatum (head) in the nominative is followed asyndetically by a determinans in the genitive oblique case. In this pattern, v. *breg* can only serve as the determinatum in nominative, e.g.,
  - Y. *BREG tajx* < P. *brzeg rzeki* vs. G. *Flussufer* = *Ufer des Flusses* 'the bank of the river'
  - Y. BREG vald < P. brzeg lasu vs. G. Waldrand=Rand des Waldes 'the edge of the woods'

Besides numerous affixes of Slavic origin, the use of both German and Polish patterns side by side may illustrate the competition between the two component languages in the area of word-formation morphology. The compound forms are apparently more numerous, though, being single lexemes, they are bound to be better represented in lexicographic works than asyndetic analytic forms, which may or may not be considered lexicalized. That being said, the Slavic-based nounnoun structures seem to be well established in the vocabulary of Yiddish – so much so that they have no compound alternatives such as x. \*tajxbreg or \*valdbreg. Ultimately, a solid corpus analysis would be necessary to determine which derivational pattern is prevalent. A cursory statistical comparison of alternative compound and asyndetic forms, such as x. *jam-breg* vs. *breg jam* 'seashore', in the Corpus of Modern Yiddish shows that this indeed may be the case. One other indication that the analytic form may be expansive comes from Weinreich ([1973] 2008: 532), who points out a tendency to break up compound words, e.g., *G. Schneiderscheere* > x. *šnajderše šer* 'tailor's scissors'.

Most other derivatives of Y. *breg* are near morphological calques of their source-language equivalents, e.g., Y. *baj*|*breg* – P. *przy*|*brzeż*|*e* 'coastal area', Y. *link*|*breg*|*ik* – P. *lew*|*o*|*brzeż*|*n*|*y* 'left-bank (adj.)', Y. *arum*|*breg*|*eve*|*n* – P. *o*|*brzeż*|*ać* 'to hem (a garment or cloth)', Y. *breg*|*l* – P. *brzeż*|*ek* 'hem + DIM.' Furthermore, these Slavic derivational patterns are not limited to Y. *breg* or Slavic-origin words in general, but seem to expand to other parts of the vocabulary. For example the expression of 'lacking' is realized by the prefix Y. *on*-, an equivalent of P. *bez*-, regardless of the given word's source language, e.g., Y. *on*|*bregik* < P. *bez*|*brzeżny* 'boundless', Y. *on*|*vejtogik* < P. *bez*|*bolesny* 'painless', Y. *on*|*vaserdik* < P. *bez*|*wodny* 'waterless'. At the same time, the typically German pattern with the suffix *-los* (e.g., G. *grenzen*|*los* 'boundless', *schmerz*|*los* 'painless', *wasser*|*los* 'waterless') is apparently underrepresented. In many cases, words that do contain it are considered "discouraged daytshmerisms" (Germanisms) in normative lexicography, e.g., Y. *end*|*loz* vs. Y. *on*|*endlex* 'endless' in Stuchkoff (1950).

Polish, however, appears to have a richer repertoire of derived forms. This may be attributed to several factors. First of all, there are typological differences between the languages in question. On the one hand, Polish seems to have a wider range of at least partly synonymous affixes. Compare, for example, the adjectives denoting proximity to a shore or bank: Polish has *przybrzeżny, nadbrzeżny, pobrzeżny,* as well as the dated form *wybrzeżny,* apparently all covered by just one v. equivalent – *bajbregik*. On the other hand, Yiddish has access to the German compositional patterns which takes part of the pragmatic load off of affixed forms, cf. v. *breg-policej* vs. P. *policja przy|brzeżna* 'coastal police'.

The second group of factors contributing to the apparent disproportion in the quantity of derivatives between Yiddish and Polish is extra-linguistic in nature.

Yiddish, being a vernacular minority language without so much institutional support, producing much less written material, is significantly under-described and under-attested in comparison to Polish. Existing lexicographic sources, as well devised and comprehensive as they may be, are normative in nature and based on the relatively small quantity of literary and press material, and as such, represent the Yiddish actually spoken in Eastern Europe only to a rather moderate degree. They are even less representative of lectal and, especially, historical varieties. This is further compounded by the lack of true native speakers of local varieties of the language. Because of this, one cannot dismiss the existence of specific derivatives with absolute certainty.

For the above-mentioned reasons, we believe that one should not readily assume that the difference in the quantity of derivatives between v. *breg* and P. *brzeg* invalidates the statement that the degree of derivational overlap between the two is high. Ultimately, most Yiddish derivatives are both formally and semantically close to their Polish equivalents, while some express the same concepts, albeit with different, language-specific word formation strategies.

The presence of a few forms that can neither be explained from Polish, nor from its competitor German (e.g., v. *ojsbregen* 'to hollow out [up to the edge]') does not change this either, in our opinion. A certain degree of autonomy in developing a transferred word's family is an obvious linguistic fact.

# 4.4 Onomasiological analysis

As already depicted in Figure 3, no German-derived word, whether contemporary or historical, covers all the senses of Y. *breg* and P. *brzeg*. At the same time, one has to note that some MHG. lexemes, such as *rant* or *borte*, were much closer in their scope of meaning to the lexemes under consideration. However, their Yid-dish cognates are limited only to specific senses of 'edge' and 'shore, coast, bank' respectively, which is consistent with the semantic limitedness of loanwords mentioned in §3. At the same time, they have also gradually specialized in German as modern G. *Rand* '1. edge, 2. outer area, 3. frame' and *Borte* 'in tailoring or fashion: border, edging, trimming'.

It is not surprising that neighboring languages, even if they differ typologically and genetically, share a certain spectrum of concepts, ideas and expressions. For some reason, however, none of the contemporary or historical German counterparts succeeded in driving out v. *breg* from the position of the hypernym of the entire semantic field of EDGE.<sup>29</sup> We may thus find within it some other words of

<sup>29.</sup> For the scope of the meaning of v. breg cf. Stuchkoff's thesaurus, §143 (1950:101).

German origin such as Y. *bortn, bort, zojm, rand, kant*, and even a hybrid, Y. *krant* < P. *KRAJ* 'border' + G. *RAND* 'edge', but they are all semantically narrower.<sup>30</sup>

Interestingly enough, v. *breg* must have been firmly rooted in the lexical system of Yiddish, as it apparently did not allow newer, German-derived synonyms such as *Ufer* 'shore' or *Küste* 'coast' to enter it. Certainly, their borrowing was still possible, as adstratal contact with German continued long after the inception of Eastern Yiddish. Nonetheless, Yiddish seems to be lacking any cognates of these two words. The German-derived inter-lingual partial synonym to v. *breg 1*, which denotes any type of 'border between land and water', is v. *bortn* < MHG. *borte*, a form that does not exist in modern German in this meaning anymore.<sup>31</sup>

Hence, we can say that v. *breg* has no German inter-lingual synonyms in the narrow sense of the term. It therefore appears that v. *breg* represents a conceptual network somehow different in its structure from anything found in German.

This shows that there is a deeper cross-linguistic connection between x. *breg* and P. *brzeg*. It appears, and is corroborated by the words' semantic overlap, that Yiddish shares with Polish also the better part of an entire conceptual frame.

To sum up the comparative analysis of the lexical environments of x. *breg* in the recipient language and its equivalent in the 'source language, we can formulate several important conclusions:

- a. The semantic overlap between the entire lexico-semantic complexes created around y. *breg* and P. *brzeg* is nearly total.
- b. The derivational overlap is also significant, though not as extensive as in the area of semantics due to typological differences and extra-linguistic constraints.
- c. The source-language word formation models are expansive or at least wellestablished.
- d. It has no historical or contemporary German equivalent with a similar degree of semantic and derivational overlap.
- e. y. *breg* belongs to the core of Yiddish vocabulary.

We can therefore claim that the word *breg* is (1) firmly rooted in Yiddish and (2) replicates the majority of the lexical features of its source-language cognate. This

**<sup>30.</sup>** The presence of this kind of hybrids might be a psycholinguistic indication of the semantic proximity of lexemes derived from two competing component languages.

**<sup>31.</sup>** Wexler (2002) was the first to propose that German words could have been blocked out of the lexicon of Yiddish by the Slavic substratum. He stated that: "German roots are blocked in Yiddish if (...) [Slavic] translation equivalents do not broadly overlap semantically" (Wexler 2002: 60). Regardless of his postulated theory on the origin of Yiddish, the novelty of Wexler's description of the process of "borrowing blockage" is appealing.

indicates, according to our criteria, that it was not borrowed from an external source but retained (with all of its semantic, lexical and structural features) from before the language shift that resulted in the Slavic substratum-induced changes in Yiddish.

A cursory application of the test to other words in our limited corpus indicates that there are other transferred lexemes that meet the requisites formulated above for relics, e.g., Y. *nude* < MP. *nuda* '1. nausea, 2. boredom'. Another revealing example is Y. *paše* '1. pasture, 2. feed, fodder'. It has not only conserved the historical and contemporary senses of P. *pasza* '1. pasture, 2. feed, fodder' (cf. G. *Weide* 'pasture', *Futter* 'feed, fodder'); its entire word family is congruent with that of the Polish equivalent in that it describes a large part of the semantic field of animal herding, cf. Y. *pastex* 'herder, shepherd' (P. *pastuch* 'herder, shepherd', G. *Hirte*), *pašen* '1. to pasture, 2. to feed, 3. to feed up' (P. *paść*, G. *weiden* 'to pasture', *füttern* '1. to feed, 2. to feed up'). Also, the entry of the equivalent G. *Hirte* 'herder, shepherd' into Yiddish vocabulary seems to have been blocked by Y. *pastex*.<sup>32</sup> Other promising examples are Y. *čerep*, *plejce*, *blote*, *cacke*, *kaše*, *praven*, *bobe*, *zejde*, *tate*, *mame*, and many others which need to be analyzed upon closer scrutiny.

#### 4.5 Verification

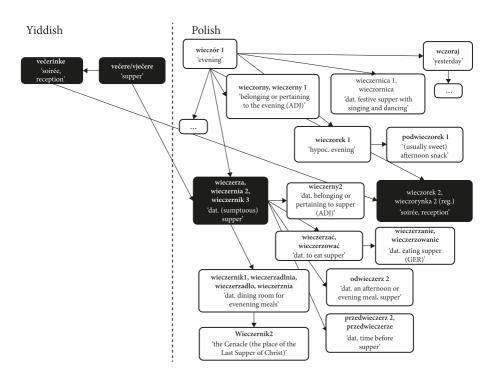
In order to validate the assertions from the previous section, we performed the same analyses on: (1) a Polish-origin word in Yiddish that had all the hallmarks of a loanword, (2) a word pair from another language contact setting – in this case a potential Slavic relic in German and its Polish cognate.

#### 4.5.1 Testing on a sample Polish loanword candidate in Yiddish

In order to demonstrate a non-obvious negative result of our test, we have chosen v. *večere* 'supper' from among the many loanwords in our database. It is as common in Yiddish as the above-analyzed relic v. *breg* and also belongs to the Yiddish core vocabulary. The graphic below (Figure 4) visualizes the striking asymmetry in the lexico-semantic networks in the recipient (v.) and the source (P.) languages.

Stemming from OP. *wieczer<sup>ž</sup>a* 'evening meal', it is now the basic Yiddish label for supper, hot or cold. Its modern Polish cognate, P. *wieczerza* 'dat. (often lavish) supper', is a practically outdated and marked word. However, as a derivative of P. *wieczór* 'evening', it is historically a part of a large word family, central to the Polish lexical system. Without this etymological link, Y. *večere* does not have such a

**<sup>32.</sup>** Besides, v. *paše* has also been noted by Weinreich ([1973] 2008:560) as an older form updated to conform to modern Polish norm in the Polish-Yiddish dialect: v. dial. *puše* > v. dial. *paše* < P. *pasza*.



**Figure 4.** Minimal degree of overlap (corresponding units marked in black) between the word families of v. *večere* 'supper', a 'loanword candidate in Yiddish, and P. *wieczerza* 'dat. supper' (parts of the word family of P. *wieczerza* have been omitted for lack of space)

direct connection to a word denoting the late hours of the day. This concept is realized by the German-derived Y. *ovnt* < MHG. *âbent/âvent* (G. *Abend*) 'evening' and there are synonyms of Y. *večere* based on that root too: Y. *ovntbrojt* vs. G. *Abendbrot* 'lit. evening bread' and *ovntesn* vs. G. *Abendessen* 'lit. evening eating'.

While v. *večere* only really indicates the late/evening time of the meal, its synonyms, formed as German-based compounds, are more specific in denoting the activity (eating) or the type of dishes consumed (bread). It seems then that the Polish-origin word is handy as a simplex form with a more general meaning, expressed in German by the word G. *Abendmahl* 'evening meal'. In Yiddish, the related form v. *ovntmol* is practically not noted.<sup>33</sup> This may have been caused by the strong Christian religious connotations of *Abendmahl* in German which, roughly since the time of Martin Luther, has come to directly reference the Holy Sacrament, thus likely making it taboo for Jews. In Polish the Christian connotations of

**<sup>33.</sup>** It only appears in the *'Grojser verterbux fun der jidišer šprax* (Yudel 1961) without any usage examples but is otherwise absent from both dictionaries and corpora.

P. *wieczerza* are much weaker, expressed exclusively in collocations such as *wieczerza Pańska* 'the Lord's supper' or *ostatnia wieczerza* 'the Last Supper'. Thus, the meaning of the word itself has remained general. Besides, P. *wieczerza* had until relatively recently been the basic Polish word for 'supper', replaced in that role by P. *kolacja* 'supper' < L. *collatio* '1. placing or putting together, 2. shared meal'.

As already indicated, P. *wieczerza* belongs to an etymologically and metonymically developed word family and has itself produced a relatively significant number of derivatives (see Figure 4). In comparison with its source language cognate, Y. *večere* comes out rather poorly. There seems to be only one etymologically connected word – Y. *večerinke* 'soirée, reception' < P. *wieczorynka* 'reg. idem'. Both these Yiddish words have the same etymological root but they were likely borrowed separately.<sup>34</sup>

In contrast, v. *večere*, while not part of a large word family, figures in relatively numerous sayings, proverbs, and other idioms, e.g., v. *zojre večere* 'unplesant situation', *kox ix a gute večere, trogt on der ruex dem tatn* 'there is always someone who will take advantage of your effort', *az men lejgt zix on večere iz niderik cukopns* 'if one goes to sleep without supper, one will not sleep well'. It is worth noting that, as opposed to v. *breg*, nearly all collocations with v. *večere* seem to be expressions of internal Yiddish concepts and metaphors, without equivalents in the source language Polish that would involve P. *wieczerza*.

The above analysis shows that v. *večere*, though clearly as much at home in Yiddish as v. *breg*, overlaps only slightly with its Polish cognate in terms of semantic (including collocations) and derivational interconnectedness, as visible in Figure 4. Therefore, it may be considered a loanword, rather than a relic.

#### 4.5.2 Testing on Slavic relics in German

There was a similar case of long-lasting contact to that which existed during the rise of Eastern Yiddish, on the German-Polish language border. Here one can observe a language shift by the local Slavic minority to the speech of the German majority and state, with Polish as substratum and German as the lexifier.

We have tested our method on the word G. *Grenze* 'border' which is considered an old Slavic loanword in German whose route of transfer is lost in history (Bellmann 1971:228–231, Bielfeldt 1982:28–29). There were, however, areas of German colonization and/or conquest in Lusatia, western Poland and Bohemia, where parts of the formerly Slavic-speaking population shifted to German in the Middle Ages. In principle, this could have resulted in the retention of some Slavic

<sup>34.</sup> P. *wieczorynka* in the sense 'soirée, reception' is a dialectal (Eastern Polish) and dated expression for P. *wieczorek*. Modern standard Polish uses P. *wieczorynka* exclusively as the name of a goodnight TV show for children.

relic words of which G. *Grenze* could be an example (cf. MHG. *granize* vs. P. *granica* 'border'). Our analysis has revealed some striking similarities to the relations between Y. *breg* and P. *brzeg*. Since a detailed description of this analysis would essentially repeat most of what was written about Y. *breg*, we shall limit ourselves to presenting its final conclusions.

The degree of semantic overlap is almost identical as in the case of v. breg -P. brzeg. Almost all the major senses of G. Grenze and its Polish cognate seem congruent, be they current or historical. Only the more specialized ones differ. Derivationally, both words are also productive in all their semantic profiles. Polish seems to be significantly richer than the recipient language.<sup>35</sup> The overwhelmingly larger number of derivatives on the side of P. granica may also be explained by typological differences, which are more significant than between Polish and Yiddish. Polish again shows a wider range of synonymous affixes - cf. the adjectives denoting proximity to the border: G. grenz|nah vs. p. po|graniczny, przy|graniczny, nad|graniczny 'situated or otherwise located close to the border'. On the other hand, even more so than Yiddish, German expresses through composition many of the concepts for which Polish builds phrases with affixed words, e.g., G. Grenzzone - P. strefa przy|graniczna 'border zone'. Generally, German is more autonomous from the source language in the choice of morphological means of derivation, e.g., G. grenz|en|los vs. P. bez|granicz|n|y 'boundless, limitless'. Hence, there are not as many calques as in Yiddish, which had borrowed or inherited many Slavic word formation patterns that have become a productive part of its system. Most German derivatives, however, have semantic equivalents within the family of P. granica. Also, more bases for morphological calques can be found in Polish historical vocabulary, e.g., G. aus|grenzen vs. MP. wy|graniczać (P. wykluczać) 'to exclude, ostracize'.

Just as with Y. *breg* and P. *brzeg*, G. *Grenze* shares a number of prominent collocations with its Polish equivalent. Examples include: G. *die Grenzen weitern* vs. P. *rozszerzać granice* 'to expand the borders', G. *sich Grenzen setzen* vs. P. *stawiać sobie granice* 'to set limits for oneself', G. *(alle) Grenzen überschreiten* vs. P. *przekraczać (wszelkie) granice* 'to break all limitations', G. *alles hat seine Grenzen* vs. P. *wszystko ma swoje granice* 'there are limits to everything'.

There is, however, a caveat to these semantic conclusions. Namely, extensively shared lexical parallels in both languages, the former source language (Polish) and the recipient language (German), are certainly in part due to pervasive political and cultural contact (adstratal influence) between the speakers of the two idioms. Some of the collocations are probably loan translations from German into

**<sup>35.</sup>** This time however one cannot put this down on the lack of linguistic documentation and extra-linguistic impairments to the popularization of new words.

Polish, because of the higher prestige and political power of the former during their common history. It has to be noted that the same applies to Polish-Yiddish contact. Here too, adstratal influence followed the language shift. The difference was that for Yiddish, Polish played the model role in shaping the lexis due to prestige.

#### 5. Discussion

In conclusion, we can clearly see similarities in the degree of semantic and derivational overlap of the cognate pairs Y. *breg* – P. *brzeg* and G. *Grenze* – P. *granica*. Additionally, the fact that Polish and German vocabulary is significantly better documented diachronically than that of Yiddish allows us to put forth another argument for the relic status of *Grenze*. Namely, some of this word's derivatives do not have formal equivalents in contemporary Polish. However, an analysis of historical Polish vocabulary reveals that they may in fact be calques of older words. This is consistent with the notion of lexical relics conserving, to a degree, the shape of a word family more or less as it was used by the population that underwent the language shift. That being said, it must be reiterated that not all derivatives of a relic are relics themselves.

Despite this, German still differs significantly from Polish in the morphological strategies of derivation, much more so than Yiddish. This can be explained by the relative autonomy of the languages. Yiddish was, for most of its history, under the influence of co-territorial Polish and other Slavic languages and has taken over a very significant amount of word formation models from them. German, on the other hand, developed on its own territory, without significant external Slavic input. The fact that, at the same time, so many derivatives of G. *Grenze* have semantic equivalents developed from P. *granica*, may indicate that the formal overlap in word-formational strategies may not be as indicative of a given word's relic status as the general conceptual relatedness of units in the respective word families in the source and recipient language.

Nevertheless, we can conclude that our test can be reproduced on presumed relics in other languages than Yiddish. Therefore, we propose "wordnet-based mapping" as a new method for the contact-linguistic study of the lexicon.

# 5.1 Cross-linguistic mapping – a new proposal for lexical borrowing studies

The implementation of mapping, i.e., juxtaposing, comparing and visualizing different lexical relations within the recipient and source language, introduces a three-dimensional perspective to lexical borrowing research. The traditional

approach to this subject was based around the notion of integration – a diachronic process of enabling and optimizing the functioning of a given word in the recipient system. This perspective was limited to the punctual analysis of the development of specific transferred words, which constituted the first of its dimensions. Conducting it on a significant number of words allowed for the description of emergent reactions of the recipient linguistic system to foreign elements – this was the second dimension. By allowing for the projection of the internal network of a given lexeme's derivational and semantic connections onto those of its equivalent (cognate) in the source language, mapping introduces a third dimension. It allows for studying the interaction of structures within the wider lexical systems of the source and recipient language. We believe that, without invalidating the traditional methods of lexical borrowing research, mapping may open the way to new findings in contact linguistics, a case in point being the identification of lexical relics as detailed in the previous section.

# 5.2 Limitations of mapping as a method

As with every scientific method, mapping does have its specific limitations. These are as follows:

# 5.2.1 Material limitations

One problem related to the quality and quantity of available linguistic material has already been discussed at length under §4.3 above – the incompleteness of the documentation of Yiddish, especially in its lectal and historical variants. In comparison with more established national languages, the catalogued and described vocabulary of Yiddish does not allow us to see the complete picture of the language as it was truly spoken. There are also no corpora comprehensive enough to properly measure the frequency of use of specific words.<sup>36</sup>

# 5.2.2 Technical limitations

Another problem lies with the wordnets that we have used as sources of non-Yiddish data for our research. The available wordnets are not entirely compatible due to: (a) different design philosophies, which result, for example, in the inclusion of different relation types, (b) different degrees of completeness, (c) differences in the granulation and evaluation of senses and (d) lack of a diachronic perspective – the available wordnets represent synchronic images of modern

**<sup>36.</sup>** Only recently, The National Yiddish Book Center has also made their OCR collection of literature searchable online (https://ocr.yiddishbookcenter.org/). Its search capabilities, however, are very limited at this moment.

languages. All this indicates the need for supplementary lexicographic queries. Despite these hurdles, wordnets do help in the process of collecting, connecting and visualizing data; though it must be emphasized that they are not indispensable for conducting diagnostic tests.

# 5.2.3 Lexicological limitations

There are quite a few transferred words that derive from items that, for various reasons, are semantically and derivationally undifferentiated already in the source language (type 1b under §3.2.1 above). Nevertheless, one must also consider the possibility that such words had survived as relics. This is a limitation of the methodology presented herein, which is best suited to differentiate between loanwords and relics among polysemous words with rich derivation. Therefore, in such cases, it becomes crucial to apply an additional criterion for determining the status of relic, namely the comparison of the collocational environments of the given transferred word and its cognate in the source language. A high degree of similarity between the two shows that not only the word itself, but also parts of its semantic frame, were taken over. Such a case would be the word y. belme/bjelme 'cataract.'37 The situation is different with specialist and cultural terms, function words and discourse markers. Especially the latter two types, such as y.  $xo\check{c} < P$ . *choć* 'although', or *nebex* 'poor thing!' < OCZ. *neboh* 'unfortunate fellow' may be very old, in fact they may very well be relics, but are semantically and derivationally limited. In such cases even collocational analysis will be of limited use. However, according to Zipf's law of meaning-frequency dependency, the most frequently used words are also the most diversified semantically. And it is hard to imagine that a word would have survived as a relic for hundreds of years if it were not frequent. This allows us to postulate that semantically underdeveloped relics must be rare, limited for the most part to function words and discourse markers (including exclamations), which are frequent by nature.

## 6. Conclusions

Loanwords rarely carry over an exhaustive, let alone complete, set of the original word's semantic and derivational relations into the new systemic environment/ lexical network (e.g., v. *večere* 'supper'). Words are borrowed usually in one particular meaning to meet the specific communicative needs of the speakers. It could be a lexical, semantic or stylistic gap in the lexicon or a pragmatic opening

**<sup>37.</sup>** It has been testified in the oldest known Eastern Yiddish source (Geller 2013, 2015), as well as earlier Hebrew-language sources that included Judeo-Slavic glosses (Kupfer & Lewicki 1956).

in the recipient language's system. In these circumstances such a word, i.e., its meaning and structure, is integrated into the system of the recipient language. If, however, we can observe a very high level of overlap of the semantic and derivational features in the source and the recipient languages (e.g., Y. *breg* and P. *brzeg* or G. *Grenze* and P. *Granica*), we are inclined to claim that the transferred lexical material was not borrowed but imposed and belongs to the substrate layer of the lexicon. In fact, such a word never moved from where it was, retaining its semantic and derivational features in the new lexicon of the shifting people, making it a lexical relic.

An additional argument for the substratum (relic) status of a word is the lack of close synonyms within the recipient language. Relics are often the only words that describe specific phenomena in a particular way (e.g., Y. *breg, pastux, nude, motike, belme*). Because of their idiosyncratic meaning or importance for the shifting community, they could have firmly occupied their position in the lexicon, while at the same time blocking the entrance of similar lexical items from the new language, either at the moment of shift or later. This happens especially because the meaning of the latter does not cover the entire scope of the original lexical item's semantic relations within the vocabulary (P. *brzeg* vs. MHG. *borte* and G. *Ufer* > Y. *breg*; OP. *granica* vs. MHG. *marke* > G. *Grenze*) or is otherwise incapable of fulfilling the desired communicational functions.

Considering the results of our test, we claim that using the method of mapping the recipient language onto the source language will help to delimit the substratum and adstratum layers among Yiddish words of Slavic origin, where they were (often erroneously) assigned to the general category of borrowings.<sup>38</sup> This allows us to formulate the following three requisites for claiming the relic status of a transferred word:

- a. All (or most) senses of the lexeme in the source and recipient language are congruent and there is overlap between entire lexico-semantic complexes created around them; this pertains to words with both rich (Y. *breg*) and poor (Y. *belme*) semantics.
- b. There is significant convergence in derivational patterns (including the structures of fixed expressions) or at least in derivative semantics.
- c. There are no cross-linguistic equivalents or synonyms coming from the target language of the shift that would cover the same scope of senses. The fact that the word under study belongs to the core vocabulary and some partial

**<sup>38.</sup>** Cf. Beider (2013: 106 fn. 34): "substratal elements represent a particular example of 'borrowing' and therefore correspond – according to the Language Tree Model – to horizontal links between languages. They are borrowed during a shift of a population group from one language to another."

synonyms apparently were blocked out by it or its derivatives is an additional confirmation.

Of course, language rarely conforms to rigid typologies and strict rules, therefore these requisites should be treated, to a degree, as guidelines, rather than absolute requirements, before they are tested on large datasets. However, we believe that the proposed diagnostic test allows for a more solid differentiation between acquired and inherited vocabulary. We also hope that it will prove applicable in the studies of other contact situations. In addition, such an analysis of contemporary language data can also provide linguistically founded insights into the histories of speech communities in contact.

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#### Abbreviations and other markers

- unattested, non-existent or reconstructed form
- adj. adjective
- dat. dated
- dial. dialectal
- DIM. diminutive
- f. feminine gender
- G. German
- Gen. genitive case
- GER. gerund
- н. Hebrew

hypoc.	hypocoristic
L.	Latin
lit.	literally
m.	masculine gender
MHG.	Middle High German
MP.	Middle Polish
Nom.	nominative case
OCZ.	Old Czech
OP.	Old Polish
Р.	Polish
reg.	regional
Υ.	Yiddish

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# Lehnwörter oder Relikte: Eine neue Methode in der Lehnwortforschung veranschaulicht am Jiddisch-Slawischen Sprachkontakt

#### Zusammenfassung

Eine der zentralen Fragen der historischen Sprachwissenschaft sowie der Kontaktlinguistik ist die Unterscheidung zwischen ererbtem und erworbenem Wortschatz einer Sprache. In dieser Hinsicht sind beide Disziplinen letztendlich gezwungen, auf Mutmaßungen zurückzugreifen. Ziel dieses Beitrags ist es, eine neue Methode vorzuschlagen, die bei der Identifizierung vermeintlicher Reliktwörter aus der ehemaligen Substratsprache hilft und diesbezügliche Behauptungen untermauern soll. Wir untersuchen diese Frage am jiddisch-slawischen Sprachkontakt, bei dem kontaktbedingte Sprachveränderungen noch relativ gut sichtbar und transparent sind. Hierfür verwenden wir die *Mapping*-Methode, die auf der Projizierung der lexikalischsemantischen Relationen eines übernommenen Wortes in der Nehmersprache auf dieselben in seiner Gebersprache beruht. Dies geschieht mit Hilfe von *Wordnets*, digitalen Netzwerken lexikalischer Entitäten, die durch lexikalisch-semantischen Relationen verbunden sind. Diese Methode erlaubt es, empirische Daten aus zeitgenössischen Quellen mit historischer Analyse zu kombinieren.

# Les emprunts vs les survivances: Une nouvelle méthodologie dans les études sur les emprunts lexicaux à l'exemple du contact linguistique yiddishslave

#### Résumé

En linguistique historique et en linguistique de contact une des questions les plus importantes concerne la distinction entre le vocabulaire hérité et le vocabulaire emprunté. Pour répondre à cette question, la linguistique historique traditionnelle aussi bien que la linguistique de contact moderne se réferent aux inférences. Le présent article propose une nouvelle méthodologie afin d'identifier des survivances observées dans le lexique et qui va corroborer nos conclusions. Notre étude concerne le contact linguistique yiddish/slave, dans lequel les changements sont relativement transparents et clairs. Dans notre analyse, nous nous servons de la méthodologie du *mapping* des relations lexicales et sémantiques des lexèmes transférés se trouvant dans la langue réceptrice jusqu'à la langue source en utilisant des *wordnets*, c'est-à-dire des réseaux numériques de données lexicales reliées entre elles par des relations lexicosémantiques. Cette méthodologie permet d'associer les données empiriques tiréesde sources contemporaines avec une analyse historique linguistique.

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