Digital Approaches to Akkadian Semantic Analysis: A Case Study on the 'Foreign Other'

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Abstract

The current trend for open data allows online access to thousands of Akkadian texts. This substantially changes the way, linguistic, philological, and socio-historical research on ancient West Asia is undertaken. One outcome of the easy access is a much decreased usage of the major Akkadian dictionaries. Based on a specific case study, the semantic field of 'the foreign other,' I showcase the immense potential of the digitized versions of the *Chicago Assyrian Dictionary* (CAD) and the *Akkadisches Handwörterbuch* (AHw) for accessing ancient data on socio-historical issues. Even a basic search including one feedback loop yields more than 80 different ways of expressing 'foreign otherness' via synonymic lexemes, negated antonyms, compounds and circumscriptions as well as structural means and oblique references. However, the workflow for accessing the dictionary data is exceedingly labourious in its currently available print and digitized formats. Here, the currently available online tools have many advantages, especially regarding performance issues, in part also with regard to content access. By exemplifying the

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advantages and limitations of the various online tools and the potential of using them in tandem with the major dictionaries, I highlight how the combination of the various assets could benefit the design of the new digital *Leipzig Akkadian Dictionary.*

Key-words: Lexicon; Methodology; Online tools; Foreign other; Semantic domain; Akkadian

Enfoques digitales para el análisis semántico del acadio: un estudio de caso sobre el 'otro extranjero'

Resumen

La tendencia actual hacia los datos abiertos permite el acceso en línea a miles de textos acadios. Esto cambia sustancialmente la forma en que se lleva a cabo la investigación lingüística, filológica y socio-histórica sobre la antigua Asia occidental. Una de las consecuencias de este fácil acceso es una disminución considerable del uso de los principales diccionarios de acadio. Basándome en un estudio de caso específico, el campo semántico de 'el otro extranjero', muestro el inmenso potencial de las versiones digitalizadas del *Chicago Assyrian Dictionary* (CAD) y el *Akkadisches Handwörterbuch* (AHw) para acceder a datos antiguos sobre cuestiones socio-históricas. Incluso una búsqueda básica, que incluye un ciclo de retroalimentación, arroja más de 80 formas diferentes de expresar la 'otredad extranjera' a través de lexemas sinónimos, antónimos negados, compuestos y circunloquios, así como a través de medios estructurales y referencias indirectas. Sin embargo, el proceso de acceso a los datos de los diccionarios es extremadamente laborioso en sus formatos disponibles, tanto impresos como digitalizados. En este sentido, las herramientas en línea actualmente disponibles presentan numerosas ventajas, especialmente en lo que respecta al rendimiento, y en parte también al acceso al contenido. Al ejemplificar las ventajas y limitaciones de las diversas herramientas en línea y el potencial de su uso en conjunto con los principales diccionarios, destaco cómo la combinación de los diversos activos podría beneficiar el diseño del nuevo *Leipzig Akkadian Dictionary* digital.

Palabras clave: Léxico; Metodología; Herramientas en línea; Extranjero; Dominio semántico; Acadio

1   Introduction

Huge efforts have been invested in the last 150 years to facilitate access to the written records of the Ancient Near East and thus the ancient mind. Throughout most of the late 19th and 20th c. this was promoted especially through basic text edition and dictionary work. Principally since the 1960s, one strand of Assyriology (Liverani *et alii*) has questioned whether it is possible to get at an emic perception at all and stressed the need to consider and highlight the influence of the scholars' etic viewpoint on the interpretation of the data[1]. This resulted in an incentive to address the available data from social and cultural sciences perspectives[2]. One of the responses of another strand of Assyriology (Parpola et *alii*), especially since the 1980s, has been to make use of computational means for compiling and processing the data, especially in the context of text editions[3]. Since the

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[1]See, e.g., the curated collection of translated papers by Liverani edited by Lemche and Pfoh (Liverani 2021), and his seminal introduction into ancient Near Eastern history, society, and economy (published in Italian in 1988; in English in 2014; see especially the introduction, Liverani 2014: 3–33).

[2]Characteristically, the strongest impact, especially in connection with the topic of this paper, can be witnessed in 2nd millennium studies (see, e.g., the recent volume on "a stranger in the house"; Mynářová et al. 2019) and in 2nd to 1st millennium Levantine studies (e.g., recently, Trinka 2022); this is strongly reflected also in the composition of the social scientific theory and applications team of ANEE (University of Helsinki). The impact on 1st millenium Mesopotamia studies is much more limited; see, however, already early on, e.g., Zaccagnini 1982 and Fales 1982 (on different aspects of the enemy construction in the Neo-Assyrian royal inscriptions), Zaccagnini 1983 (on patterns of mobility); recently Wasmuth 2022 (on alterity as a research approach including the application to a Neo-Assyrian case study).

[3]See especially the *State Archives of Assyria* series (SAA; including their online version in ORACC), the *State Archives of Assyria Studies* series, the *State Archives of Assyria Bulletin*, and the *Prosopography of the Neo-Assyrian Empire* (Parpola et al. 1998–2011). From the beginning in 1986, the aim was to compile the data in a digital database for further processing (https://assyriologia.fi/natcp/; last accessed 31 Okt 2025). Consequently, the SAA volumes were among the first corpora to be included in the online text repository ORACC (Open Richly Annotated Cuneiform Corpus; see below). Another response has been to develop a philological-historical approach, which focuses on deep reading of the texts, in contrast to the quantity focus characterizing the digital approach, and their detailed contextualization in the contemporary and earlier text traditions; see characteristically early on Postgate 1976, recently Faist 2020; with specific relevance to the topic at hand, e.g., already Veenhof 1972. The difference becomes very obvious when comparing the SAA volumes of the Helsinki Neo-Assyrian Text Corpus Project with their full scope of textual data, but minimal text commentary, and the

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2000s this has been taken to a new level, especially with the development of the major online reposita[4] and with the recent focus on social network analysis[5]. One of its latest developments comprise the efforts of the Finnish Centre of Excellence in Ancient Near Eastern Empires (ANEE: Team 1) in collaboration with the Finnish Language Bank to create digital tools aimed at accessing the ancient emic point of view via language technology[6].

Drawing on a research focus situated at the juncture of the philological-historical, archaeology-, and social sciences-inspired branches of the field[7], this paper takes up the challenge to evaluate key products of the traditional dictionary and the recent computational big data approach from a sociocultural-historical user perspective. The chosen case study is the ancient perception and presentation of the 'foreign other', starting point the digitized versions of the two major Akkadian dictionaries, the *Akkadisches Handwörterbuch* (AHw) and the *Chicago Assyrian Dictionary* (CAD). As will be seen, their potential is enormous – and currently far beyond the search result scope of other digital tools created for the purpose like *ORACC*, the online repository for Akkadian (and other cuneiform) texts hosted by the University of Pennsylvania, the online search tool *KORP* developed and maintained by the Finnish Language Bank and adapted for Akkadian language searches in collaboration with the Finnish Centre of Excellence in Ancient Near Eastern Empires (ORACC in KORP), the online graphic semantic dictionary *Lexical Portal of Akkadian* devised and implemented by the Centre, or the digital (not only digitized) versions of the *Concise Dictionary of Akkadian* (CDA), the *Electronic Supplement to the Akkadian Dictionaries* (eSAD), or the dictionary function of the *Electronic Babylonian Library* (eBL).

Even a basic search across the AHw and CAD volumes focusing on the basic terms "fremd – foreign, strange, alien" (plus one feedback loop)

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commentary-focused editions from the Berlin Assur project (e.g., Faist 2007; with the exception of Parpola and Donbaz 2001, which follows the Helsinki model). For a response somewhere in-between both strands see, e.g., Radner 1997.

[4]Originally especially the Cuneiform Digital Library Initiative (CDLI) and the Open Richly Annotated Cuneiform Corpus (ORACC), by now many more. For a non-exhaustive overview of online resources, see https://iaassyriology.com/online-resources/.

[5]See, e.g., Waerzeggers 2014 (especially conceptual and methodological concerns); Jauhiainen and Alstola 2022 (processing of a data set); Baderschneider 2021 (topical analyis of the Assur temple personnel).

[6]See, e.g., Svärd et al. 2018; see especially below.

[7]See, e.g., Wasmuth 2021, Wasmuth 2022, Wasmuth forthcoming.

yields more than 80 different ways of expressing 'foreign otherness' via synonymic lexemes, negated antonyms, compounds and circumscriptions as well as structural means and oblique references. Thus, AHw and CAD produce thrice as many lexemes as the other discussed online tools combined. In addition, they allow access to other strategies for expressing 'foreign otherness,' which arguably were even more prominent in ancient lived realities than the lexemes and are not (or at best very marginally) picked up by the other tools. On the downside, the workflow for accessing the dictionary data is exceedingly labourious in its currently available print and digitized formats. Here, the online tools have many advantages, especially regarding performance issues, in part also with regard to content access. In consequence, a case-study based comparison of the advantages and disadvantages of the various tools for accessing the ancient mind —or at least the Akkadian lexicon— yields important insights into the potential pitfalls, but especially the huge added value of turning the two major dictionaries into an integral digital dictionary as proposed for the *Leipzig Akkadian Dictionary* (2025–2042)[8].

2   The digitized versions of CAD and AHw: processing concerns

The first step in this survey of digital tools is to assess the potential of the two major Akkadian dictionaries, the AHw and the CAD, the traditional lexical tools for Assyriologists, in their digitized format of OCR-ed scans.

2.1   Tool-specific characteristics

Despite their substantially different scope —the CAD with its 25 volumes is roughly nine times larger than the three-volume AHw— both utilize similar approaches. They aim at relative comprehensiveness, provide detailed information on grammatical forms, translations (meanings), and attestations of the cited lexemes both in the cuneiform lexical tradition, i.e., the lexical lists, and in various genres of Akkadian texts. They are, however, intrinsically neither comprehensive nor up to date, despite their huge scope of provided information. This is characteristic of all the tools presented here,

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[8]https://www.gkr.uni-leipzig.de/altorientalisches-institut/forschung/leipzig-akkadian-dictionary (last accessed 21 Nov. 2025)

albeit for different reasons. For a suggestion of how a digital dictionary could (and in my opinion should) stay up to date see below.

The Akkadian/German AHw was created within a relatively short time frame (c. 30 years, 1949–1981) by a limited group of authors[9], and is consequently based on a relatively consistent corpus of sources, methodology, and research outlook for all entries. As set out in the preface of volume I and the postface of volume III, the aim of the work was never to give a comprehensive overview of all attestations of a given word nor to provide the complete corpus of Akkadian lexemes. Instead, the aim was a deliberate compromise between compactness and comprehensiveness, covering more or less the full scope of genres and time periods within the core region of Akkadian text production, but providing only selected source references and these only with strongly reduced context quotes or paraphrasing. According to his own statement, Wolfram von Soden aimed at a largely complete corpus of lexemes of confirmed meaning as reflected in the already edited texts at the time the dictionary being created[10]. For lexemes already published by the time in CAD, one criterion for choosing the sample source quotes was to complement the evidence presented in CAD[11]. In general, the explicit idea underlying this "concise dictionary (Handwörterbuch)" has been for Assyriologists to check the CAD for additional source references[12].

In contrast, the Akkadian/English CAD aimed, ideally at least, at a much higher level of comprehensiveness, both regarding the scope and the presentation of the sources. This inherently required more time and a much larger group of collaborators[13]. Thus, the project, which was started already

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[9]Main author (and editor) is Wolfram von Soden, who drew heavily on previous work by Bruno Meissner, especially on his annotations of earlier dictionaries and papers and on a partial root-oriented dictionary manuscript (b, g, d, w, z, ḫ, ṭ, j, k, half of l; worked out in detail by Erich Ebeling, Gerhard Meier, and Ernst Weidner). Major help in cataloguing and compiling source quotes has been provided by Rykle Borger, Wolfgang Röllig, Dietz Otto Edzard, Willem G. Ph. Römer, Joachim Krecher, Hermann Hunger, and Gabriella Guidi; for help with handcopies and collations Wilfred G. Lambert and Jørgen Lassøe are mentioned by name. See *AHw* I.i-ii (Vorwort zu Band I; Wien, im Okt. 1958), AHw I.568 (Nachwort zu Band I; Münster, im Okt. 1964), *AHw* II.[n.p.] (Nachwort zu Band II; Münster, im Juli 1972), *AHw* III.vii–viii (Nachwort zu Band III; Münster, im März 1981). See also Maul 2009.

[10]AHw I.i-ii, AHw III.vii-viii.

[11]AHw I.i-ii.

[12]AHw III.vii (section 1).

[13]The number of authors who contributed to the CAD is not easy to determine. Already in the preliminary stages of the 1920s, at least 40 assyriologists contributed input.

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in the early 1920s, was re-organized in 1947, leading to the first published volume (vol. 6) in 1956 and the last basic volume in 2010[14]. In addition, some updates were published in supplement[15]. While this was a necessary compromise for an 'analog' undertaking, it also means that the CAD has never been able to provide a complete and representative accounting of the ever growing available textual sources. For this, a format allowing growth in data (and knowledge) is required: either in analog format as some form of expandable loose-leaf collection or in digital format (see below).

2.2 Workflow issues

As already mentioned, the dictionary versions currently available are not digital tools, but digitized print studies. This substantially impacts the workflow, as the OCR-ed scan does not suit the data set. In practice, each volume has to be searched separately due to the large files, thus tripling each search process (AHw), or even multiplying it by 25 (CAD). The other core issue is a methodological one. OCR is not good at distinguishing multiple languages intertwined in the same "sentence" and by their very nature, the dictionary entries contain various mixtures of Akkadian, Sumerian, and English or German. This problem is substantially enhanced by the OCR challenge of correctly identifying diacritics, which are characteristic for the transliteration of the ancient scripts. Furthermore, textual citations often include scribal variants. In consequence, the results of digital searches are severely distorted by OCR mistakes (see sample below: section 5.1).

The search function is, thus, properly productive only for the translations, and only in the form of a simple full-text search. This is both cumbersome and a blessing. On the one hand, the modern language search produces many irrelevant results. For example, the search term "foreign" is heavily used also for editorial comments like "foreign word", "foreign etymology" or as part of a bibliographical reference, and "alien" is a word

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In the published main volumes, i.e., the 21+4 basic lexical entries volumes, 11 authors are acknowledged as editorial board members, 30 further authors as editors-in-charge, associate editors, and/or main contributors assisting the editors, and 10 more contributors as assistants to the editors, manuscript editors, or editorial secretaries.

[14]CAD 6.v.; https://oi.uchicago.edu/research/publications/assyrian-dictionary-orien tal-institute-university-chicago-cad.

[15]CAD 6.v.

element also of unrelated terms like "salient" or "Materialien"[16]. On the other hand, the search setup results in a lot of important additional terms like "OrtsFREMDer" or "ALIENated" and in further data in paraphrased translations or explanatory notes. These additional data sets that are only written out in the modern language part of the dictionaries would be lost in an Akkadian-only search.

While the modern language terms are thus necessary workflow-dictated starting points, they are also conceptually useful. As both major dictionaries use different modern languages (CAD – English, AHw – German), the modern language approach prominently showcases how far the research language dictates the interpretation of the ancient word. The main denotations and connotations, i.e. direct word definitions and contextual associations, of the primary terms are different in both modern languages: e.g., "fremd" equals "foreign, alien, strange". Thus, the basic searches expectedly result in different data sets, not due to the dictionary design and the underlaying ancient language, but due to the research language (see section 3). Similar shifts of connotations and denotations over time and across socio-cultural and textual context are to be expected for the Akkadian language. Thus, the diverse language and socio-cultural backgrounds of the researchers highten the likelihood of substantial overlap with ancient connotational realities.

To max out the full potential of the data scope the workflow requires several feedback loops within and between the two dictionaries. In case of the 'foreign' other, the search in AHw is doubly reduced in comparison to CAD, as the basic search is for a single term ("*fremd*") within three volumes vs. three terms ("*foreign*", "*alien*", "*strange*") in 25 volumes. This would probably even out once all major terms in the full semantic field were searched for, e.g., "ander* / other", "seltsam / strange", "unbekannt / unknown", "un/außergewöhnlich / unusual", "feindlich / hostile", "feindselig / inimical", "Feind / enemy", "*gast* (Gast, gastlich, gastfreundlich) / guest or visitor".

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[16]A rather extreme example is the search for "*foreign*" in CAD volume P (= CAD 12, 2005). Only six out of the 40 page hits pertain to an explicit mentioning of a term or concept potentially related to 'foreign otherness', in the Akkadian sources. All other search results refer to editorial comments, especially to the designation of a term as a "foreign word". As will be shown below (section 4), this methodological issue similarly distorts the data of the presented digital tools.

As already intimated, the effort to extract the relevant data sets from CAD and AHw, though highly productive in content, is exceedingly time-consuming. For the paper at hand 'only' the first eleven necessary workflow steps were implemented: 1) making sure that the digitized volumes are OCR-ed and annotatable. 2) AHw – basic search: including a first basic full-text search run for the term "fremd", the assessing, which search results are relevant, extracting the dictionary pages featuring the research results and their contexts, and classifying the search results according to strategy (lexeme, phrase, ellipsis), Akkadian root and/or concept (e.g., RULER, LAND, *ahû*, *nkr*, *šanû*, *u/wbr*, varia). 3) AHw – data filing: requiring to copy/paste the relevant main entries and additional quotes including their context, correct the heavily distorted dictionary 'quotes,' add them to a list or data base, and identify the context of the quote (if provided). 4) checking the immediate dictionary entry context for relevant related data and processing them as indicated in workflow step 3. 5–7) repeating steps 2–4 for CAD. 8) basic cross-referring feedback loop: searching in AHw for the additional lexemes and phrases yielded by the basic CAD search in steps 5–7 and adding the information to the existing data. 9) assessing why the additional data did not show up in the basic AHw search: e.g., due to lesser comprehensiveness, mentioning only in explanatory notes and paraphrasing, or due to different readings of the sources. 10–11) same as workflow steps 8–9, but for CAD.

The next feedback loop of searching for the extended modern language lexeme lists multiplies this effort exorbitantly due to the large scope of nearly 90 Akkadian lexeme and phrase results from steps 1–11, most of which carry more than one translation meaning. Due to the vast amount of data yielded by even such a basic search and the immense manual effort required for transforming the information into usable data (see sample below: section 5.1), this needs first a major research project (like the *Leipzig Akkadian Dictionary*). Based on a digital (not merely digitized) version of the dictionaries, in which the necessary "cleaning" of the Akkadian data has already taken place, these feedback loops could be suitably outsourced to a computer leaving the scholar(s) to contextualize and interpret the probably still significantly enhanced data set.

2.3   Search results

The dictionaries supply (among other features) four types of data that can be exploited for the topic at hand, i.e. a study of the variety and implications

of ancient perceptions and Akkadian designations as 'foreign other': 1) Akkadian quotes; 2) modern language (English / German) translations of (parts of) these quotes; 3) paraphrases of (parts of) these quotes and/or their immediate syntactic context; and 4) explanatory comments by the authors based on their intimate knowledge of the wider corpus of sources.

The most prominent difference between the AHw and the CAD results (certainly up to one basic cross-referencing feedback loop) is a strong tendency of AHw to provide a more literal, and often also a more specific meaning, while CAD tends to give more generic translations (see Section 3). Thus, in many cases, the very basic search yields more results in CAD, the majority of which can be checked against AHw (feedback loop), where one often gets clearer glimpses into their specific usage and contexts, or into historiographical challenges to be re-examined. The other —to be expected— key difference is an overall much wider scope of quotes provided in CAD, which were deliberately cut down in AHw in order to achieve a good compromise between conciseness and comprehensiveness. Accordingly, especially lexemes with an already wide scope of non-'foreign' meanings or contexts, tend to lack the specific marginal reference to a 'foreign other' context in AHw (see especially lexemes representing specific titles or offices). However, this fuller comprehensiveness concerns only the quotes and occasional special meanings. The majority of lexemes found in CAD are also available in AHw, in some instances AHw is even more complete[17].

3   Expressing 'foreign otherness' according to AHw and CAD

The undertaken basic search in AHw and CAD for "fremd – foreign, strange, alien" including one feedback loop across both dictionaries picks up five distinct key strategies for expressing 'foreign otherness': (a) elliptic references, which receive the foreign component from the immediate or wider text context; (b) structural means showcasing two contrasting features

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[17]Cf. the contextual references to actions of foreign rulers (AHw 4) or to the strangeness of human beings (AHw 1537), for which no parallels show up in the CAD results. See also, e.g., the compound *lipištu aḫītu* (AHw 554) or the provision of a translation for *uburtu* (AHw 1400), but also the indication of an additional explicitly foreign context for *aḫītu* (AHw 20), *errēbu* (AHw 243), or *šangû* (AHw 1163); for details see section 3.

including the distinction between the self and the (foreign) other; (c) antonymic expressions signifying 'foreignness' via the negation of another, usually self-related, quality or category; (d) compounds and less fixed phrases, which typically specify the foreign context of a person, event, or phenomenon; and (e) lexemes, which express 'foreign otherness' either generically or very specifically, and which are spread over a wide range of word categories.

Though the lexemes hold the majority of results (54), they arguably do not constitute the most common ancient strategy for expressing 'foreign otherness'. The basic dictionary search (including one feedback loop[18]) brought to light another 55 contexts of 'foreign otherness': 30 phrases and compounds including 8 negated antonyms, further 13 general contexts for elliptic or otherwise contextual indications, and 12 terms introducing otherness via structural means, namely reduplication (see Fig. 1). As the dictionaries are intrinsically lexeme-focused, this distribution argues for the other strategies substantially outweighing the lexeme expressions in quantity in ancient lived realities.

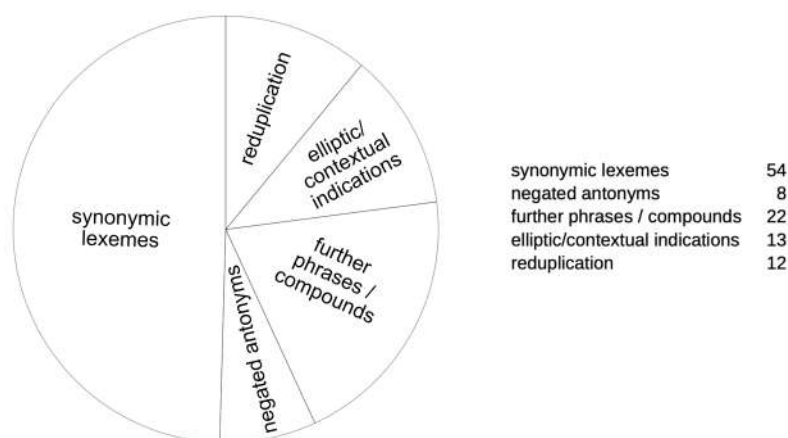| synonymic lexemes | 54 |
negated antonyms	8
further phrases / compounds	22
elliptic/contextual indications	13
reduplication	12

Figure 1: Distribution of strategies for expressing 'foreign otherness' according to the AHw and CAD search for "fremd – foreign, strange, alien".

[18]Consisting of double-checking the Akkadian search results rendered only by one dictionary in the other one.

3.1   Elliptic indications

Easily overlooked, especially in the current computational approaches, is the strategy of indicating the foreign background or context of a phenomenon, event, or person via elliptic references. The key characteristic of this strategy is an oblique implication of the 'foreign' context in the text. One typical example is a reference to a soldier belonging to a foreign army, where the origin/foreignness of the army has to be deduced from the text context. As to be expected from its more concise scope and more literal translations, such indications of ancient elliptic references to 'foreign otherness' are rare in AHw[19]. From CAD at least 30 elliptic or implicit references can be easily extracted. Roughly half of these are related to *mātu*/KUR, which is not specified as being foreign, because this is immediately clear from the context[20]. Other prominent contexts, in which the 'foreign' aspect is implicit, not explicit, are references to foreign rulers, especially regarding their offices and military actions, to Assyrian foreign rule over other countries, but also actions, status, and interaction policies of non-royal persons[21]. The strategy is prominently in use throughout Akkadian text production[22].

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[19]See, however, AHw 225: *abbūt aḫḫē … ip-pu-uš* – to take a father's place for (foreign) brothers ["die Vaterstelle einnehmen für (fremde) Brüder … CT 41, 30, 15"].

[20]See, e.g., CAD A (1/1, 1964) 278: "*malkī mātitan* LÚ *pāḫāti mātija ak-li sāpirī rubûti šūt rēši u* LÚ.AB.BA.MEŠ *māt Aššur* kings from all the (foreign) lands, the governors of my own country, overseers, commanders, nobles, high officials and the elders of Assyria Winckler Sar. pl. 36:178"; CAD E (4, 1958) 201: "*alkakāt qurdija mamma ša ina mātāte e-te-pu-šá* each of the heroic deeds which I performed in (foreign) lands Layard 90:72 (Shalm. III)"; CAD Z (21, 1961) 11: "*kišittu ša mātāti kališina ina za-gi-in-du-ri-e ina igārātišina ēṣir* I depicted with greenish glaze on its walls (representations of) my conquest of all foreign lands Iraq 14 41:31 (Asn.)". For further examples see the data compilation Wasmuth 2025.

[21]See especially the abundant evidence for KUR/*mātu* "(foreign) lands/country", which often does not specify the foreign context (whether generically or specifically) [CAD *passim*]; see also, e.g., fear of foreign, namely Assyrian, rule [*palāḫ bēlūti*: CAD E (4, 1958) 417]; references to kings of (foreign) lands [*šarrāni*: CAD IJ (7, 1960) 306, CAD P (12, 2005) 7]; references to foreign kings' and foreign princes' weapons [*ulmēšun šēlūti*: CAD R (14, 1999) 6; GIŠ.TUKUL (copy: ⸢SUḪUŠ⸣)-*šu-nu*: CAD Ṣ (16, 1962) 59]; marriage between non-foreign husbands and Egyptian princesses [*ana mamma*: CAD Š (17/2, 1992) 113, N (11, 1980) 58]; foreign city inhabitants [LÚ.MEŠ *ša ba-bi-šu-nu*: CAD B (2, 1965) 23; see also below]; instructions to foreign peoples [*ana šūḫuz ṣibitte*: CAD IJ (7, 1960) 152]; women talking to (a stranger) [*šudbubu*: CAD D (3, 1959) 4, 13]; a woman bringing keys to an enemy(?) or stranger [*sinništum nam-za-qa-am ušeṣṣi*: CAD N (11, 1980) 256]; describing spatial contexts via alien footsteps [*šēpu*: CAD A (1/1, 1964) 264].

[22]See the full scope of quotes compiled from the dictionary data (Wasmuth 2025).

Both lexica further provide elliptic indications on an editorial level: on the one hand, when the reference to the 'foreign other' context is only paraphrased (very common in AHw) but does not allow direct assessment of the underlying term (or ancient elliptic reference), on the other hand by contextualising comments[23]. These may be misleading, as the dictionaries occasionally suggest ancient elliptic phrases, which in reality are only elliptic in the dictionary quotes[24].

Another form of editorially elliptical indications concerns individual and summary comments on foreign contexts for a (set of) lexeme(s): e.g., the rather common indication that a plant is mentioned among (other) foreign plants in a botanical garden[25], the mentioning of officials "among other foreign dignitaries"[26], or references to actions of foreign rulers who, e.g, send their daughters to perform conductor duties[27].

3.2 Reduplication

According to AHw, one of the most common ways to express 'otherness' is by doubling whichever lexeme or phrase is contrasted with itself. In contrast to the other strategies, the evidence for this means was only cursorily compiled for the paper at hand. The expression (plus equation) *birīt birīt = ana aḫâte*

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[23]Random examples of the former are CAD A (1/2, 1968) 23: "should other persons from foreign lands *ša* KÙ.BABBAR.MEŠ-*šu-nu ana muḫḫi* PN *in-na-am-mi-ru-na u iṣabbatuna* to whom PN owes money appear and seize (him) MRS 9 110 RS 17.28:21"; or CAD A (1/2, 1968) 246: "note: among the rich or the poor, the bearded ones or the eunuchs *lu ina* LÚ.ARAD.MEŠ *lu ina* LÚ.ŠÁM.MEŠ the (house-born) slaves or the bought (slaves) (among the natives of Assyria or those of a foreign country) Wiseman Treaties 221".

[24]See, e.g., AHw 225: "die Vaterstelle einnehmen für (fremde) Brüder" – *abbūt aḫḫē … ip-pu-uš* (no date specified) CT 41, 30, 15"; the text passage is not elliptic in the Akkadian text ("ŠEŠ.MEŠ *la šu-a-ti*"), only in the AHw quote. The actual Akkadian text represents the phrasal strategy of negated antomym (*la šu-a-ti*). Or CAD IJ (7, 1960) 31: "Difficult: KI.DA.BI. ŠE GIŠKIM ḪA.MA.TUK : *ana rittišu lu-<u>-wa-di-a-am* I was able to give them (the foreign peoples) instructions …. UET 1 146 iv 9 (Hammurabi)", which again is elliptic only in the CAD quote; the Sumerian / Akkadian text specifies "(the foreign peoples)" as "the man from Elam, Gutium, Subartu, and Tukriš, whose mountains are faraway, whose language is not understandable"), thus follows the strategy of specific synonymic lexemes (see below).

[25]See, e.g., CAD H (6, 1956) 197: "GIŠ *ḫi-pu-tu* (among the foreign trees of the botanical garden) *Iraq* 14 43 i 47, Asn".

[26]Information on the *šatammu* of Dēr paraphrased in CAD Š (17/2, 1992) 188.

[27]AHw 4: *abrakkūtu.*

– into the foreign ["in die Fremde"[28]] is the most obvious one from the basic search, at least regarding explicit 'foreign otherness'. At the same time it exemplifies, how easily *prima face* oblique expressions can be missed by the modern researcher. Without the ancient equation, the specifically foreign and also the explicitly directed focus of the expression would probably have been missed. The German and English interpretation of the literal meaning of *birīt birīt* – between between > hither and thither ["da- u dorthin"] suggests an explicitly undirected context, and arguably a (more) local one[29].

Less obviously connected to specifically 'foreign' otherness, but to 'otherness' in general, are a number of contexts cursorily checked via a basic feedback loop in AHw, drawing on the search term *ander* [equals *other*]: e.g. *aḫātum ana/eli aḫātim* etc., *amūtum eli amūtim, ašar … ašar, awīlum ana/mala/kīma awīlim, ištēn … ištēn, kīam … kīam, qarnu qarna, šīrum ana šīrim, ulla … ulla* etc., or *ūmu … ūmu*[30]. In the context of this paper, also this data is significant. The underlying structural strategy for expressing otherness showcases the importance given to 'alterity' expressions. The complementary definition or description of 'the one' and 'the other / another' is implemented via the same lexeme. Thus, at least on a formal (or structural level), 'otherness' is neither ascribed a positive nor a negative value, but explicitly the same in relation to the self or to a given entity.

3.3   Negated antonyms

For the third discernible strategy for expressing 'foreign otherness', the tandem search in both dictionaries proves highly effective. The basic search for "fremd – foreign, strange, alien" elicited results mainly from CAD with its

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[28]AHw 128.

[29]See *birīt birīt* – hither and thither ["da- u dorthin ?; " AHw 128]; *birīt birīt = ana aḫâte* – into the foreign ["(in die Fremde)"; only LB; AHw 128]. For *ana aḫâte* see below: phrases.

[30]E.g., *aḫātum ana/eli aḫātim etc.* – (the) one … the other ["die eine, die andere/einer den anderen"; AHw 18, also 21, 201]; *amūtum eli amūtim* – the one on top of the other ["eine … auf der anderen"; AHw 46]; *ašar … ašar* – here … there / at one place … at another place ["da – dort, an einer – an der anderen Stelle"; AHw 83]; *awīlum ana/mala/kīma awīlim* – one toward the other ["einer dem anderen"; AHw 90]; *ištēn … ištēn* ["der eine, der andere"; AHw 400]; *kīam … kīam* – once … another time ["einmal – ein anderes Mal"; AHw 470]; *qarnu qarna* – one horn the other one ["ein Horn das andere"; AHw 186]; *šīrum ana šīrim – (one) the other* ["(einer) den anderen"; AHw 1249]; *ulla … ulla* etc. – the one time … the other time ["das eine, das andere Mal"; AHw 1408, 1410]; *ūmu … ūmu* – the one day … the other day ["den einen – den anderen Tag"; AHw 1419].

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strong tendency to provide more generic as well as more figurative meanings. In most cases, the term is included also in AHw, but translated literally, thus defying the basic search: *lā ālišu* – lit. not his city > "foreign city", *lā erṣetišu* – lit. not his earth/land/territory > "in a foreign country, in a country which is not his own", *lā īlišu* – lit. not his god > "alien god", *lā kattum/kûam* – lit. not belonging to you > "alien, strange", *lā mudû* – lit. not knowledgeable, incompetent > "stranger", *lā šattam* – lit. not his (own [territory]) > "foreign (country/territory)", and *lā šû* – lit. not his/her, not belonging to him/her > "strange"[31].

Especially the literal translations of the negated antonyms (or identity qualifiers) provide insights into the ancient perceptions of (foreign) otherness, though it remains challenging to grasp, whether these perceptions are general or specific to a time, context, or person. Tellingly, in none of the examples found via the basic search plus feedback loop, the connotation is inimical. Whether the *prima face* descriptive meaning of *lā mudû* (not knowledgable, incompetent) generally had a pejorative undertone, and whether this comprised a special undercurrent when applied to a 'foreign other,' remains to be studied. In the other cases, the 'foreign otherness' is expressed via a descriptive alterity definition, i.e., as being something or someone else, usually defined in relation to oneself.

A methodologically interesting case is *lā šīr*, which, in contrast to all other negated antonyms, is picked up by AHw in the basic search (not belonging to the group ["Gruppenangehöriger: Fremder"]), by CAD only in the feedback loop ("of non-xx descent")[32]. Interestingly, the two rather specific meanings focus on a different aspect of (foreign) otherness: social affiliation (AHw) and descendance (CAD). They illustrate quite obviously how much the modern researcher's perspective shapes the translation, and in consequence the further reading of the Akkadian (and any other ancient) texts.

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[31]See *lā ālišu*: CAD A (1/1, 1964) 385 and IJ (7, 1960) 14; *lā erṣetišu*: CAD L (9, 1973) 2; *lā īlišu*: CAD R (14, 1999) 136; *lā kattum/kûam*: "strange" [CAD G (5, 1956) 25] vs. "alien" [CAD A (1/1, 1964) 266, H (6, 1956) 12, K (8, 1971) 227], lit. "dir nicht gehörig(e)" [AHw 28, 496]; *lā mudû*: CAD A (1/1, 1964) 343, AHw 666 ["nicht klug, sachverständig, kenntnisreich, wissend"]; *lā šattam*: CAD K (8, 1971) 277, AHw 245 ["nicht seines (= Gebiet, Territorium)"]; *lā šû*: CAD D (3, 1959) 109, K (8, 1971) 617, R (14, 1999) 145], AHw 1254–5 [nicht "sein(ig)er, ihr(ig)er; ihm/ihr gehörend, sein/ihr eigen"].

[32]AHw 1249; CAD Š (17/3, 1992) 118.

3.4 Phrases and compounds

In addition to these phrases consisting of negated antonyms, the basic search for "fremd – foreign, strange, alien" in AHw and CAD yields 23 further prominent phrasal terms referring to 'foreign otherness'. In contrast to the antonyms, the two dictionaries mostly pick up different phrases, thus not allowing a comparative discussion. As to be expected given the more concise scope and literal focus of AHw, the majority of results derive from CAD. They include *aḫû nakaru, ālik idi, ana aḫâte, ana pattim, arad šarri, bēl āl(ān)i, bēl lišāni, libbišu šunnû, lišānu aḫītu, lišānu ma'dātu, lipištu aḫītu,* LÚ(.MEŠ) *ubru,* LÚ.TUR *aḫû, nakru aḫû, qātu aḫītu, rab mugi, ṣin/ddu u birtu, ša ekalli, ša lišāni, ša māti šanīti, ša šadû, šēpu aḫû,* and *zēru aḫû.*

The majority of the cited phrases can be easily classified into several categories. One of these are paraphrased descriptions specifically of the 'foreign' context. They include *ana aḫâte* – into the foreign ["in die Fremde"]; LÚ(.MEŠ) *ubru* – lit. (resident) alien man/men > "alien"; LÚ.TUR *aḫû* – lit. foreign/strange child/boy > "strangeling"; *ša māti šanīti* – lit. of/from another country > "foreigner"; and *ša šadû* – lit. of the mountain(s)/East > "foreign country"[33].

Also common are figurative descriptions, e.g., *ana pattim* – lit. to the border region > "to a foreign country" or *ša ekalli* – lit. the one of the palace > "wife of the ruling king, said of foreign queens" or *libbišu šunnû* > lit. to change his heart > "to alienate someone"[34]. Compare also the physical images present in the expressions of 'foreign origin:' *lipištu aḫītu* – "foreign scrotum / descent", sired by a 'stranger' ["von einem Fremden gezeugt"] or *zēru aḫû* – "foreign seed / offspring"[35].

Another discernible pattern is the creation of jargon meanings out of literal descriptions. This is evidenced, e.g., by *ālik idi* – lit. (at the) side goer > "person assigned to escort diplomats, foreigners and persons in need

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[33]See *birīt birīt = ana aḫâte*: AHw 128 [see also above: reduplication]; LÚ(.MEŠ) *ubru*: CAD UW (20, 2010) 398; LÚ.TUR *aḫû*: CAD Š (17/2, 1992) 320 [*caveat*: Akkadian equivalent uncertain ("*šerru … ṣiḫru* or *ṣuḫāru* may apply")]; *ša māti šanīti* – foreigner: CAD P (12, 2005) 240; *ša šadû* – foreign country: CAD N (11, 1980) 283. For *aḫû/aḫâte*, *šanû/šanīti*, and *ubru/wabru* see also below: lexemes.

[34]See *ana pattim*: CAD K (8, 1971) 447; AHw 849: *pattu* II – border region ["Grenzgebiet"]; *libbišu šunnû*: CAD Š (17/1, 1989) 408; quotes without translation or context also in AHw 1166–7; *ša ekalli*: CAD E (4, 1958) 61–2.

[35]See *lipištu aḫītu*: AHw 554; *zēru aḫû*: CAD A (1/1, 1964) 211; Z (21, 1961) 97. On *aḫû* see also below: lexemes.

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of surveillance"; *arad šarri* – lit. servant of the king > "official (2') of a foreign king"; *bēl āli/ālāni* – "ruler of a (foreign or enemy) city"; or *rab mugi* – lit. chief/overseer of the *mugu/mungu* "(high military official who occasionally served as special envoy to foreign rulers)"[36].

A further strategy are compound *pars-pro-toto* expressions. They include, e.g., *bēl lišāni* – lit. lord of a/the language > "one who knows a (foreign) language", *lišānu aḫītu* – lit. foreign language (speaker) > "foreigner"; *lišānu ma'dātu* – lit. many language(s) > "foreign people(s)"; *qātu aḫītu* – "outsider (lit. an alien hand)"; and *šēpu aḫû* – lit. foreign foot > "foreigner"[37]. Noteworthy in this context is the prominence of language as a denominator for 'foreign otherness'. Once more, the spelled out attribution is not (never?) pejorative in nature, but descriptive, and used for foreign and non-foreign contexts. This becomes even more evident when including the related phrasal expressions that are not translated as compound by one or the other dictionary: *ša lišāni* – lit. one of language > "person able to give information" and *lišānu egru* – unintelligible language ["unverständliche Sprache"] or "confused (said of foreign languages)"[38].

Arguably, another means of referring to 'foreign others' are tautological expressions. In the list extracted from AHw and CAD, this concerns especially *aḫû nakaru* – "stranger" and *nakru aḫû* – "foreign enemy / hostile foreigner"[39]. As compound expressions, they seem to have a more specific, albeit intangible, meaning. To make them more comprehensible, an in-depth study of the lexemes (and phrases) derived from both roots would be needed first, which is beyond the study at hand[40]. Another compound phrase falling

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[36]See *ālik idi*: CAD A (1/1, 1964) 343; *arad šarri*: CAD A (1/2, 1968) 247; *bēl āl(ān)i*: CAD A (1/1, 1964) 388; *rab mugi*: CAD M (10/2, 1977) 171. In each case also attested in AHw, but without referencing the potential foreign context. For *rab mugi* compare also the discussion by Radner (2001: 12–13), which contextualises the dictionary entries further, but essentially confirms them.

[37]See *bēl lišāni*: CAD L (9, 1973) 215 [CDA 183: "'one who knows a (foreign) language'"]; *lišānu aḫītu*: CAD A (1/1, 1964) 211; *lišānu ma'dātu*: CAD L (9, 1973) 214; AHw 556 (not translated); *qātu aḫītu*: CAD A (1/1, 1964) 211; *šēpu aḫû*: CAD S (17/2, 1992) 303. On *aḫû* see also below: lexemes.

[38]CAD E (4, 1958) 42; AHw 190 (no explicit reference to foreign context). For the *lišānu* compounds see also Section 5.

[39]See *aḫû nakaru*: CAD Š (17/2, 1992) 43; *nakru aḫû*: CAD B (2, 1965) 200; E (4, 1958) 66; K (8, 1971) 361.

[40]In preparation by the author.

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into this category is *ṣin/ddu u birtu* – "'no-man', stranger, mob, foreign riffraff", which also requires further etymological studies[41].

The Akkadian semantic field certainly included still further phrases and compounds, but these remain largely inaccessible, either due to limitations intrinsic to the digitized print format, due to the specific scope of the studied dictionaries, or because the classification as compound term remains uncertain without further text edition based studies. One example for phrasal expressions of 'foreign otherness' obliterated or —at best— hidden in the dictionaries, is the reference to "(alien) gods or divine images". *Prima face*, the quote points to an elliptic reference to foreign otherness' ("alien"); but it proves to be elliptic only in the CAD quote[42]. The actual Akkadian text is broken regarding the context, i.e. god/divine image, but not regarding the expression of 'foreign otherness', which is circumscribed in a negated subclause: […] *-ma ina mati* [KUR] *la i-mu-ru-uš man-ma-an* "and no one in the land saw him [i.e. the (image of the) god/deity]"[43].

3.5   Lexemes

With more than 50 separate terms, roughly half of the results from the basic search for *foreign* / *strange* / *alien* in CAD, and for *fremd* in AHw, fall into the category of lexeme. All of them represent generic or specific synonyms for persons, places, concepts, and actions related to 'foreign otherness' or estrangement. Most of them show up only via their basic entry and/or in a very small number of specific quotes. They can be divided into nine different categories: nouns that refer (1) rather generically or (2) very specifically to persons perceived as 'foreign others', (3) titles referencing (also) 'foreign others', (4) adjectival lexemes qualifying persons, things, and concepts as 'alien, foreign, strange, or fremd' (also to be used as nouns); (5) lexemes for persons in contact with 'foreign others'; (6) spatial and (7) abstract nouns connected to 'foreign others'; (8) verbs indicating estrangement; and finally (9) misleading lexemes, for which the connection to 'foreign otherness' is intrinsic to the relevant modern language, in this case English, not necessarily to other modern languages or to Akkadian (see Fig. 2).

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[41]CAD Ṣ (16, 1962) 172; Z (21, 1961) 82, 297; arguably lit. "yoke-team and fortress".

[42]CAD R (14, 1999) 136: "*kigalla ú-šar-me* he placed [an alien god] on a pedestal BHT pl. 5 i 22 (Nbn. Verse Account)".

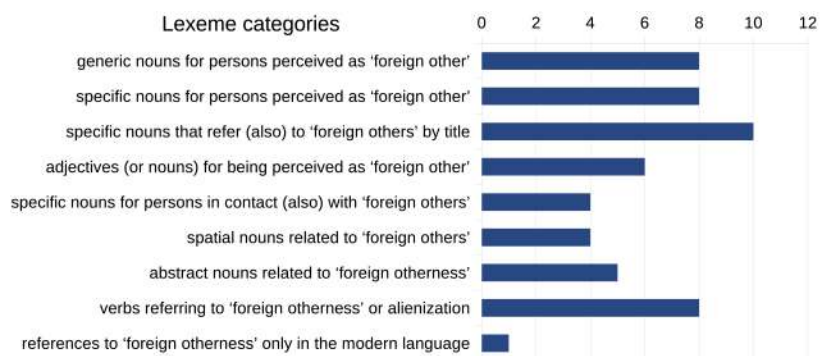[43]Smith 1924, 83, 87, V col I.21; Schaudig 2001, 566, 573 (as I 22').

Figure 2: Distribution of lexeme categories for expressing 'foreign otherness' according to the AHw and CAD search for "fremd – foreign, strange, alien"; one feedback loop.

Concerning **generic nouns for persons perceived as 'foreign other'**, the basic search yielded *awīlu*/LÚ.MEŠ (*ša bābišunu*) – "aliens (living within the gates)"; *kam/wâtu* – "stranger, outsider"; *labṣum* – "foreigner (?)"; *laššu* – "foreigner, aliens (?) [lit. absent]"; *surû/sūru* II – a stranger (?) ["ein Fremdling?"]; *ubarru* – "stranger, alien, foreign resident"; *umman-b/mad(d)a* – "a foreign people" (CAD); and *umzarḫu* – "foreigner"[44].

For this category, both, AHw and CAD, show a conspicuous lack of additional lexemes from the feedback loop, they correspond independent of the modern research language and translation approach. Arguably, the overlap of the English and German search results indicates a similar degree of genericness of the terms also in Akkadian. To explore this is, however, beyond the scope of this paper. Suitable starting points, ideally used in tandem, are a detailed analysis of the Akkadian contexts in which they occur and an extended synonym search.

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[44]See *awīlu* / LÚ.MEŠ (*ša bābišunu*): CAD B (2, 1965) 23; *kam/wâtu*: CAD K (8, 1971) 121; *labṣum*: CAD L (9, 1973) 34 [CDA 175: "'foreigner'?"]; *laššu*: CAD L (9, 1973) 108; M (10/2, 1977) 303 [CDA 179: "I '(there) is not, are not'; II 'absent; alien'?"]; *surû, sūru* II: AHw 1063 [CDA 329: "(a foreigner)?"]; *ubarru*: CAD A (1/2, 1968) 314; Š (17/1, 1989) 393; in AHw (1473) not translated; *umman-b/mad(d)a*: CAD M (10/1, 1977) 247; Š (17/2, 1992) 304 [CDA 421 provides instead "barbarian horde"]; *umzarḫu*: CAD L (9, 1973) 214. According to the translation in CDA [422: "(a class of person) … 'freedman?'"] may rather belong to the specific nouns (see below).

This for additional synonyms, the extended search would require laborious and complex feedback loops based on the various additional translations of the search results (e.g., "outsider" – see *kam/wâtu*) or other terms from the modern semantic field (like *other* / *ander**), which are beyond the paper at hand, though their literal translations once more promise insights into the nuances of the perception of the (foreign) other[45].

Also the compilation of lexemes representing **specific nouns for persons perceived as 'foreign other'** highlights the importance of a more detailed study of the different specific terms for 'foreign others'. This may be exemplified by the treatment of *ubru/wabru* in the dictionaries. AHw distinguishes *ubāru* and *ubru/wabru*, both of which are understood as having a more generic and a more specific meaning[46]. CAD keeps the generic and the specific meaning on a rather general level ("stranger; foreign guest, resident alien, guest friend"; "type of foreigner"), while AHw suggests in both cases a highly specific meaning. "Ortsfremdeʀ" means either non-local or someone not knowing the locality. Thus, a newcomer to the town, someone from a neighbouring town, or someone from rather further away equally meet the criteria. Tellingly, AHw distinguishes from this —at least in the female form— someone from a different region or country, which

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[45]For access to the contexts, the dictionary quotes and a search in KORP (see below) provide starting points. Further synonyms can be checked via additional feedback loops in the dictionary search starting from the secondary translations. For instance, the extended search for *outsider* (see *kam/wâtu*) in CAD results in the hitherto hidden phrase *ša kīdu* [CAD A (1/1, 1964) 176, 180; K (8, 1971) 345] as well as in various terms found already via the basic search (discussed below): (ʟÚ) *ahû* [CAD A (1/1, 1964) 169, 211; A (1/2, 1968) 122; L (9, 1973) 2; M (10/1, 1977) 197; P (12, 2005) 197–8, 535; Ṣ (16, 1962) 11; T (18, 2006) 225], *kam/wâtu* [CAD K (8, 1971) 121], *nakāru* [CAD N (11, 1980) 159, 160, 162], *nakru* [CAD N (11, 1980) 191], *šanû* [CAD Q (13, 1982) 6; Š (17/1, 1989) 396; UW (20, 2010) 301]. A search for the more generic term *ander* [equals *other*] in AHw is expectedly much more productive. It yields the additional lexemes *enû* – lit. to turn, change [AHw 221], *eššu* – lit. new [AHw 259], *mimma* – lit. whatever [AHw 653], *pānu* – lit. face [AHw 820], *šanītu* [e.g., AHw 1164], *ullû* [AHw 1410]; as adverbial terms also, e.g., *jānu* [AHw 411], *kīam* [AHw 470], or *šaniš* [AHw 1164]. See also *aḫû* [e.g., AHw 371], *nakartu* [AHw 634], *šanû* [e.g., AHw 763, 1165]; further relevant meanings below.

[46]See *ubāru/ubārtu*: *ubāru* – stranger, foreign guest, resident alien, guest friend [CAD UW (20, 2010), 10–1]; *ubārtu* – foreign woman [CAD UW (20, 2010), 10] / same as *wabru*, *ubru*, but also female ["Ortsfremdeʀ; Beisasse/in"; AHw 1399]; *ubāru*: also further habitation status ["Schutzbürger"; AHw 1399]; *wabru*, *ubru* – a type of foreigner [CAD UW (20, 2010) 398] / non-local, person not knowing the locality; person with underprivileged habitation status ["Ortsfremder; Beisasse"; AHw 1454; CDA 432: "'stranger, foreign resident'"].

allegedly is expressed by the term *uburtu* ("Landfremde", instead of *ubārtu* – "Ortsfremde")[47]. For the specific meaning of *ubārtu* and *wabru/ubru*, AHw implies a highly specific administrative or juridical status, for which two 'German' concepts are offered: "Beisasse/in" and (for the male form also) "Schutzbürger". The differences and parallels between the CAD and AHw interpretation or across ancient and medieval urban administration and jurisdiction are worth reinvestigating, but are beyond the paper at hand. Such a study should also include the other lexemes implying some kind of civic status, notably *aššābu*, arguably denoting an "alien (?) resident", and *napṭaru*, a "person of *napṭaru* status", which denotes a guest-friend relationship according to AHw[48]. The specific nouns for being perceived as a 'foreign other' further include *asīru*, which CAD translates as "prisoner of war, captive foreigner used as worker", and *errēbu*, which AHw knows as (foreign or strange) 'intruder'[49].

Various lexemes represent **specific nouns that refer (also) to 'foreign others' by title**. They include *bēlu, ḫīrtu/ḫīštu, iššakku,* and *ṣiru,* for which the foreign context is only specified in CAD[50]; *malku, šakkanakku, šarratu,* and *šarru* with the foreign context explicitly mentioned in CAD, in

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[47]See *uburtu* – non-regional / non-'national' female person? ["Landfremde?"; AHw 1400; CDA 418: "'female stranger?' jB"].

[48]See *aššābu*: CAD A (1/2, 1968) 461 [CDA 436: "*waššābu* Ass. *uššābu* 'tenant' … 2. 'foreign resident, metic' M/NB, Nuzi, NA?; jB of deity 'resident' in city"]; *napṭaru*: CAD N (11, 1980) 325 / AHw 742 ["eine Art v Gastfreund, Vertrautem"; CDA 240: "'(type of) acquaintance, guest-friend' O/jBab, NA; *bīt* n. "lodgings, guesthouse"]. On *napṭaru* see also below (spatial nouns). CDA 240 lists also *napṭartu*, translated as "'desertion' of soldiers" and "des(ignation) of class of woman".

[49]See *asīru*: CAD A (1/2, 1968) 331 [CDA 26: "captive, prisoner of war"]; *errēbu*: "'Eindringling'" [AHw 243]. CDA 79 provides an interesting additional insight, highlighting both, the core literal meaning ("intruder, new arrival") and the scope of applications ("of usurper; of new member of household; also jB lex. for *arbu* 'fugitive'"). Another term, which may have been used as a specific rather than a generic designation for a group or 'class' of foreigners according to CDA 79, is *umzarḫu* (see above: generic nouns for persons being perceived as 'foreign other').

[50]See *bēlu* (1b2') – "master, ruler (referring to foreign kings)" [CAD B (2, 1965) 191, 195]; *ḫīrtu/ḫīštu* – "wife of equal status with the husband (in reference to foreign deities)" [CAD H (6, 1956) 200–1]; *iššakku* (1.3') – "territorial ruler of a foreign country" [CAD IJ (7, 1960) 263]; *sekretu* – "a woman of the palace household, court lady … a) of foreign courts" [CAD S (15, 1984) 216]; *ṣiru* – "(foreign) chieftain" [CAD M (10/1, 1977) 3; Ṣ (16, 1962) 213.

AHw indicated via quotes[51]; as well as *janzi* and *rabânu*, for which the foreign context is highlighted in the basic entry in both dictionaries[52]. As with the generic nouns referring to 'foreign others' (see above), a basic crosscheck of the found lexemes in CAD and AHw does not enhance the scope of terms. However, it is striking that the CAD lexemes show up already in the basic search, while the AHw lexemes require the feedback loop via CAD. This is mainly due to the extended scope of quotes facilitated by the larger format (25 vs. 3 volumes), which accommodates also more marginal quotes, e.g., on foreign contexts, but also because of the already noted tendency in AHw to provide more specific translations. Thus, von Soden's aim is essentially fulfilled: the AHw includes a representative scope of lexemes, but not necessarily the full scope of their meanings[53].

The lexemes representing **adjectives (or nouns) for being perceived as 'foreign other'** conspicuously include the majority of the most common lexemes for "fremd – foreign, strange, alien:" *aḫû, nakaru/nakartu, nakru* (*nekru*)/*nak(i)rtu*, and *šanû*; further *ālānû* and *egru*. The two main reasons for this are (a) their double usage as nouns and as adjectives, and (b) their generic nature, though they can carry also very specific meanings. For instance, *aḫû* also refers to the planet Mars, and to extra-serial or uncanonical texts.

Historiographically of note is the overlap and discrepancy between the CAD and AHw translations of *aḫû, nakru*, and *šanû*/*šanītu*, and between the main entries and scope of quote translations across the various volumes. While each of these terms have a large overlap in meaning, especially the AHw entries argue for a quite clear distinction of their core meanings. For

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[51]See *malku* – "king, (foreign) ruler" [CAD M (10/1, 1977) 166; contextual evidence also CAD A (1/1, 1964) 278; M (10/1, 1977) 167; N (11, 1980) 7; R (14, 1999) 311; S (15, 1984) 139] / king, ruling prince ["König; Fürst"; AHw 595–6]; *šakkanakku* (Ie) – "designation of foreign governors" [CAD Š (17/1, 1989) 173, 176] / governor, vice-regent ["Statthalter"; AHw 1140]; *šarratu* – "ruling queen (designating foreign queens)" [CAD Š (17/2, 1992) 74] / ruling queen, ruling princess ["Königin, Fürstin"; AHw 1188]; *šarru* – king (when referring to foreigners, often petty king, tribal chief), son of a (foreign) king, prince [CAD Š (17/2, 1992) 76–114] / king, ruling prince; also kinglet, local king ["König, Fürst"; "Kleinkönig od. Schech", "Lokalkönig"; AHw 1188–90].

[52]See *janzi* – "king (title Ianzu taken as name of foreign kings)" [CAD IJ (7, 1960) 325 / king? ["kass. janzi König"?; AHw 412]; *rab(b)annu* (B, *rabiānum, rabânu[m]*) – "a high (foreign) functionary" [CAD R (14, 1999) 9, 19] / *nAss*: a high functionary abroad ["nA ein hoher Funktionär im Ausland"; AHw 934–5; CDA 294: "'mayor' … NA (high foreign offical)"].

[53]AHw I, i-ii; AHw III, vii-viii.

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the most common ones, we (arguably) have as core meanings: *šanītu* – 'other, not the same as me/someone else'[54], *aḫû* (I) – '(culturally) different (than core Assyrian/Babylonian)'[55], and *nakru* – '(culturally/politically) vying; hostile, inimical; domestic or external political adversary'[56]. However, this distinction gets largely lost, when compared to the full scope of cited quotes, which occasionally even show a switching or interchanging of their primary meanings[57]. Whether this is due to different usage in distinct ancient contexts, or the inner attitude of the scribe (or other persons involved in the text production), or to the academic and personal habitus of the modern historiographers, is not easy to determine.

Two of the terms in this category partially diverge from the others: *ālānû* arguably qualifies as a specific, not a generic term, at least if the CAD translation "exile" as primary meaning of *ālānû* is correct[58]. It is included

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[54]See *šanû* (B/II) – "strange, inimical, evil" [CAD Š (17/1, 1989) 397], in contexts and quotes also "strange/r, foreign/er, alien" [CAD *passim*; see data set Wasmuth 2025] / (an)other, a different one, strange/outlandish ["anderer"; AHw 1165; "fremdartig; " AHw 230; CDA 356: "Ass. '(an)othe' [MAN] also 'different, strange; inimical, evil'"]; *šanû* IV: "Gt. stat. 'is very strange, different' of tongue, person" [CDA 356].

[55]See *aḫû* (I, ass. *aḫiu*) – "1. strange (person), foreigner, outsider, alien (object), 2. additional, extraordinary, 3. strange, abnormal, estranged, unusual, ill-portending, 4. hostile" [CAD A (1/1, 1964) 210; contexts: CAD *passim*, see data set Wasmuth 2025] / on the side, foreign, strange, odd, extra-serial, uncanonical, the star Mars ["auf der Seite befindlich, fremd", "der fr., feindliche Stern = Mars", "fremdartig", "serienfremd, unkanonisch"; AHw 22; contexts: AHw *passim*, see data set Wasmuth 2025; CDA 8: "'outside(r), strange' [BAR] of person, also as subst. 'stranger'; (design. of planet =) Mars; of appearance 'abnormal'; of textual passage 'non-canonical, extraneous' [pl. also BAR.BAR]"]. See also the contextual quote in eSAD providing synonyms for *aḫû* – "strange" [eSAD B 32: *bēšu* "'distant'; SB *bé-eš-tú* : *rūqu* : *aḫû* SpTU 1, 84 ed. 3 'distant : remote : strange'"].

[56]See *nakaru/nakartu* – "alien, foreign/er, strange/r" [in CAD (*nakar/štu*) under *nakru*; CAD N (11, 1980) 189, contexts also 189–192; A (1/1, 1964) 210; L (9, 1973) 214; Š (17/3, 1992) 114] / alien/foreign/strange, enemy ["fremd; Feind"; AHw 718; CDA 233: "'strange, unknown; enemy'"]; *nakru* (*nekru*)/*nak(i)rtu* – "foreign, alien, strange, hostile; enemy, foe" [CAD N (11, 1980) 189], also 'disloyal' [CAD Ṣ (16, 1962) 27]; contexts: CAD *passim* [see data set Wasmuth 2025] / hostile, inimical, enemy; alien/foreign/strange ["feindlich; Feind; fremd"; AHw 723; CDA 234: "'strange, foreign' [KÚR] of language, city, people; 'hostile (person); enemy'"].

[57]See the quote compilation Wasmuth 2025 and the (abundant) evidence in KORP and in LPA; a detailed study on disambiguating the terms is in preparation by the author.

[58]See *ālānû* – living abroad ["in (fremdem) Ort, in der Fremde lebend"; AHw 35] / "exile, person living abroad" [CAD A (1/1, 1964) 334]; CDA combines both connotation scopes: "'living in a (foreign) place, abroad, exile'" [CDA 11].

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in this category, because of its combination of a (potentially) generic and specific meaning and its usability as noun or adjective. Similarly, *egru* is classified here, because it is (the only term in all the search results) that is only used as an adjective attribute (in combination with *lišānu*). While the usage is thus very specific, its 'compound' expression seems to be rather generic: unintelligible speech, especially due to 'foreign otherness'[59].

The lexemes representing **specific nouns for persons in contact (also) with 'foreign others'** perfectly illustrate the complementary nature of both dictionaries (see also above: negated antonyms). They include *šaknu, šangû, turtānu,* and *ugulamartû*. In the case of *šaknu*, only CAD directly provides indications for a foreign context, even a double one: according to the main (sub-)entries, a *šaknu* can be a 'foreign other' by being subordinated to and/or designated by a foreign king (1a4'), or he can be internally connected to foreign others under his command (2c); AHw does not make the foreign context explicit[60]. In the case of *šangû*, it is the other way around: AHw gives an example also for a *šangû* of foreign gods, while CAD does not make a foreign connection explicit[61]. For *turtānu*, both dictionaries indicate a foreign context, but on a different level. While CAD explicitly indicates that the Assyrian office can be, albeit rarely, assigned also to a foreigner, AHw has a separate sub-entry on *turtānu* of other countries[62]. Finally, *ugulamartû* is a good example for different modern interpretations of the term: for AHw the lexeme is to be understood as generically referring to persons in charge of 'foreign others', mainly semi-nomads and foreign workers, while CAD keeps it on the specific level as overseer of the (semi-nomadic) Amorites[63].

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[59]See *egru* – "confused (said of foreign languages)" [CAD E (4, 1958) 4].

[60]See *šaknu* (1a4' / B) – "governor (of foreign kings); ... 2c) governor in charge of groups of population (foreign and domestic) under military administration" [CAD Š (17/1, 1989) 182–3, 187] / governor, representative, appointee, delegate ["Eingesetzter; Beauftragter, Statthalter u.ä."; AHw 1141].

[61]See *šangû* – priest, temple custodian ... (also of foreign gods) ["Priester, Tempelverwalter ... (fremder Götter)"; AHw 1163]; CAD Š (17/1, 1989) 377–382.

[62]See *ta/urtā/en/nu* – "Assyrian official ... only rarely applied to foreigners" [CAD T (18, 2006) 490] / 'man in 2nd place'?, one of the highest Assyrian officials, field marshal?, f) t. from other countries ["etwa 'Mann an 2. Stelle'? ... einer der höchsten Beamten ...; Feldmarschall? f) t. von anderen Ländern"; AHw 1332; CDA 401: "'deputy, second in command' ... NA 'field marshal, principal military officer'; 7th century ... also of Egypt, Elam, Urarṭu"].

[63]See *ugulamartû* – work supervisors ... for semi-nomads and foreign workers ["Arbeitsaufseher ... für Halbnomaden u Fremdarbeiter"; AHw 1403] / "overseer of

Another lexeme category comprises **spatial nouns related to 'foreign others'**. The basic AHw and CAD search plus one feedback loop yield *napṭaru* (in *bīt napṭari*), *šadû*, *ubartu(m)/(w)abartu(m)*, and *ušmannu*. They range from the very generic (*šadû* – mountains as (native) permanent place of living[64]) via slightly more specific temporary (*ušmannu* – camps of foreign kings[65]) to highly specific temporary or permanent places of living (*bīt napṭari* – residence for soldiers and foreigners[66]; *ubartu* – Assyrian trading outpost)[67].

Expectedly, the spatial nouns substantiate via feedback loops, especially in the case of specific place terms. As such, they invite specific translations which are beyond the very basic search underlying this study. Even a single basic feedback loop doubles the output. In addition, the connotation becomes more tangible, albeit not necessarily regarding ancient lived, but modern research realities. This is most obvious for *napṭaru*, for which CAD and AHw give different nuances, albeit changed around in comparison to, e.g., *ubru/wabru*. This time, CAD proposes an administrative or juridical connotation ("persons of *napṭaru* status"), while AHw suggests a more generic meaning as a kind of guest friend or intimate. While *napṭaru* shifts in focus due to the feedback loop, *ubartu* only shows up then (feedback loop initiated by the female form of *ubāru*; see above).

Several lexemes fall under the category of **abstract nouns related to 'foreign otherness'**: namely *aḫītu*, *lišānu*, *šanītu(m)*, *šibsātu*, and *wabrūtu*. Most notably, AHw makes explicit how the main translation of *aḫītu* (mishap, misfortune) is related to *aḫû* (alien, foreign, strange). Tellingly(?), the noun is used for both extremes, mishap/misfortune and

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the Amorites, high military official, general" [CAD UW (20, 2010) 39–40; CDA 419: "'Amorite-supervisor' OB"].

[64]See *šadû* (A.1i) – "mountain (region; as the home of (foreign) gods, demons, and wild creatures" [CAD Š (17/1, 1989) 49, 55].

[65]See *ušmannu* – "camps of (foreign) kings" [CAD UW (20, 2010) 302; in AHw 1441 and CDA 429 no foreign context specified].

[66]See *napṭaru* (in *bīt napṭari*) – "quarters for soldiers, also a type of residence for foreigners and other persons of *napṭaru* status, and the people living there" [CAD N (11, 1980) 325] / 'place of loosening', kind of guest friend, intimate ["'Ort des Lösens,' eine Art v Gastfreund, Vertrautem"; AHW 742].

[67]See *ubartu(m)/(w)abartu(m)* – "trading post" [CAD UW (20, 2010) 397] / Assyrian trading outpost ["kleinere ass. Handelskolonie"; AHW 1454; CDA 432: "(a small Ass. trading colony)"].

explicit meanness, in addition to a more general otherness/strangeness[68]. As already seen in the context of the generic lexemes referring to persons, things or concepts as 'foreign other,' the scope of *aḫītu*/*aḫû* is vast; and potentially still enhanced in translation, as the German lexeme "Fremdartiges" includes both 'odd' and 'outlandish.'

For *šanītu*, the already noted more literal approach in AHw is again visible. CAD indicates solely a hostile or inimical context, while AHw keeps the core meaning of *šanû* and gives both, a more neutral and a negatively valued meaning (strange/outlandish > hostile/inimical)[69]. In addition, we have a reference to changing interpersonal relations (*šibsātu* – estrangement), to explicit(?) administrative or juridical concerns (*wabrūtu* – *wabru* state), and a case of transfer to an even more abstract concept and to a practical observation (*lišānu* – [foreign] language; nationality; [foreign] language speakers)[70].

The search for **verbs referring to 'foreign otherness'** or alienization likewise results in a number of items: *ekēmu*, *kalû*, *nakāru*, *napšuru*, *nukkuru*, *parāsu*, *šūṣû*, and *zunnû*. They correlate semantically with various concepts represented in the nouns and phrases. For example, *ekēmu*, *parāsu*, *šūṣû*, and *zunnû* seem to address the dissolution of interpersonal relationships in a general fashion[71]. This can, but does not necessarily involve 'foreign

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[68]See *aḫītu* – mishap, misfortune ["5) etwas Fremdes = Mißgeschick"], something strange/odd/outlandish, mean ["6) Fremdartiges, Gemeines"; AHw 20; CDA 8: "3. … OB …'(strange, i.e.) unfortunate, adverse'"]; CAD provides a similar scope of meanings, but without referencing the etymological origin of the term [CAD A (1/1, 1964) 189–192].

[69]See *šanītu(m)* II.2 – something strange/outlandish, hostile/inimical ["Fremdartiges, Feindliches"; AHw 1164; CDA 355: "2. 's.th. strange, hostile' (also pl.)"] / "hostile, inimical word or matter" [CAD Š (17/1, 1989) 388].

[70]See *šibsātu* – "estrangement" [CAD Z (21, 1961) 99; main entry: "anger, wrath"; CAD Š (17/2, 1992) 382]; *wabrūtu* – "status of stranger, foreigner" [CAD UW (20, 2010) 399] / *wabru* state ["*wabru*-Zustand"; AHw 1454; only indirect reference to foreign/strange/alien/fremd; CDA 432: "'status as *wabrum*' OA"]; *lišānu* – (foreign) language; nationality, person or people speaking a (foreign) language [CAD L (9, 1973) 209–14/5; in CDA 183 reference to *bēl lišāni* "one who knows a (foreign) language" taken up; see above (Section 3.4: phrases and compounds)] / tongue, (foreign) language ["Zunge; Sprache"; AHw 556]. For a discussion of *lišānu* – '(foreign) language, nationality; (foreign) language speakers' see also Section 5.

[71]See *ekēmu* – to estrange, to alienate ["entfremden"; AHw 194; no 'foreign otherness' picked up in CDA 68]; *parāsu* – "to estrange, to alienate" [CAD P (12, 2006) 171; in context quotes also CAD A (1/1, 1964) 172, 197; E (4, 1958) 149 / K (8, 1971) 80; IJ (7, 1960) 273; M (10/1, 1977) 302, 309; N (11, 1980) 344; P (12, 2005) 171; R (14, 1999) 449] / to disunite, estrange/alienate ["7f) entzweien mit"; AHw 831]; *šūṣû*/*(w)aṣû* Š –

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others'. How far these four verbs were directly synonymous or had (partially) diverging specific connotations is currently beyond assessment. Particularly the role spatial and emotional distance played in the understanding of 'estrangement, alienation, Entfremdung' would be worth examining. In this respect, it is notable (though to be researched further) that CDA reduces *šūṣû* to the estrangement between husband and wife, including the resulting separation or divorce[72].

Arguably slightly different is the focus of *napšuru*, which seems less concerned with the process of growing estrangement, but with practical arrangements in case of personal or institutionalised estrangements[73]. This is even more pronounced for *kalû*, which provides insights into the social context and potential handling of 'foreign others' by the authorities and their representatives[74].

Perhaps the most thought-provoking term is based on the highly common root *nkr*. Already according to the main entries, *nakāru* covers the full range of being potentially not perceived as different in the beginning, but only becoming different via becoming and/or being perceived as strange (probably with a derogative connotation) via becoming estranged to the degree of being a passive enemy to becoming an active enemy who rebels and/or attempts to topple his adversary by military means[75]. This easily explains the —at first glance rather unexpected— range of the adjective

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"8) to alienate" [CAD A (1/2, 1986) 382] / to let go out of one's heart ["bildl. (warum aus deinem Herzen … hinausgehen lassen)"; AHw 1478]; *zunnû* (*zenû* II, ass. *zanā'u* D) – "to alienate" [CAD UW (20, 2010) 58; in context quotes also CAD Š (17/1, 1989) 38; Z (21, 1961) 86] / to alienate, to estrange ["entfremden"; AHw 1519; in CDA 446 'foreign other' connotation not taken up: only "'make' s.o., heart 'angry' with (= *itti*) s.o."].

[72]CDA 389: "'made to leave' of wife; man".

[73]See *napšuru* (< *pašāru* – "to relent, be reconciled, to be undone, loosed, annulled, to be sold, alienated, released (for payment), to be packed (said of grain), to be calmed" [CAD P (12, 2005) 236, 243; without 'foreign' context also AHw 843].

[74]See *kalû* (1a2') – "referring to messengers and foreigners: to detain, delay, hold back (a person), to keep in custody, in confinement, to distrain, (with *ana/ina* and inf.) to prevent, to hinder" [CAD K (8, 1971) 96–7].

[75]See *nakāru* – "(1.) to become hostile, to be(come) an enemy, to engage in hostilities, to be at war, to rebel against a ruler, to be an alien, an outsider, to become estranged" [CAD N (11, 1980) 159] / to be(come) different, strange, inimical ["anders, fremd, feindlich sein, werden"; AHw 718–9]; CDA once more combines the key meanings provided by bothe dictionaries: 'to be(come) different, strange, hostile'; … [KÚR] 'change (in appearance)'; … 'be(come) estranged', 'grow angry'; 'rebel, revolt'" [CDA 233]. For contexts see further CAD A (1/1, 1964) 323; B (2, 1965) 194; D (3, 1959) 46; K (8, 1971) 412; N (11, 1980) 162; AHw 718.

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and noun *nakru* and the consequential exchangeability with *šanû* and *aḫû* (see above). The exceedingly wide range of meaning is also attested in the D-stem, at least according to CAD. The function, however, seems less to be intensification, as typically attributed to the D-stem, but to specify the reasons behind and the practices resulting from growing estrangement: to change in a way that one becomes strange or unintelligible, to become angry and even to turn hostile (because of this?), or alternatively to deny the other's acquaintance(?) and to move away[76]. AHw, on the other hand, stays more in line with the idea of intensification of the already mentioned practical outcome, by classifying behaviour as be(coming?) very strange and/or outlandish[77].

A potentially further valuable starting point regarding the question of perceiving and expressing 'foreign otherness' is provided by **lexemes referring to 'foreign otherness' only in the modern language**, especially if they show up in one, but not the other research language(s). For the search terms 'alien, foreign, strange; fremd' this concerns a subset of results for *alien*, namely a relatively large scope of quotes regarding (in)alienable property and offices: cf. *mumarra/iqqānu*[78]. At first glance —at least from a non-English background— the question of disposability of property (or offices) is completely unrelated to the concept of 'foreign otherness.' But given the terminological realities of the English term "(in)alienability", a conceptual closeness also for Akkadian may be worth examining. The search in CAD is, however, only partially suitable as a starting point for this, as the actual Akkadian quotes behind the term(s) are mostly not provided.

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[76]See *nukkuru* – *nakāru* 7: "to turn hostile, to become angry, to change, become different, strange, unusual, unintelligible, to change course, to move away, to deny" [CAD N (11, 1980) 166; including context: "everything about him is strange"]; *nakāru* 10c: "to make (something) look strange" [CAD N (11, 1980) 169; inlcuding contexts: e.g., "he […] talks […] and acts like a strange person" or "she […] is strange to look at, she is fearsome"].

[77]See AHw 723: to be very strange / outlandish ["*nakāru* D.10) … sehr fremdartig"]; CDA 233: "OB stat. 'is strange, outlandish'; NA 'make enemies of'; WSem. *nukkir* 'made hostile'".

[78]Cf. *mumarra/iqqānu* – "guarantor who guarantees that property sold is alienable" [CAD M (10/2, 1977) 155]; guarantor ["Garant"; AHw 671].

3.6 The AHw and CAD evidence: conclusions

The five Akkadian strategies for expressing 'foreign otherness' picked up by the major dictionaries either in the lexeme translations or the contextual quotes include implicit, i.e. elliptic, references, structural lexeme reduplication (translated as "the one … the other" or similar), negated antonyms, compounds and more variably phrased circumscriptions as well as lexemes providing generic and specific synonyms.

One of the most important results from the study is the broad scope of expressions, out of which the more than 50 lexemes showcased in the dictionaries (mostly CAD and AHw) probably represent the lesser strategy in ancient lived realities. Despite the strong intrinsic lexeme focus of the dictionaries, they only comprise roughly half of the research results. One, if not the most, common way of referencing 'foreign otherness' was probably the one most difficult to search for: i.e., oblique references, for which the 'foreign' aspect became obvious via the context, not via explicit comments.Though only ten different contexts show up via the contextual quotes (especially in CAD), they demonstrate a wide field of usage reaching from the very specific to the very generic, and from positive via neutral to negative (mostly inimical/hostile) valuations of 'foreign otherness'.

Arguably the most telling strategy regarding ancient perceptions of the '(foreign) other' is the use of structural reduplication of lexemes for contrasting the self (or 'the one') and another (or 'the other'). In most contexts —and very explicitly by their format— they are neutrally descriptive, in contrast to the prevailing modern historiographical perception of the 'foreign other' as inimical or 'barbarian' (inspired, or rather tainted, largely by the Neo-Assyrian Royal Inscriptions). The much more neutral basic perception highlighted by the reduplication strategy is supported by the evidence of negated antonyms. They mostly reflect neutral 'alterity' descriptions; in rare cases, they represent 'deviance,' i.e. a (positively or negatively connoted) differing from the norm, and only in one instance the meaning was possibly derogatory, thus representing a form of 'othering'[79]. The prominence of perceiving the 'foreign other' as separate, and often different, though not (necessarily) negatively valued, is further underscored

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[79]See Wasmuth 2022 for a research approach, which utilizes the terms and concepts underlying 'alterity,' 'deviance,' and 'othering' as analytical lenses, and its application potential for ancient world studies, and particularly Assyriology.

by a substantial part of the lexeme evidence: often, the same term is used for 'indigenous' and 'foreign' places, persons, and offices.

A related phenomenon can be observed for the most common lexemes, especially for *aḫû* ("other, extraordinary, strange, foreign" and similar). The differentiation in the extant translation (and thus the underlying perception) as 'alien,' 'foreign,' or 'strange' is less dependent on the ancient context than on the modern author, as testified by the different translations of the same ancient quotes throughout the CAD volumes[80]. This raises the question, to which degree the diverging translations of the terms across different source quotes reflect (to be expected) chronological, spatial, and socio-cultural differences and changes within the long history of Akkadian, or rather modern historiographical assumptions. If (primarily) the latter, it would be worth checking, whether these can be ascribed to individual practices, zeitgeist issues, or regional socio-cultural contexts. For the scope of this paper and the main question at hand, the discussion needed to be reduced to the basic presentation of the evidence, which largely consists of synonyms for 'alien, foreign, or strange' persons, and to open up several questions for further investigation.

On a similar note, it is remarkable that only for two out of the ten identified lexeme categories the evidence throughout CAD (or even across the dictionaries) is consistent. This is most prominently the case for the "foreign" (not "alien" or "strange") titles of persons and offices at 'foreign' courts in CAD, arguably exemplifying the joint core meaning of "foreign" among modern researchers. Also conspicuous is the scope of very generic nouns for persons perceived as 'foreign other' across the dictionaries. Though this requires following up, and may be beyond proper examination due to the relatively low number of attestations, a likely explanation for the observed phenomenon lies in a universal, i.e. modern and ancient, core connotation of 'foreign otherness' reflected in these terms.

In all other instances, the full range of evidence across the dictionaries (mainly AHw and CAD) got substantially enhanced in number and connotational content by combining the different underlying translation approaches[81]. The partially complementary aspects root mostly in the

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[80]See the full data set including the actual quotes from AHw and CAD provided in openly accessible format in Wasmuth 2025.

[81]CAD: more generic translations, diversified by quotes also from more marginal contexts; AHw: more concise scope of meanings and quotes as well as generally more literal translations.

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different modern research languages and in the overall wide scope of included researchers with their array of personal backgrounds.

Beyond these general reflections, the collated evidence prompts some intriguing specific research questions. One of these concerns the spatial, temporal, and emotional scope of perceived 'otherness' picked up by the (negated) antonymic expressions. They include, *inter alia*, metaphors of invasive species (*lā kattum/kûam*), incompetence due to lack of local, and thus culturally specific, knowledge (*lā mudû*), being beyond one's own possessions (*lā kattum, lā šû*, etc.) or sphere of influence (*lā šû, lā šattam*), and either not belonging to the in-group or not originating from the current place of residence (*lā šīr*). Together with phrases like *mār āli* ("son of a/the town") or *lipištu aḫītu* – ("sired by a stranger"), the spatial and cultural implications of the perception as 'foreign other' are worth much more intensive studies.

Another example concerning how the 'foreign other' was seen or dealt with is provided by the terms *ālik idi* ("person assigned to escort diplomats, foreigners and persons in need of surveillance") and *ālik ḫarrāni* ("1. expeditionary force, 2. traveler")[82]. The terms invite important practical and conceptual questions from within the Akkadian lexicon, which are typically addressed from a historical or anthropological angle. These need to be (re-)examined from a philological point of view: for instance, how were the persons, to whom the *ālik idi* is assigned or who the *ālik ḫarrāni* meets, perceived by these specialists? Does their perception change over the course of their career or depending on the specific persons or situations they experience? And does the 'official' narrative and the individual perception (or more correctly its reflection in the written record) tally or diverge – and why?

4 The comparative potential of current Akkadian online tools

As highlighted in the introduction, the aim of this paper is to assess the research potential of the digitized versions of AHw and CAD for insights into the semantic field of 'foreign otherness' against some of the more prominent

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[82]See *ālik idi*: CAD A (1/1, 1964) 343 [= meaning 1, also "2. helper, protector, partner; OB, Mari, SB; see *alāku*"; *ālik ḫarrāni*: CAD A (1/1, 1964) 342.

available online tools, especially those with an explicit dictionary focus and those specifically designed to access ancient semantic domains.

The former category include the online version of the *Concise Dictionary of Akkadian* (CDA), the *Electronic Supplement to the Akkadian Dictionaries* (eSAD), and the dictionary section of the *Electronic Babylonian Library* (eBL), the latter the online search tool ORACC in KORP and the graphic semantic dictionary *Lexical Portal of Akkadian* (LPA). As these are essentially based on ORACC, and ORACC heavily draws on CDLI, some introductory notes also on these tools will be included. Each of these online tools are work in progress. Thus, the results presented here are likely to become obsolete soon. In addition, even combined they only elicit a fraction of the data yielded by the basic search across the major dictionaries. Nonetheless, they provide important insights into ways the new digital dictionary initiative celebrated in this volume, i.e. the *Leipzig Akkadian Dictionary* (LAD), may profit from their approach and performance strengths in order to equal, or go beyond, the content potential of the (digitized) print dictionaries.

4.1 The online dictionaries CDA, eSAD, and eBL

An inclusion of the evidence presented in the *Concise Dictionary of Akkadian* (CDA), the *Electronic Supplement to the Akkadian Dictionaries* (eSAD), and the dictionary section of the *Electronic Babylonian Library* (eBL) provides only minor additions to the AHw and CAD evidence.

For CDA, this to be expected as it is essentially based on the lexeme compilation published in AHw with the (arguably) most essential connotations translated into English, though occasionally CAD and/or later evidence is taken into account[83]. Given the generic search terms underlying this paper (i.e. "fremd – foreign, strange, alien") and the deliberate inclusion of native German and native English speakers in the production of CDA, the majority of the lemma-based AHw results show up also in CDA. In contrast, the additional connotations deriving from the contextual quotes provided in AHw and, especially, in CAD are mostly missing in the derivatives, i.e. CDA and the CDA derivatives.

In a basic search for "foreign, strange, alien" plus one feedback loop, CDA picks up 26 lexemes, 2 compounds, and 1 elliptic reference. 12 lexemes, 1

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[83]CDA vii, ix-x.

compound, and 1 elliptic result from the search term "foreign"[84], 13 partially overlapping lexemes from "strange"[85], and 5+3 partially overlapping lexemes from "alien"[86].

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[84]CDA lexemes for "foreign": *ālānu(m)*, f. *ālānītu* – "living in a (foreign) place, abroad, exile" (CDA 11); *biltu(m)* – "5. 'tribute' of foreign countries'" (CDA 44); **gurummaru(m)* – "GIS.GISIMMAR.KUR.RA (liter. 'foreign date palm')" (CDA 204); *labṣum* – "'foreigner'?" (CDA 175); *nakru(m)*, *nakiru(m)*, NB *nekru* – "'strange, foreign' [KÚR] of language, city, people" (CDA 234); *rabiānum*, *rabânu(m)*, NA *ra(b)bannu* – "NA (high foreign official)" (CDA 294); *suru(m)*, *sūru* – "(a foreigner)?" (CDA 329); *šēpu(m)* – "cut off f(eet) of enemy, foreigner, from territory = repel invasion" (CDA 367); *ubartu(m)* – "'(resident) alien (f.)' ...; Bogh. (desig. of a foreign princess)" (CDA 417); *ubāru(m)* – "'(resident) alien" [U.BAR]; ... (corps of foreign soldiers), pl. *ubārūtu*" (CDA 417); *wabrum, ubru(m)* – "stranger, foreign resident" (CDA 432); (*w)aššābu(m)*, Ass. *uššābu(m)* – "foreign resident, metic" (CDA 436). CDA foreign – compound: *bēl lišāni* – "one who knows a (foreign) language" (CDA 183); CDA foreign– elliptic: *mātu(m)* I – "[mostly KUR (pl. KUR.KUR)... '(foreign) country, territory'" (CDA 204).

[85]CDA lexemes for "strange": *ahītu(m)* I "'(strange, i.e.) unfortunate, adverse' events, omen(s)" (CDA 8); *ahû(m)* I, Ass. *ahiu* – "'outside(r), strange' [BAR] of person, also as subst. 'stranger'; (desig. of planet =) Mars; of appearance 'abnormal'; of textual passage 'non-canonical, extraneous' [pl. also BAR.BAR]" (CDA 8); *amāriš* – "(strange) 'to look at'" (CDA 14); *nakaru(m)*; f. *nakartu(m)*, NB *nakaštu* "strange, unknown; enemy" (CDA 233); *nakāru(m)* – "'to be(come) different, strange, hostile' ... 'change (in appearance)'; ... be(come) estranged', 'grow angry'; 'rebel, revolt' ...; ... Gt recipr. 'become (each other's) enemies' D [KÚR] 'change, alter' words, names, prices, plans" (CDA 233); *nakru(m)*, *nakiru(m)*, NB *nekru* "'strange, foreign' [KÚR] of language, city, people; 'hostile (person); enemy'; ... *ša nakirti* 'enemy'" (CDA 234); *nemûm – "'to be strange, disturbing'? ... G of dream" (CDA 249); *šanītu(m)* II "'something other' ... 2. 's.th. strange, hostile' (also pl.)" (CDA 355); *šanû(m)* II, Ass. *šaniu(m)* – "'(an)other' [MAN] also 'different, strange; inimical, evil', in pl. 'outsiders'; *mannum š.* 'who else?'; *šanûmma* 'any other', also term for planet Mars; *ašar šani(u)mma* 'anywhere else'" (CDA 356); *šanû(m)* IV, *šanā'u(m)* – "'to be changed, become different' [MAN] G (i/i) of road, border ... stat. 'is very strange, different' of tongue, person" (CDA 356); *šanû(m)* IV, *šanā'u(m)* – "'to be changed, become different' [MAN] G (i/i) of road, border ... stat. 'is very strange, different' of tongue, person" (CDA 356); *uburtu* – "'female stranger'?"; *wabrum, ubru(m)* – "stranger, foreign resident" (CDA 432); *bēl nakāri* – "NB 'enemy'" (CDA 233).

[86]CAD lexemes for "alien": *ahû* – "alien *i(lku* [= '(state) service']) (performer)" (CDA 126–127); *laššu(m)* II – "'absent; alien'?" (CDA179); **sumaktar, sumuktar, sumakti* – "'half-bred' ... 2. (a resident alien)?" (CDA 327); *ubartu(m)* – "'(resident) alien (f.)' ...; Bogh. (desig. of a foreign princess)" (CDA 417); *ubāru(m)* – "'(resident) alien' [U.BAR]; ... (corps of foreign soldiers), pl. *ubārūtu*" (CDA 417). From feedback loop: *wabartum, ubartum* – "(a small Ass. trading colony)" (CDA 432); *wabrum, ubru(m)* – "stranger, foreign resident" (CDA 432); *wabrūtum* – "status as *wabrum*".

As the CDA output picks up one compound not specified in AHw, adds occasionally relevant CAD connotations to the AHw evidence, and shifts or enhances the lexeme connotation in some cases, the CDA results are included in the footnotes in section 3, but only discussed in case of significant differences compared to the AHw and CAD evidence. CDA provides also two (or three) additional lexemes, which are not included in the AHw cum CAD search results: *gurummaru*(*m*) – "GIS.GISIMMAR.KUR.RA (liter. 'foreign date palm')" (CDA 204; cf. AHW 299: "Berg-Dattelpalme"), *nemûm* – "'to be strange, disturbing'? … G of dream" (CDA 249; not in AHw and CAD?), and *sumaktar*, *sumuktar*, *sumakti* – "'half-bred' … 2. (a resident alien)?" (CDA 327; AHw 1057: "halb-bürtig"; CAD S (15, 1984) 377: "fatherless, of unknown lineage").

EBL draws not only on CDA for its lemma list, but also on *The Akkadian-Arabic Reference Dictionary*, *Akkadische Logogramme*, *Akkadische Glossare und Indizes (AfO-Register)*, and the *Supplement to the Akkadian Dictionaries*[87]. As to be expected, the results largely match the CDA results[88]. However, one additional lemma is picked up, which goes not only beyond CDA, but also AHw and CAD: *šasû* – "6. 'call' by name, by (foreign) word". The lexeme is included in AHw 1195–97 and in CAD Š (17/2, 1992) 147, but without indicating an explicitly foreign context.

Due to the exceedingly time-efficient performance and well-structured result display, two additional searches were implemented: for "odd" and for "unknown". The search term "odd" yielded 106 results, non of which, however, is pertinent as each reflects a term "*odd*", mostly "goddess"[89]. The search term "unknown" yields the already found *nakaru* I – "strange, unknown; enemy", and three additional results from the same root, namely *halqu* – "'lost; fugitive'", *halāqu* I – "to be lost; be(come) fugitive", and *zēr halqātî* – "nomads"[90].

Also eSAD draws on CDA for its lemma list. Its search results are, once more, meagre as to be expected given its aim to complement, not to replace, AHw and CAD. Only three out of the 19 eSAD search results for *foreign*

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[87]https://www.ebl.lmu.de/about/dictionary.

[88]For matches see CDA results in the footnotes right above. For the eBL quotes see https://www.ebl.lmu.de/dictionary?meaning=foreign; …=strange; …=alien.

[89]For the eBL quotes see https://www.ebl.lmu.de/dictionary?meaning=odd.

[90]For the eBL quotes see https://www.ebl.lmu.de/dictionary?meaning=unknown. For *halqātu* see also CAD H (6, 1956) 36–40; for *halqu* AHw 313 and CAD H (6, 1956) 50.

pertain to lexeme connotations at all, none adds a lexeme or a significant connotation[91]. The only search result for *alien* is elliptic, either in the reference or also in the Akkadian original[92]. Out of the four results for *strange* one doubles a *foreign* result, one provides an additional quote for a standard lexeme translation, another is elliptic in the reference (not in the Akkadian original source)[93]. Only the fourth, i.e one out of 25 search results, provides, besides an additional quote for a standard translation, two Akkadian synonyms otherwise not picked up by the dictionaries[94].

4.2 The data repositories CDLI and ORACC

CDLI, the *Cuneiform Digital Library Initiative* by the University of California, Los Angeles, and the University of Oxford, has two main aims: on the one hand, a focus on the early periods of cuneiform writing, on the other hand, on making the data medium, the inscribed clay tablets as artefacts, openly accessible[95]. The main use of CDLI for the later periods, especially for ORACC and its derivatives, is to provide a joint data base for the underlying artefacts yielding the recorded texts, thus ensuring systematic and consistent entries of the meta-data, including language category, provenience, excavation and inventory numbers, photographs, etc.

For the topic at hand, also the former, the text, and especially composite text, repository is of interest. Its advanced inscription (vs publication) search easily allows looking up *inter alia* translation terms in combination with language, period, provenience, and other categories. A key strength of the tool beyond the systematic data collation, especially for researchers pursuing general socio- and cultural historical, rather than linguistic research questions, is the scope of customability concerning the data export. While

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[91]See KUR.RA – "foreign?" [eSAD T 2]; *nakru* – "strange, foreign, enemy (context:) stranger" [eSAD N 12]; *rabannu* – "a foreign official, sheikh" [eSAD R 1]. The other search results concern editorial comments, mostly "foreign word".

[92]See *kašku* – "'part of a field' … (inalienable part of a parcel of land)" [eSAD K 68].

[93]See *nakru* – "strange, foreign, enemy (context:) stranger" [eSAD N 12]; *nakāru* – "become strange" [eSAD Š no page no.; see *šulummû*]; "'(he is not a stranger), we fed together at the breast'" [eSAD T 58].

[94]See *aḫû* – "strange" [eSAD B 32: *bēšu* "'distant'; SB *bé-eš-tú* : *rūqu* : *aḫû* SpTU 1, 84 ed. 3 'distant : remote : strange'"]. Whether the synonyms are indeed pertaining to 'foreign otherness' requires further research. On *aḫû* and especially its connotational relations with *nkr* and *u/wbr*, and *šn'* see above (Section 3.5) and a more in-depth study is in preparation by the author.

[95]https://cdli.earth/about (last accessed 24 Nov. 2025).

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checking the individual research results online is rather unwieldy due to the tool design, the exported files allow easy adaption of the search results for the relevant research question.

As the translation is synchronized to the original text in very small, rather literal translation units, both the overall text and the specific lemmata and phrases are accessible for further research also with limited specialized linguistic knowledge. The outcome for the basic search for "foreign / alien / strange" is, however, exceedingly limited. Searching for the translation terms "fremd / foreign, alien, strange" elicits three composite texts: the *Laws of Eshnunna*[96], the *Codex Hammurapi*[97], and the literary composition *ludlul bēl nēmeqi* (LBN)[98]. Jointly, they yield seven passages concerning the semantic field of 'foreign other' featuring the four most common Akkadian lexeme roots: *ina mātim šanitimma* (Eshnunna law 29 l. 100) / *ina māt nukurtim* (Codex Hammurapi law 280 ll. 3114'–3115') – in a foreign land; *epšēti šanāti* – strange conditions (LBN canto 2 l. 10); *aḫû* – stranger (LBN canto 1 ll. 84, 104); *ubarum* – foreigner (Eshnunna law 41 l. 135); and *itti mār šiprim* – a foreign envoy (Codex Hammurapi law 52 l.165). The term "alien" elicited no search results.

The small data set edited in CDLI is obviously not statistically significant. However, it is to be noted that the lack of translatory differentiation of *māt šanitim* vs *māt nukurtim* visible in the dictionaries arguably mirrors a lack of ancient rather than modern differentiation. On the other hand, it is to be questioned whether the offered translations of *aḫû* and *ubarum* suitably reflect the ancient connotations. As picked up by AHw, though also on a problematically small data set, *ubaru* may have had a much more specific civic meaning ("Beisasse"; maybe "resident alien") than the general term "foreigner" used in CDLI implies[99]. Notably, CDLI picks up a strategy of expressing 'foreign otherness' that becomes otherwise tangible mainly in the major dictionaries: elliptic contextual indication. Not in itself, but due to its context, the phrase (*itti*) *mār šiprim* ("messenger, envoy") indicates 'foreign otherness' (Codex Hammurapi law 52).

ORACC, *The Open Richly Annotated Cuneiform Corpus*, emerged from the *Cuneiform Digital Library Initiative*. Its main purpose is to provide open access to the documents archived in CDLI via transliterations and

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[96]P480696 = RIME 4.05.19.add03 (https://cdli.earth/artifacts/480696).

[97]P464358 = RIME 4.03.06.add21 (https://cdli.earth/artifacts/464358).

[98]P491222 = CDLI Literary 00270 (https://cdli.earth/artifacts/491222).

[99]AHw 1454.

translations[100]. By now, the online repository hosts many different platforms united by the same lemmatization and meta-data collation approach. It thus provides easy access to an enormous scope of texts, though still with an exceedingly strong bias towards the 1st millennium BCE, and especially toward Neo-Assyrian imperial texts.

Unfortunately, the platform does not include editorial comments. Thus, its huge success causes also a major science-historical *caveat*. The easy access without options for evaluation and easy updates, or rather inclusions of the scientific discussion, petrifyies the primary text edition. So far, this issue is not taken up by the other tools either (see below).

The other two main challenges regarding socio-historical questions like what constituted the ancient semantic field of 'foreign otherness', for which the repository provides a lot of data, concern the limited search and download options. The individual texts can be downloaded, but bulk export of data for further processing with other programs is not implemented. In addition, only simple searches within the various sub-projects are possible, neither complex searches nor a simple full-text search across the various sub-projects. This is by now (partially) remedied by the search tool KORP (see below).

4.3   The search tool KORP

KORP is an online corpus search tool developed by the Language Bank of Finland. It "allows its users to search for keywords in text corpora and to generate concordances"[101]. Among many other data sets in various modern and ancient languages, it includes several versions of ORACC data to be searched for specific queries. These include base (i.e. dictionary) form, translation "lemma" (i.e., first translation in the *Concise Dictionary of Akkadian*, CDA), transcription, translation "sense" (context-dependent), part-of-speech, standardized (for divine and geographical) names, and language/dialect. Text attributes are: CDLI number, genre, period, provenance, subgenre, and text languages. Searches can be made both for and within all those categories and can combine multiple attributes[102]. While earlier ORACC in KORP versions were based solely on already

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[100]https://oracc.museum.upenn.edu/doc/about/aboutoracc/index.html.

[101]https://www.kielipankki.fi/support/korp/.

[102]A user guide to ORACC in KORP can be found here: https://www.kielipankki.fi/wp-content/uploads/OraccInKorpUserGuide_2024.pdf.

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lemmatized ORACC texts, it now features also autolemmatized texts from ORACC (displayed in the field "autolemma") since 2022[103]. As the link to the relevant ORACC record is stable, the ORACC updates on these texts can be directly accessed, even though the meta-data information remains on the state of the last import (i.e., currently, *ORACC 2024*).

Using KORP proves to be a fast way for obtaining a representative list of Akkadian lexemes within the semantic field "fremd – foreign / alien / strange". ". However, due to the choice to use CDA for the lemma list including translations, the number of results is far more limited than via the AHw+CAD search (16 vs over 80 results, one potentially going beyond the dictionary data)[104]. Spread across 515 hits found in sixteen ORACC text corpora (see Fig. 3), they include *ahītu* (side, foreign part), *aḫû/ahû* (foreign, strange[r], outside[r], other, extraneous); *ālānû* (living in a [foreign] place, living abroad, exile); *labṣu* (foreigner?); *nakaru* (strange, enemy), *nakāru* (be[come] different / strange / estranged, alienate), *nakru* (strange, alienated, enemy, refusing, hostile); *parāsu* (cut off, alienate); *rabiānu* ([high foreign official]); *šanû* ([an]other, strange one, stranger; be[come] different, alienate); *sumaktar* (half-bred, resident alien); *surû* (a foreigner, eye disease); *ubartu* ([resident] alien), *ubāru* ([resident] alien, visitor, guest); *ubru/wabru*; (stranger, foreign resident, guest); and *zenû* (be[come] angry / estranged). In addition, an oblique reference to to foreigners (*awīlu*: man, resident alien) and three compounds (*bēlu#nakru*: lord#strange; *bītu#wabru*: house#stranger; *mātu#nakru*: land#strange/enemy) are picked up.

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[103]This study draws on the current version, published in November 2024 (see ORACC in KORP); for all available versions see http://urn.fi/urn:nbn:fi:lb-2019111601. The tool used for autolemmatization is *BabyLemmatizer*, which has been specifically created for the purpose (see Sahala 2021: especially 75). In the future, regular updates will be made to sync the newly uploaded data in ORACC with KORP (personal communication: Lindén and Sahala).

[104]In principle, ORACC in KORP should at some point be able to rival the search output from the dictionaries for the lexemes. This is largely a question of input data, which is currently much less comprehensive compared to the major dictionaries discussed above (CAD and AHw). The underlying search parameters were "translation base form contains foreign OR strange OR alien" OR "translation sense contains foreign OR strange OR alien" AND "part of speech subcategory is not RN Royal Name AND is not PN Personal Name". In addition, for "language/dialect" either all Akkadian options need to be selected via "is" or all non-Akkadian options via "is not"; no overarching language tag "Akkadian" is implemented. For the dictionary data see above, Section 3.
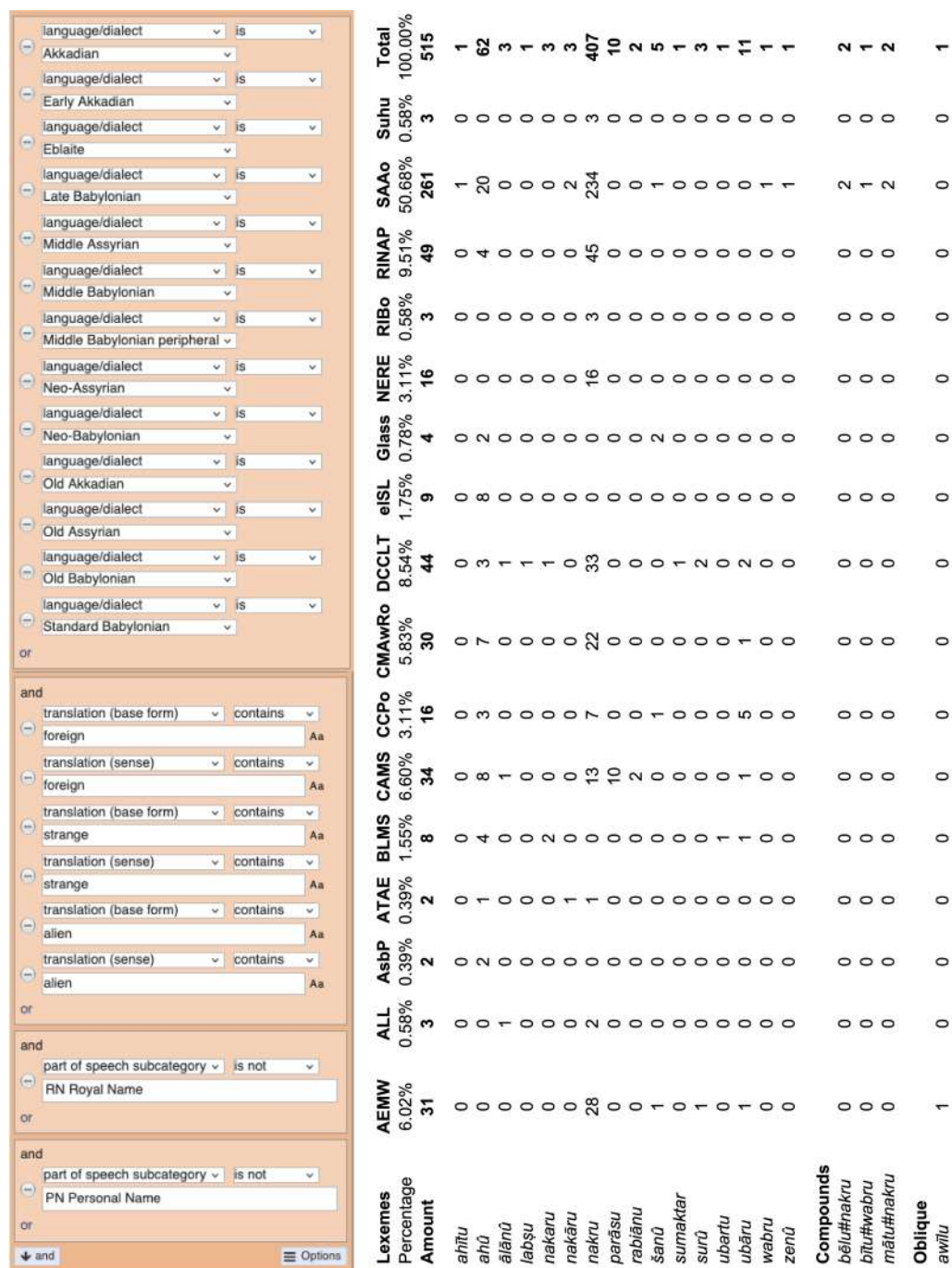
Figure 3: Search criteria and distribution of search results across ORACC projects in KORP (screenshot and statistics: 31 May 2025).

The provided overview, of the corpus and immediate context, in which the lexeme occurs, invites explorations whether and why the various connotations and the general usage of the terms is corpus or context specific. The easy access to the scope of specific writings, via the text display, the statistics, and the exportable annotations, further elicits potential distinctions regarding the preferred writing option (especially for *ahû* and *nakru*). Especially for the main roots, *ahû*, *nkr*, *šn'*, and *u/wbr*, the scope of search results further indicates that a partial disambiguation along the semantic field of alterity–deviance–othering is possible, across the roots, but also within[105].

As the tool is not designed for catching phrasal or oblique references to 'foreign otherness', it misses out on most of these important emic strategies of expressing 'foreign otherness'. On the other hand, KORP provides statistical metadata for each result facilitating easy comparisons between the different lexemes. The online search tool further allows direct access to the immediate text context (in Akkadian), and to the full text context (in transliteration, and where available in translation) via a link to the respective ORACC data record. In addition, all results can be downloaded in different formats.

4.4   The Lexical Portal of Akkadian

The *Lexical Portal of Akkadian* (LPA) is an online "graphic semantic dictionary" developed by researchers at the Finnish Centre of Excellence in Ancient Near Eastern Empires at the University of Helsinki[106]. It allows for searches in Akkadian and English, and also the results can be displayed in both languages. It is possible to choose either "All Texts Written in Akkadian", "2nd and 1st Millennia", or "Neo-Assyrian" as well as options with all words or only with "proper nouns"[107].

The ultimate aim of LPA is to present an emic view of the lexical semantics of Akkadian by construing networks that visually represent syntagmatic relationships between different words. Thus, it is based on the assumption that two words are connected if they frequently co-occur,

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[105]Study in preparation by the author.

[106]The version used in this article can be accessed at https://anee-portals.rahtiapp.fi /portals/anee-lexical-portal-pmi-2022-05/index.html.

[107]https://www.helsinki.fi/en/researchgroups/ancient-near-eastern-empires/anee-lexical-networks-v20.

and the strength of the connection is defined by the probability of their co-occurrence. For example, the English word "sword" has a strong syntagmatic link to the words "fight(ing)" ("they fight with a sword") and "weapon" ("a sword is a weapon").

The data base used by LPA draws on ORACC. Before being processed, the data were standardized and simplified. Specifically, spellings of divine and geographical names were unified, Akkadian words were utilized solely in their dictionary citation forms, and the lemma translations reduced to a single connotation. To obtain statistically relevant results for the 'big data' approach, only words that occurred five or more times were considered. While this allows for the innovative application of language technological methods, it does distort the evidence from the very onset. The most conspicuous effect is that LPA presents a simplified and minimized version of the Akkadian language. The choice to exclude words that are attested less than five times results in many Akkadian words missing from the tool (statistically speaking the data set is simply not large enough for a big data approach). LPA is further essentially set up in a way that it obscures essential historical nuances: all metadata for differentiating, e.g., dialects, locations, or genres were excluded. To recover at least some of these, the user needs to check for details in KORP (links implemented) and in ORACC. In addition, the language data from each text have been treated as a running text without full stops indicating sentences. Within the, albeit special, case study at hand, this resulted in the suggestion of strong word ties, which are not specific to the lexeme in question, but to its position within a specific genre. In the case study at hand, this concerns especially *nakru*, often to be found in the apodosis of omina, for which some of the attributed ties are words from the omen protasis[108]. While this has been a major problem in earlier stages of this survey, it is largely resolved by now, though still to be kept in mind for double-checking. Another issue yielding problematic results in the earlier stages of this survey, has been solved by now: the disambiguation of homonyms (especially with regard to *ahû*).

The workflow for LPA involves three main steps: 1) searching for English terms of interest, in this case: "foreign", "strange", "alien", and "other"[109], 2) studying the ego networks consisting of closely co-occurrent words for each identified Akkadian term; 3) checking the network relationships in KORP

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[108]Warm thanks to Céline Debourse for pointing out this issue.

[109]The latter ("other") can be included here due to the low range of results, though it had to be excluded from the dictionaries and KORP searches for feasibility concerns.

("search in Korp" button provided) to understand the context behind the co-occurrence.

The most important results from the case study at hand (see Fig. 4) are that the LPA provides very fast access to some of the most common terms for 'foreign other,' though to the two most common, *nakru* and *ahû*, only secondarily. On the downside, it yields only a small fraction of the otherwise known terms and phrases. The basic search for "foreign, strange, alien" elicits *surû* ([a foreigner]), *Šanu* (strange), *wabru* (stranger), *nakaru* (strange), *ubāru* ([resident] alien), *ubārtu* ([resident] alien), and *Ahu* (Alien [i.e. a stellar constellation]). The ego networks of most of these are tiny and consist of either very generic (e.g., *surû*: only *awīlu* – man; *alāku* – to go) or highly context-specific terms (e.g., *nakaru*: only *kakkabu* – star; reflecting omen context).

The ego network of *Šanu* (strange) points one to *nakāru* (to be[come] different; see Fig. 5), the ego network of *ubāru*, not also of *ubārtu*, to *nakru* (only given as "enemy") and to *šanû* ([an]other). The other main term of the semantic field according to the dictionaries and KORP, *ahû* (in LPA as outside[r]), even requires a further feedback loop (via *mithurtu*; see Fig. 5). It is included in the ego network of *nakru*, where one can also find *ummān-manda* (enemy horde), which did pop up in the dictionary search (see Section 3.5), though not via KORP. The compounds *bēlu#nakru* (lord#enemy) and *mātu#nakru* (land#enemy) found there are not included in any of the ego networks of the primary and secondary search results, they do, however, show up as lemma alternatives when searching directly for *nakru*, as does *nakriš* (like an enemy). Possibly, the third KORP compound, *bītu#wabru* (house#foreigner), is included in the *bītu* tie in the ego network of *wabru* (stranger). Though not *ahû*, several other lexemes based on the same root can be found via the lexeme search for "other:" *ahāmiš* (on another), *ahā'iš* (each other), and *ahullâ* ([on the other bank]); cf. also *šanîš* (otherwise) and *šanītu* (something other).

foreign		strange		alien	
Nodes		**Nodes**		**Nodes**	
Translations	surû	**Translations**	Šanu	**Translations**	ubāru
			wabru		ubartu
			nakaru		Ahu

● surû
Attributes
degree: 2
modularity class: 2
Search in Korp
translation: (a foreigner)
weighted degree: 1.17
Linked words:
● awīlu (0.67)
● alāku (0.50)

● nakaru
Attributes
degree: 1
modularity class: 4
Search in Korp
translation: strange
weighted degree: 0.97
Linked words:
● kakkabu (0.97)

● Šanu
Attributes
degree: 13
modularity class: 4
Search in Korp
translation: Strange
weighted degree: 8.31
Linked words:
● rubû (1.18)
● ṭehû (1.16)
● mâtu (0.85)
● ṣabātu (0.73)
● ālu (0.63)
● šamaššammū (0.21)
● bibbu (0.21)
● dumqu (0.20)
● halāqu (0.17)
● ešēru (0.16)

● wabru
Attributes
degree: 3
modularity class: 2
Search in Korp
translation: stranger
weighted degree: 2.41
Linked words:
● erēbu (1.01)
● bītu (0.98)
● leqû (0.42)

● ubāru
Attributes
degree: 11
modularity class: 12
Search in Korp
translation: (resident) alien
weighted degree: 11.88
Linked words:
● šahû (2.08)
● sadru (1.67)
● ālu (1.47)
● erēbu (1.31)
● bītu (1.25)
● nakru (1.06)
● šanāṣu (1.03)
● waṣû (0.87)
● awīlu (0.48)
● edû (0.47)
● bēlu (0.18)

● ubartu
Attributes
degree: 3
modularity class: 10
Search in Korp
translation: (resident) alien
weighted degree: 2.55
Linked words:
● iptennu (1.38)
● paššuru (0.84)
● mātu (0.33)

● Ahu
Attributes
degree: 5
modularity class: 4
Search in Korp
translation: Alien
weighted degree: 3.55
Linked words:
● bibbu (1.11)
● nentû (0.27)
● damāqu (0.27)
● šamaššammū (0.17)

Figure 4: Search term results and terms linked to search results for "foreign, strange, alien" in LPA (screenshots: 27 May 2025).
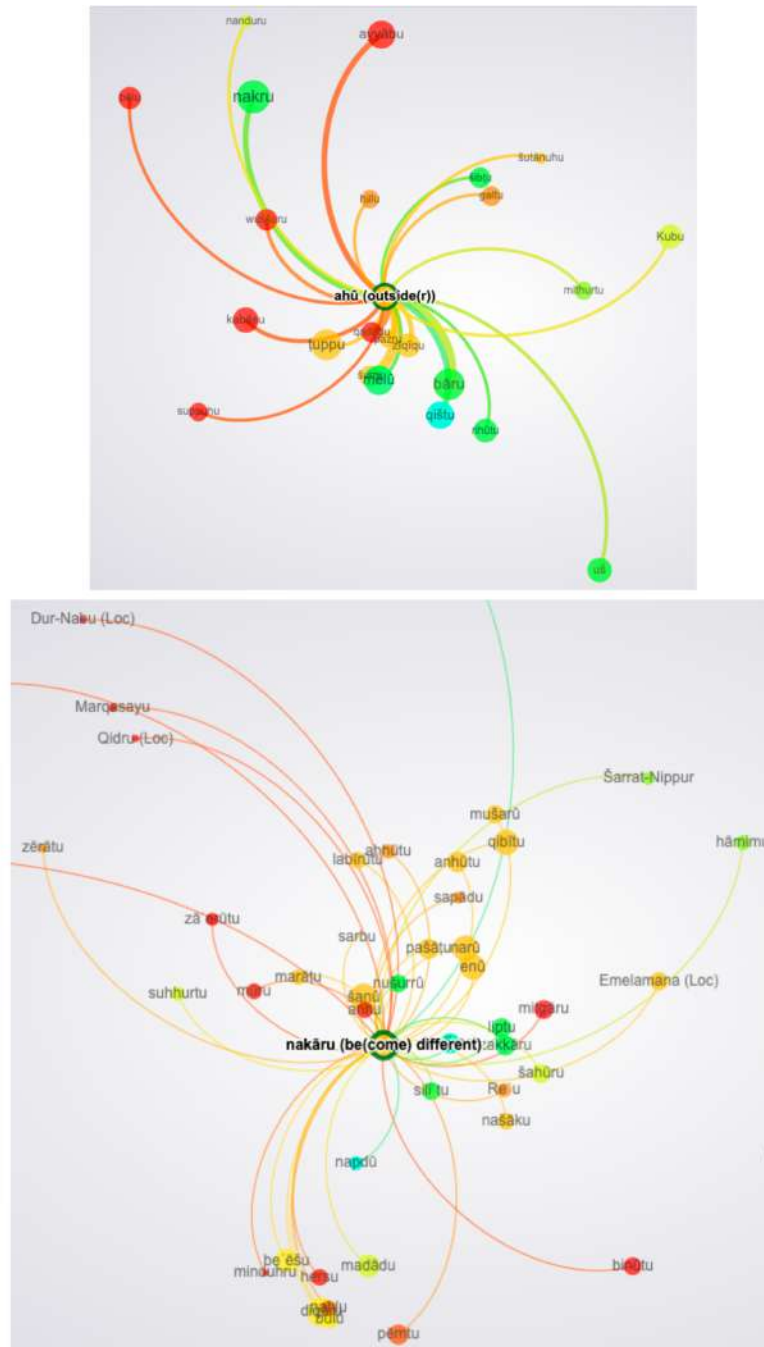
Figure 5: The graphic lexeme presentation of LPA exemplified for the loop results *ahû* and *nakāru* (screenshots: 21 Nov. 2025).

The case study at hand, thus, exemplifies that the severe reduction of the data for applying a big data approach to a data set that does not (at least not yet, and possibly never will) fulfill the basic criterion of being sufficiently big in number, makes the aimed for access to the emic viewpoints doubtful, certainly for the case study at hand. Too many lexemes get obliterated, in Akkadian by cutting out the rarer lexemes (and by basing the network on exceedingly biased data), in English by reducing the lexeme connotation to a single English equivalent.

5   Using the tools in tandem: a sample study

According to the dictionary evidence, language was a key identification factor for distinguishing different peoples. Thus, it is contentwise a highly suitable case study. Also methodologically, the lexeme *lišānu* in combination with its compound constructions and its most common qualifying adjectival attributes is indicative. The term and underlying concept perfectly showcase the workflow-specific challenges and potential of the presented tools.

5.1   The AHw and CAD workflow concerns and search results

As is the case for many lexemes and phrases, the dictionary approach proved to be the most productive by far, but also the most laborious. In the case of *lišānu*, the relevant CAD results stem already (and mainly) from the main entry ("4. language, technical language, special language or dialect, nationality, person or people speaking a (foreign) language"), while in AHw the foreign context is provided only in the contextualising examples of sub-entry 3 ("*l.   aḫītu* [fremd]")[110]. The English and German OCR results prove perfectly acceptable, any entries including Akkadian (and/or Sumerian) require major corrections. Compare, for instance, AHw sub-entry 3 (*lišānu* = language ["Sprache"]):

> AHw 556 *lišānu*, sub-entry 3: copy/paste result from OCR-ed dictionary.
> 8) Sprache. a) aB cl *egeru* G 2b, *egru* 2. jB cl*mitlJurtu*; Länder
> *süt sunna li · sa · nu* die ver- schieden sprechen BWL 128, 49; 1.

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[110]CAD L (9, 1973) 209–15, main entry for *lišānu*: p. 209; AHw 556.

alJitu (fremd) RMA 62,3; 76-80,3; Sg. Wi. 94,86; s. TU 17, 33; cl *belu* I B 3a; *ina li · sa · an* LN Sg. Lie 76, 17; Wi.214a. b) v Fachsprachen usw: *li · sa-an* (11 eme) cl *kullizi, utulti, malaMi* usw Teachers 202; ZA 4, 434,7.9 cl *nesakku.* c) Spr. = Volk: *1.rneS* v Ost u'VestAS 5, 16V 9.nB1.meS*ma'dätiina*ONABL 238 Rs. 6. spB (achäm.) *niätäte Ba napljar li · 8a.nU gabbi* VAB 3,113 § 2; 115 § 2; ZA 44,163,6; API 30,6; 35,7.

AHw 556 *lišānu*, sub-entry 3: corrected quote.

3) Sprache. a) aB o| *egēru* G 2b, *egru* 2. jB o| *mitḫurtu*; Länder *šūt šunnâ li-ša-nu* die verschieden sprechen BWL 128, 49; *l. aḫītu* (fremd) RMA 62,3; 76–80, 3; Sg. Wi. 94, 86; s. TU 17, 33; o| *bēlu* I B 3a; *ina li-šá-an* LN Sg. Lie 76, 17; Wi. 214a. b) v Fachsprachen usw: *li-šá-an* (|| eme) o| *kullizī, utullī, malaḫḫī* usw Teachers 20²; ZA 4, 434, 7. 9 o| *nēšakku.* c) Spr. = Volk: *l.*ᵐᵉˢ v Ost u West AS 5, 16 V 9. nB *l.*ᵐᵉˢ *ma'dāti ina* ON ABL 238 Rs. 6. spB (achäm.) *mātāte ša napḫar li-šá-nu gabbi* VAB 3, 113 § 2; 115 § 2; ZA 44, 163, 6; API 30, 6; 35, 7.

The scope of misrepresentations in the OCR results makes it doubtful, whether correcting the digitized evidence can be suitably achieved via automatized processing and cross-checking or whether copying the ancient language segments by hand is more time- and content-efficient.

Characteristically, some major relevant contexts are already provided in the concise dictionary AHw, but they require substantial insight knowledge, both of the Akkadian and the German language. Further, AHw compound constructions like *lišānu egru* or *lišānu mitḫurtu* are classified as (more) primary language qualifiers, *lišānu aḫītu* as most representative for indicating a foreign language.

It is worth noting that the primary compound attributes, *egru* and *mitḫurtu*, and the prominence of indicating specialised languages potentially point to a more alterity- than othering-connected perception of foreign languages and their speakers: the issue being that they are unintelligible, but not necessarily negatively connotated, neither as languages, nor with regard to their speakers. This becomes obvious from the CAD quotes chosen for exemplifying the meanings of the lexeme compounds: *lišānu egru* signifies "confused" / "twisted (said of foreign, unintelligible speech)" /

generally unintelligible ["unverständlich"] speech[111]. A descriptive rather than derogatory focus also characterises the (AHw) sample quote for *lišānu+šanû* (countries that speak differently)[112]. The two available (CAD) quotes for *lišānu nakirtu* showcase, in contrast, the wider range of the lexeme *nakru*, which could obviously be used for the full range of connotations from 'alterity' to 'othering'[113]. It is, however, to be noted that the strong inimical aspect often associated with the root, is not explicit even in the deprecatory quote[114].

An intriguing case is presented by the compound construction *lišānu mithurtu*. CAD suggests a mix-up with *mithartu* for the cases, where *mithurtu* indicates correspondence or congruence rather than conflict[115]. This is not born out by the ORACC/KORP data, which regularly note *mithurtu*. Based on the more literal rendering of AHw, the perceived inconsistency seems to be rather a modern English language phenomenon (or researcher perception) than an ancient Akkadian one. The primary literal meaning seems to be "encounter" ["Zusammentreffen" (AHw 662)], which can either lead to "conflict, opposition" or to "confluence, harmony".

Remarkably, the allegedly most common expression for foreign language according to KORP, *lišānu aḫītu*, is not the most frequently attested in the

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[111]CAD E (4, 1958) 42: "kur.bi bad.du eme.bi gilim.ma : *ša šadûšunu nešu lišānšunu e-eg-ru* (Gutium, Subartu and Tukriš) whose mountains are far away, whose languages are confused". CAD E (4, 1958) 47: "twisted (said of foreign, unintelligible speech): [… *l]i-ša-na-am e-eg-ra-am*". AHw 190: *lišānu egru* unintelligible speech ("unverständlich(e) … Sprache"; no explicit reference to foreignness of language).

[112]AHw 556: "Länder *šūt šunna li-šá-nu* die verschieden sprechen".

[113]On the application potential of the concepts 'alterity', 'deviance', and 'othering' to ancient, and especially Neo-Assyrian textual contexts see Wasmuth 2022.

[114]CAD L (9, 1973) 214: "*u lu aššum errēti šinātima nakara aḫâ ajāba lemna li-šá-na nakirta lu mamma šanâ uma'aruma ušaḫḫazu* or if on account of these curses he instructs or instigates a hostile stranger, an evil enemy, a speaker of a foreign language, or anyone else" CAD L (9, 1973). 215: "The foreign messenger was brought before me EME.MEŠ *ṣitti šamši ereb šamši ša Aššur umallû qātūa be-el* EME-*šú ul ibšīma* EME-[*šú*] *nakratma la išemmû atmûšu* (in) the nations of east and west that Assur granted me (to rule), there was no one who could speak his language, his language was foreign, they could not understand his speech."

[115]CAD M (10/2, 1977) 137, 138: "1. conflict, contrast, clash (of opposing forces), opposition (of sun and moon), 2. correspondence; SB … [138:] Since EME.ḫa.mun (*lišān mitḫurti*) describes contrasting tongues, and not harmony, and *mitḫurtu* in ref. to the sun and moon refers to opposition, it is possible that the refs. cited mng. 2 which seem to mean correspondence are to be read *mitḫartu*, and are to be connected with *mitḫartu* 'square.'"

dictionaries. In fact, all four translated quotes for *lišānu aḫītu* found in the basic search draw on the same ancient source, which is translated slightly differently in each case, thus clearly showing the impact of the modern researcher on the reading of the ancient texts[116].

At least as many or even more quotes are cited for the combinations of *lišānu egru*, *lišānu mitḫurtu*, *lišānu nakirtu*, and *lišānu + šanû*. Interesting is once more the scope of quotes for the root *nkr*, which seems to have both, a more neutral and a negative connotation, and also the interchangeability of *lišānu nakirtu* and *lišānu egru*, at least when the focus is on the unintelligibility of speech due to its being in a foreign language.

Whether (some of these) phrases represent fixed compound expressions is interpreted differently in CAD and AHw. CAD assumes that some compound expressions with *lišānu* have developed a specialised meaning of their own: *bēl lišāni* ("one who knows a (foreign) language"), *lišānu aḫītu* ("foreigner") and *lišānu ma'dātu* ("foreign peoples"[117]). AHw, on the other hand, focuses on their literal meanings and, thus, subsumes them under the main entries of the compound elements. Especially for *bēl lišāni*, it may be interesting to study, whether this title or ascription was given mainly/only to native speakers or (also) to those who acquired the language in question as a second (or third) language. For *lišānu aḫītu* and *lišānu ma'dātu*, the different interpretations in CAD and AHw invite the question what motivates the difference in usage (or modern interpretation) between the qualified abstract noun (foreign language) and its personalisation (foreigner / foreign peoples).

5.2   Tandem processing with KORP (and ORACC)

In the primary KORP search for "foreign", *lišānu aḫītu* ("foreign language") does not pop up for structural reasons, as it is not tagged as a unit. In the basic search modi (simple and extended) it is also not possible to search for the word combination. However, the search results for translation sense "language" are limited and can, thus, easily be checked, especially when downloaded for further processing[118]. Out of the 72 results for

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[116]CAD A (1/1, 1964) 211: "strange tongue(s), different language(s)"; CAD A (1/2, 1968) 498: "alien languages, different speech"; CAD B (2, 1965) 182: "foreign tongue(s), (of) divergent speech"; CAD L (9, 1973) 213: "foreign languages, (of) diverse speech"; AHw 556: foreign language ["(fremd)"].

[117]CAD L (9, 1973) 215; CAD A (1/1, 1964) 211; CAD L (9, 1973) 214.

[118]Search parameters: all ORACC 2021 corpora; text language contains "Akkadian"; translation sense is "language".

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lišānu ("language"), 30 point to a foreign language context. Of these, 16 are combined with *aḫû*, 2 with *nakru*[119]. 21 results, including 11 of the *aḫû* results, specify the relevant language obliquely or directly as foreign (as that of Amurru)[120]. One further search result yields *bēl lišāni* ("master of language"), for which the context explicitly specifies his foreign language capacity[121]; another *lišānu mithurti*, which refers in the specific text obliquely to a foreign, or at least different, language that is to be combined with another one in a bilingual text or sentence[122].

Thus, the KORP evidence confirms and substantiates the AHw claim that *lišānu aḫītu* is the primary term for "foreign language" and makes it even more difficult to understand, why the scope of usage is not better reflected in the CAD quotes of the term.

For the dictionary focus, the Amurru connotation is too specific to show up (at least with any prominence). The same is true for quotes, in which the language or jargon of a profession(al) is explicated: e.g., the language of a sailor, smith, a seal cutter, or a priest. Especially the latter diversify the dictionary claim and quotes of *lišānu* as referring also to jargon and technical language.

The two further *lišānu* compounds indicating 'foreign otherness' according to CAD (and AHw), *lišānu egru* and *lišānu ma'dātu*, do not show up in the current KORP data, *ma'dātu* not at all, *egru* not in combination with *lišānu*. The ten search results for the (auto)lemma provide the translation base forms "transverse (one)" and "perverse one" as well as the additional translation sense "crossed", thus, providing potentially interesting additional connotations for the (primary) dictionary compound *lišānu egru* ("confused/twisted language")[123].

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[119]With *aḫû*: 7x EME * aḫītu*, 5x *lišānu aḫītu*, 4x EME BAR; 2x CAMS, 3x RINAP, 11x SAAo. With *nakru*: 1x EME-*šú nakratma* (RINAP); 1x *lišāna nakirta* (RIAo).

[120]11x RINAP: *lišān māt Amurri* (li-šá-an KUR MAR.TU.KI); 10x SAAo: *lišānu aḫītu māt Amurri* (EME/*lišānu* BAR-*tum/aḫītu*(*m*) KUT-MAR(.TU)KI).

[121]RINAP: *be-el* EME … EME-*šú nakratma* (Ashurbanipal 1 vi 11'–13': "…*be-el* EME-*šú ul ib-ši-ma* ˹EME-*šú*˺*na-ak-rat-ma la i-šem-mu-ú at-mu-šú* … there was not a master of his language. [H]is language was different and his speech could not be understood" (https://oracc.museum.upenn.edu/rinap/rinap5/Q003700.30.2).

[122]"o5: *eme ḫa-mun dili-gin₇ si mu-ni-ib₂-si-sa₂-e* / o5a: *li-ša₂-nu mit-ḫur-ti ki-ma iš-ten šu-me tuš-te-šer₃* – (Sum) He sets conflated language in order like one (language). (Akk) You put conflated language in order as one line (of text?)." (https://oracc.museum.upenn.edu/blms/P394721.11.1).

[123]2x BLMS, 1x CAMS, 1x CCPo, 1x RIBo, 4x RINAP, 1x SAAo.

5.3   Tandem processing with LPA

Tandem processing with the *Lexical Portal of Akkadian* (LPA) proves to be only of limited value. On the one hand, the meaning "language" is not tagged in the data set. Thus, the search needs to go via the Akkadian lexeme *lišānu*. Interestingly, the most common compound attribute of according to the ORACC in KORP search of the same underlying data set, *ahû/ahītu*, does not show up in the ego network while the very minor compound attribute *mithurtu* does. The very strong tie obviously gets lost due to the indiscriminate search, i.e. the evidence for the much larger primary connotation of "tongue", which overshadows the special connotation "language" with its distinctly different set of close ties. In the case of *lišānu ahītu* vs *lišānu mithurtu* this is especially misleading, as the underlying data testifies that the compound featuring *ahû* was much more common than *lišānu mithurtu* (at least on the available, though highly skewed *ORACC* data). In addition, the link between *lišānu* and *mithurtu* was mainly secondary: a series of Sargon inscriptions specify *lišānu ahītu* explicitly as *atmê la mithurtu* (people speaking a foreign language, being of diverse [lit. not harmonizing] speech)[124].

6   Conclusions

6.1   Scope of elicited data

One of the most striking results of the survey has been the overwhelming amount of extra data provided by the major dictionaries in comparison to the online (search) tools. The major dictionaries, especially in tandem, produced more than 50 lexemes in contrast to the 16 found via (ORACC in) KORP and the mere 7 (via feedback loops up to 19) elicited from the *Lexical Portal* (LPA). The surveyed online dictionaries, i.e. CDA, eBL, and eSAD, which constitute direct or indirect English-language derivatives of AHw jointly bring forth roughly half of the AHw-cum-CAD lexemes, including two that are beyond the basic search, one for which they do not specify a foreign context, and one that is not included in the major print dictionaries at all (see Section 4.1). All KORP and LPA results, on the other hand, came up in the basic translation-based dictionary search.

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[124]E.g., http://oracc.org/rinap/scores/Q006524.72.7; see also AHw 662.

The core scope of otherness —reaching from the perception of inimical, culturally different, administratively different, not identical with oneself or a specific group, to a welcome visitor— are present in the results from KORP and LPA, thus confirming their basic representativeness despite the heavily reduced data set implemented for allowing a 'big data' approach to the (in 'big data' terms) small data set of the digitally available Akkadian language records. Nonetheless, the extra lexemes, which are both generic and specific in nature, open up significantly more relevant contexts, in which the perception of a difference is worth re-examining. Arguably even more important, regarding the aim of an emic viewpoint is the lack or ability, respectively, to showcase non-lexeme-focussed expressions of 'foreign otherness.' The dictionary lexeme list is complemented by roughly 30 fixed phrases that directly circumscribe the concept of foreign otherness or strangeness, often by negating conceptual antonyms. These allow immediate access to the core of the perceived otherness, e.g., being from a different town, being not identical with someone else, or being less known or less knowledgeable. Further important strategies to indicate (foreign) otherness that get lost in the lexeme-focused search tools, are indirect references via the context (e.g., without explicitly referring to the enemy camp as foreign or different from one's own) and syntactical formats for expressing otherness: especially by doubling the relevant terms, often to be translated "the one, the other".

6.2   Workflow concerns

The necessary workflow effort is roughly proportional to the search result output. The dictionaries, and especially CAD, require the highest effort by far to extract the available information, and even more, if these are to be prepared for further processing. Nonetheless, they elicit a scope of information currently not easily available by other means, though a time- or context-specific analysis requires also here an additional examination of the full edited data. Especially for CAD, the search for source references also beyond the main entries proved highly productive. In various cases, the quotes cited in a different context added significant connotations to the main entry quotes. The key disadvantages of the dictionaries are their inherent lack of searchability for the Akkadian terms beyond their main entries (OCR does not work well enough for the specific data), thereby limiting the potential of further feedback loops. Nonetheless, it is to be noted that the output also of Akkadian terms has been far beyond the feedback

loops in the online tools, without missing out on their lexeme results (one exception via eBL).

The online dictionaries (CDA, eBL, and eSAD) provide roughly half the amount of lexemes with minimal effort, but also without much potential to access the other half. KORP and LPA provide only the most prominent generic terms with little effort, but with substantial potential for further contextualisation by largely complementary approaches. To get beyond the basic lexeme information requires also here vast, highly specialised knowledge and laborious contextualisation. For this, the *Lexical Portal* (LPA) requires first an additional contextualisation loop via KORP and/or ORACC. For a focus on the text genres and periods towards which ORACC, and thus also ORACC in KORP and LPA, are biased, this is, however, substantially more effective than the detour via the dictionaries.

For alternative outlooks, and especially for testing the imperial and chronological bias against other contexts, KORP, LPA, and ORACC are not only insufficient, but contain an inherent risk to distort the data, and to petrify the distortion by its easy, but defective, data access. This is potentially going to change with future updating, put only fundamentally if additional ways get implemented to add to or emend already existing lexeme translations.

To access the ORACC data via KORP has the tremendous advantage of a stable simple to complex search across all ORACC projects. The alternative is a time-consuming project-internal search within ORACC, which proves similar in effort to searching each CAD volume separately. In case of AHw and CAD, this is primarily a performance issue; in principle, the different volumes could be incorporated into a single file and searched together. In ORACC, this is currently a feature: the full-text search across projects is not operational and is only meant for basic searches in contrast to the powerful cross-project search in KORP.

The graphic dictionary LPA is very intuitive and efficient regarding its workflow. In addition, the relatively small number of produced lexemes and the limited number of their connections allow a fast basic check-up of their contexts via KORP. In earlier versions, they showed, at least for the case study at hand, that many of the more unexpected connections in relation to the lexemes' core meanings have only very loose links, which draw on the text format rather than the content (e.g., omen protasis vs. apodosis, separate syntactical units within a text). This has been emended in the current version, but in a way that a substantial amount of formerly primary or secondary connections matching the dictionary data got lost as well.

6.3   Future viability

The concern of future viability differs strongly across the presented tools. In the pre- and postfaces, von Soden explicitly states his aim of producing a dictionary that presents a more or less comprehensive scope of lexemes based on the available sources at the time in a way that they remain representative also in the future. The CAD editors took up the issue by planning from the start the addition of topic-specific extra volumes. ORACC is designed for easy extension, by adding further data sets within the existing projects, and by adding new projects. The same is true for the search derivative (ORACC in) KORP, for which, in addition, an autolemmatitizer was created that allows inclusion also of not yet lemmatized and not yet translated digital text records. For KORP and LPA no strategies for future updating are published so far. As KORP is maintained by major national infrastructure, the Finnish Language Bank, future update imports from ORACC are planned and feasible. Whether LPA, which is currently maintained by a temporary research project, will be regularly updated beyond the project duration (12/2025) remains to be seen.

AHw remains largely up to date due to its strong focus on literal translations, which are less prone to zeitgeist-inherent distortion. CAD is much more characterized by its diversity of scholarly backgrounds and tendency to more generic translations. This creates a higher influence of the zeitgeist and historiographical outlook, which is, however, mitigated by its vast scope of contributors, and by the scope of Akkadian quotes. Future proofing in the sense of including emendations and additions based on later text editions and topical studies does not really take place in both dictionaries. Due to their print status, the search for published add-ons is not time-effective compared to the additionally necessary edition check, and their immensely time- and finance-consuming design does not make regular updates likely[125].

It has to be noted, however, that the same is true for the discussed digitally designed online platforms like ORACC, which —at least currently— tend to be based on the original print editions, thereby 'petrifying' mistakes and obsolete transliterations and translations already corrected in the scholarly literature. Real future viability would, thus, require a strategy to include not only further basic data in the form of transforming print

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[125]As cited above, there is at least some effort to be noted to update both, AHw and CAD.

editions of transliterations and translations into digital format, but also ways to integrate contemporary and later scholarly lexeme and text discussions (= lexeme-oriented commentary). The same is true for the ORACC derivatives, (ORACC in) KORP and LPA. To which degree the data distortion due to prioritizing the lexeme over the syntactic-semantic text structure will get mitigated by extended data input, is currently beyond assessment. At least some of the immense data reduction (7/19 vs. 16 vs. over 50 lexemes plus more than 30 phrases) due to the big-data approach should even itself out with continued data additions.

As CDA online is based on a print dictionary, and the lexeme lists of eBL and eSAD draw on CDA (and several other print studies), expandabiity of the basic lexeme list is also no explicit concern of these tools. They are, however, much more easily adaptable to comply with such extention needs than the other tools under discussion here.

6.4   Socio-cultural input potential

Each of the presented tools has major potential but also severe limitations when used for socio-cultural and/or (socio-)historical, rather than philological or linguistic questions. For now, the dictionaries have the biggest socio-cultural potential by far. Most importantly, they allow accessing the Akkadian language production also for a much less specialized audience even beyond the lexeme level. To a lesser degree, this is true also for the online dictionaries presented despite their lesser scope of lexemes, their often lesser scope of ancient source indications, and their nearly exclusive lexeme focus.

Once LPA and ORACC in KORP are based on a much more representative data set, both tools have significant, and complementary, future potential. For KORP, this is due to the possibility to search and filter not only according to lexeme (combinations), but also according to text genre and any other included meta-data fields like time period or provenance. Furthermore, the option to search for base form translations and translation sense gives helpful insights into the core meanings and the scope of actual usage.

For the case study at hand, the potential of LPA has been rather limited due to the unrepresentatively low amount of produced lexemes[126].

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[126]The disambiguation of homonyms and the comparatively high degree of 'bogus' lexeme connections (quantitative instead of syntactic context, mix of formulaic frame

The actually semantically connected lexemes did not enrich the lexeme connotations and contexts much beyond the already known core meaning. These were even significantly reduced as in the case of *nakru*, which is only rendered as "enemy" despite its exceedingly fluid scope of connotations, and does not show enough significant ties to offset the impression given by the chosen translation. Whether this limited added value remains a key design issue (language complexity reduction for 'big data' approach) or may substantially even out on a much enlarged data set, is currently beyond assessment. In general, the overall small (in 'big data' speech) and diversified Akkadian data set and the current (and likely future) practice to cut out relatively rare lexemes make the tool mainly suitable for stable social phenomena, not for exploring exceptions or dynamics of change.

Nonetheless, if kept abreast of the growing online editions, e.g., via KORP, the *Lexical Portal of Akkadian* (LPA) has a lot of potential to provide a highly time-efficient starting point for checking both, obvious and unexpected, connotations, and thus for accessing potential further, culture-inherent meanings that may have gone lost in the zeitgeist and academic background of the dictionary contributors.

7 Outlook: key agenda points for a digital Akkadian dictionary

Based on the case study of the semantic domain of 'the foreign other' across the various digitized and digital tools and in view of a target audience searching for primary data concerning socio-historial research questions, taking up the following aspects would provide essential added value for a major digital dictionary of Akkadian:

(1) to mantain, and ideally enhance, modern research language diversity in order to increase the likely overlap with the (regionally, socially, chronologically, etc. differing) ancient scope of connotations of specific lexemes and wider semantic fields.

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and actual text context), which proved to be major concerns in the preliminary stages of the study underlying this article, have been successfully solved by now (at least according to the case study at hand). Unfortunately, this did not only cause necessary exclusions from the various ego networks, but also the elimination of terms that should show up in them according to the dictionary evidence.

(2) to keep the scope of collated differing translations and editorial comments and create stable search options to access these also beyond the basic lexeme search.

(3) to incorporate links to an ORACC in KORP (auto)lemma search for the various lexemes.

(4) to implement an option for adding further quotes that diversify the hitherto collated meanings (ideally by supervised crowd-sourcing), and also enhance the chance of picking up essential language aspects beyond the lexeme focus.

(5) to include an option for updating old translations (of quotes and lexemes) based on later research discussions [urgently needed in order to counter the petrified primary editions typically used in the current online tools].

(6) to provide ample and diverse ways to download simple and advanced search results in various (platform- and program-independent) formats for further processing.

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