## Luxembourgish



Luxembourgish language, phonetics, phonology, morphology, syntax, lexicon, language variation

## 1. Introduction

Luxembourgish (L.) did develop in the context of the creation of the nation-state in the 19th century and serves as the national language of Luxembourg. Due to sociolinguistic divergence, in the 21st century, Luxembourgish cannot be regarded as a variety of German anymore but rather as a Germanic Ausbau language on its own. Located on the westernmost border of the Continental Western Germanic language continuum, Luxembourg borders Germany in the east, France in the south, and Belgium in the west (Figure 1). This specific contact situation and a complex history of territorial changes involving Germanic- and Romance-speaking areas led to the emergence of a multilingual situation, which dates back at least to medieval times. Intended as a buffer state between the European powers France and Germany (Prussia) after the Napoleonic Wars, Luxembourg was founded as a grand duchy in 1815 after the Congress of Vienna. It did not take long for the situation to change yet again when, as a side effect of the Belgian Revolution (1830), the historically Romance-speaking area of the grand duchy, the socalled "quartier wallon," was attributed to Belgium, forming in the early 21 st century the "Province du Luxembourg." The remaining, much smaller territory represents the Grand Duchy of Luxembourg in its early-21st-century borders since 1839. Luxembourg, however, only gained full independence in 1890, consequently ending the sovereignty of the king of the Netherlands. This brief overview shows that the process of nation building was initiated and governed by external political factors and agents and did not originate
from an independence movement of the population (see Pauly, 2014; Péporté et al., 2010). During the 19th century, the idea of a shared nation, culture, and identity gradually arose (Newton, 1996b) and grew especially during and after the two World Wars, when Luxembourg suffered tremendously from the occupation and forced conscription by the German Reich. The resulting negative attitude against Germany and its language, culture, and society lasted well into the 1980s (Trausch, 1983).

## [COMP: FIGURE 1 HERE]

In the early 21 st century, Luxembourg is a socially and culturally highly diverse and economically powerful country. Of the 634,700 inhabitants (2021), $47.2 \%$ are foreign nationals (Statec, 2021). The largest groups of migrants have Portuguese (about 94,000) and French nationalities $(48,500)$. The high and continuously growing demand for workforce in the service sector (mainly in the financial and insurance sectors, shops, restaurants, construction sector, etc.) has led to a high number of cross-border workers, who commute to Luxembourg daily (105,700 from France, 48,800 from Belgium, 50,300 from Germany). The unemployment rate has risen from 2.4\% in 2000 to $6.3 \%$ in 2020, but the labor market can still be regarded as especially strong (Statec, 2021).

## 2. Sketch of the Sociohistorical and Sociolinguistic

## Evolution

From medieval times to the early 21 st century, the geographic region of the nation-state Luxembourg was (and continues to be) strongly characterized by multilingualism where

Latin and later Romance varieties coexisted alongside German varieties (see Rapp, 2006; Ravida, 2012). It can be safely assumed that the then largely illiterate population used vernacular varieties in their everyday lives, that is, Germanic Moselle Franconian and Romance Walloon or Lorraine dialects. Eventually, the Luxembourg territory was divided into a western "quartier wallon" and an eastern "quartier allemand," with French and German serving as written languages for administrative purposes. This multilingual situation remained unchanged even after the "quartier wallon" had been separated and attributed to Belgium in 1830. After the establishment of Luxembourg as a grand duchy in 1839, the first constitution (1848) acknowledged the multilingualism of the nationstate in Article 30, by declaring German and French as the two languages of the country (Mémorial, 1848). Subsequently, the emerging school system was tailored around these two languages. However, the spoken varieties, which were typically acquired by the population as their first languages, were Moselle Franconian dialects.

This situation with Standard German and French as the High Varieties and various local vernaculars as Low Varieties can best be described as medial diglossia (see Auer, 2005, type A). Early reports on language use describe the local vernaculars as patois, Luxemburger deutsche Mundart 'Luxembourg German dialect' and onst Däitsch 'our German' or Lëtzebuerger Däitsch 'Luxembourg German' (Newton, 1996a: 52f.), indicating that the vernacular was perceived as a (spoken) dialect of German, dependent on its Dachsprache (roofing language) German. Accordingly, the prestige of this dialect was rather low.

The situation slowly began to change toward the end of the 19th century and would eventually result in a largely transformed language situation in the 1980s (see Horner \&

Weber, 2008). The dialect (and partly also the system of multilingualism as such) became progressively associated with the national identity. The negative attitudes toward and the low prestige associated with the dialect were gradually transforming into positive attitudes and high prestige. Especially after World War II, people increasingly expressed the idea that their mother tongue was not a German dialect anymore but rather a separate language. This process was recognizable, for example, in the change of the language name to Lëtzebuergesch ['lətsəbu:əjəJ] or Eis Sprooch 'our language'. In the 1980s, authors began to produce an increasing number of literary works in Luxembourgish, helping establish a very active literary scene, where Luxembourgish acquired the status of a literary language alongside German and French (Gilbertz, 2019). This changing situation led to the adoption of the seminal language law of February 24, 1984 (Mémorial, 1984): Luxembourgish was for the first time recognized as the national language (langue nationale), and German, French, and Luxembourgish were considered the three administrative languages, thus officially recognizing the trilingualism. In addition, French was attributed the role of the only language for legislation. The language law thus underlined the particular role of Luxembourgish in the overall multilingual setting. Note, however, that no specific language planning measures, for example, to foster Luxembourgish, were foreseen in the law. It was merely intended to acknowledge the status quo and underline the high positive prestige of Luxembourgish. Thus, in the early 21 st century, the language is probably the most important factor to convey national identity and is considered a national symbol. Clearly not regarded as a dialect of German anymore, Luxembourgish can be characterized best as a vernacular with well-defined tendencies toward Ausbau and standardization, with French and German functioning as
major contact languages for lexical elaboration and creativity (Gilles, 2019a). In 2018, a national law was introduced to promote the usage of Luxembourgish on all levels of society (Loi du 20 juillet 2018 portant sur la promotion de la langue luxembourgeoise; Mémorial, 2018).

The societal multilingualism is maintained and reproduced through the school system, and it is still a real paradox that, while French and German are taught and used in schools on a high, if not near-native, level, Luxembourgish is hardly present in the school system. While used informally in primary school as a medium of instruction, it is officially not used in secondary schools except for 1 hour (until 2021 in the 7th grade and since then in 10th grade, including a small amount of orthographical training). Instead, German and French (and, of course, English) are taught as the most important (foreign) languages (see Horner \& Weber, 2008).

Nevertheless, in the early 21 st century, Luxembourgish can be considered the most important spoken language, which is gradually also used as a written language. Provided that the participants in a conversation speak the language, there are no restrictions regarding topics or degree of formality. Regardless of the setting, it would be inconceivable to switch to another language.

Apart from the private and informal oral domains, Luxembourgish is also the sole language spoken in the parliament, it is increasingly used for official public announcements, which previously were in French, it can be found in advertisements and is often a required language for certain jobs (e.g., for all civil servants). Competencies in Luxembourgish are also required to obtain Luxembourg nationality, which also led to a rising number of second-language learners (see Weber-Messerich, 2011). However,

French (and increasingly English) is the most widely used language in the workplace and as a lingua franca in shops or restaurants (see Fehlen, 2009). The role of Standard German, besides its use as the language of alphabetization, is somewhat more difficult to assess: It is largely used as a passive language of media consumption (newspapers, German TV chains, books) and partly as the written language of local administration (see Scheer, 2017).

On the structural level, an ongoing process of dialect leveling is reducing the regional variation within Luxembourgish itself. The various regional dialects of the South, the East, the West, and the North show a gradual loss of former dialect features in favor of the central variety of Luxembourg. This central Luxembourgish variety, sometimes called Zentralluxemburgisch, Koiné, or Gemeinluxemburgisch (common Luxembourgish), serves as an emerging standard variety, which is also acknowledged as such by the population (Engelmann, 1910; Gilles, 1999, 2000, 2006a). However, Luxembourgish remains a rather variable language also due to highly flexible borrowing processes from either French or German.

While newspapers are generally published in German or French, the language on the radio or on TV is Luxembourgish (RTL Radio Lëtzebuerg, eldoradio, RTL Télé Lëtzebuerg and Radio 100komma7). The advent of digital media (SMS, chat, email, Facebook, Twitter, WhatsApp, Instagram, etc.) maintains a tremendous effect on the development of Luxembourgish as a written language (Belling, 2015). Nearly all these texts and messages are composed in (mostly far from orthographically correct)

Luxembourgish, even though the spelling system is taught only on a rudimentary level or not at all in schools (Gilles, 2015a).

In church, Luxembourgish is used for sermons, whereas chants and the service of the word may be in the three languages. A translation of the Gospel has been provided only recently (Biver-Pettinger, 2015; Ecclesia catholica, 2009).

According to the most recent census of 2011 (Fehlen \& Heinz, 2016), 55.8\% $(265,731)$ of the resident population uses Luxembourgish as their first language. This figure roughly corresponds to the population possessing Luxembourg nationality, and in this group, intergenerational transmission of Luxembourgish as the first language is clearly guaranteed. The census furthermore inquired about the main languages used at work, in school, or in public. Here, $70.5 \%(323,557)$ of the respondents stated that Luxembourgish is one of their main languages. These figures thus indicate that there is also a substantial group of second-language speakers. Taken together, these figures may also serve to underline the vitality of the Luxembourgish language within an outspoken multilingual setting (see Fehlen, 2009; Fehlen et al. 2013a, 2013b; Fehlen \& Heinz, 2016).

However, the status of Luxembourgish, its vitality, and its position in the multilingual situation are not free of tensions. While, on one hand, structural Ausbau is clearly taking place in certain, especially "digital" domains, immigration and crossborder workforce, on the other hand, have led to a highly multilingual, yet Frenchdominated, everyday life, which is also contributing slightly to societal tensions. These are reflected in changing and conflicting language attitudes and ideologies (see Horner \& Bellamy, 2018; Horner \& Weber, 2008; Purschke, 2020).

Language standardization can be observed mainly in orthography and the lexicon, where a medium level of standardization has been reached (Gilles \& Moulin, 2003;

Newton, 2002; Stell, 2006). Since the end of the 20th century, Luxembourgish has a fully developed official orthography, with predecessor systems dating back to 1912 and 1946 (see Gilles, 2015a; Moulin, 2006; Newton, 2000). The recent orthography has been introduced in 1975 and was slightly reformed in 1999 (Mémorial, 1975, 1999). A major overhaul took place in 2019 (Orthografie, 2019). This revised system is also used for all examples in this chapter.

Linguistic research on Luxembourgish already began in the 19th century in the context of the emerging dialectology. While still regarded as a dialect of German, the published studies on the then Moselle Franconian dialects in Luxembourg focused mainly on phonology and morphology in a comparative historical framework. The reference system thus was either West Germanic, Old High German, or Standard German. Since the middle of the 20th century, research on all linguistic levels and especially in sociolinguistics has constantly increased; see Gilles (2020) for an overview of the historical development of the field of Luxembourgish linguistics.

## 3. Phonetics and Phonology

For a general overview of the phonetics of Luxembourgish see Gilles and Trouvain (2013). The phonetic vowel inventory has the following structure (1):
(1) Vowel inventory of Luxembourgish


The closed and close-mid monophthongs are characterized by a duration opposition and not by a tense-lax opposition as in Standard German. Apart from loans (ähnlech [' $\varepsilon: n l ə ¢$ ] ‘similar', Dän [d $\varepsilon: n]$ 'dane', Saison ['s $\varepsilon: z a ̃ \mathrm{a}:]$ ), long [ $\varepsilon$ :] only occurs before /r/ and can be considered as a conditioned allophone of/e:/. Typologically interesting is the fact that schwa can also occur in stressed syllables (Dëscher ['dəfe] 'tables', Ënnen ['ənən] 'onions'). Phonologically, however, this schwa must be considered as a complementary allophone of/e/, as it never occurs where the allophone [e] occurs. Short, near-open [æ] is currently experiencing further lowering and is coming qualitatively closer to [a:]. Contrary, for example, to Standard German, the open vowels are clearly distinguished by vowel quality and duration, with long [a:] in the central position and short [a] back and sometimes even raised toward [0].

In its inherited system, Luxembourgish has no rounded front vowels. In the case of umlaut, a back vowel is mutated to the corresponding unrounded front vowel (e.g., Fuus [fu:s] vs. Fiiss [fi:s] 'fox(es)', froen ['fro:ən] '(I) ask' vs. frees [fre:s] '(you) ask'). The umlaut relationships are, however, often much more complicated and frequently not unambiguously predictable from the back vowel, especially for the plurals of the nouns (see Section 4.1).

Luxembourgish has eight diphthongs, constituting a comparatively rich system. While the pair [iod / [uə] shows a centralizing articulation, the pair [3i] / [əv] shows the mirroring, that is, decentralizing articulation. The two pairs [aI] / [æ:I], [av] / [æ:v], both differentiated in quality and duration, arose historically through a phoneme split of Middle High German long $\hat{\imath} / i u$ (=[y:]) and $\hat{u}$ due to the influence of the Central Franconian tonal contrast; compare G. Seide ['zaıdə] ‘silk', Seite ['zartə] ‘side', bauen ['bavən] 'to build', Bauch [bavx] 'stomach' vs. L. Seid [zart], Säit [zæ:It], bauen ['bavən], Bauch [bæ:ux] (see Gilles, 2002).

The long-lasting and ongoing language contact with French (F.) and German (G.) has enriched the sound inventory with several loan consonants and loan vowels. Most of these sounds are confined to clearly identified borrowed words. Due to the missing rounded front vowels, inherited Germanic words normally underwent an automatic derounding process, that is, the vowels in G. über ['y:br] 'above', Höhe ['hø:ə] 'height' > L. iwwer ['ive], Héicht [h3ict]. However, several more recently borrowed words from German and French can maintain their rounded front vowels, that is, G. Bühne ['by:nə] 'stage', Föhn [fø:n] 'hair dryer' > L. Bün [by:n], Fön [fø:n], F. flûte [flyt], acteur [ak'tœ:r] > L. Flütt [flyt], Acteur ['aktæ:r]. In general, the different degrees of the phonological adaptation of borrowings lead to a mixed system where unadapted forms coexist alongside adapted forms.

A similar case is the integration of the French nasal vowels [ã] and [õ]. Words borrowed a long time ago show phonetic adaptation toward short vowel followed by a velar nasal, that is, F. franc [frã:] 'Franc', béton [be'tõ:] 'concrete', Jean <name> [3ã:] > L. Frang [fray], Bëtong ['bətoŋ], Jang [3ay]. More recent borrowings, however, can
keep a nasalized vowel, that is, F. chance [ $\int$ ã:s] 'chance', bon [bõ:] 'good' > L. Chance [ $\left.\int \tilde{\mathrm{a}}: \mathrm{s}\right]$, bon [bõ:]. Note that these two nasal vowels are quite close and tend to merge into one. The French nasal vowel [ $\tilde{\varepsilon}:]$, however, is integrated into Luxembourgish without further modification: Interieur [' $\tilde{\varepsilon}: n t \varepsilon R j œ: R]$ 'interior', Cousin ['kuzz̃:] 'cousin'.

The phonetic consonant inventory is shown in (2).
(2) Consonant inventory of Luxembourgish

|  | Bilabial | Labiodental | Alveolar | Postalveolar | Alveolopalatal | Palatal | Velar | Uvular | Glottal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plosive | p b |  | t d |  |  |  | k g |  |  |
| Nasal | m |  | n |  |  |  | 1 |  |  |
| Vibrant |  |  |  |  |  |  |  | R |  |
| Fricative |  | f V | S Z | $\int 3$ | $6 \quad 3$ |  | X X |  | h |
| Approximant |  |  |  |  |  | j | W |  |  |
| Lateral |  |  | 1 |  |  |  |  |  |  |

Although voicing plays a role in distinguishing the obstruents, the plosives are primarily organized in a fortis/lenis distinction, with $[\mathrm{p}, \mathrm{t}, \mathrm{k}]$ as (often aspirated) fortis and $[\mathrm{b}, \mathrm{d}, \mathrm{g}]$ as (voiceless) lenis realizations. The voiced plosive $[\mathrm{g}]$ is restricted to occur only in syllable onsets, whereas in medial and final positions, it has been spirantized, probably already in Old High German times (see Frings, 1955), into the four fricatives [ $6, ~ z, ~ y, ~ x] ~$ illustrated in (3).
(3) Fricatives deriving from former /g/
voiced
alveolo-palatal velar

Vigel Kugel ['kuyal] 'sphere'
voiceless
sichen ['zicen] 'to search' Dag [da:x] 'day'

Together with the regular reflexes from West Germanic $/ \mathrm{k} /$, these four fricatives form part of the well-known allophony, where the velar fricatives only occur after back vowels and the alveolo-palatals only after front vowels and consonants.

Like in the neighboring German dialects (and in French), the vibrant is a uvular [R], sometimes also replaced by the fricative [ь]. Before voiceless obstruents, it may also be assimilated to a velar fricative (Hirsch [hixf] 'deer', parken ['paxkən] 'to park'). While older people are realizing $[\mathrm{R}]$ quite consistently as a vibrant also in the syllable coda or at the end of words, younger people often exhibit R -vocalization resulting in $[\mathrm{k}]$ or [ə] (see Conrad, 2019). The labio-velar approximant [w] occurs only after [ts] (zwee [tswe:] 'two'), [J] (schwammen ['Swamən] 'to swim') or [k] (Quell [kwæl] 'source') and has thus to be analyzed as an allophone of /v/. Note, however, that words like Qualitéit [kali'tsit] 'quality', Quartier ['kaRtje:] 'quarter' often follow the French pronunciation whereas Quartal [kwar'ta:l] 'quarter' or Quadrat [kwa'dra:t] 'square' are identifiable as loans from German. The approximant [j] varies occasionally with the alveolo-palatal fricative [z] (jäizen ['jæ:Itsən] ~ ['zæ:Itsən] 'to cry'), where the latter variant can be regarded as the older one (Newton, 1993). Note that the glottal stop [?] does not exist in Luxembourgish on the word level. It does, however, occur on the phrase level as a marker of prosodic segmentation.

A major difference to Standard German is constituted by the presence of the alveolopalatal fricatives $[\epsilon, z]$, which derive from the former voiceless palatal fricative $[¢]$ and spirantized [g] through the process of "coronalization" (sécher ['zece] 'secure', Spigel ['Spizal] 'mirror'; see Conrad, 2021; Gilles, 1999, 2019b). In this process, the place of articulation underwent fronting from palatal to alveolo-palatal and thereby initiating a
merger of fricatives. In the early 21 st century, in the speech of the older generation, the contrast between the post-alveolar and alveolo-palatal fricatives is still attested by several minimal pairs (4) and is reflected in the official spelling ([6] $=\langle\mathrm{ch}\rangle$ or $\langle\mathrm{g}\rangle,\left[\int\right]=<$ sch $>$ ).
(4) Minimal pairs [ [J] - [c] post-alveolar [J] mëscht [məft] '(s/he) mixes' Fräsch [fræf] 'frog' Dësch [dəJ] 'table' viischt [fi:ft] 'ahead' Fleesch [fle: $]$ 'meat'
alveolo-palatal [6]
mécht [məct] '(s/he) makes'
frech [fRæ6] 'naughty'
dech [də6] 'dech'
fiicht [fi:ct] 'wet'
Fleeg [fle:c] 'care'

However, due to the closeness of these fricatives, the ongoing merger with the postalveolar fricatives will eventually lead to a simplification of these fricatives. Especially for younger speakers, the merger seems to be largely completed, and the words in (4) are all produced with the same fricative (Conrad, 2021; Gilles, 2019b).

### 3.1 Syllable and Word Structure, Prosody

Syllable structure is largely identical to German, especially regarding syllable onset clusters. Maximally, three consonants are allowed in onset (Strof [ $\int$ tro:f] 'punishment', sprangen ['Jprayən] 'to jump') or coda (lénks [leŋks] 'left', Uebst [uəpst] 'fruits'). Compared with German, some differences apply to the syllable coda, where certain clusters are systematically avoided in Luxembourgish. This concerns primarily the coda clusters [lf], [Rm], and [rn], which are rarely attested in the core lexicon. Instead, these clusters are either split up by the insertion of schwa (G. fünf 'five', gern 'gladly', arm 'poor' vs. L. fënnef, gären, arem) or the final nasal is deleted (G. Korn 'grain', Horn
'horn', Stern 'star', gestern 'yesterday' vs. L. Kar, Har, Stär, gëschter). Schwa in general is realized in all sorts of unstressed syllables (fidderen ['fidərən] 'to feed', sammelen ['zamələn] 'to collect'; spadséieren [Jpa'dzзəərən] 'to promenade', Eemeren ['e:məRən] 'buckets', see G. füttern, sammeln, spazieren, Eimern). It is striking that the schwa in the final inflectional syllable is hardly ever subject to deletion or assimilation, even in a faster speech tempo. Morpheme-internal schwas, however, are often not realized; compare L. spadséieren [Jpa'dzзırən] > [Jpa'dzzırən] 'to promenade', Eemeren ['e:mərən] > ['e:mrən] 'buckets' (see Conrad, 2017a). Regarding the syllable nucleus, long and short vowels can occur freely before voiceless and voiced intervocalic obstruents. This combination of a short vowel followed by a voiced obstruent introduces a significant phonological contrast to German, where this combination exists only in a handful of words (e.g., G. Bagger ['bage] 'excavator', Robbe ['robə] 'seal'): Compare L. midden ['midən] 'tired' (inflected), bludden ['bludən] 'to bleed', Wisen ['vizən] 'meadows', Gladder ['glade] 'chops [face]'. It is especially this distribution of phonological length in the vowel system that conspicuously sets Luxembourgish apart from German.

Noteworthy phonological processes occur when words are borrowed from French or German, of which only a few can be mentioned here. As the core lexicon does not allow a voiceless alveolar fricative [s] word initially, various strategies of phonological integration can be noticed: Older borrowings have developed the affricate [ts] in this position (F. soldat [sol'da] 'soldier', solide [so'lid] 'solid', serre [s $\varepsilon: \mathrm{R}]$ 'greenhouse' > L. Zaldot [tsal'do:t], zolidd [tso'lit], Zär [tse:e]]. This process, however, has lost its productivity and recent borrowings display variation between a voiced fricative [z] or the
retained voiceless fricative [s], thereby illustrating different stages of loan word integration. Thus, the integration of French sensible 'sensitive' shows variation between [zæn'zi:bəl] and [sæn'zi:bəl] (and [zã:' zi:bəl] and [sã:'zi:bol]). This variation is influenced by sociolinguistic factors, especially age, gender, and educational level (see Conrad, 2017b).

High competencies in both French and German allow speakers to vary greatly between two variants also for stylistic and sociolinguistic reasons. It is, for example, quite possible that a speaker is switching freely between the French ['tæknik] and the 'Germanic' ['tæcnik] for Technik 'technique' within the same utterance. Finally, multiple language contacts can lead to hybrid constructions: The brand name $\mathrm{H} \& \mathrm{M}$ is frequently pronounced [hafun'd æm], where [haf] originates from French (except that the [h] is pronounced), [und] from German, and [æm] from Luxembourgish.

All obstruents in the syllable coda are realized voiceless ('final devoicing', Auslautverhärtung), and this also affects borrowings from French, where final devoicing does not exist (F. plage [pla:3] 'beach', solide [so'lid] 'solid' > L. [pla:]], [tso'lit]). However, if the following word in the same phonological phrase begins with a vowel, word-final devoicing is blocked and the coda consonant(s) are subject to voicing in a liaison type of resyllabification (héich [h3ic] 'high' + Uewen ['uəvən] 'oven' > Héichuewen ['h3ızuəvən] 'blast furnace', mir ass et och egal [mi:e] [as] [ət] [ox] [e: 'ga:1] $>$ [mi:R az ad ов ее: 'ga:1] 'it doesn't matter to me either'). Note that [r], which is vocalized usually in the coda, resurfaces again as a vibrant $[\mathrm{R}]$ or fricative [ b$]$ in this resyllabification (Gilles, 2014). The entire system of this "resyllabification-cum-voicing"
is yet not fully understood. Note that this process is applied mainly when the following word is a function word, a weak form, or within a compound.

Consonant clusters consisting of a sonorant and a homorganic plosive are assimilated to the single sonorant when the original cluster is located intervocalically, a process similar to the consonant mutation of Finnish (see Bruch, 1954, p. 6ff). In (5a), some examples are depicted in relation to their Old High German equivalents. For some words, for example, friem, the intervocalic cluster cannot be recognized anymore synchronically due to the apocope of the final schwa, which took place diachronically after the assimilation of the consonant cluster. For a further group of words (5b), the intervocalic assimilation intervenes synchronically with plural formation: While the monosyllabic singular forms retain the cluster, the disyllabic plurals are affected by assimilation, thereby introducing stem allomorphy (see Dammel \& Kürschner, 2008; Nübling, 2006a). The process is not productive anymore, as more recent words do not allow assimilation at all (e.g., Pult > Pulter, *Puller 'desk(s)').
(5) Assimilation of intervocalic clusters 'sonorant + plosiv'

| a. | OHG |
| :--- | :--- |
| -mb- | klimban |
| -md- | fremidi |
| -nd- | bindan |
| -rt- | fiorteil |

b. Singular Plural
-nt >-n- Kand [kant] Kanner ['kane] *['kande] 'child/children'
-nt >-n- Mond [mont] Mënner ['mənv] *['məndъ] 'mouth'
-lt >-l- Bild [bilt] Biller ['bile] *['bilde] 'image(s)' -mp >-m- Schwamp [Jwamp] Schwämm[Jwæm] *['Jwæmp] 'sponge(s)' $-\mathrm{\eta k}>-\eta-$ Gank [gayk] Gäng [gæy] *['gæŋk] 'hallway(s)'

All word-final alveolar nasals are subject to a phonological rule of $n$-deletion (n-Reegel, sometimes also mobile-n or Eifeler Reegel; Gilles, 2006b, 2014). According to this rule, the phonetic realization of word-final $n$ depends on the nature of the initial sound of the following word. Generally, a word-final nasal is retained only when the following phonological word begins with a vowel or the consonants [d, t, ts, n, h]. In all other cases, the final nasal is deleted. The presence or deletion of the final $n$ is thus a specific form of allophony. Albeit rather complicated, the $n$-rule is obeyed nearly categorically in spoken Luxembourgish. For sake of illustration, a deleted $n$ is symbolized by ' $\quad$ ' in the examples in (6).
(6) Retention of -n
a. den Auto 'the car'
kalen Téi 'cold tea' gleewen ech 'I believe'
b. ginn heem 'going home' vun dir 'from you' unzefänken 'to start' [expanded inf.]
c. mäin Duuscht 'my thirst' hien huet 'he has' Wäinhandel 'wine trade' Reen hunn 'to have rain'

Deletion of -n
de_Mechanicien 'the mechanic'
kale_Wäin 'cold wine'
gleewe_mir 'we believe' gi_geckeg 'getting crazy'
vu_ mir 'from myself'
u_fänken 'to start'
däi_Béier 'your beer'
hie_weess 'he knows'
Wäi(n)fläsch 'wine bottle'
Ree(n) kréien 'to get rain'

The deletion of the nasal, although systematical to a large extent, depends on several internal and external factors (word class, segmental setup of the syllable rhyme, type of intervening prosodical boundary, age of the speaker) and the formulation of a consistent phonological rule is challenging. According to the affected words, three main groups and deletion patterns can be distinguished:

1. The $n$-rule affects all final syllables with schwa plus $n$ (6a), regardless of the word classes (inflectional suffixes of verbs, adjectives, articles, pronouns, nouns).
2. Monosyllabic words ending with a short full vowel plus $n$ are affected only when they belong to a small set of some 20 words, mainly high-frequency function words like articles, pronouns, adverbs, prefixes, auxiliaries, and prepositions (some examples in $6 b$ ). $n$-deletion in these words is thus lexicalized.
3. Similarly, $n$-deletion is lexicalized in a group of monosyllabic words with a long vowel plus $n$ (some examples in 6 c ). If the word belongs to a small group of pronouns and articles, $n$-deletion is applied regularly. In all other cases, $n$-deletion is variable, with a tendency for younger people to not apply $n$-deletion here at all.

Besides these general contexts, several exceptional cases for the application of the $n$ rule exist (see Gilles, 2006b). According to the official spelling, the $n$-rule must be respected also in writing. Due to phonological unawareness of this sandhi phenomenon, it is a source of many spelling mistakes in the informal written language. Note that in the remainder of this article, the regularly deleted nasal is nonetheless written in parenthesis to increase readability and to avoid misinterpretations, that is, kee(n) Vokal instead of kee Vokal 'no vowel'.

As for the articles, the definite articles déi (NOM, ACC.F. SG/PL), dat (N.SG) are usually cliticized to $d^{\prime}$ when attached to a subsequent noun. Phonetically, the definite article is characterized by lengthening and is realized as [d:] (Gilles \& Trouvain, 2015). This consonantal geminate is attested systematically for the definite article and thus has a morphosyntactic function. Apart from this specific function, geminates do not occur in Luxembourgish.

Word stress is usually on the penultimate syllable (Gilles, 2009). With most words consisting of two syllables, the trochaic stress pattern is widespread ('Buedem 'soil',
'Kanner 'children'). Contrary to most other languages, schwa syllables can also attract stress if they are in the penultimate position and no other stressable syllable is available ('fëschen ['fəfən] 'to fish', 'kënnen 'can (modal verb)'). In case the final syllable is heavy, this syllable will attract stress (Spi'dol 'hospital', Ta 'péit 'wallpaper', Ele 'ment 'element', aktu 'ell 'current'). However, and in contrast to Standard German, open final syllables never carry stress, which can be observed nicely for the integration of French borrowings. These words are subject to stress shift to make them fit the Luxembourgish stress patterns, which means that the final stress is moved to the penultimate (7a) or even to the ante-penultimate syllable if the penult contains a schwa or a short high vowel (7b).
(7) Stress pattern integration for French borrowings

| a. | penultimate stress |  |
| :--- | :--- | :--- |
| French | Luxembourgish |  |
| cli 'ent | 'Client | 'client' |
| croi'ssant | 'Croissant | 'croissant' |
| décolle'té | De'colleté | 'cleavage' |
| té'lé | 'Tëlee | 'TV' |

b. ante-penultimate stress

French Luxembourgish
atel'ier 'Atelier 'studio'
para'pluie 'Präbbeli 'umbrella'
barri'ère 'Barrière 'barrier'
comi'té 'Kommitee 'committee'

The integration of French télé [te 'le] to Luxembourgish Tëlee ['təle:] illustrates clearly how stress on the final syllable is avoided even when the only alternative is an (inherently weak) schwa syllable. The same process of integration happens to the numerous French names in Luxembourgish (Laurent ['lorã:], Françoise ['frã:swa:s], Claudine ['klo:din]).

Compounds are sometimes stressed on the second constituent (Haus 'dier 'front door', Mo 'gripp 'stomach flu', aarm 'séileg 'miserable'), and it seems that this pattern can be regarded as the original one; due to language contact with German, in the early 21st century, stress is shifting toward the first constituent of the compound.

Research on intonation has begun only in the 2010s (see Gilles, 2015b; ManzoniLuxenburger, 2021). Despite the typological and historical closeness to German, the intonational system is remarkably divergent. While certain rising and falling contours strongly resemble other related Germanic varieties, at least one rather peculiar and frequent intonation contour sticks out as characteristic. This contour consists of a rise to the nucleus syllable of a phrase, and then, instead of forming a plateau on the high level or beginning with a final fall, the intonation drops to mid-high level and forms a constant plateau until the end of the phrase. This intonation contour is quite specific to Luxembourgish; it does neither occur in German nor French. It is furthermore striking that Luxembourgish has no nuclear low tone (L*) or a final high tone $\left(\mathrm{H}^{*} \%\right)$.

## 4. Morphosyntax

The morphosyntactic system is characterized by a large overlap with traditional Moselle Franconian dialects but differs greatly from Standard German. For certain features, Luxembourgish has clearly developed specific grammatical structures, progressively diverging both from Standard German and the neighboring dialects in Germany. Due to restrictions of space, only a selection of features are covered and certain aspects, for example, word formation, have been omitted altogether. For further information, the
reader is referred to Döhmer (2020, Chapter 4), Newton (1990), Russ (1996), Schanen and Zimmer (2012), Edelhoff (2017). Bruch (1955) and Keller (1961) can be considered outdated but still present valuable language historical information.

### 4.1 Inflection of the Noun

Nouns are categorized according to the three genders: masculine, feminine, and neuter. The former two genders are still rather productive, while neuter nouns form a smaller and closed group. Masculine seems to be the default gender, as most borrowings entering the language receive masculine gender (e.g., Handy $\mathrm{M}<$ German Handy N 'mobile phone'). Loans from French often keep their gender, which can deviate from the gender of the corresponding word in German.

| (8) Gender of nouns in | French, Luxembourgish, and German |  |  |
| :--- | :--- | :--- | :--- |
|  | French | Luxembourgish | German |
| Atelier | M | M | N |
| Bord | M | M | N |
| Büro | M | M | N |
| Café | M | M | N |
| Courage | M | M | F |
| Bagage | M | M | F |
| Examen | M | M | N |
| Telefon | M | M | N |

Some nouns may show gender variation, indicating the varying influence of the two donor languages, German and French (see en/eng Agenda M/F 'calendar', en/eng Garage M/F, en/eng Grupp M/N 'group', den/d’Accident M/N, en/eng E-Mail M/F ‘email’, den/d'Universum M/N, 'universe', den/d'Departement $\mathrm{M} / \mathrm{N}$ 'department').

Luxembourgish nouns no longer take any case marker (only exception: Joer 'year', which still has a dative and accusative in the plural: vill Joer 'many years' vs. mat de Joren 'with the years', an d'Joren 'in the years'). Instead, all case marking, that is, nominative, accusative, and dative, is realized in the nominal phrase through articles and/or adjectives. However, an extended system for plural marking on the noun has developed (Dammel \& Kürschner, 2008; Nübling, 2006a). The most common plural suffix is -en, which is used with most masculine and feminine nouns ( $A f>A f e n$ 'ape(s)', Kär $>$ Kären 'grain(s)', Dier $>$ Dieren, 'door(s)', Tut $>$ Tuten 'bag(s)'). This suffix can be regarded as the default method to mark plural, and it is also predominantly applied in most borrowings (Handy > Handyen 'mobile phone(s)', iPhone $>$ iPhonen, Point de vue $>$ Point-de-vuen 'perspective(s)'). Note that this suffix does not trigger umlaut except for a few words (Kraaft/Kräften 'power(s)', Angscht/Ängschten 'fear(s)', Fruucht/Friichten 'fruit(s)'). The suffix -er also shows sensitivity toward grammatical gender and is attached to masculine and neuter nouns only (Dësch > Dëscher 'table(s)', Mond $>$ Mënner 'mouth(s)', Boot > Booter 'boat(s)', Netz > Netzer 'net(s)'). Moreover, the suffix -er is also selected when the singular form is stressed on the final syllable (Ge'brauch > Ge'bräicher 'custom(s)', Pro'dukt > Pro'dukter 'product(s)', Pro'zent $>$ Pro'zenter 'per cent(s)'). Note that the suffix -er-contrary to -en-is triggering umlaut and/or consonant mutation when possible (Rad [Ra:t] > Rieder ['riede] 'wheel(s)', Land [lant] > Länner ['læne] 'country/countries', Bild [bilt] > Biller ['bile]). This suffix is also used for plurals historically ending with the suffix $-e /[ə]$, which subsequently lost their suffix due to schwa apocope in Early New High German. These suffix-less forms then received the
suffix -er, sometimes in competition with -en, to indicate the plural (see Dammel \&
Denkler, 2017) (9).
(9) Schematic development of plural suffix -e to -0 to -er/-en

|  | schwa apocope | development of suffixes -er/-en |  |
| :--- | :--- | :--- | :--- | :--- |
| Witz/Witz-e $>$ | Witz/Witz-0 $>$ | Witz/Witz-en $\sim$ Witz-er | 'joke(s)' |
| Bus/Buss-e $>$ | Bus/Bus-0 $>$ | Bus/Buss-en $\sim$ Buss-er | 'bus(es)' |
| Bierg/Bierg-e $>$ | Bierg/Bierg-0 $>$ | Bierg/Bierg-er | 'mountain(s)' |
| Kräiz/Kräiz-e $>$ | Kräiz/Kräiz-0 $>$ | Kräiz/Kräiz-er | 'cross(es)' |

In an ongoing morphological change, the suffix -er is increasingly used by younger generations, thus gradually superseding the competing suffix -en (see Entringer, 2017, 2021).

Finally, a large group of monosyllabic plurals is formed by using a zero suffix, which arose through the already mentioned apocope of a former word-final -e (Schong 'shoe(s)', Päerd 'horse(s)', Strëmp 'sock(s)').

Umlaut in singular-plural constellations constitutes a complex system involving one-to-many relations and vowel shortenings (10). For example, [a:] has developed four different umlaut vowels for the plural and [a] three.
(10) Umlaut relations in plural formation

| Singular | Plural | Vowe | alter |  |
| :---: | :---: | :---: | :---: | :---: |
| Bam [ba:m] | Beem [be:m] | [a:] | [e:] | 'tree(s)' |
| Schaf [Ja:f] | Schief [ $\int \mathrm{ibf}$ ] | [a:] | [iə] | 'closet(s)' |
| Baart [ba:Rt] | Bäert [bs:ct] | [a:] | [ $\varepsilon$ :] | 'beard(s)' |
| Saz [za:ts] | Sätz [zæts] | [a:] | [æ] | 'sentence(s)' |
| Rass [ras] | Rëss [Rəs] | [a] | [ə] | 'crack(s)' |
| Stach [ftax] | Stéch [Jtec] | [a] | [e] | 'stitch(es)' |
| Land [lant] | Länner ['læn¢] | [a] | [æ] | 'country/countries' |
| Haus [hæ:us] | Haiser ['haıze] | [æ:v] | [ar] | 'house(s)' |
| Bauch [bæ'vx] | Bäich ['bæ:I6] | [æ:ঠ] | [æ:I] | 'stomach(s)' |
| Kou [kəv] | Kéi [k31] | [ə๐] | [3I] | 'cow(s)' |


| Nol | $[$ no:1] | Neel | [ne:1] | [o:] | [e:] | 'nail(s)' |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Drot | $[$ dro:t $]$ | Dréit | [dR3It] | $[\mathrm{d}:]$ | $[3 \mathrm{si}]$ | 'wire(s)' |

Recently, the hitherto inexistent plural suffix $-s$ is observed more and more, however exclusively in loans from English, where it competes with -en (Fan > Fans/Fannen 'fan(s)', Band $>$ Bands/Banden 'band(s)', App $>$ Apps/Appen 'app(s)').

### 4.2 Adjective Inflection

Along with articles and pronouns, adjectives are employed to mark case, definiteness, and number in the noun phrase. Regarding syntactic functions, Luxembourgish today distinguishes mainly among nominative, accusative, and dative while the genitive has largely vanished except for a few lexicalized expressions (uganks der ${ }_{\text {Gen }}$ Woch 'beginning of the week', Enn desGen MountsGen 'end of the month', dëser ${ }_{G e n}$ Deeg 'these days') or phrasal verbs (ech sinn der $_{\text {Gen }}$ Meenung, dass . . . 'I have the opinion, that . . .'). Instead, forms of the genitive were reanalyzed as the partitive case (see section 4.5 and Döhmer, 2018, 2020).

The distinction between strong and weak adjective inflection, which is characteristic for Standard German, does not exist anymore. This can be seen in the paradigm in (11), where the adjective suffixes remain the same for definite (den 'the') or indefinite (en 'a') articles.
(11) Inflection system of the adjective. Note the complete syncretism of nominative and accusative.


Only the dative masculine and neuter singular noun phrases without articles still have the -em suffix, indicating the former strong inflection (mat kal-em Wäin 'with cold wine', mat selwergemaacht(en)-em Gebeess 'with homemade marmalade'). Regarding the suffixes, the NOM/ACC neuter has retained the $-t$ from West Germanic, which has developed to $-s$ in German (see G. dünn-es 'thin').

Striking is the total syncretism of all nominative and accusative forms, which is one of the most prominent features of Luxembourgish (and of Central Franconian; see Bruch, 1955, p. 44). In fact, all former nominatives have been lost, presumably in Early Modern German times, and the accusative form took over the form of the nominative. On the formal side, Luxembourgish thus presents a rather reduced case system with a conflated nominative/accusative (NOM/ACC) and dative (DAT). The former is sometimes also called "common case" (Russ, 1996) or "C1" (for French 'cas 1'; Schanen \& Zimmer, 2012). As for the syntactic functions, however, nominative and accusative are still distinct and mostly distinguished through word order. This formal syncretism of nominative and accusative applies to all inflecting nominal word classes, that is, adjectives, articles, and pronouns, with the important exception of some personal pronouns (see section 4.4).

Adjectives derived from past participles of weak verbs have developed a different inflectional system by variably inserting an infix -en- between stem and inflectional suffix. Basically, the infix -en- can show up for all adjectives of this type, its occurrence, however, is governed by several morphological and prosodic conditions. While the actual function of the infix remains unclear, it originated presumably through analogy with the
past participles of the strong verbs, which also take the suffix -en (see Entringer, 2021). Some examples of this infix -en-, which can basically occur in all case-gender-number combinations, are shown in (12).
(12) Infixing of -en- in adjectives derived from weak verbs

NOM/ACC-M-PL déi iwwerfëllt(-en)-e(n) Busser 'the overcrowded buses'
DAT-F-SG an der wuelverdéngt(-en)-er Paus 'in the well deserved break'
NOM/ACC-N-SG verdéngt(-en)-t Geld 'deserved money’

For a comparison of the adjective, the synthetic formation of the comparative by attaching the suffix -er has survived only for a few high-frequency (and irregular) adjectives (gutt-besser 'good - better', wéineg - manner 'little - less', gär - léiwer 'gladly'). For all other adjectives, the comparative is constructed as a phrasal construction using the particle méi 'more', for example, méi schéin 'nicer', méi al 'older'. The superlative is formed with the suffix -st, for example, schéinst 'most nice', eelst 'oldest', gréisst 'biggest', neist 'newest', béist 'most evil'. This suffixation can lead eventually to complex syllable codas, which are not simplified by schwa insertion (e.g., absurdst 'most absurd', arrogantst 'most arrogant'; see G. absurdest, arrogantest). The superlative, too, can take an additional infix -en- (e.g., schéinst(-en-)-t Haus 'nicest house'; see Entringer, 2021). Whenever possible, the stem vowel shows mutation (umlaut). For the uninflected superlative, the particle $a m$ is used in conjunction with the suffix -en (am schéinsten 'the nicest').

### 4.3 Articles

Luxembourgish distinguishes definite and indefinite articles. Both sets of articles occur as full forms and reduced forms (sometimes also called 'strong' and 'weak' forms). Note that both forms of the article remain unstressed, and the choice of either form is subject to syntactic and semantic restrictions (see Döhmer, 2016, 2020; Krier, 2002). The previously mentioned syncretism of nominative and accusative holds true here as well. The system of the definite articles is presented in (13). The full forms contain long full vowels throughout, whereas the reduced forms contain schwa ( $[\mathrm{\partial}, \mathrm{q}]$ ) or are realized as a consonantal clitic $d^{\prime}$ [d: $]$.
(13) Inflectional paradigm of the definite article; full and reduced forms separated by '/’

|  | Singular |  |  | Plural |
| :---: | :---: | :---: | :---: | :---: |
|  | Masculine | Feminine | Neuter | M/F/N |
| NOM/ACC | deen / den | déi / $d^{\prime}$ | dat / $d^{\prime}$ | déi / $d^{\prime}$ |
|  | [de:n] / [dən] | [dsi] / [di] | [da:t] / [di:] | [d3ı] / [d:] |
| DAT | deem / dem | där / der | deem / dem | deenen / den |
|  | [de:m] / [dəm] | [de: e$] /$ [de] | [de:m] / [dəm] | ['de:nən]/ [dən] |

As a general tendency, the reduced or clitic forms are used when there is no intervening adjective in the noun phrase (14). As soon as an adjective enters the noun phrase, the full form of the article is employed, whereas the reduced article is hardly possible in this constellation. From this distribution, it can be concluded that the reduced form is only fulfilling the basic task of definiteness, whereas the full form (together with and more tightly associated with the adjective) brings more specific semantic information into the noun phrase.
(14) Choice of the reduced or full form of the article depending on the presence or absence of an adjective
reduced form full form

| d'Haus *dat Haus | 'the house' | dat neit Hau | *d'neit Haus | 'the new house' |
| :--- | :--- | :--- | :--- | :--- |
| d'Hand *déi Hand | 'the hand' |  |  |  |
| d'Inselen *léi Inseleng Hand | *d'kleng Hand | 'the small hand' |  |  |
| d'the island' | déi ellen Inselen *d'ellen Inselen | 'the ugly islands' |  |  |

Definite articles are also obligatory for noun phrases containing first names, surnames, or certain product, brand, or shop names: den Denis, d'Sara, de Xavier Bettel, d'Madamm Nosbusch; de Word, den Excel, den Nutella, de Cactus (supermarket), de Burger King. Names are thus inflected the same way as regular nouns phrases, for example, mat dem dat Denis 'with Denis', mat dem Dat Sara 'with Sara', bei de(n) Akk Xavier Bettel 'to Xavier Bettel'. Note that female first names are always treated as neuter nouns (see section 4.4).

The full forms of the definite article can also function as demonstratives (dee( $n$ ) Bréif 'this letter'), in which case they receive word stress. These demonstratives can sometimes be extended by the deictic elements do 'there' and hei/elei 'here' (dee(n) Bréif do/deen dote(n) Bréif 'this letter there', déi Fläsch hei/déi heite(n) Fläsch 'this bottle there'). Besides these forms, a paradigm of proper demonstrative articles does exist as well (15).
(15) Inflectional paradigm of the demonstrative article

|  | Singular |  |  | Plural |
| :--- | :--- | :--- | :--- | :--- |
|  | Masculine | Feminine | Neuter |  |
| NOM/ACC | dësen | dës | dëst | dës |
|  | ['dəzən] | [dəs] | [dəst] | [dəऽ] |
| DAT | dësem | dëser | dësem | dësen |
|  | $[$ ['dəzəm] | ['dəze] | [dəzəm] | ['dəzən] |

The paradigm of the indefinite article is derived from the numeral een $(t)$ 'one' (16).
While the monosyllabic forms retain the alveolar nasal (een/en), historically bisyllabic forms have developed forms containing the velar nasal (*eine, *einem, *einer $>e[\eta]$,
$e[\eta] e m, e[\eta] e r)$. The result of this sound change is stem allomorphy \{een-, eng-\}, which can also be witnessed in similar inflectional paradigms, for example, the possessive pronouns (mäin vs. meng/mengem/menger 'my').
(16) Inflectional paradigm of the indefinite article, full and reduced forms


Indefinite articles are generally not attested for the plural. However, a construction emerged (with origins in Middle High German) in which forms of eng are used with cardinal numbers and plural nouns to indicate an approximate quantity (e.g., eng 20 Leit 'approximately 20 people', mat engen 100 Boter 'with approximately 100 boats').

The full forms of een 'one' are furthermore also used as the indefinite personal pronoun to refer to one or more unspecified persons (see G. man 'one', jemand 'somebody') (17). Contrary to German man, Luxembourgish een is not allowed sentenceinitially (e.g. *Ee(n) kann hei net parken.); in these cases, inversion is triggered to make een move to the middle field of the sentence. The negation of this indefinite pronoun is keen 'nobody' (see G. niemand 'nobody').
(17) Examples of the indefinite personal pronouns een, keen

Kann een hei parken? 'Can one park here?'
Et kann een hei net parken. 'One cannot park here.'
Ech war mat engem zesummen. 'I was together with someone.'
Ech kennen een, deen hei parkt. 'I know someone who is parking here.'
Ech kenne(n) keen, deen hei parkt. 'I know nobody who is parking here.'

### 4.4 Personal Pronouns

The system of personal pronouns (18), too, distinguishes between full and reduced forms (see Döhmer, 2016). Furthermore, the formal distinction among nominative, accusative, and dative is available for the first and second person. The characteristic $h$-initial pronouns hien, hatt, him, hir, hinnen hint at a historical connection with the languages of the Low Countries (see Bruch, 1955).
(18) Paradigm of the personal pronouns (see also Döhmer, 2016; Schanen \& Zimmer, 2012,
pp. 155-158); full and reduced forms separated by '/’

| Number | Person | Gender | Nominative | Accusative | Dative |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Singular | 1. | - | $\begin{aligned} & \text { ech } \\ & {[\partial 6]} \\ & \hline \end{aligned}$ | mech <br> [mə6] | mir / mer [mi:e]/[me] |
|  | 2. | - | $\begin{aligned} & \text { du / de } \\ & \text { [du:] / [də] } \end{aligned}$ | $\begin{aligned} & \text { dech } \\ & \text { [do6] } \end{aligned}$ | $\begin{aligned} & \hline \mathrm{dir} / \mathrm{der} \\ & {[\mathrm{di}: \mathrm{e}] /[\mathrm{de}]} \end{aligned}$ |
|  | polite form |  | $\begin{aligned} & \text { Dir / Der } \\ & {[\mathrm{di}: \mathrm{e}] \perp[\mathrm{de}]} \end{aligned}$ | Iech <br> [io6] | $\begin{aligned} & \text { Dir / Der } \\ & \text { [di:e]/[de] } \end{aligned}$ |
|  | 3. | M | hien / en <br> [hiən] / [ən] |  | $\mathrm{him} / \mathrm{em}$ <br> [him] / [əm] |
|  |  | F | si/se [zi:] / [zo] |  | hir / er <br> [hi:e] / [e] |
|  |  | N <br> female reference | $\begin{aligned} & \text { hatt / et, 't } \\ & {[\text { hat } /[\text { [t], [t] }} \end{aligned}$ |  | $\mathrm{him} / \mathrm{em}$ [him] / [әm] |
|  |  | N | $\begin{aligned} & \hline-/ e t, ' t \\ & -/[\mathrm{t}],[\mathrm{t}] \end{aligned}$ |  | $\begin{aligned} & \hline-/ \mathrm{em} \\ & -/[\mathrm{\partial m}] \end{aligned}$ |
| Plural | 1. | - | mir / mer <br> [mi:e] / [me] | eis <br> [ais] |  |
|  | 2. | - | $\begin{aligned} & \mathrm{dir} / \mathrm{der} \\ & {[\mathrm{di}: \mathrm{e}] /[\mathrm{de}]} \end{aligned}$ | $\begin{aligned} & \text { iech } \\ & {[\text { iə }]} \end{aligned}$ |  |
|  | 3. | - | $\begin{aligned} & \text { si/se } \\ & \text { [zi:] / [ze] } \end{aligned}$ |  | hinnen / en <br> [hinən] / [ən] |

In terms of politeness, Luxembourgish has conserved the $t u$-vos distinction, where the 2.SG $d u / d e$ is used to address a person informally and 2.PL Dir/Der, Iech to express politeness and formality.

Remarkable is the 3. SG neuter pronoun: The pronoun hatt 'it' ( $<$ West Germanic *hit, see English $i t$ ), although grammatically neuter, has been grammaticalized to refer to female persons. This pronoun, and its associated forms et, 't, him/em, is used to refer to a specific, socio-pragmatically defined group of girls and women and is complementary to the traditional reference with the feminine gender and its pronouns si/se 'she', hir/er 'her' (so-called Femineutrum 'feminine-neuter'; see Döhmer, 2016; Martin, 2019; Nübling, 2015). This surprising disagreement of grammatical gender and biological sex, specific for Luxembourgish, has its origin in the neuter of the noun Meedchen 'girl', which was extended from there to all female persons. Most and foremost, female persons referred to by their first names are grammatically neuter. Thus, when a female person is referred to by her first name, all the referring grammatical forms (articles, adjectives, personal pronouns, possessive pronouns) for her must be neuter. In the example in (19), all forms referring to the first name Sylvie are neuter, that is, the article dat, the adjective inflection jonkt 'young', the personal pronoun hatt 'it', and the possessive pronoun seng 'his' ( N ). By contrast, when a woman is introduced by a feminine title, for example, Madame 'Mrs.', followed by the surname, then the whole construction and all referring pronouns are feminine, that is, the definite article déi 'the' (F), the personal pronoun $s i$ 'she', the possessive pronoun hir 'her'.
(19) Gender assignment

Dat $_{\mathrm{N}}$ jonkt $_{\mathrm{N}}$ Sylvie $_{\mathrm{N}}$, hatt $_{\mathrm{N}}$ huet gëschter seng 19 Joer kritt.
'Young Sylvie, she turned 19 yesterday.'

Déi $_{\mathrm{F}}$ elegant $\mathrm{F}_{\mathrm{F}}$ Madamm $\mathrm{F}_{\mathrm{F}}$ Weydert $_{\mathrm{F}}$, si $\mathrm{F}_{\mathrm{F}}$ huet gëschter hir $\mathrm{F}_{\mathrm{F}} 59$ Joer kritt.
‘Elegant Mrs. Weydert, she turned 59 yesterday.'

However, the combination of first name and surname like Angela Merkel or a female title followed by a first name like Prinzessin Kate 'Princess Kate' lead to a grammatical conflict between the feminine and neuter gender in the noun phrase (20): While the first names Angela and Kate have neuter gender, the surname Merkel and the title Prinzessin 'princess' are feminine. This conflict of grammatical gender in the noun phrases manifests itself in the socio-pragmatically governed choice of the referring personal or possessive pronouns, which can vary between feminine (si, hir) and neuter (hatt, seng), with a preference for the neuter forms in early-21st-century Luxembourgish.
(20) Conflict in gender assignment
$D^{\prime}\left[=\operatorname{dat}_{\mathrm{N}}\right.$ Angela $_{\mathrm{N}}$ Merkel $_{\mathrm{F}}$, hatt $_{\mathrm{N}} /$ si $_{\mathrm{F}}$ krut gëschter seng ${ }_{\mathrm{N}} /$ hir $_{\mathrm{F}} 67$ Joer.
'Angela Merkel, she turned 67 yesterday.'
$D^{\prime}\left[=\text { déi }^{\prime}\right]_{\mathrm{F}}$ Prinzessin $_{\mathrm{F}}$ Kate $_{\mathrm{N}}$, hatt $_{\mathrm{N}} /$ si $_{\mathrm{F}}$ huet gëschter seng ${ }_{\mathrm{N}} /$ hir $_{\mathrm{F}} 39$ Joer kritt.
'Princess Kate, she turned 39 yesterday.'

This variable choice of feminine or neuter grammatical forms for female persons is governed by several grammatical and socio-pragmatic factors, among them the syntactic distance between target and controller, the age of the speaker, age difference between speaker and women referred to, or social distance (see Döhmer, 2016; Martin, 2019).

### 4.5 Possession and Partitives

Various grammatical and phrasal options are available for the expression of possession, with the possessive articles and possessive pronouns playing the most important role
(base forms singular: mäin 'my', däin 'your', säin 'his/her', hir 'her'; plural: hir 'their', eis 'our', är 'your') (21). Besides the forms with a diphthong or a long vowel, several inflected forms have developed short vowels and accompanying velarization of the nasal (meng, deng, seng; menger, denger, senger; mengem, dengem, sengem), thus adding allomorphy to the paradigm; for the entire paradigms, compare Döhmer (2020, Chapter 4) or LOD (2007ff). Note that female persons mentioned with their first names are referenced with the neuter possessive article (21c), as opposed to feminine appellative nouns, which show gender agreement with the possessive article (21d).
(21) Examples for possessive articles
a. Du hues mäi(n) Buch verluer. 'You lost my book.'
b. Däi(n) Buch ass erofgefall.
c. D'Tina huet säi $(n)_{N} /$ *hiert $_{F}$ Buch vergiess.
d. D'Auteurin huet hiert ${ }_{F}$ Buch virgestallt.
'Your book fell down.' 'Tina has forgotten her book.'
'The author presented her book.'

The inflection of the possessive article and the possessive pronoun is largely identical. The only difference is that, in the NOM/ACC, neuter the possessive pronoun takes the suffix -t (mäint 'mine', däint 'yours' [singular], säint 'his/hers', hiert 'hers', eist 'ours', äert 'yours' [plural]), which is already known from the adjective inflection: Dëst Buch ass däint. 'This book is yours.'

Optionally, the possessor can be mentioned, by prepending a dative noun phrase, for example, the dative noun phrases dem Sara or dem Här Lies in (22). It goes without saying that, due to its dismantlement, a construction with a genitive is not available. Note that this option is only available when the possessor is animated, for example, a person; for further syntactic and semantic restrictions, see Döhmer (2020, Chapter 4).
(22) Possessive construction ' $\mathrm{NP}_{\text {Dat }}+\mathrm{NP}_{\text {Acc }}$ '

Du hues dem Sara säi Buch verluer. 'You have lost Sara's book.'
D'Tina huet dem Sara säi Buch vergiess. 'Tina has lost Sara's book.'
Wärend dem Här Lies senger Ried war et roueg. 'It was quiet during Mr. Lies's speech.'

Related to possessions are partitives, which are used to express the fraction of a larger quantity, in the sense of 'a portion of this specific $X$ '. Partitives are only allowed with mass nouns or countable nouns in plural (for a thorough account, see Döhmer, 2020). In Luxembourgish, partitives show up as articles (23) or pronouns (24). The partitive article is däers [d $\varepsilon: \mathrm{Zs}$ ] for mass nouns in masculine or neuter (singular), and the form där [de:v] is used for mass nouns in feminine or for plurals. The partitive pronouns are available in full and reduced forms (24): The target pronoun $d \ddot{a} r[\mathrm{~d} \varepsilon: \mathrm{e}] / \mathrm{der}[\mathrm{de}]$ is used for controllers, which are noncountable, feminine mass nouns like Mëllech 'milk' or countable plural nouns like Bicher 'books'. The pronouns däers [d $\varepsilon$ :ess]/es [əs] refer to noncountable, masculine, and neuter mass nouns like Botter 'butter' or Gehacktes 'ground meat'. Historically, partitives are derived from the definite article der.
(23) Partitive articles

Kann ech nach däers Téi ${ }_{M,}$ Sg kréien? Mir brauchen däers Waasser ${ }_{N, S g}$ Et gouf vill där Mesuren ${ }_{F, P l}$
'May I have [a portion of this specific] tea?' 'We need [a portion of this specific] water.' 'There were lots of those activities.'
(24) Partitive pronouns
Controller Target

Mëllech $_{F, S g, \text { Bicher }_{N, P l} \quad \text { Kéint dir eis där/der matbréngen? }}$
'Could you bring us some of that [e.g., milk, books]?'
Kéint dir eis däers/es matbréngen?
'Could you bring us some of that [e.g., butter, ground meat]?'

### 4.6 Prepositions

Most prepositions govern dative or accusative and there is considerable structural overlap with German (see Schanen \& Zimmer, 2012, Chapter 20). Prepositions with accusative are used to express the direction toward a location (op 'up/onto' for locations like cities or villages, an 'in' for country names). However, to express the position, prepositions with dative are required ( $z u$ 'at' for localities, an 'in' for country names).
(25) Directional and positional prepositions

Direction (accusative)

| locality | country |  |
| :---: | :---: | :---: |
| op Zolwer 'to Soleuvre' | an Däitschland | 'to Germany' |
| op Paräls 'to Paris' | an d'USA | 'to the USA' |
| Position (dative) |  |  |
| locality | country |  |
| zu Zolwer 'in Soleuvre' | an Däitschland | 'in Germany |
| zu Paräis 'in Paris' | an den USA | 'in the USA' |

For prepositions with dative, a following masculine or neuter weak definite article dem is cliticized to the preposition (mat + dem $>$ mam 'with the', bei + dem $>$ beim 'at the', op + dem $>$ um 'on the', ënner + dem $>$ ënnerem 'under the', $z u+$ dem $>$ zum 'towards the' etc.). This cliticization is not possible for the feminine article der, except for $z u+d e r>$ zur 'toward the'.

Certain bisyllabic prepositions have developed a variant with a suffixed final -t (e.g., ënner/ënnert 'below', iwwer/iwwert 'above', hanner/hannert 'behind', tëschen/tësch(en)t 'between'), which presumably has emerged from a reanalysis of the nexus 'preposition + definite article'. The fact that a $d$-initial article is frequently cliticized to the preceding preposition, has led to a situation in which the initial plosive of the article has been
erroneously interpreted as part of the preposition, that is, iwwer dem ['ive dəm] (Bierg) 'above the (hill)' > ['ived_əm] > ['ivet_əm] > ['ivet_dəm]. In the early-21st-century language use, the $t$-variant is found mainly, when the following word begins with a consonant, while the original, $t$-less variant occurs mainly before vowel-initial words, which allow resyallabification (iwwert méi ['ivet m3ı] 'above more' vs. iwwer en ['ivəR_ən] 'above one').

### 4.7 Verbs

The Luxembourgish verbal system distinguishes between main, modal, and auxiliary verbs. The traditional distinction between strong and weak verbs is still identifiable, but it is largely dismantled due to a massive deterioration of past-tense forms (see Dammel \& Nowak, 2011; Nowak, 2020; Nübling, 2005). For a comprehensive listing of all verbs and all verbal forms, see LOD and Zenter fir Lëtzebuerger Sprooch (2020).

Example (26) illustrates the paradigm of the regular verb bauen 'to build'. The shown personal suffixes are used for nearly all verbs. Note that the 1 .SG has the -en suffix (ech bauen), rendering this form homonymous with the infinitive and the 1./3.PL. This remarkable feature originates from the Old High German weak verbs of Class III (e.g., ih habên 'I have'), from where the suffix -en has been transferred to all strong and weak verbs of Luxembourgish. All -en suffixes contain a clearly pronounced schwa, and the reduction to a syllabic nasal $[\underset{1}{n}]$ is quite rare.
(26) Basic inflectional pattern of the verb

Infinitive bauen -en

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Past participle gebaut ge-...-t
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|  | Singular |  |  | Plural |
| :--- | :--- | :--- | :--- | :--- |
| 1. | bauen | $-e n$ | bauen | $-e n$ |
| 2. | baus | $-s$ | baut | $-t$ |
| 3. | baut | $-t$ | bauen | $-e n$ |
| Imperative | bau | $-\emptyset$ | baut | $-t$ |

The suffixes $-t$ and $-s$ have zero allomorphs - $\varnothing$, if the stem ends with the alveolar obstruents $[\mathrm{t}, \mathrm{d}, \mathrm{s}, \mathrm{z}]$. The geminates that would arise in this constellation, are automatically degeminated and assimilated (27). In case the stem consonant is underlyingly voiced, it will undergo final devoicing (27b).
(27) Degemination of identical stem consonant and suffix Infinitive Inflected form
a. kascht-en [kaft-ən] kascht- $\varnothing \quad[\mathrm{kaft}] \quad$ 'to $\operatorname{cost}$ (3.SG/2.PL)'
schwätz-en [Jwæts-ən] schwätz-Ø [Jwæts] 'to talk (2.SG)'
räiss-en [Ræ:Is-ən] räiss-Ø [Ræ:IS] 'to tear (2.SG)' hex-en [hæks-ən] hex- $\varnothing$ [hæks] 'to perform witchcraft (2.SG)'
b. land-en [land-ən] lant- $\varnothing$ [lant] 'to land (3.SG/2.PL)'
laud-en [lavd-ən] laut- $\varnothing$ [lavt] 'to ring (a bell) (3.SG/2.PL)'
weis-en [vaIz-ən] weis-Ø [vais] 'to show (2.SG)'

Contrary to, for example, German, the recognizability of the inflectional suffix does not seem to be relevant in Luxembourgish (see the schwa insertion for similar cases in German kosten > es kost-e-t 'it costs').

Luxembourgish has imperative forms for singular and plural: bau! and baut! 'build!'. The former is constituted by the verbal stem and the latter by the verbal stem and the ending $-t$.

Besides the present tense, synthetic tenses are available only for a few verbs. In (28), examples for the verb kréien 'to receive', which still has a preterit (with vowel alternation
and $-t$-suffix), are given. The most common pattern to construct the tenses, however, is analytically by virtue of auxiliaries sinn 'to be' or hunn 'to have' (29). The most frequent past tense is the present perfect (Perfekt or Passé composé), consisting of an auxiliary and the past participle of the full verb: si hu(nn) gebaut 'they have built' (Glaser, 2006; Krier, 2015). The past perfect is constructed with the help of the past tense of the auxiliaries: si hate(n) gebaut 'they had built'. Sentences in the subjunctive ('Conditionnel', 'Konjunktiv') are predominately built by using the subjunctive forms of the auxiliaries ginn 'to give', hunn 'to have' or sinn 'to be'. Note that the verb ginn 'to give' has been grammaticalized to an auxiliary (see the inflected form géifen in (29)). As a frequent variant, it is also possible to use the subjunctive of the verb goen, i.e. géingen instead.
(28) Synthetic tense construction Indicative
Present-tense indicative Si kréien eng Universitéit. 'They receive a university.' Preterit indicative Si kruten eng Universitéit. 'They received a university.'

Subjunctive
Preterit subjunctive Si kriten eng Universitéit. 'They would receive a university.'
(29) Analytic tense construction

Indicative
Present-perfect indicative Si hunn eng Universitéit gebaut. 'They have built a university.'
Past-perfect indicative Si haten eng Universitéit gebaut. 'They had built a university.'
Subjunctive
Present-tense subjunctive Si géifen eng Universitéit bauen. 'They would build a university.'
Past-tense subjunctive Si hätten eng Universitéit gebaut. 'They would have built a university.'

Additionally, a 'double perfect' (Doppelperfekt) or 'double past perfect'
(Doppelplusquamperfekt) can be found occasionally in informal Luxembourgish as a means of intensification (30). In this case, a perfect or past-perfect construction is augmented by the past participle of the auxiliary (gehat for hunn, gewiescht for sinn), thereby letting the sentence exhibit two participles in a row.
(30) 'Double perfect' and 'double past perfect'

Dat hunn ech mer geduecht gehat. 'I have thought this.'
Huet dir dat gefall gehat? 'Did you like this?'
Da wier de(n) Problem geléist gewiescht. 'Then the problem would have been solved.'

The future tense occurs only rarely, and the present tense is used instead. Sometimes a construction with the auxiliary wäerten 'to become' is also used to express future meaning: Si wäerten eng Universitéit bauen. 'They will build a university.' However, in these cases, the auxiliary wäerten is also transporting a certain uncertainty and probability, which brings this verb in closer connection to the epistemic modal verbs.

The paradigms of the auxiliaries hunn 'to have' (31), sinn 'to be' (32), and ginn 'to give' (33) are highly irregular, some forms even suppletive. The subjunctive is formed through the umlaut of the preterit. Note the syncretism of the infinitive with the 1.SG, 1.PL, and 3.PL.
(31) Inflection of the verb hunn 'to have'

| Infinitive | hunn |
| :--- | :--- |
| Past participle | gehat |

Indicative Singular Plural

1. hunn hunn
2. hues hutt
3. huet hunn

|  | Preterit |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Indicative |  | Subjunctive |  |
|  | Singular | Plural | Singular | Plural |
| 1. | hat | haten | hätt | hätten |
| 2. | has | hat | häss | hätt |
| 3. | hat | haten | hätt | hätten |
| Imperative | hief! | hieft!/h |  |  |
| (32) Inflection of the verb sinn 'to be' |  |  |  |  |
| Infinitive |  | sinn |  |  |
| Past participle |  | gewies |  |  |
| Indicative |  |  |  |  |
|  | Singular | Plural |  |  |
| 1. | sinn | sinn |  |  |
| 2. | bass | sidd |  |  |
| 3. | ass | sinn |  |  |
|  | Preterit |  |  |  |
|  | Indicative |  | Subjunctive |  |
|  | Singular | Plural | Singular | Plural |
| 1. | war | waren | wier/wär | wieren/wären |
| 2. | waars | waart | wiers/wäers | rs wiert/wäert |
| 3. | war | waren | wier/wär | wieren/wären |
| Imperative | sief! | sieft!/si |  |  |
| (33) Inflection of the verb ginn 'to give' |  |  |  |  |
| Infinitive |  | ginn |  |  |
| Past participle |  | ginn |  |  |
|  | Indicative |  |  |  |
|  | Singular | Plural |  |  |
| 1. | ginn | ginn |  |  |
| 2. | gëss | gitt |  |  |
| 3. | gëtt | ginn |  |  |
|  | Preterit |  |  |  |
|  | Indicative |  | Subjunctive |  |
|  | Singular | Plural | Singular Pl | Plural |
| 1. | gouf | goufen | géif gé | géifen |
| 2. | goufs | gouft | géifs géj | géift |
| 3. | gouf | goufen | géif géj | géifen |
| Imperative | $g e ̈ f f!$ | gitt! |  |  |

The main verb ginn 'to give' received a new function through grammaticalization, and it is serving now also as an auxiliary for the subjunctive and for passive voice (so-called geben-Passiv; Lenz, 2011; Nübling, 2006b). Ginn is thus largely equivalent to German werden/würden, which does not exist in Luxembourgish. Passive voice is formed with a finite form of the auxiliary ginn and the past participle of the main verb (34).
(34) Passive voice formation with the auxiliary ginn 'to give'

Active voice
De Mecanicien fléckt den Auto. 'The mechanic repairs the car.'
Passive voice
Den Auto gëtt (vum Mecanicien) gefléckt. 'The car is repaired (by the mechanic).'

A further common passive voice is the so-called recipient passive (Rezipientenpassiv; Lenz, 2011), which is constructed with forms of the verb kréien 'to receive' as an auxiliary (35).
(35) Recipient passive voice

Hie kritt d'Hoer geschnidden. Hatt krut Wäin an d'Glass geschott. Si kritt gehollef, de(n) Mantel unzedoen.
'He gets his hair cut.'
'She got wine poured in her glass.' 'She gets help to put on the coat.'

The present participle has been entirely dismantled due to the previously mentioned assimilation of -nt-/-nd- clusters, except for a few lexicalized forms (rosen 'furious', fléissen 'fluent', see G. rasend, fließend). Recently, several present participles have entered Luxembourgish via borrowing from German (lafend 'ongoing', spannend
＇exciting＇，bedeitend＇significant＇，betreffend＇in question＇；see G．laufend，spannend， bedeutend，betreffend）．

The past participle can be regarded as one of the most central verbal forms，carrying a high functional load in the formation of the different tenses．As for its morphological design，two basic principles can be distinguished：Historically weak verbs form the past participle with the prefix ge－and the suffix－t（fëllen－gefëllt＇to fill＇），while strong verbs show the suffix－en instead（sangen－gesongen＇to sing＇）．

For both，weak and strong verbs，the preterit is characterized by a dramatic loss．The only existing weak verbs with a regular preterit suffix $-t$ are the high－frequency verbs soen＇to say＇and froen＇to ask＇（e．g．，si soten＇they said＇）and the modal verbs（see the following discussion）．For all other weak verbs，it is morphologically impossible to build a preterit．As for the strong verbs，only about 20 to 30 of them have still attested preterit forms，many of them rarely used and steadily replaced by present－perfect constructions． The main characteristics are vowel alternations，which are due to ablaut（preterit and past participle）and umlaut（subjunctive）．In（36），the most common strong verbs and their ablaut patterns are listed．Note that some of the forms are quite rare in the early 21 st century and have been superseded by the present perfect．
（36）Ablaut patterns of strong verbs

| infinitive | preterit | subjunctive | past participle | ablaut pattern |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1．／3．SG | 1．／3．SG |  |  |  |
| bleiwen | blouf | bléif | bliwwen | aI－ə ${ }^{\text {a }}$－3I－i | ＇to stay＇ |
| gesinn | gesouch | geséich | gesinn | i－əひ－3I－i | ＇to see＇ |
| ginn | gouf | géif | ginn | i－əひ－3I－i | ＇to give＇ |
| goen | goung | géing | gaangen | o：－əひ－3I－a： | ＇to walk／to go＇ |
| stoen | stoung | stéing | gestanen | o：－əひ－3I－a： | ＇to stand＇ |
| kommen | koum | kéim | komm | о－ə๐－3I－0 | ＇to come＇ |


| leien | louch | léich | geleeën | aI-əひ-3I-e: | 'to lay' |
| :--- | :--- | :--- | :--- | :--- | :--- |
| sëtzen | souz | séiz | gesiess | $\partial-\partial \sigma-3 \mathrm{I}-\mathrm{i}$ | 'to sit' |
| geschéien | geschouch | geschéich | geschitt | 3I-əv-3I-i | 'to happen' |
| stiechen | stouch | stéich | gestach | iə-əv-3I-a | 'to pierce' |

One of the most striking features in (36) is the leveling of the stem vowel in the preterit and subjunctive. The various historical preterit vowels that constitute the seven-ablaut series have been radically simplified in Luxembourgish to one uniform diphthong $<\mathrm{ou}>/[\partial \mathrm{J}]$ (see Dammel \& Nowak, 2011; Nowak, 2020). The same holds for the subjunctive with its uniform diphthong <éi>/[3ı], which is structurally linked to the preterit via umlaut.

Besides ablaut, another type of vowel alternation is taking place in the present tense of the strong verbs. This so-called Wechselflexion (changing inflection) applies to the 2.SG, 3.SG, and sometimes to the 2.PL (see Dammel, 2010; Nübling, 2001). Here, the predominantly back vowels of the infinitive are changing to front vowels in an umlautlike process (37). Contrary to, for example, Standard German, Wechselflexion may also apply to some high-frequency weak verbs (37b).
(37) Vowel alternation in present tense due to Wechselflexion

| a. infinitive | 2.SG | 3.SG | 2.PL | vowel alternation |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| bannen | bënns | bënnt | bannt | a-ə-ว-a | 'to bind' |
| sangen | séngs | séngt | sangt | a-e-e-a | 'to sing' |
| saufen | säifs/sëffs | säift/sëfft | sauft | æ:ర-æ:I/ə-æ:I/ə-æ:U | 'to swig' |
| kréien | kriss | kritt | kritt | 3I-i-i-i | 'to get' |
| zéien | zitts | zitt | zitt | 3I-i-i-i | 'to pull' |
| iessen | ëss | ësst | iesst | іә-ə-ว-іə | 'to eat' |
| ginn | gëss | gëtt | gitt | i-ə-ə-i | 'to give' |
| gesinn | gesäis | gesäit | gesitt | i-æ:I- æ.I-i | 'to see' |
| kommen | kënns | kënnt | kommt | о-ә-ə-0 | 'to come' |
| goen | gees | geet | gitt | o:-e:-e:-i | 'to walk/to go' |
| b. infinitive | 2.SG | 3.SG | 2.PL | vowel pattern |  |


| soen | sees | seet | sot | o:-e:-e:-o: | 'to say' |
| :---: | :---: | :---: | :---: | :---: | :---: |
| maachen | méchs | mécht | maacht | a:-e-e-a: | 'to make' |
| kafen | keefs | keeft | kaaft | a:-e:-e:-a: | 'to buy' |
| huelen | hëls | hëlt | huelt | นə-ə-ə-иә | 'to take' |

Taken together, ablaut, umlaut, and Wechselflexion contribute to the rather complex vowel alternations in Luxembourgish with their irregularities and opaqueness.

As for the past participle suffix -en of the strong verbs, an allomorphic rule governs whether the suffix is realized or not (38). According to this rule, the suffix -en is present only when the last sound of the stem is a voiced obstruent or a vowel. In contrast to this, the suffix -en is not realized when the last consonant of the stem is voiceless (Gilles, 2011).
(38) Past participle of strong verbs
voiced stem consonant infinitive participle [v] reiwen geriwwen 'to rub' [z] weisen gewisen 'to show'
[z] steigen gestigen 'to climb'
[ y ] sangen gesongen 'to sing'
voiceless stem consonant
infinitive participle
[f] gräifen gegraff 'to grab'
[s] bäissen gebass 'to bite'
[x] richen geroch 'to smell'
[k] drénken gedronk 'to drink'

In contrast to German, many more weak verbs show a particular vowel alternation in the past participle which is due to the so-called reverse umlaut (German Rückumlaut), where the stem of the infinitive contains a front vowel/diphthong and the participle contains a back vowel/diphthong (brennen-gebrannt 'to burn'; see Gilles, 2011; Nübling, 2005). For most of the verbs, the "reverse umlaut" is remarkably stable, only a few verbs have developed variants as the result of analogical leveling (39).
(39) Reverse umlaut (Rückumlaut) of the weak verbs


Note that in case the verbal stem ends with the affricate $<\mathrm{z} / \mathrm{tz}>/[$ ts $]$ the past participle will still keep the 'unshifted' [t] (39b).

Modal verbs are also among the most irregular verbs (see Dammel, 2006). The existence of several variants makes it difficult to select a canonical form. Däerfen, for example, has the frequent variants dierfen and duerfen, which partially even mix their inflectional forms.

Besides the vowel alternation in the preterit and the subjunctive, they also show the suffix $-t$ to signal the preterit. For the present tense and the preterit, the $1 . / 3$. SG has no personal suffix. As the only modal verb, the $3 . \mathrm{SG}$ of wëllen shows the suffix $-t$, which is, however, rarely used in the early 21 st century.
(40) Base forms of the modal verbs

| infinitive | present | preterit | subjunctive |  |
| :--- | :--- | :--- | :--- | :--- |
|  | 3SG | 3sG | 3sG |  |
| däerfen | däerf | duerft | dierft | 'may' |
| kënnen | kann | konnt | kéint | 'can' |
| mussen | muss | musst | misst | 'must' |
| sollen | soll | sollt | sollt | 'shall' |
| wëllen | wëll(t) | wollt | wéilt | 'will' |
| (net) brauchen | brauch | braucht | bräicht | 'to not need' |

```
wäerten
wäert -
'to become'
```

When used as infinite forms in verbal clusters, the modal verbs have recently developed an infixed $-t$ - (combined sometimes with vowel alternation), probably originating from a subjunctive or preterit form (so-called supine; see Dammel, 2006, p. 154; Döhmer, 2020). The occurrence of the supine forms like däerften (<däerfen), kéinten/kinnten (< kënnen), missten (< mussen) is variable, and its functions are not fully analyzed yet. According to the corpus analysis by Döhmer (2020, p. 213), they occur in between 10\% and $50 \%$ of the verbal clusters.
(41) Supine forms of the modal verbs Mir hunn däerften am Knascht spillen Dat hätt missten intern beschwat ginn. Du häss kinnte(n) schwamme(n) goen.
'We were allowed to play in the dirt.' 'This should have been discussed internally.' 'You could have gone for a swim.'

## 5. Selected Syntactic Characteristics

A profound analysis of the syntactic features of Luxembourgish has been undertaken by Döhmer (2020). For this chapter, only two selected features are discussed. The first feature concerns the typologically striking inflection of the complementizer position in dependent clauses ("complementizer agreement"). In a subordinate clause with $2.5 G$ or 1./3.PL, the conjunction receives an inflectional marker, too. The corresponding inflectional suffixes $\{-\mathrm{s}\}$ and $\{$-en $\}$, respectively, have "stranded" right after the conjunction in the complementizer position (42).
(42) Complementizer agreement: inflectional suffix after conjunction (suffixes underlined)
2.SG Mir wëssen, datt $\underline{s}$ du fortgees.
2.SG Ech weess net, wéini $\underline{s}$ du ukënns.
1.PL Fro d'Sara, ob (en) mir komme sollen.
3.PL Hatt gesäit, datt (en) se sangen.
'We know that you leave.'
'I don't know when you will arrive.'
'Ask Sara, whether we should come.'
'She sees that they are singing.'

This double placement of the verbal suffix is mandatory for the $2 . \mathrm{SG}\{-\mathrm{s}\}$ and optional (and rare) for the 1./3.PL \{-en\}.

A further feature concerns the word order in verbal clusters in subordinate clauses. If the verbal cluster consists of a finite form of a modal verb or of a subjunctive auxiliary and an additional infinite verb, then the word order is variable, and basically, two serializations are possible, that is, 1-2 and 2-1 (43).
(43) Word order in verbal clusters (modal verb underlined)

1-2 .... ob ech dat $k a(n n)$ vergläichen '. . . , whether I can compare this’
2-1 . . . , ob ech dat vergläiche(n) kann
1-2 . . . , dass dir mech géift verstoen
'... , that you would understand me'
2-1 . . . , dass dir mech verstoe(n) géift

According to a recent study by Döhmer (2020), serialization 1-2 is the most common at about $80 \%$, which is said to be the older and original serialization (see Bruch, 1955). The less common serialization 2-1, however, could have been introduced through Standard German, where $2-1$ is nearly exclusively used.

## 6. Lexical Structures

Work on the lexical inventory and its structures started as early as the 19th century
(Gangler, 1847). The most extensive dictionary is the Luxemburger Wörterbuch (LWB;

1950-1977), comprising some 50,000 dictionary entries covering also regional variants, loans from French, idioms, and names for animals and plants, as well as place-names. When the teaching of Luxembourgish as a second language gained momentum from the 1980s onward, smaller dictionaries were published little by little to cover (and develop) the core vocabulary (e.g., Dermann-Loutsch, 2004, 2006; Zimmer, 2008). The most recent dictionary is the Lëtzebuerger Online Dictionnaire (LOD, 2007ff.), which intends not only to document the vocabulary of the early 21 st century but also to implement the recent spelling rules (Ecker, 2013). Contrary to the older $L W B$, the $L O D$ thus also takes part in the standardization process.

Throughout its history, Luxembourgish has always been and still is influenced by French and German, predominately on the lexical level (see Conrad, 2017b, 2020;

Southworth, 1954). The oldest layer is probably due to the imminent role of the French language and culture on European languages from the 16th to 18th centuries. In the early 21st century, these words belong to the core vocabulary, and some of them still retain their French pronunciation. Examples are Tour [tu:e], Cours [ku:r] 'course', Boulevard ['buləva:r], Bourse [burs] 'stock exchange/purse', Chance [ऽã:s], Chamber ['fã:mbe] 'parliament'. From the 19th century onward, the influence of French increased for at least three reasons: (a) The bilingual political elites of the 19th century introduced more and more French into the administration and the institutions of Luxembourg. (b) The mandatory teaching of French gradually made this language accessible to the whole population. (c) A longtime positive attitude toward the French language and culture supported and facilitated borrowing; note, however, that, in the early 21 st century, this
positive attitude has been changing in favor of more positive attitudes toward German and English instead (see Purschke, 2020; Stölben, 2021).

Quantitative statements about the number of loans in the vocabulary are notoriously difficult. According to my very broad and cautious estimation, some $10 \%$ to $15 \%$ of the vocabulary result from language contact with French, also including internationalisms of French origin (e.g., Adress 'address'). Note that several loans have Germanic competitors. Regarding the borrowing structures particularly for French, see the Dictionnaire Étymologique des Éléments Français du Luxembourgeois (BenderBerland/Kramer/Reisdoerfer, 2003-2018). As expected, most loans are nouns, whereas adjectives and verbs are somewhat lesser affected. The degree of integration into Luxembourgish is noticeable in spelling and pronunciation. The following list in (44) is meant to give an illustrative impression.

| (44) Common borrowings from French |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| nouns |  |  | adjectives |  |  |
| French | Luxembourgish | French | Luxembourgish |  |  |
| tirebouchon | Tirebouchon | 'corkscrew' | douce | duuss | 'soft' |
| fond | Fong | 'bottom' | efficace | effikass | 'efficient' |
| tournure | Tournure | 'phrase' | exigent | exigent | 'demanding' |
| bol | Boll | 'bowl' | favorable | favorabel | 'favorable' |
| vélo | Vëlo | 'bicycle' | foutu | futti | 'broken' |
| arbitre | Arbitter | 'referee' | impeccable | impeccabel | 'impeccable' |
| rideau | Riddo | 'curtain' | jaloux | jalous | 'jealous' |
| perte | Perte | 'loss' | louche | louche | 'suspicious' |
| piscine | Piscine | 'pool' | marbre | marber | 'marble' |
| pouvoir | Pouvoir | 'power' | ambigu | ambigu | 'ambiguous' |
|  |  |  |  |  |  |

As for verbs, loans from French can easily be recognized by their word formation suffix éier(en), which allows borrowing almost any French verb into Luxembourgish. This word-formation pattern gained momentum in Early New High German and is especially
frequent in Luxembourgish (see Solms \& Wegera, 1999). Among the approximately 5,000 verbs in the $L O D$, about 850 , that is, $17 \%$ (own calculation), are derivations with the suffix -éier(en) and can be regarded as loans, directly or indirectly imported from French (45).

| (45) Examples for verbs on -éieren |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| French | Luxembourgish |  | French | Luxembourgish |  |
| aborder | abordéieren | 'to deal with' | bouger | bougéieren | 'to move' |
| accoucher | accouchéieren | 'to give birth' | rafistoler | rafistoléieren | 'to patch up' |
| egaliser | egaliséieren | 'to make level' | traiter | traitéieren | 'to treat' |
| vernier | vernéieren | 'to varnish' | calmer | calméieren | 'to calm so.' |

For the uninflected word classes, some borrowed adverbs and conjunctions from French are used quite frequently: de plus en plus 'more and more', plus ou moins 'more or less', just [3yst] 'just', entre-temps 'meanwhile', vu que 'because', mee ( $<\mathrm{F}$. mais) 'but', kitt (< F. quitte à 'although'. Borrowed discourse particles and interjections are bien/abee 'well', bof 'what!?', soit 'well then', bon 'OK', d'accord 'all right', voilà 'there!', ça va 'all right', on verra (bien) 'we will see', allez 'come on!'. Routines for greetings, politeness, and celebration, although part of the very core vocabulary, come from French to some extent, too: bonjour 'good day', bonsoir 'good evening', salut/zalut [tsa'ly:]/zali ['tsali:], awar/awuer 'goodbye' (< F. au revoir), äddi 'bye-bye' (< F. adieu), Merci, Pardon ['pardõ:]/Pardong [par'doy] 'pardon me', viv (< F. vive) 'long live'. Finally, some swear words originate form French as well: gare (la Box/la Minn) ( $<$ F. gare) 'attention!’, zut ‘damn', flütt (< F. flûte) 'damn', (nondi)djö/(nondi)djëss/nondikass (< F. nom de Dieu) 'damn', Merd (< F. merde) 'shit', putain 'fuck' (see Krier, 2011).

As in other languages, kinship terms may be influenced by French as well. In (46), kinship terms of the family are displayed, where shaded cells indicate a possible loan from French.
(46) Kinship terms in Luxembourgish.

|  | (Ur-)Grousselteren |  |  |  |
| :--- | :--- | :---: | :--- | :--- |
|  | Boma/Groussmamm |  | Bopa/Grousspapp |  |
| Tatta | Mamm |  | Papp | Monni |
| Cousine | Schwëster | EGO | Brudder | Cousin |
| Niess | Meedchen/ <br> Duechter |  | Jong/Fils/Bouf | Neveu/Nëwwi |
|  | (Ur-)Enkel |  |  |  |

While French kinship terms like Tatta ['tata:] 'aunt', Monni ['moni:] 'uncle', Cousine ['kuzin] 'cousin' (female), and Cousin ['kuz $\tilde{\tilde{\varepsilon}}$ :] 'cousin' (male) can be found in several other languages as well, Niess [niəs] ( $<$ F. nièce) 'niece', Neveu ['nəvø:] ( $<$ F. neveu) 'nephew' and especially Fils [fis] ( $<$ F. fils) 'son' underline the strong influence of French. This holds also for Boma ['bo:ma:], Bomi ['bo:mi:], Bom [bo:m] 'grandmother' and Bopa ['bo:pa:], Bopi ['bo:pi:], Bop [bo:p] 'granddad', which possibly derive from F. bonne-mère and bon-père, respectively.

The adjectives for the base colors are schwaarz 'black', blo 'blue', gro 'grey', gréng 'green', mof/violett 'purple', rout 'red', giel 'yellow', wäiss 'white', where mof [mo:f] is a loan from the French mauve. French provided further color terms like beige [be:J], orange ['orã:f], or saumon ['so:mã:] 'salmon'.

Societal multilingualism is also fostering the alternation of (largely) synonymous words from French and Luxembourgish. The actual choice of a lexical item from the list
in (47) (and, of course, from many more) can depend on language competence, personal preference, and stylistic function.
(47) Lexical alternatives

| French | Luxembourgish |  |
| :--- | :--- | :--- |
| Choix | Auswiel/Wiel | 'choice' |
| Avantage | Virdeel | ''dvantage' |
| But | Zil | 'aim' |
| Gouvernement | Regierung | 'government' |
| Produit | Produkt | 'product' |
| jugéieren | beurteelen | 'to judge' |
| decidéieren | entscheeden | 'to decide' |

Finally, determining German loanwords in Luxembourgish is much more difficult, due to the structural closeness of the two languages. Usually, when a word from German is imported, it is automatically modified according to the phonological structure of Luxembourgish and thus making its German origin invisible. German loans can therefore only be identified when they still exhibit phonological traits, which deviate from Luxembourgish. Examples are eeben 'just now' instead of *eewen, einfach 'easy' instead of *ee(n)fach, berücksichtigen 'to consider' instead of *berécksiichtegen, leider 'sadly’ instead of *leeder (however, Bäileed 'condolence', et deet mir leed 'I am sorry'). An interesting case constitutes the adjective süüss 'sweet', which has been borrowed recently from German to refer to a 'cute' person or animal by younger speakers. The traditional Luxembourgish adjective séiss, however, is (mainly) used to refer to 'sweet taste'.

It might come as a surprise, that despite the high amount of societal and individual multilingualism, intra-sentential code-switching involving more than one word or a syntactic construction is nearly inexistent (see, however, Krier, 2014; Stell \& Parafita Couto, 2012). Loanwords like the ones presented earlier are always regarded by

Luxembourgers as mere lexical insertions or ad hoc borrowings and not as a switch to another language. For the early-21st-century language situation, it is largely inconceivable to switch to French or German for more than a word, as they are regarded as foreign languages. Two exceptions can be identified: first, when citing another person the language of this specific person may be used and, second, highly multilingual migrants, who grew up with several languages at home, may switch between their first language, French, and Luxembourgish in informal, in-group interaction.

## 7. Language Variation and Change

Due to its status as a largely spoken language, Luxembourgish is still influenced by a high degree of language variation on all levels. The main types of language variation originate from regional variation, language contact with German and French, and internal factors. All these types of variation are superimposed by sociolinguistic factors like age, gender, educational level, and language attitudes. The data for the following illustrations come from a recent large-scale survey of linguistic variables utilizing a smartphone application and crowdsourcing (Entringer et al., 2021).

Luxembourgish was and still is characterized by regional variation, which was the subject of intensive investigation since the 19th century, often in a connection with the dialectology of the German dialects in a wider sense (see Gilles \& Moulin, 2008). Older dialectological studies and surveys from the end of the 19th and beginning of the 20th century (see 'Luxemburgischer Sprachatlas'; LSA, 1963) were able to document a rich regional variation in Luxembourg for pre-World War II times. Next to a central dialect
around the capital city, it was possible to distinguish sub-dialects for the south (border to France), the east (border with Germany and similar to Moselle Franconian), and the north (influenced by the Ripuarian dialect of the Cologne area). The modernization of the country, together with the low prestige of dialects and the recognition of Luxembourgish as a language of its own, initiated a still ongoing process of dialect leveling (see Gilles, 1999). For illustration purposes, the historical dialectological situation from the linguistic atlas is juxtaposed to the situation in the early 21 st century, as it is documented in a recent survey (Entringer et al., 2021; Gilles, 2021). For the variable Brudder 'brother' (Figure 2), it can be noticed that the occurrences of the eastern and northern forms (Brouder and Brugder) are receding and the central form Brudder is gaining ground.
[COMP: FIGURE 2 HERE]

Due to the high participation rate in this recent survey, it is also possible to draw choropleth maps with the quantitative occurrence of a variant on the geographical basis of the commune (Figure 3). For the eastern stretch, the former variant Brouder is used by only $10 \%$ to $25 \%$ of the population in the early 21 st century. By contrast, the two variants of the north occur at a considerably higher degree.
[COMP: FIGURE $\underline{3}$ HERE]

For many other linguistic variables, the general tendency toward dialect leveling can be noticed as well. In general, the former dialect landscape of Luxembourg is about to change, and the central variety is spreading into the surrounding regions. Note, however, that the dialect of the north is still quite alive.

While discussing the lexical choices in the previous section, it became apparent that the ubiquitous language contact with French, German, and, increasingly, English is a
steady source of language variation. As an example, Figure 4 is presenting the lexical and phonetic variation for Telecommande 'remote control' for 896 participants. Several characteristic observations can be drawn from this apparent-time analysis of six age groups. From the older to the younger speakers, it is obvious that (integrated and nonintegrated) loans from German are increasing (i.e., Fern/seh)steierung/Fernsteuerung, Fernbedienung), while the original French loan [te:le:]commande is decreasing. Furthermore, on the phonetic level, the French pronunciation [te:le:]commande is decreasing, and the new, phonetically adapted pronunciation [tale:]commande is increasing. For the general tendency to borrow more frequently from German than from French, especially by younger people, see Conrad (2017b).

## [COMP: FIGURE 4 HERE]

Finally, as for the internal factors, ongoing changes are also affecting, albeit to a lesser extent, the grammatical system. As an example, Figure 5 is concerned with the plural formation of nouns (here: Bus 'bus'). The apparent-time distribution shows that two suffixes, -en and -er, are in strong competition with each other. From old to young, one can notice that -er is constantly replacing -en, which is more often used by older people (see Entringer, 2021).
[FIGURE 5 HERE]

All in all, language variation due to regional variation, language contact, and internal factors contributes to the highly flexible and adaptive character of Luxembourgish.

## 8. Conclusion

In a process of emancipation, Luxembourgish evolved from a regional dialect of German in the 19th century to the national language during the 20th century (Gilles, 2000). In the early 21 st century, due to its multifunctional usage, as the most important spoken language and due to the high positive attitudes, Luxembourgish can be regarded as an Ausbau language. Being the national language of a nation-state, Luxembourgish cannot be called a minority language in the early 21 st century. The structural divergence from Standard German and the neighboring Central Franconian dialect is increasing.

Written language use is increasing constantly, and various digital media are offering new alleys to extend and expand the usage in the written domain. With the highly standardized orthography, language standardization is evolving. Pronunciation, lexicon, and grammar remain on a medium level of standardization. However, the implementation of these standards is rather limited, as Luxembourgish is still not a fully-fledged subject in the educational system.

Nevertheless, in the early 21 st century, the language is very vital and stable. The transmission of the language from generation to generation is guaranteed. However, being embedded in a highly multilingual and multicultural situation, in which roughly $50 \%$ of the population is constituted by residents without Luxembourgish nationality, the language situation might face profound changes in the future.

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## Links to Digital Materials

*Variatiounsatlas vum Lëtzebuergeschen[https://infolux.uni.lu/variatiounsatlas/]*
[Atlas of language variation in Luxembourgish].
*Historical Dictionaries of Luxembourgish[https://dico.uni.lu/]*.
*LOD[https://lod.lu/]*—Lëtzebuerger Online Dictionnaire [Modern dictionary of Luxembourgish].
*D'Lëtzebuerger Verben[https://verben.lu/]* [Compilation of paradigms for all verbs in Luxembourgish].

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Figure 1. Location of Luxembourg with neighboring countries.

Figure 2. Regional distribution for the variants for Brudder 'brother'. Left: Distribution for the early 21 st century with data for 1,118 participants. Right: Corresponding map from the "Luxemburgischer Sprachatlas" (LSA, 1963: map 155).

Figure 3. Choropleth maps showing the detailed regional distribution of the three variants for Brudder 'brother', based on 1,113 participants.

Figure 4. Apparent-time distribution of the variants for Telecommande 'remote control' in six age groups (896 participants).

Figure 5. Apparent-time distribution for the plural formation for the noun Bus 'bus' in six age groups (1,237 participants).

