LANGUAGE CONTACT AS AN ACCELERATOR OF CHANGE: THE DIFFUSION OF THE WERDEN FUTURE TENSE PERIPHRASIS IN GERMAN

ABSTRACT

This paper aims to formalize the grammaticalisation pathway by which *werden* became a future auxiliary verb in German; and to revisit the role of language contact with Old Czech. I show that the grammaticalization of *werden* can be modelled in terms of upward renalaysis (Roberts & Rossou 2003). Particular attention is given to proposals by Leiss (1985) that futurate *werden* represents a syntactic borrowing based on Czech imperfective futurate *budu + INFINITIVE*. This is argued against, yet Leiss’s proposals are reworked into an approach considering language contact and linguistic similarity the basis of the diffusion of futurate *werden* from areas where contact was most prevalent. I develop a scenario informed by the agentivity model (Source- and Recipient Language Agentivity) (van Coetsem 2000, Winford 2005) in conjunction with proposals for crosslinguistic influence by Jarvis & Pavlenko (2008) concerning psycholinguistics and transferability constraints. It is argued that Source Language Agentivity and syntactic similarity drove bilingual speakers of German and Czech to prefer the incipient *werden* future above competing options. This increased use in bilinguals then led to an increased uptake in non-bilingual German speakers in East Central German speaking areas, before the periphrasis eventually established itself in a superregional written standard.

1. INTRODUCTION

The analytic construction [*werden + INF(INITIVE)] constitutes the only periphrastic means of explicitly marking future time reference (henceforth FTR) in Modern German (ModG)(1).

(1) Fritz wird nach Spanien fliegen
Fritz become.3SG to Spain fly.INF
‘Fritz will fly to Spain’

Notably, the use of a grammaticalised form of *werden* ‘become’ is anomalous among the Germanic languages in the expression of FTR. For example, English makes use of *will*, grammaticalized from *willan* ‘to want’, and *going to*; Dutch/Flemish on the other hand employs a grammaticalized use of *zullen* “shall/should”. Likewise, Scandinavian languages also mark FTR with grammaticalised uses of “want” *vil* and “shall” *skal*, as well as *kommer til å* (Lit. *come to/ until.PREP to.INF*) corresponding roughly to the *going-to* future. Indeed, no early Germanic language inherited a morphosyntactically unambiguous future tense from Proto-Germanic, which lacked an explicit synthetic construction for the expression of FTR (Nübling et al. 2013: 279). Instead, as is possible in ModG, present tense form could express the future in Old High German (OHG) (2), a function known as the futurate present (Hilpert 2008). In OHG (750-1050) and Middle High German (MHG) (1050-1350) several modal periphrastic future constructions emerged similar to other Germanic varieties. Notably, [*werden + INF*] does not represent a variant of FTR during the OHG and most of the MHG periods, only becoming the dominant variant in Early New High German (ENHG) (1350-1650) (Bogner 1989, Luther 2013).

Consequently, the, for Germanic exceptional, actuation of the *werden* periphrasis in late MHG and its diffusion in ENHG have been the subjects of much investigation and heated debate for many years (Kleiner 1925, Leiss 1985, Harm 2001, Schmid 2000, Westvik 2000, Dielewald & Habermann 2005, among others). Some authors view this innovation as the result
of purely language internal factors (Harm 2001, Schmid 2000), while others see a link between: a) the actuation of \([werden + INF]\) and Czech-German language contact (Leiss 1985), or b) the diffusion of \([werden + INF]\) and contact between German and Latin (Diewald & Habermann 2005). As yet, there is no general consensus.

(2) Got giba imo wiha joh era filu hoha
God gives him holiness and honour much high
‘God will give him holiness and the highest honour’

(Otfrid cf. Schönherr 2010: 113)

The goals of this article are two fold; firstly, to frame the syntactic changes descriptively by which \([werden + INF]\) grammaticalized in terms of generative literature on grammaticalization, particularly following Roberts & Roussou (2003). I agree with proposals that language internal factors led to the actuation of the periphrasis (Schmid 2000, Krämer), yet I do not take a strong position, since the goal of this article is more to explain the syntax and diffusion of the innovation and not its catalyst.

Secondly, I aim to reassess disagreement in the literature concerning the processes by which \([werden + INF]\) came to be the dominant periphrastic future construction. I give special attention to the role of well documented Czech-German language contact in German speaking areas where sustained contact is well documented. Here, I review and radically revising the approach by Leiss (1985), which wholly attributed the actuation of \([werden + INF]\) to innovation to Czech-German bilinguals. This approach is furthermore informed by psycholinguistic models of contact-induced language change Van Coetsem (2000), crosslinguistic influence and L2 language acquisition by Jarvis & Pavlenko (2008); and the interaction between L1 acquisition, bilingualism and language change by Meisel (2011). I propose a revised model in which Czech-German language contact plays a direct role in increasing the frequency of \([werden + INF]\). This increase occurs first in the grammar of unbalanced adult bilingual speakers of Czech and German, before then becoming cemented in the grammar of L1 children acquiring German. Finally, I come to the conclusion that a contact-induced higher frequency of the periphrasis in East Central German (ECG) \((Ostmitteldeutsch)\) speaking areas led to its codification in early more unified supraregional written varieties which formed the basis of Modern standard German.

In section 2 I provide some diachronic and typological background for grammaticalisation of future tense constructions, and introduce how grammaticalization pathways can be conceived of within a more formal model. Section 3 focuses on diachronic variation and change of German future tense constructions, including a review of modal periphrases which competed to mark FTR. Explicitly, in §3.2 I present and discuss MHG inchoative periphrases, including an in-depth discussion and novel proposal concerning the underlying structure of \(werden\) as it developed from an inchoative lexical verb to a future marker; §3.3 then presents a review of historical data from the literature showing that \([werden + INF]\) gained real traction as the primary periphrasis for FTR in the ENHG period, increasing most radically and then spreading from East Central German \((Ostmitteldeutsch)\) speaking areas; lastly in §3.4, a formal grammaticalisation pathway of \(werden\) as a future auxiliary is presented within the context of polygrammaticalisation. Section 4 provides a brief review and critical analysis of recent more prominent hypotheses surrounding the actuation and diffusion of \([werden + INF]\). In section 5, I explicitly revisit the role of Czech-German language contact and make the case that it cannot be overlooked. I present a hypothesis for a contact-induced diffusion of \([werden + INF]\), which I argue is linked to both prolonged Czech-German language contact and the emergence of a supraregional standard. The findings of this article are summarised in section 6.

2. FUTURE MARKERS AND GRAMMATICALIZATION
Bybee et al. (1994: 253) shows that in the languages of the world most future-grams originate from a limited set of source lexemes. The most frequent set of source lexemes are movement verbs, such as come and go. The second most frequent set are those expressing be, become or have. Finally, the next most common set are modal verbs conveying desire, obligation, or ability (Figure 2). This phenomenon occurs along established pathways of grammaticalisation (Figures 1, 2 & 3), grammaticalising first from the original semantic value of the source lexeme to the expression of intention, and then to a future-gram (Bybee et al. 1994: 254) According to Bybee et al. (ibid), the development of an intentional reading is a prerequisite for the future readin. This stipulation is contradicted by Diewald & Habermann (2005) and Szczepaniak (2011) in the case of German werden. However, debate on the requirement of a blanket requirement of intention for the grammaticalisation of future markers lies outside the goals of this paper.

‘come’ & ‘go’ \(\rightarrow\) INTENTION \(\rightarrow\) FUTURE

\textbf{Figure 1:} Grammaticalisation pathway of movement verb futures (Bybee et al. 1994: 267-270)

\begin{align*}
\text{Obligation (deontic modality)} & \rightarrow \\
\text{Desire (volitional modality)} & \rightarrow \text{INTENTION} \rightarrow \text{FUTURE} \\
\text{Root possibility (dispositional modality)} & \rightarrow \\
\end{align*}

\textbf{Figure 2:} Grammaticalisation pathway of modal futures (Figure 1, Diewald & Wischer 2013: 201)

\begin{align*}
\text{‘be’, ‘become’, ‘have’/POSSESSION} & \rightarrow \text{OBLIGATION} \\
\text{‘be’, ‘become’, ‘have’/POSSESSION} & \rightarrow \text{PREDESTINATION} \\
\text{INTENTION} & \rightarrow \text{FUTURE}
\end{align*}

\textbf{Figure 3:} Grammaticalisation pathway of ‘be’, ‘become’, ‘have’ futures (Figure 2, Diewald & Wischer 2013: 201)

As discussed, the first and third group are dominant in Germanic, yet while futurate werden is crosslinguistically typical, it anomalous for Germanic. Moreover, this construction is rarely attested until a rapid expansion in ENHG (Bogner 1989). Indeed, these same typical Germanic future-grams are also historically attested in HG; Section 3 provides an in-depth analysis. Consequently, we must ask how \([\text{werden} + \text{INF}]\), a typological anomaly, became the dominant periphrastic future construction in German. Before turning to this question explicitly, I shall now give a brief and schematic overview of the formal assumptions made here for the grammaticalization of future markers.

Following Roberts & Roussou (2003), and a broadly generative theory based on minimalist assumptions (Chomsky 1995), we can consider this kind of grammaticalization as upward reanalysis. That is, reanalysis of syntactic heads once base-generated lower in the clause to be generated higher in the clause with a different label. For example, the reanalysis of Old English willan ‘to want’ from a lexical \(\rightarrow\) modal \(\rightarrow\) future auxiliary can be schematically conceived of, assuming a simplified functional hierarchy in (3), in three main stages (4). I demonstrate this point with the grammaticalization of Old English willan ‘to want’.

\footnote{I note that the exceptions of LG and Luxembourgish in this regard are apparent rather than real, as in these dialects the werden form should be considered a borrowing from HG}
Intermediate stages in which the reading of a potential future marker are ambiguous, compete, or indeed included both the modal and tense marking interpretation, can be conceived of in terms of head-movement operations, whereby the new syntactic-semantic features of the verb are available but the old ones are retained (5). I refer the reader to Roberts & Roussou (2003) for a more detailed and theoretically richer account of grammaticalisation in general and specifically for future markers from a formal perspective.

3. ‘WERDEN’ AND OTHER FUTURE MARKERS IN THE HISTORY OF GERMAN

Over the course of its development German has demonstrated remarkable variation in the expression of the future tense. At various stages different grammaticalised periphrastic constructions competed until the emergence of a dominant form [werden + INF]. Notably, the only constant variant across all historical stages is the futurate present; that is, the expression of FTR via present tense form. The futurate present represents the only postulated means of marking future time in Proto-Germanic (Nübling et al. 2013: 279), the primary means in OHG (2 given again as 6) (Braune 2004: 256), and is shared by all Germanic languages (Hilpert
2008: 157). This section primarily focuses on the diachrony of analytic, i.e. periphrastic, future constructions and those which bear some relation throughout the historical stages of HG.

(6) Got gibit imo wiha joh era filu hoha
God gives him holiness and honour much high
‘God will give him holiness and the highest honour’
(Offrid c.f. Schönhere 2010: 113)

3.1. Modal verbs

Modal verb periphrases are attested as future-grams in both OHG and MHG (Diewald & Wischer 2013: 196, Luther 2013). In OHG [scullan + INF] (sollen) (4a) was rare, and [wellan + INF] (wollen) (4b) was rarer still (Braune 2004: 256). [mugan + INF] (mögen) is also sporadically attested (Schrodt 2004: 129). [scullan + INF] is often found as a translation of the Latin future tense in both Offrid and Notker (Stevens 1995: 192).

(7) a. berga sculun swīnan (Ellis 1953: 81)
protections shall.disappear
‘Protections will disappear’

b. thir willu ih geban innan thes sluzila himiles
you.disappear will.I give.into the.key heaven
Translation 1: ‘I will give you the keys of heaven’
Translation 2: ‘I want to give you the keys of heaven’ (Offrid cf. Schrodt 2004: 130)

However, OHG modal future auxiliaries cannot be considered pure future-grams. While incipient grammaticalisation as future-grams is evident, almost all cases in OHG retain their modality, potentially leading to ambiguity between modality and futurity (7b). As such, OHG modals marking future time had not undergone semantic bleaching shedding their modality and cannot be considered fully grammaticalised future-grams.

As in OHG, MHG [modal + INF] periphrases indicating future time retain their modality leading to ambiguity in certain contexts (Diewald & Habermann 2005: 234) (8). In MHG a wider range of [modal + INF] periphrases indicate FTR: wellen, suln, müezen, mügen (wollen, sollen, müssen, mögen), with suln (8a,b) and wellen as the most frequent variants (Luther 2013: 154).

(8) a. swaz2 der küneginne liebes geschicht, des sol ich ir wol gunnen
whatever.the queen love.happens that shall.MOD I her well grant
(NL1204,2)

b. Interpretation i:
‘Was auch immer der Königin Schönes geschieht, das werde ich ihr wohl gönnen’
‘Whatever nice thing happens to the Queen, I will not begrudge her it.’
[German translation c.f. Nübling et al. (2013: 280), English: own translation]

2 Swaz is a generic indefinite pronoun corresponding to the meaning ‘whatever’
c. Interpretation ii:
‘Was auch immer der Königin schönes geschieht, bin ich verpflichtet, es ihr zu gönnen’

‘Whatever pleasantry befalls the Queen, I am obliged not to begrudge her for it.’ [German translation cf. Szczepaniak (2013: 144), English: own translation]

3.2. Ingressive/Inchoative Periphrases

A further group, and for us most noteworthy, are INGRESSIVE and/or INCHOATIVE periphrases. Following Wiltschko (2014), the classical lexical aspect distinctions between inchoative, ingressive, and inceptive distinguish three types of temporal view point aspect (henceforth PoV-aspect [point of view]) denoting the course of subevents, i.e. different ways of mapping the event time to the reference time. In short, inchoative denotes the beginning of a state, ingressive refers to the beginning of an atelic process, and the inceptive marks the beginning of a telic process (Wiltschko 2014: 293) (9).

(9) a. John got tired.        INCHOATIVE
    b. The soup came to a boil.   INGRESSIVE
    c. He began to build the house.   INCEPTIVE  (ex 75, Wiltschko 2014: 293)

In some literature regarding werden (Nübling et al. 2013: 281, Szczepaniak 2011), it has been assumed that the distinction between ingressive and inchoative concerns the pace of initiation, often indicating change of state i.e., ingressive denotes a sudden change in state, while inchoative indicates a slower process, such as the ModG inchoative copular werden (10). I choose to follow the semantically more articulate distinction presented by Wiltschko (2014). It should be noted that some authors do not distinguish between these categories for the history of German (see for example Diewald & Habermann 2005).

(10) Hauke wird krank (Inchoative)
    Hauke becomes ill
    ‘Hauke is getting ill’

Previous to the emergence of [werden + INF], varying periphrastic constructions with reportedly ingressive and inchoative auxiliaries historically occupied two distinct types of periphrastic construction which rarely indicate futurity.

The first type comprises a verb group formed by a reportedly ingressive verb, functioning as the auxiliary, followed by an infinitive; that is, in OHG [biginnan + INF] (beginnen “to begin”) (11) and [gistantan + INF] (entstehen “to come into being”) are attested (Ellis 1953: 80). However, an ingressive (atelic) or inceptive reading (telic) is reliant on the type of infinitival complement chosen, and as such a general PoV-aspect label is more appropriate.

These verbs retain primarily PoV-aspectual semantics throughout the OHG and MHG periods ([{enst\'an + INF}]<(OHG gistantan) and [beginnen + INF]), and thus do not represent a frequent expression of future time in either period (Diewald & Habermann 2005: 237). There is little to suggest that these variants represented any significant construction for the expression of the future tense.
The second construction type comprises the construction \([werdan + PRES.PTCP.]\) (8), a variant for the expression of ingressive meaning in OHG. Szczepaniak (2011: 145) states that this construction marks the abrupt onset of a state with a continued duration into the future is expressed. This variant can be found as a translation of Latin future tense in ecclesiastical texts such as Tatian (Diewald & Habermann 2005). Indeed, the futurate present was the common translation of the Latin future in this period (Schrodt 2004: 128). Like the \([\text{begin} + \text{INF}]\) type, \([werdan + PRES.PTCP.]\) retains PoV function in OHG and should not be considered a default marker of future time.

According to Szczepaniak (2011: 147), During the MHG period, the OHG faster ingressive semantic value of \([werden + PRES.PTCP]\) is weakened and a more gradual inchoative interpretation is strengthened, whereby focus is placed on the process itself and no longer indicates the sudden onset of a new state. This, she argues, facilitates a future reading, representing the initial phase of an ongoing change where both the temporal and aspectual semantic values compete, and coincides with the rise of infinitive forms after \(werden\) as opposed to only the present participle form.

However, following the guidelines set out for the different PoV-aspect types, i.e. change of state = inchoative, atelic = ingressive, telic = inceptive (Witschko 2014: 293), there is nothing to suggest that an inchoative reading marking the beginning of a state was unavailable across the board for \(werden\). Rather these readings should be defined, at least to an extent, by the selected complement. While possible, it also remains unclear to me, however, how accurately judgements can be extracted without consultant judgements for such small differences in PoV-aspect.

Indeed, the \(werden\) copula combining with DP arguments and adjectives, in addition to the present participle has been possible in OHG up until the present day. Moreover, the example given in (13) \(werden\) marks the beginning of a state rather than an overtly atelic, or indeed telic, process.

Building on observations by Schmid (2000), it can be posited that the change described by Szepaniak (2011) reflects changes in underlying syntactic structure, and thus proceeds in the reverse order. For Schmid (2000: 16), in the older “ingressive phase” (although we have reason to doubt this) the subject referred directly to \(werden\) (as in 8), but once a future reading and infinitives become available, the subject refers then to the infinitive. The fact that competing both the present participle and the infinitive were able, for a time, to mark inchoative structure, is in fact evidence for reanalysis in the underlying structure. We can

\[(11) \quad \text{Sô man dáz } \text{peginnet} \quad \text{óugen} \quad \text{when one.PN that begins see.INF} \]

‘When one begins to see it’ (Notker cf. Diewald & Habermann 2005: 238)

\[(12) \quad \text{inti nu uuirdist } \text{thu suigenti} \]

and now become you silent

‘and now you will be/become silent’ (Tatian c.f. Diewald & Habermann 2005: 236)

\[(13) \quad \text{iwer leben wirt bî Etzeit sô rehte lobelich} \]

your.2PL life become.3SG by Etzel so right glorius

‘Your life will be so glorious with Etzel’ [Nibelungenlied, 1239,2]

(ex 15, Diewald & Habermann 2005: 236)
reframe these observations as follows: the older structure is a predicate selecting lexical/copular *werden*, taking a present participle with adjectival predicate function\(^3\), an argument DP, or an adjective as its compliment; *werden* is a lexical/copula verb, the subject of which is generated in Spec-vP (14). In short, the subject is an argument of *werden*.

(14) \[vP [DP subj] v [VP V wird [ [AP lachende]]] \]

The underlying structure in the OHG \[*werden + present participle*] structure, is not necessarily different from that of historical inchoative copula sentences like (9) or modern ones such as ‘sie wird Ärtztin’ (“she is becoming/ will be a Doctor),

The later phase described by both Schmid (2000) and Szepaniak (2011) can be thought of as the result of a reanalysis of *werden* as an aspect bearing auxiliary, generated within the inflectional domain. *werden* selects a vP complement (15), i.e. the verb and its subject. In short, the subject is not an argument of *werden* but of the infitive/true present participle in V, since \[*werden + present participle*] has been reanalysed from a \[*V + A*] structure to an \[*Aux + V*] structure.

(15) \[AspP Asp wird [vP [DPsubj] v [VP V lachen/lachende]]\(^4\) \]

This reanalysis hypothesis is supported by a period of preterite forms of *werden* combining with the infinitive to mark PoV-aspect between the 13\(^{th}\) and 15\(^{th}\) centuries, as remarked upon by Schmid (2000: 16) (12). Moreover, the atelicity of (16) support the hypothesis that POV-aspect can be derived compositionally according to complement type, and not an issue of speed. Indeed, the previous literature has often been too keen to make broad-brush claims regarding inchoative/ingressive semantics. Further discussion is outside the scope of this paper, since I do not wish to make strong claims on the actuation of the futurate *werden*.

(16) Da wart er sich erkennen und bat, dass sie im vergebt
    Then became he REFL recognize and asked that she him forgive
    Then he began to admit his mistake and asked, that she forgive him
    (Ebert 1986: 140, Schmid 2000: 16)

Once the change in (15) had taken place, i.e. a new layer of grammaticalisation, the structure in (14) became presumably only available for DP arguments and adjectival states, as is possible in ModG. The eventual pure grammaticalised future reading, on the other hand, will have the structure in (17); where *werden* is reanalysed as a temporal auxiliary lacking aspect and occupying the Tense phrase (TP).

(17) \[TP T wird [vP [DPsubj] v [VP V lachen]]\]

As a matter of principle I do not rule out independent semantic specification relating to different types of PoV-aspect on specific lexical heads. However, the take-home point in this section, beyond providing a diachronic description of aspectual/futurate *werden* and other “ingressive” periphrases, is that a change in underlying functional structure likely had interpretational effects. Moreover, we should take care when discussing PoV-aspect with

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\(^3\) By this I intend a v head which is dominated by the categorizing head A(djective) (see Arad 2003); I do not mean that there are no verbal features, simply that they are superseded by, and embedded within, AP.

\(^4\) This is a schematic representation in formal terms, since I brush over considerations such as linearisations as part of the verb second constraint (den Besten 1977). (7) serves purely to show the relationship between *werden* and the lexical verb; the subject is crossed out, since a copy operation would place it in spec CP in unmarked matrix contexts.
regard to werden, since both underlying structure and composition play a role in the finer distinctions. By taking both structural changes and compositional semantics into account, it has been possible to shed some light on the classification of different structures. However, if this hypothesis is correct, the catalyst to the change remains unclear. While I do not attempt definitively to explain the grammaticalization of futurate werden, a discussion of possible accounts is provided in §4.

3.3. The rise of [werden + INF]: when and where?

The future periphrasis [werden + INF] (18) is attested from around 1300 (Harm 2001: 289). However, this incipient construction does not represent a frequent variant in late MHG accounting for only 1% of FTR from 1300-1350 (Luther 2013: 158). Indeed, [werden + PRES.PTCP.] is preferred 15: 1 in the thirteenth century and 5: 1 in the fourteenth century (Kleiner 1925: 37, 57).

(18) Wan ir werdet lachin
When you.PL become.2.PL laugh.INF
(Luther 2013: 158)

Remarkably, instances of [werden + INF] are attested in isolated cases from the 8th century. However, most cases are philologically disputable and are conditioned by factors such as meter or rhyme (Westvik 2000: 240). Therefore, such cases are discounted from this discussion which considers the genesis of [werden + INF] a late MHG innovation.

In early ENHG [sollen/wollen + INF] are still the preferred periphrastic variants. To a much lesser extent [müssen + INF] is also attested (Bogner 1989). However, the frequency of [modal + INF] future constructions declines over the ENHG period. In place of modal futures, the incipient [werden + INF] construction gains significant ground and emerges as the dominant variant by the 15th century (Philipp 1980: 122, Bogner 1989) (Figure 4).

![The distribution of [verb + infinitive] future periphrases in ENHG](image)

Figure 4: A graph showing the frequency of future periphrases with infinitives in ENHG from a corpus of 1019 tokens (Bogner 1989: 74-78)

The historically ingressive periphrasis [werden + PRES.PTCP] salient in OHG and MHG loses ground to [werden + INF] throughout the ENHG period (Diewald & Habermann 2005: 236).
Early ModG sees the disappearance of \[\text{werden} + \text{PRES.PTCP}\] altogether (Szczepaniak 2011: 145). The declining \[\text{modal} + \text{INF}\] future periphrases also eventually disappear, leaving two possibilities for the expression of a simple future in ModG: the historically constant futurate, often with a temporal adverb (Hentschel & Weydt 2003: 97) (19a), and \[\text{werden} + \text{INF}\] (19b): the only periphrastic future construction capable of expressing future tense\(^5\)

\[(19)\]  
a. Morgen \textit{fahre} ich nach Berlin  
   Tomorrow I’m driving to Berlin  
b. Sie \textit{wird} es ihm mitteilen  
   She will inform him of it \hspace{1cm} (Hentschel & Weydt 2003: 97)

With regards to the historical geography of the periphrasis, the exact region where the actuation of \[\text{werden} + \text{INF}\] took place is disputed. Evidence from corpus studies by Bogner (1989), Schmid (2000), and Walther (1980) (among others) suggest that in the period 1300-1400 the majority of tokens can be located to Eastern Upper German (\textit{Ostoberdeutsch}) speaking areas, followed in frequency by East Central German (ECG). During this period, however, it is notably completely absent in High Alemannic and West Central German speaking areas during this period. Yet, the geographic distribution of \[\text{werden} + \text{INF}\] demonstrates surprisingly high frequency in Swabian dialects, higher than in any other variety, from 1451-1500, before sinking to a similar frequency to \[\text{wollen} + \text{INF}\] in later ENHG (Bogner 1989: 75-79). Corpus analysis by Schmid (2000: 13) finds the majority of early tokens from the late MHG to ENHG periods (12\textsuperscript{th}-15\textsuperscript{th} C.) in eastern UG dialects. The second half of the ENHG period shows a massive increase in frequency of the periphrasis in ECG dialects. Consequently, it is, in my opinion, impossible to draw steadfast conclusions from the data regarding the dialect and/or region in which \[\text{werden} + \text{INF}\] was actuated.

Nonetheless, Bogner (1989) concludes that the primary diffusion of \[\text{werden} + \text{INF}\] proceeded from the eastern dialects westwards, a position shared by Diewald & Habermann (2005) (henceforth D&H) and Leiss (1985). Unfortunately, Early Silesian and Bohemian, the most easterly ECG varieties, are not present in the data, yet the expectation is that they would support this. I shall discuss these varieties in more depth in section 5.

\(^5\) Here I consider \textit{Futur II}, \[\text{werden} + \text{PST.PTCP} + \text{INF}\] an extension of \[\text{werden} + \text{INF}\]. Furthermore, it cannot constitute a simple future as it encodes a past tense in the future.
3.4. THE (POLY)GRAMMATICALISATION OF WERDEN

Indeed, werden demonstrates a wide range of grammaticalised reflexes in different functions in both synchrony and diachrony. This functional layering, has been referred to as polygrammaticalisation (Szczepaniak 2011: 139) (see Table 1).

Table 1: The polygrammaticalisation of werden (adapted from Nübling et al. 2013: 280)

<table>
<thead>
<tr>
<th>Function</th>
<th>Example</th>
<th>Chronology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inchoative copular</td>
<td>Ich werde krank</td>
<td>&gt; OHG</td>
</tr>
<tr>
<td>Passive auxiliary (dynamic)</td>
<td>Ich werde an-ge-sprochen</td>
<td>&gt; OHG</td>
</tr>
<tr>
<td>PoV-aspect periphrasis (present and preterite)</td>
<td>Thu uuirdist suig-anti you.SG become.2SG silent-PRES.PTCP</td>
<td>OHG - ENHG (extinct)</td>
</tr>
<tr>
<td>Future auxiliary</td>
<td>Ich werde gehen</td>
<td>&gt; late MHG</td>
</tr>
<tr>
<td>Subjunctive auxiliary</td>
<td>Ich würde gehen</td>
<td>&gt; early ENHG</td>
</tr>
<tr>
<td>Epistemic modal</td>
<td>Er wird schon dort sein</td>
<td>&gt; ENHG</td>
</tr>
</tbody>
</table>

Exactly how the entirety of this poly-functionality developed across the linguistic system is outside the goals of this article (for a fuller account see Szczepaniak 2011). It is, however, important to highlight the versatility of werden within the grammatical system. It is of note that the [werden + INF] fulfils both the function of future marker and that of epistemic modality (20)

(20) Er wird im Büro sein He become in-the office be ‘He’ll be in the office’

This functional crossover has caused some debate on the categorisation of [werden + INF] as tense (Klein 1994), mood (Vater 1975) or a combination (Leiss 1992). While this debate is not overtly relevant to the goals of this article, it is well known that future contexts lend themselves to epistemic modality from a crosslinguistic perspective. Heine (1995) incorporates the polyfunctionality of werden into a chain of grammaticalisation, ‘the werden chain’. This, he claims, is a unidirectional chain of overlapping grammaticalised functions which may be applied on both the synchronic and diachronic level (Heine 1995: 122); forms further to the left tend to be older (Figure 5).
Inchoative

Intention

Future

Speaker-oriented modality

Epistemic modality

Figure 5: An overlap model of the focal senses of werden-constructions (Figure 5, Heine 2005: 130)

While I do not pursue a strong view of Unidirectionality (see Norde 2009, Willis 2010, Roberts & Roussou 2003, for further discussion), accepting a unidirectional approach as a strong diachronic tendency allows us to posit that epistemic modality in \([\textit{werden} + \text{INF}]\) emerged after the \textit{werden}-future as an extension of its future semantics. This position is further supported by generative findings for grammaticalization by Roberts & Roussou (2003), who view standard grammaticalization as reanalysis up the functional hierarchy. Explicitly, epistemic modality is thought to be encoded by a head situated above TP (Cinque 1999, 2006), the locus of tense marking auxiliaries. Therefore, for \textit{werden} to mark epistemic modality, it must bear feature either move to such a head or be reanalysed as it (see Krämer 2005 ch.2 for further discussion).

Likewise, volitional modals have been shown to occupy a position below T (Cinque 1999, 2006.). On the basis of Italian, Cinque (2006: 90) classifies inchoative, ingressive, and inceptive types of PoV-aspect meaning under the label \textit{AspP} Inceptive. Indeed, more evidence that PoV-aspect can be located on a syntactic head comes from languages which mark \textit{temporal view point} morphemically (Wiltschko 2014: 292). For example, Wiltschko (2014: 293-4) shows that that the syntactic function of the inchoative mirrors Squamish control predicates, a Salishan language spoken in British Columbia, Canada, which marks Point of View (PoV) Aspect morphemically (I refer the reader to Wiltschko 250-298 for more detailed argumentation, for which there is no space here). Cinque (2006: 90) places \textit{AspP} Inceptive under the realisation of modal heads and above V; Similarly, Wiltschko (2014) posits PoV-aspect to occupy an Asp(ect) head below T and above vP.

Leaving aside the issue of speaker-oriented modality since it does not factor greatly in our discussion, the relevant steps on Heine’s chain (1995) can be recast as the syntactic course of upward reanalysis shown in Figure 6. The overlapping function periods in Heine’s chain can be conceived of as a period where \textit{werden} is base-generated in a lower head but is also endowed with the features of a higher head leading to movement. Semantic bleaching of the older features, or rather their loss, will then be the result of a reanalysis leading to the base-generation of the head in its former landing position.
Let us briefly return to the earliest, reportedly ingressive, stage of *werden* on the pathway, in which it functioned as copula/lexical verb selecting DPs, adjectives, and the present participle with adjectival function. Now we have introduced the idea of upward grammaticalization and an interaction between layering and movement operations, we are in a position to say something about this earliest stage (14 given as 21) in opposition to the immediately following stage in which *werden* acted as a PoV-aspect auxiliary selecting a truly verbal present participle (15 given as 22).

(21) \[vP [DP subj] v [VP V \textit{wird} [AP lachende]]] \quad \text{Stage 1}

(22) \[\text{AspP Asp wird} [vP [DP subj] v [VP V \textit{lachen/lachende}]] \quad \text{Stage 2}

That is, we may posit that a movement operation form V to AspP was already present in stage 1 (see 23 a). This would explain the presence of PoV-aspect, but also the differing external argument relationship between the subject and *werden* (but not the present participle) in stage 1, and the subsequent subject present participle. Moreover, it can account for the lack of infinitives in stage 1 and their incipient introduction in stage 2 before a FTR reading was available. The emergence of the aspectual auxiliary, then, reflects a lexical split in which [+V] features were not posited for *werden* in *[werden + present participle]*, but the [+PoV] features were retained, resulting in base-generation of *werden\textsubscript{AUX} in AspP (23b). Presumably, the present participle is reanalysed as the main lexical verb [+V] without [+A] categorization in this environment, i.e. it is no longer the complement of the lexical verb\textsuperscript{7}.

(23) a. AspP
   \[\text{Werden} vP\]
   \[\text{Subj} v'\]
   \[v VP\]
   \[V XP\]

b. AspP
   \[\text{werden} vP\]
   \[\text{Subj} v'\]
   \[v VP\]
   \[V [PRES.PTCP/INF]\]

\textsuperscript{6} For simplicity I have not separated v and VP in figure 6 since the difference is not important here.

\textsuperscript{7} Since linearization is not being examined, examples 21-23 show the subject where it is generated (merged).
However, it is impossible to posit a cause and effect order between these reanalyses, as we are faced with a chicken and egg question. It is possibly a simultaneous reanalysis, an extension of the model of other [modal/PoV + INF] periphrases; this is along the same lines as suggestion by Harm (2001) and Schmid (2000) who both argue that analogy should be seen as the driving factor in the actuation of FTR-marking [werden + INF]

In any case, the series of events depicted above is backed up by historical data. ENHG corpus data by Bogner (1989) clearly demonstrates that the temporal function, as opposed modal function, of [werden + INF] consistently comprised over 95% of tokens between 1350 and 1600 marginally decreasing to 91% in the NHG period 1651-1700. Furthermore, corpus analysis by Szatzker (2002 cf. Welke 2005: 378) shows a continued expansion of the epistemic use of [werden + INF] between 1650 and 2000. However, in this data set the epistemic function was already more frequent than temporal function in 1650 (Szatzker 2002: 225 cf. Welke 2005: 378), which falls roughly a century after the establishment of [werden + INF] as the primary periphrastic future construction (See Figure 5). Comrie (1989: 62) comments that, at least within Germanic and Romance languages, inferentiality, i.e. epistemic modality, appears diachronically ‘parasitic on future time reference, rather than vice versa’, a position supported quantitatively by Hilpert (2008: 130-55)

However, neither a functional grammatical chain nor a generative approach involving ordered upward reanalysis elucidate the driving force behind the actuation of which [werden + INF], nor the processes by which it diffused. This is explored in the following sections.

4. APPROACHES TO THE ACTUATION AND DIFFUSION OF [WERDEN + INFINITIVE]

The actuation and diffusion of [werden + INF] has attracted an vast amount of attention in the literature (Leiss 1985, Heine 1995, Schmid 2000, Harm 2000, Dielewald & Harmann 2005, Szczepaniak 2011, among many others). Many different hypotheses exist and as yet there is no definitive agreement. In this section, I explore some language internal and external approaches to the development of [werden + INF], characterised by splits viewing the development as: a) the result of either language internal or language external factors; and b) limited to the written language or a spoken phenomenon. There is neither the time nor space to give an exhaustive view of all the approaches. Moreover, this article does not look to answer definitively the question on the how and where of the grammaticalization of [werden + INF] FTR periphrasis. Nonetheless, it is useful to sum up some of the more prominent ideas. The remarkable fact, as shown by Bogner (1989) is that wherever and however the periphrasis might have emerged, its diffusion as the dominant future periphrasis proceeded from the ECG area. I give special consideration to reviewing the Czech-German language contact hypothesis put forward by Leiss (1985).

4.1. Analogy in the spoken and written language

A number of authors look to language internal processes to account for the catalyst to the of grammaticalization [werden + INF] (Schmid 2000, Harm 2001, Diewald & Habermann 2005, Krämer 2005). It is worth giving some space to these proposal, since it is part of the story I do not attempt to explain; this is for the reason that much ink has already been spilled, and it is nigh on impossible to reach a definitive conclusion. These authors consider that the actuation of the periphrasis results from analogical pressure on [werden + PRES.PTCP.] from either established modal constructions, explicitly [sollen + INF] and [wollen + INF] (Harm 2001, 2000, Schmid 2000), or from other [PoV-verb + INF] periphrases (Krämer 2005, Diewald & Haberman 2005), e.g. such as [entstän + INF] and [beginnen + INF].
For Harm (2001), the actuation is the result of internal developments limited to the morphosyntact of written German, rejecting change in spoken language. He argues that a polyactuation and diffusion took place simultaneously in several dialects as the result of a typological drift involving the same cognitive processes for both actuation and diffusion (p 295). He rejects Bogner’s (1989) findings that the future periphrasis spread from ECG speaking areas. It is argued that the decreasing use of *werden* as a lexical verb and the loss of progressive forms, such as *sein/werden tuend*, gave the new periphrasis an advantage across the dialects (p 295). While this latter point is sound reasoning, I cannot understand why a cognitively driven typological drift should be limited to written language, especially in light of the similar conditions in several varieties in which [*werden + INF*] could emerge. Indeed, analogical pressure from other periphrases and the effect of the polyfunctionality of *werden* relate to inherently cognitive processes of innovation, which are implausible as a purely written phenomenon in separate varieties. In any case without access to historical spoken data, it is impossible to discount spoken language.

Schmid (2000) takes the same general position for both actuation and diffusion, crediting the diffusion of [*werden + INF*] to its system suitability with the backdrop of the polygrammaticalization of *werden*. However, makes no outright claims excluding the role of spoken language, unlike Harm (2001). Schmid (2000) postulates an UG actuation of [*werden + INF*] based corpus analysis of 100 different versions of the ‘Prophezeiungen von den 15 Zeichen des Jüngsten Gerichts’ from six centuries and different West Germanic varieties (Schmid 2000: 9). Tokens of the new periphrasis are most frequent in UG varieties between the 12th and 15th centuries (Schmid 2000: 12). However, the corpus represents a very limited genre of ecclesiastical texts in which the role of Latin translation may disproportionately affect the salience of a certain periphrasis, a point Schmid concedes (2000: 20).

As discussed, both Krämer (2005) and Diewald & Habermann (2005) view the development of [*werden + PRES.PTCP.*] to [*werden + INF*] as the product analogy with the PoVaspect periphrases [*entstán + INF*] and [*beginnen + INF*] at some point in the early MHG period, as opposed to modal periphrases. The primary catalyst for analogy is considered the related semantics of the inchoative/ingressive periphrases with [*werden + PRES.PTCP.*]. Like Harm (2001) and Schmid (2000), D&H (2005) view the polyfunctionality of *werden* in different periphrastic constructions as a factor facilitating the incorporation of [*werden + INF*] into the linguistic system. Yet for them, the analogy to a [*werden + INF*] structure does not entail the innovation of FTR, to which I shall briefly return. The question is left open as to whether the actuation of [*werden + INF*] should be considered a phenomenon originating in UG, ECG, or the result of polygenesis.

D&H (2005: 240-247) divide their account into a second stage taking the role of Latin into account as a driver of the future interpretation of [*werden + INF*] and its diffusion in written language. D&H examine the interaction between translation from Latin and the use of [*werden + INF*] in three texts by different authors from different places and eras. They find that in earlier texts based on Latin translations [*werden + INF*] correlates more strongly to the Latin future. Later texts, however, by Luther demonstrate a preference for [*werden + INF*] in untranslated original German. Moreover, D&H view the diffusion of the periphrasis as a phenomenon limited to the written language based on findings that only 1.5% of FTR in spoken ModG employs *werden*. However, D&H’s reasoning for discounting spoken language is questionable, since it highly speculative to consider spoken ModG representative of spoken ENHG varieties in this respect. Moreover, the established role of [*werden + INF*] as a marker of epistemic modality in both the written and spoken language should be considered in relation

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8 Meister Eckhart from Thüringen (Early 14th century), Heinrich Haller from South Tyrol (mid-15th century), and Martin Luther from Sachsen (early 16th century)
to a feeding context of futurate-werden, as discussed in section 3. We have established that the FTR meaning of \([\text{werden} + \text{INF}]\) should be considered archetypal. Indeed, contemporary telephone corpus analysis by Brons-Albert (1982: 102) demonstrates that \([\text{werden} + \text{INF}]\) occurs considerably more often, if not almost exclusively, in ‘modal’ contexts in spoken ModG. This simply indicates a more advanced grammaticalisation process.

While the role of ecclesiastical translation from Latin should not be ignored in the establishment of \([\text{werden} + \text{INF}]\) in written German, there is inadequate evidence to discount the role of the spoken language, which will be expanded in the following sections. For our purposes it is not important to take a strong position for the historical dialect/s in which the periphrasis emerged. Nonetheless, analogy is a credible catalyst for the reanalysis of \([\text{werden} + \text{INF}]\) as a future periphrasis, as long as we remove any caveat excluding spoken language. It is, however, neither totally possible nor the aim of this paper to decipher exactly which constructions served as a model. Lastly, none of these works are able to properly account for the early diffusion of the periphrasis nor explain the large increase in its frequency in ECG during the ENHG period described by Bogner (1989), whose study still provides the broadest data.

4.2. Contact-induced change: Czech hypothesis

Leiss (1985) suggests an approach to the actuation of \([\text{werden} + \text{INF}]\) involving Czech-German language contact between the 12th and 15th centuries, in which the semantically similar Czech future periphrasis \([\text{budu} + \text{INF}]\) is replicated in Bohemian (ECG) German; this approach has been criticised (Schmid 2000 Nübling et al 2011), but should not be immediately dismissed. Specifically, \([\text{budu}]\) marks the imperfective future form of the Czech copular \(\text{být}\). \([\text{budu} + \text{INF}]\). It is well attested with an infinitive in Old Czech from the late 13th century. Based on the assumption that written language lags behind the spoken language, Leiss argues, in my view unproblematically, that the construction will have been established in spoken Old Czech predating written attestations. Leiss (1985: 258) makes the case that we cannot view as coincidence the development in two neighbouring languages of two future periphrases with a copula, both with aspectual content and indicating the future, in combination with an infinitive. She concludes that \([\text{werden} + \text{INF}]\) emerged as the result of language contact between ECG and Old Czech. Indeed, geographic proximity is well known to correlate to areal linguistic features in Sprachbünde (Winford 2003). Hence, this hypothesis, the first to take account of language external factors, warrants attention and further analysis.

In support of a contact hypothesis for the actuation of \([\text{werden} + \text{INF}]\), Leiss (1985: 259-260) cites an extended period of bilingualism in Bohemia between the 12th and 14th centuries. That is, the eastward population movement of German speaking peoples from the Holy Roman Empire into Slavic speaking areas, which took place in the medieval period between the 12th and 15th centuries as part of the Ostsiedlung (The German Eastward Expansion). This led to a period of extended bilingualism in Bohemia, Silesia, and Moravia. Indeed, by the time of the “break-out”, i.e. the main diffusion, German was well established in these areas. As evidence for her chronology, Leiss (1985: 256-257), like Westvik (2000), rejects attestations of \([\text{werden} + \text{INF}]\) from before the 13th century as unreliable. Cases of the periphrasis in the 13th century are scarce and mostly in the latter half.

In the settled Slavic regions, German carried more prestige in urban areas and was preferred by the ruling classes, but cannot be considered the most prevalent language. Leiss (1985: 262) argues that in contrast to the transference of lexical material, syntactic material may bypass the constraints of prestige as the speaker is less aware of it. Indeed, prestige need

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9 Paradigm: \(\text{budu, budes, bude, budeme, budute, budou} + \text{INF}\) (Leiss 1985: 252)
not be a conditioning factor in syntactic change, where (psycho)linguistic dominance plays a role in the speaker (Winford 2005), and or frequency of a structure affects its frequency in the input of the child acquiring language (Meisel 2011) (contra Nübling et al. 2011, Schmid 2000). These claims are readdressed later in section 7.2.1. In the same vein as Harm (2001), Schmid (2000), D&H (2005), and Sczcepaniak (2011), Leiss (1985) considers that the adoption of [werden + INF] filled a hole in the linguistic system, providing the only future periphrasis free from modal nuances. The only difference, being that she considers it a borrowing and not an independent innovation.

In terms of diffusion, Leiss (1985: 263-267) cites limited corpus evidence by Walth'er (1980) to assert that new periphrasis spread from east to west. This is generally supported by Bogner’s (1989) study, yet early tokens from both Bogner’s (1989) and Schmid’s (2000) studies show that [werden + INF] already made early inroads in more westerly dialects in the early 14\textsuperscript{th} century before the rapid emergence of its dominance in ECG and East Franconian, before the focal period of Walth'er’s (1980) study. This is problematic for Leiss’ hypothesis of a contact-induced ECG actuation.

Furthermore, Leiss’ (1985: 268) attempt to postulate a geographic homeland of the werden-periphrasis based on descriptions of future periphrases in a 1480 Middle Low German (MLG) grammar from Münster (24) can be discounted.

(24) ‘Leg-am\textsuperscript{10}: Ick will edder Ick schal lesen,
Read-FUT.1SG I want.FUT or I shall.FUT read.INF

edder also de aver-lender seggen: ick werde lesen’
or as the.PL over-lander.PL say I become.FUT read.INF

‘Legam: I “will” or I “shall” read, or as the High Germans (Oberländer) say: I will (become) read’

Leiss speculates (1985: 268) that Averlender refers to the inhabitants of an area around Aue and Auerbach within the ECG continuum. This, however, more likely refers to High Germans (Oberländer) (Schmid 2000: 7). This is because MLG orthography did not regularly distinguish between <u> <v> <w> for [v] [β] [f] (Dietl 2002: 9). Furthermore, the HG consonant shift caused a shift from the Germanic voiced bilabial fricative /β/\textsuperscript{11} to /b/ in most HG varieties (Salmons 2012: 46). Crucially, The (West-) Germanic fricative phoneme /β/, found in medial and final position, is likewise retained in Old Saxon (Braune 1989: 14,15). Due to Verners Law, in MLG this phoneme is realised as /b/ in initial stressed position, appears as [v] medially in unstressed position, and [f] in final position as the result of final devoicing (Dietl 2002: 10-11). Thus, the irregularity of MLG orthography and, crucially, regular diachronic phonological developments render Oberländer the most accurate translation. This is further substantiated by several dictionary forms of MLG over corresponding to the HG preposition über (Schiller & Lübben 1877: 250), and by extension ober-, in Köbler’s MLG dictionary (2014): över, över, über, auer.

Leiss (1985: 272) also speculates that phonological ambiguity in 12\textsuperscript{th} century ECG was influential in the replication of [budu + INF] as [werden + INF]. That is, the interplay of three phonological trends: the interchangeability of [b] and [w], the deletion of /r/ in syllable codas, and the deletion of final /n/ in infinitives. This last point is a variant of the so-called Abschleifungstheorie (Bech 1901)’erosion theory’, which is convincingly argued against in

\textsuperscript{10} first-person singular future active indicative of Latin infinitive legere (to read)
\textsuperscript{11} Often written as <b> along with other graphemic variants in Old Saxon (Braune 1989: 19) and used for phonemic representation in some academic literature.
D&H (2005) and Krämer (2005). *werden* thus apparently morphed into a variant of *budu* among bilingual speakers creating ambiguity: &lt;*werden* &gt; /berden/ &gt; /beden/ &gt; /bede/. However, no framework is provided for how these phonetic similarities led to syntactic change; it is unclear if this is analogy on the part of L2 Czech, L2 German or second generation bilinguals. The directionality as presented is confusing, since it would entail German speakers learning Czech as L2, which then influences the L1 German. Regardless, this would require an extremely high level of structural code mixing for which we have no evidence, and is unlikely, requiring the use of Czech T elements with a German vP.

In sum, Leiss (1985) cannot present steadfastly reliable evidence to support a Czech-German contact hypothesis for the actuation of [*werden* + INF]. Nor is a thorough account provided for the nature of the expansion of [*werden* + INF] into a supraregional variety. Much of her proposal relies on circumstantial evidence or is cast into doubt by newer corpus studies, such as Schmid (2000) and Bogner (1989). Therefore, an adequate case for a hypothesis of a contact-induced actuation is not made. Too many interactions between language external and internal factors are postulated, for which there is not enough explicit theoretical evidence.

However, Leiss’ (1985) work predates many modern frameworks of contact-induced change. Indeed, the rapid adoption and diffusion of the new periphrasis in ECG is remarkable and Leiss is quite right that it cannot and should not be overlooked. Likewise, semantic and syntactic similarities do exist between both the *budu* and *werden* futures, and language contact and bilingualism is well documented in historically ECG speaking areas. Consequently, the role of language contact in the diffusion of [*werden* + INF] cannot be ruled out. Indeed, more recent research can shed light on the possible interaction between external and internal linguistic factors in the diffusion of this variant.

5. LANGUAGE CONTACT AS A CATALYST FOR DIFFUSION

In the following sections I consider that certain evidence presented by Leiss (1985) cannot be considered purely coincidental and must be given attention in an account of the development of [*werden* + INF]. I then propose a diffusion model for [*werden* + INF] based on theories of cross-linguistic influence proposed by Jarvis & Pavlenko (2008) and Winford (2005); with the ultimate goal of providing a framework for a theoretically sound reworking of part of Leiss’ (1985) proposals.

5.1. Revisiting the role of Czech

Leiss (1985) comments that ECG varieties developed in areas traditionally inhabited by Slavic peoples. Indeed, as discussed, these areas were settled by speakers of varying German varieties during the Ostdiedlung between the 11-14th centuries where Both Slavic and German varieties existed side by side until the 14-15th centuries (Becker & Bergmann 1969: 20-30). Furthermore, the presence of Czech-German bilingualism in Bohemia until expulsion of ethnic Germans from Czechoslovakia in 1945 is well-known. This combined with the high proportion of Slavic words present in ECG (Eichler 1965), a historical trend towards the ‘germanification’ of place names and a decline in Slavic varieties (Becker & Bergmann 1969: 26-35) suggests that: a) high levels of language contact and varying levels of bilingualism were prevalent in the ECG region, and b) a gradual language shift to German took place, with the exception of parts of Bohemia where a complete shift to either German or Czech did not take place until the expulsion of German speakers after 1945.

Leiss remarks further on some interesting evidence that [*werden* + INF] was already the sole future marker in documents of the Bohemian court of Charles IV in 1365 (Schmitt 1936: 219 c.f. Leiss 1985: 272). This is surprising at such an early stage. It is then plausible that the
[budu + INF] model gave [werden + INF] some advantage and that the innovative [werden + INF] periphrasis was thus present in the regional spoken language. Moreover, pre-WWII ModG in Bohemia apparently demonstrated a higher incidence of the [werden + INF] where a futurate present is standard (Seidel 1939 c.f. Leiss 1985: 271), yet Leiss does not provide any convincing examples. While such evidence is certainly not strong enough to indicate an contact-induced actuation of [werden + INF] was a direct consequence of the transference of Czech [budu + INF] into ECG, the rapid adoption of the periphrasis in ECG during the ENHG period and clear East to West trend demonstrated by Bogner (1989), are remarkable. Furthermore, this suggests that the role of language contact should not be disregarded for the diffusion of the new future periphrasis, even though earlier tokens in several UG (Bogner 1989, Schmid 2000), are appear to rule out a solely contact-induced actuation hypothesis.

Indeed, syntactic borrowings are more common in languages which exhibit syntactic similarity; this is known as the ‘structural-compatibility requirement’, a tendency of grammatical borrowing (Harris & Campbell 1995: 123-124). Furthermore, Ebert (1978: 16-17) comments that:

Lehnsyntax kann auch quantitativ sein: eine an sich heimische Konstruktion wird unter dem Einfluß einer fremdsprachlichen Fügung häufiger gebraucht.

Loan syntax can also be quantitative: a native construction is more often used under the influence of a foreign-language construction.

[Translation Harris & Campbell (1995: 123)]

Indeed, there is no doubt that there was a situation of prolonged contact between Czech and German in ECG speaking areas. To assume that there were no linguistic effects would be naïve. Leiss (1985) successfully demonstrates that [budu + INF] and [werden + INF] do exhibit some similarity in both semantic value and syntactic structure. Therefore, we should explore the possibility that language contact, and explicitly the influence of [budu + INF], nonetheless played a role in the establishment of [werden + INF] as the dominant analytic future construction. For that reason, Czech-German language-contact and bilingualism deserves renewed examination, which may now benefit from a body of theoretical and empirical research since Leiss’ (1985) initial work.

5.2. The contact-induced diffusion of [werden + INF]

I have not taken a definitive position for the actuation of the werden-future, as discussed in §4, yet in lieu of lack of good evidence to the contrary, the most plausible approach appease a language internal accounts involving analogy are with other periphrases, followed by structural reanalysis and grammaticalisation (as laid out in §3, see also Krämer 2005). I consider this to have involved the upward reanalysis, i.e. grammaticalisation (Roberts & Roussou 2003) of werden from a lexical head, generated in V, to an PoV-aspect auxiliary, generated in AspP, finally to a pure future auxiliary, generated in T. Defining the exact catalyst and location of the change is beyond the goals of this paper and perhaps impossible given the available evidence, as demonstrated by the myriad of conflicting hypotheses in the literature. Nonetheless, the available data suggests either a UG or ECG actuation, since the earliest tokens are attested in both dialect families. Moreover, As I have argued, the change is unlikely to have taken place exclusively in the written language, for the reason that I do not view the locus of language change as “the adult writing books” but the child acquiring language (see Roberts 2007, Meisel 2011, among many others). Yet there is little point in taking a hard line, and further attempts at explaining the actuation of [werden + INF] must be left to future (or indeed past) research.
now look to both psycholinguistic and sociolinguistic factors in order to account for the diffusion of the periphrasis within a framework informed by contact linguistics. ‘Diffusion’ is taken here as a braid term covering the uptake of the variant in the local community, also known as transmission (Labov 2007), and its subsequent spread to other communities (‘diffusion’ in the Labovian paradigm.

The departing point of the following discussion, considers Leiss’ (1985) claims that (morpho-)syntax behaves differently to phonology and the lexicon in contact situations, and may therefore bypass the effects of sociolinguistic prestige. Little evidence is provided to support this claim, which is considered problematic by Schmid (2000) and Nübling et al. (2013). Indeed, syntactic borrowing should be considered a ‘powerful force that must be reckoned with in framing theories of grammatical change’ (Harris & Campbell 1995: 150). While I have disputed claims that Czech-German language contact is responsible for the actuation of [werden + INF], I argue that prestige is not an obligatory conditioning factor in any contact-induced actuation or, more crucially, diffusion model. In the next section I demonstrate the psycholinguistic mechanisms by which a morphosyntactic structure may, under the influence of language contact, either enter a language or become more frequent in it.

5.2.1. Psycholinguistic mechanisms of Language Acquisition and Contact Induced Change

I firstly draw on work by Van Coetsem (2000) and Winford (2005), amongst others; who provide a framework in which to model the mechanisms of contact-induced change by focussing on the effects of psycholinguistic dominance in contact-induced transfer of linguistic material. By drawing on this body of work we can model the key steps the in early diffusion of [werden + INF] and apply appropriate frameworks of contact-induced change which were unavailable to Leiss (1985).

Winford (2005) and Van Coetsem (2000) label the movement of linguistic material between L1 and L2, regardless of direction, TRANSFER. This invariably takes place from the ‘source language’ (SL) to the ‘recipient language’ (RL). This distinction outlines two types of changes, or transfer, in opposing directions: ‘borrowing’ and ‘imposition’. The significance of ‘borrowing’ corresponds broadly to the use of a linguistic material from a speaker’s L2 in her L1, while ‘imposition’ corresponds to the ‘interference’ of a speaker’s L1 in her L2. Indeed, contact-induced changes, such as these, require explanation in terms of the interaction of linguistic systems or input in the bilingual mind (Winford 2013: 735). The bilingual speaker is considered the ‘agent of change’ and thus most often the locus of actuation. An agent of change is said to be ‘dominant’ in either the SL or RL. The notion of psycholinguistic dominance, not sociolinguistic, is central to this approach. A bilingual speaker who as a child acquires two languages as L1 and is equally dominant in both is said to be a ‘balanced bilingual’. I follow Lucas (2012: 277-278) in assigning dominance to the L1, regardless of accessibility, by reason of fundamental differences between L1 acquisition and L2 learning. Therefore, a change in which the agent of change is dominant in the RL takes place under ‘RL agentivity’ and accounts for borrowing. Conversely, a change in which the agent of change is dominant in the SL takes place under ‘SL agentivity’ and accounts for imposition. A prevalent type of borrowing under RL agentivity is the transfer of lexical items into the SL from the RL; for example, SL words may be adopted by speakers of the RL in order to label newer hitherto foreign concepts. Indeed, borrowing is primarily lexical, while imposition can also cause ‘catastrophic change’ to the grammatical system (syntax and morphology), in addition to affecting semantics, phonology and vocabulary (Winford 2005: 377-380).

Secondly, the Van Coetsem (2000)/ Winford (2005) model, especially the notion of imposition, is intimately linked to theories of first and second language acquisition. Here I draw on work by Jarvis & Pavlenko (2008: 174-179) (henceforth J&C) in order to account for further
psycholinguistic factors in the transfer of linguistics material. These encompass the interaction of the ‘psychotypology constraint’ (PC) with the ‘transferability constraint’ (TC). In short, the PC dictates that L2 speakers are more likely to impose L1 linguistic material if they perceive a similarity between their L1 and L2. On the other hand, the TC dictates that ‘structures perceived by the L2 user as marked (or language-specific) are less likely to transfer’ (J&P 2008: 174), i.e. be imposed. This interaction clearly stems from perceived crosslinguistic similarity, or lack thereof, between L1 and L2 competences. The degree of true linguistic congruence is referred to as OBJECTIVE SIMILARITY, while the degree of falsely perceived congruence is referred to as SUBJETIVE SIMILARITY. Indeed, J&P (2008: 177) remark that the extent of L1 into L2 transfer is highest where the L2 user perceives similarity. Furthermore, learners are predisposed to searching for similarities between what they know (L1) and what they are learning (L2). Therefore, we should expect that L2 learners will prefer target language structures which bear objective similarity, or indeed subjective similarity, to those in the L1 over others which do not. The subjective similarities they identify, or believe to have identified, can be classified as ‘perceived’ and ‘assumed’, which J&P (2008: 179) define as follows:

A perceived similarity is a conscious or unconscious judgment that a form, structure, meaning, function, or pattern that an L2 user has encountered in the input of the recipient language is similar to a corresponding feature of the source language. An assumed similarity, on the other hand, is a conscious or unconscious hypothesis that a form, structure, meaning, function, or pattern that exists in the source language has a counterpart in the recipient language, regardless of whether the L2 user has yet encountered anything like it in the input of the recipient language, and regardless of whether it actually does exist in the recipient language.

Perceived similarities do in fact go hand in hand with assumed similarities, in that all of the former belong to the latter but not vice-versa, i.e. ‘perceived’ is a sub-set of ‘assumed’ (J&P 2008: 179). The logical consequence of these findings for contact-induced language change, and especially morphosyntactic change, is that innovation will occur when subjective similarities, perceived or assumed, go uncorrected in L2 acquisition. Furthermore, an initial innovation by the L2 speaker – SL-dominant agent of change- on the basis of perceived similarity may map out a larger L1 set of grammatical relations onto the L2. Therefore, when the imposition of syntactic properties of individual lexical items occurs, it is the consequence of the incorrect extrapolation by SL-dominant speakers based on perceived, or assumed, similarity between an RL item and an SL item. ‘SL-dominant speakers will often have sufficient exposure to RL lexical items to perceive them as translation equivalents of SL items, but insufficient exposure to acquire all aspects of their morphosyntax’ Lucas (2015: 523). In such cases, these speakers will draw on the assumed similarity that these items are crosslinguistically identical, and will in turn map the grammatical relations of the L1 item onto the apparently equivalent L2 item. Lucas (2015: 523) argues that this assumption will hold until these speakers ‘are exposed to salient evidence to the contrary’.

Finally, I follow a generally acquisitionist view of language change which considers the true locus of change to be found in child language acquisition. That is, children acquiring an L1 are regarded as the principal agents of diachronic change (Meisel 2011: 123). This is for the reason that the primary linguistics data (PLD) which a child either receives from influential interlocutors, such as primary care givers or peers, makes up the input with which the child constructs his/her grammatical knowledge. Meisel (2011: 127), amongst others, argues that one source of the syntactic change occurs as the result of the exposure of monolingual or bilingual children to data containing conflicting evidence, such as PLD characterised by an L2 variety of the target language. In sum, L2 influenced PLD containing partially of completely replicated L1 structures may act as a ‘trigger’ for syntactic reanalysis and thus grammaticalisation.
When combined, these approaches may account for Ebert’s (1978: 16-17, See p.22) observation that a native construction can become more frequent under the influence of a foreign-language construction. Explicitly, if a marginal construction in the target language bears objective similarity to a certain L2 construction it is likely that L2 speakers will prefer it, for it satisfies both the PC and TC, i.e. it is similar and unmarked. Furthermore, because the crosslinguistically similar surface pattern will more easily align to fixed L1 parameters in the L2 speakers mental grammar, it will be relatively easier to acquire. When this preferred variant makes up the PLD of children acquiring language it may lead to the dominance of the pattern under L2 influence in the next generation. In such cases, contact may not necessarily cause the reanalysis of an underlying structure but rather serves as a catalyst which can propel marginal use patterns to a more central role in grammars.

5.2.2. Discounting Prestige as a Conditioner in Contact-Induced Change

Leiss (1985: 262) puts forward that morphosyntax may bypass the effects of prestige, a point disputed by Schmid (2000) and Nübling et al. (2011) (see §4.2). However, Leiss does not qualify this statement in any way. We are now in a position, however, using the Van Coetsem / Winford model to illustrate that morphosyntactic transfer may indeed occur below the level of societal consciousness, thus rendering conditioning by prestige an irrelevant factor. I turn briefly to a straightforward case arising in Lutz’s (2011) discussion of Cymric influence in the actuation of the dual paradigm of the Old English (OE) copula beon. Here the innovation is treated as ‘substratum influence’ based on intimate contact between Cymric L2 speakers of English and Anglo-Saxon children acquiring language. I apply the theoretical framework outlined above to her findings, reaching much the same conclusion, in order to illustrate the minimal role of prestige in syntactic change.

The dual paradigm, present in both OE and Cymric but absent in other Germanic sister languages, distinguishes an actual and habitual present marked with the grammaticalised aspect marker b- (Table 2) (Lutz 2011: 120). The OE innovation is attributed to structural borrowing by L1 speakers of Cymric, the non-prestige variety, into their OE L2 repertoire, the prestige variety. Under Van Coetsem’s framework (2000), these L1 Cymric speakers are considered dominant bilinguals who impose their L1 structures onto their L2. The motivation for this innovation can be attributed to assumed similarity between the Cymric aspect marker b- and the initial /b/ in the paradigm of pre-contact Anglo-Saxon beon. We have seen that if learners are presented with evidence that a certain L2 construction bears resemblance to an L1 construction, they are likely to impose the grammatical behaviour of the L1 feature into the L2. Therefore, the actuation of the split paradigm is clearly a case of Cymric L1 dominant bilinguals mapping their L1 grammars onto the L2 as the result of misconstrued evidence of morphosyntactic similarity. Hence, this is an indisputable instance of imposition under SL agentivity.

Table 2: Split paradigm in OE (adapted from Lutz 2011: 120)

<table>
<thead>
<tr>
<th>PDE</th>
<th>OE</th>
<th>Cymric</th>
<th>Old Saxon</th>
<th>OHG</th>
</tr>
</thead>
<tbody>
<tr>
<td>am</td>
<td>beo</td>
<td>eom</td>
<td>byðaf</td>
<td>bium</td>
</tr>
<tr>
<td>are</td>
<td>bist</td>
<td>eart</td>
<td>byðy</td>
<td>bist</td>
</tr>
<tr>
<td>is</td>
<td>bið</td>
<td>is</td>
<td>byðyw</td>
<td>is(t)</td>
</tr>
</tbody>
</table>

At the time of actuation, the split paradigm will have been ungrammatical for adult non-bilingual L1 speakers of OE, and therefore highly marked as a foreign usage. This change was able to bypass the effects of prestige, as low status non-dominant bilingual L2 speakers of English often worked as primary care givers for Anglo-Saxon children. An intimate contact
situation between these speakers and children acquiring English as their L1 meant that a sizeable proportion of L1 PLD was influence by L2 grammars containing imposed structures. This in turn created the conditions in which a generation (or perhaps successive generations) of L1 OE speakers acquired the new variant as ‘natural’ regardless of the sociolinguistic prestige of forms used by L2 speakers. That is, L2 influenced PLD lead to parametric reanalysis in the L1 grammars of children.

Therefore, the imposition under SL-agentivity of morphosyntax may function below the level of societal consciousness a) when innovative forms appear first in L2 speakers, and b) comprise the PLD of children acquiring an L1. As a result, where there is significant interaction between L2 speakers and children acquiring language, prestige can be discounted as a conditioning variable. This is especially the case when structures bear ‘objective’ and ‘subjective’ similarity, and in situations of bilingualism, as above. Indeed, this development can shed light on the role of [budu + INF] in the rapid diffusion of [werden + INF] in ECG, even though we cannot credit contact for its actuation.

5.3. The Diffusion of [werden + INF]

The [werden + INF] future periphrasis is shown to be a highly frequent variant in ECG during the ENHG period (Bogner 1989). However, neither the hybrid theory proposed by D&H (2005), nor a polygenesis hypothesis (Harm 2001) fully account for the rapid increase in the frequency of this variant in ECG and subsequently a supraregional written standard. I argue that a reworking of Leiss’ (1985) hypothesis will provide a clearer picture of the process by which [werden + INF] became the default future periphrasis. I divide the diffusion of the periphrasis into three phases.

5.3.1. Phase 1: L2 Acquisition

As outlined, I employ a framework informed by Van Coetsem’s (2000) and Winford’s (2005) psycholinguistic model of contact-induced language change, Meisel’s (2011) model on the interaction between bilingual language acquisition and change, and proposals by J&P (2008) on crosslinguistic influence and L2 learning strategies. In the first instance, this approach bases its theoretical approach on cognitive learning strategies used by L2 speakers in acquisition of L2 syntax. In the second instance, I look to explain diachronic changes in L1 usage by drawing the interaction between adult SL-dominant bilinguals and monolingual or balanced bilingual children acquiring German in areas where German-Czech language contact was prevalent.

We have established that L2 learners are predisposed to searching for similarities between what they know (L1) and what they are learning (L2) (J&P 2008). Furthermore, if there L2 speakers find strong evidence to suggest that an L1 feature is not present in the L2, they are likely to avoid it as it would violate the TC. On the other hand, if a particular L2 feature does bear a ‘subjective’ or ‘objective’ similarity to an L1 feature, it is more likely that without correction this feature will be imposed onto a speaker’s L2. That is, that feature will satisfy the PC. I suggest that L1 speakers of Czech learning German as an L2 in Bohemia and the wider ECG region did not need look far for evidence of a comparable future construction to [budu + INF], namely the incipient late MHG [werden + INF]. This marginal future construction, although not identical in aspect type, will have presented an objective similarity to [budu +INF] satisfying the PC. Therefore, I argue that L2 speakers will have preferred this construction over other possible modal future periphrases as it bears the most syntactic and semantic similarity to its equivalent in the L1 grammatical system; that is, [werden + INF] maps most easily to the grammar of L1 Czech speakers. As a result of the already marginal status [werden + INF] as a grammaticalised future-periphrasis, it is unlikely that L2 speakers will have been corrected, and as such there will have been no violation of the TC, i.e. the construction will not
have been considered particularly marked as a foreign construction. Moreover, the apparent ‘nativeness’ of the new periphrasis will have likewise prevented it from seeming marked as particular Slavic for German L1 speakers; as a result it will have remained unaffected by sociolinguistic prestige at this stage. This supports Leiss’ (1985) view of the interaction between syntax and prestige in contact settings. However, the presence of objective similarity, as opposed to subjective similarity, contradicts a contact-induced actuation of [werden + INF].

Consequently, the frequency of [werden + INF] will have relatively increased in the L2 population under SL-agentivity. It is important to point out that in this case, I claim there to be a direct link between token frequency and language contact, not a link between innovation and language contact.

5.3.2. Phase 2: L1 child language acquisition

A significant L2 and incipient native L1 use fostered the conditions in which [werden + INF] could find its way into the internal grammar of a larger number of bilingual L1 speakers of German through child language acquisition. As discussed in §5.2, both Czech and German existed alongside one another, and dialectal evidence points to longstanding contact and bilingualism. A trend towards the germanification of place names and the decline of Slavic varieties in these areas suggests that German made inroads into the Slavic community. Consequently, a growing proportion of children will have acquired both German and Czech simultaneously as their L1. Likewise, in some cases children of the German speaking elite will have also acquired German as monolinguals but likely with a high level of interaction with Czech servants for whom German was the L2, similar to the Old English – Cymric contact scenario suggested by Lutz (2011) and formalised above (§5.2.2). In both cases children will have been exposed to PLD from native German speakers, but crucially also from L2 speakers for whom Czech was the L1 and [werden + INF] the preferred periphrastic future-construction. Since [werden + INF] originated from L1 speakers of German, and as I argue was merely preferred by L2 speakers, the construction will not have seemed particularly Czech and thus, once again, prestige should not be considered a conditioning factor. As a result of the high level of contact there will have been a considerable amount of L2 influenced PLD. Specifically, the PLD of bilingual children and some German monolingual children will have contained [werden + INF], and as such L1 learners in this region will have acquired the new future-periphrasis in their native repertoires without the need for the reanalysis of grammatical parameters. I suggest that this is the process by which [werden + INF] was able to gain such a foothold in ECG at such an early stage.

5.3.3. Phase 3: Diffusion into a (more) unified supraregional variety

It is still unclear, however, how the new future-periphrasis was able to make its way into a (more) unified German Schriftsprache, i.e. written language (Salmons 2012: 264), and consequently establish itself as the dominant variant. Indeed, all theories on the birth of a (more) unified German provide the contexts in which [werden + INF] could gain ground in a supraregional written standard.

Some authors attribute the beginnings of the establishment of a unified German to the role of the ECG speaking Bohemian chancery of the Lützelbürgers and Charles IV (Salmons 2012: 267). As noted by Schmitt (1936: 219 c.f. Leiss 1985: 272), the [werden + INF] periphrasis is consistently employed to mark the future in the writings of the chancery. If this holds true, the new periphrases will have gained overt prestige facilitating its wider diffusion. Notably, it is here that the role of Latin translation in the diffusion of the periphrasis, as suggested by Diewald & Habermann (2005), may be incorporated in a supporting role. Any
relation between [werden + INF] and Latin can only have served to garner overt prestige and progress the codification of the construction. Theodor Frings (c.f. Salmons 2012: 267) suggests that a levelled out ECG dialect adopted by the neighbouring Meissen Chancery may have been the beginnings of a variety approaching a standard. The same linguistic conditions were also present here, since the two seats of power were adjacent in the eastern ECG region. Likewise, the language of other eastern chanceries, such as North Bavarian and East Franconian, begins to level out adopting CG features, amongst others, as relations increased with ECG and Bohemian cities (Benzinger 2000: 1670). [werden + INF] was also present to a lesser extent in these southern varieties during the early ENHG period (Bogner 1989). Indeed, Salmons (2012: 265-269) comments that Kanzleisprachen ‘the standards of the chanceries’ came to resemble one another ‘showing supraregional tendencies’, which ‘helped to create a framework for the standard language in morphology and spelling’.

The emergence of a (more) unified and prestige carrying supraregional written variety based partly on the conventions of the ECG chanceries was the crucial step which facilitated the diffusion and adoption of the new werden-future periphrasis. As ECG norms were accepted in a levelled written language, so too was the new periphrasis. This was further aided by its inclusion in grammars in an east to west trend (Leiss 1985: 270), and a growth in different types of writings, such as prose and newspapers (Betten 2000: 1646-1658). Such developments are evidence of the incorporation of [werden + INF] into a (more) unified supraregional variety resembling. It is certain that the high overt prestige of a supraregional written variety will have also impacted the early (more) standard spoken language. In this way [werden + INF] will have been able to make inroads in spoken prestige varieties which in turn will have had some impact on the regional varieties. However, definitive statements about spoken language in ENHG is a difficult and hazardous task since very little is data available. I argue, these developments facilitated the acquisition of [werden + INF] by children across the High German Sprachraum as the natural periphrastic variant in their L1 grammar for FTR, and also for epistemic modality, as other variants disappeared.

In sum, Czech-German Language contact did not cause the actuation of the new future-periphrasis. Instead, its objective similarity to [budu + INF] for Slavic L2 learners of German contributed to the development of [werden + INF] as the dominant variant in areas where language contact was present. This coupled with child bilingualism, where German L1 speaking children were exposed to German L2 (Czech L1) caregivers, and the subsequent adoption of written conventions influenced by ECG proved to be the factors which led to a wider diffusion of [werden + INF]. Figuratively speaking, contact did not invent the wheel, but it did get it turning. Consequently, I argue that this particular case should be considered diffusion under SL-agenticity in which language contact has acted as a catalyst to language change. This case of [werden + INF] represents further proof of Ebert’s (1978: 16-17) claims that native constructions can increase in frequency under the influence of a foreign-language construction in contact situations.

However, regardless of the fact that [werden + INF] represents the only periphrastic construction which explicitly marks FTR in ModG, it is clear that its use as a future marker in the spoken standard. Instead, present tense form still dominates FTR and [werden + INF] is marginalised. The reasons for the continued marginalisation of [werden + INF] in FTR, the dominance of present tense form, and the rise of [werden + INF] primarily as a marker of epistemic modality in the spoken language are beyond the goals of this paper.

6. CONCLUSION

This article has provided a brief diachronic description of morphosyntactic variation in the expression of future time in German. Germanic could only express future time with present
tense verb forms. OHG saw the development of a series of typologically typical [modal + INF] future periphrases. To a lesser extent, a set of ingressive periphrases could also express the future in both OHG and MHG. Among these ingressive constructions was \([\text{werden} + \text{PRES.PTCP}]\) which became a consistent marker of future tense. Late MHG and ENHG see not only the actuation of \([\text{werden} + \text{INF}]\) but also its transmission, diffusion and eventual adoption into a supraregional lingua-franca.

Moreover, we have revisited Leiss’ (1985) study of Czech-German language contact and has proposed a radically modified two-stage model for the actuation and subsequent diffusion of \([\text{werden} + \text{INF}]\). The periphrasis first arises as the result of analogically induced grammaticalisation due to competition between \([\text{werden} + \text{PRES.PTCP}]\) and \([\text{modal} + \text{INF}]\) future constructions. Subsequently, the new construction gains a foothold in several dialects owing to the ENHG loss of progressive constructions and the polygrammaticalisation of \text{werden} as an auxiliary. I have argued that a combination of incipient grammaticalisation, the interaction between L2 learning strategies and linguistic similarity; and child language acquisition were responsible for a rapid rise in frequency of \([\text{werden} + \text{INF}]\) in ECG in areas where historical long term bilingualism is well documented.

In this model, Slavic L2 learners of German are confronted with ‘objective similarity’ between their L1 and L2 in the form of incipient \([\text{werden} + \text{INF}]\) and \([\text{budu} + \text{INF}]\). This leads to a clear preference of the former over other modal constructions in the expression of FTR in their L2. I attribute this to the satisfaction of both the ‘psycholinguistic typology constraint’ and ‘transferability constraint’ (Jarvis & Pavlenko 2008: 174-179). Consequently, under SL-agentivity L2 speakers impose their L1 grammar onto the L2 (Van Coetsem 2000); crucially without leading to any innovation. Subsequently, the L2 influenced PLD of children acquiring German as an L1 leads to a preference of \([\text{werden} + \text{INF}]\) in children’s internal grammar. I call this ‘diffusion under SL-agentivity’, i.e imposition acts here as a catalyst in language change but not the trigger.

Finally, the influence of the Bohemian and Saxon chanceries in the establishment of a supraregional written variety is seen as the vehicle by which \([\text{werden} + \text{INF}]\) was codified in a (more) unified German, and subsequently became a prescribed form. In order to support this hypothesis, further research is required into a) historical German-Slavic bilingualism, and b) the behaviour \([\text{werden} + \text{INF}]\) making use of collated tagged and parsed diachronic corpora.

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Abbreviations

Linguistic varieties

OE = Old English
ECG = East Central German
MHG = Middle High German
ModG = Modern German
UG = Upper German

HG = High German
ENHG = Early New High German
MLG = Middle Low German
OHG = Old High German

L1 = First language
L2 = Second language
PC = psycholinguistic constraint
RL = Recipient language
SL = Source Language
TC = transferability constraint

FTR = Future Time Reference
L1 = First language
L2 = Second language

12 HG refers to all those varieties which underwent the second sound shift: Upper German and Central German.

13 ModG is a blanket term for New High German and post 1945 Present Day German.