

The constructional patterns of L2 German meteorological events by native French-, Dutch- and Italian-speaking L1 learners

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Abstract

Weather expressions are part of the relevant topics in foreign language (FL) teaching. Traditional teaching methodology focuses on fixed FL expressions like impersonal verbs discarding both the rich array of verbal and nominal constructions for typical weather states, as well as the learners' needs for their production. Construction grammar may fill this gap in two respects, by focusing on weather expressions produced by learners of German as a second language (L2). This study describes: (1) the variation in the preferred L2 constructional patterns for weather forecasts in three samples of non-native speakers of German (French, Italian and Dutch); (2) an inventory of constructional and associated lexical deficits in German-L2, compared to the participants' L1. Descriptive results lead to constructional recommendations for language pedagogy of L2 German.

From a contrastive perspective, we explore the influence of L1 on L2-constructions, in order to show possible learner interferences. More specifically, we contrast the Dutch learners as representatives of a Germanic language, with the speakers of the Romance languages. Finally, we propose some guidelines for construction-based teaching as an alternative to the conventional lexical approach to meteorological expressions.

Keywords: construction grammar, weather expressions, German, constructional and lexical deficit, error analysis

1. A rationale for weather expressions in foreign language teaching as a constructional issue

Small talk about the weather belongs to the well-known discursive strategies (Coupland & Ylänne-McEwen 2000) used by speakers to socialize and to start communication with others. Weather discourse does not simply depend on a specific meteorological vocabulary, but also on formulaic or idiomatic expressions. For Wray (2002: 79) weather expressions even constitute "an interesting case for research into formulaicity" (Wray 2002: 79). Her claim is based on Crystal's (1995) study who observes that the fluency of the delivery of weather forecasts strongly depends on the "broadcaster's ability to rely on formulaic phrasing (*with light winds and largely clear skies, blue skies and sunshine, widespread frost*) and on standard sequences of locations" (1995: 385).

In spite of the fact that meteorological discourse is a limited and well-defined discursive domain (see also Koptjevskaja-Tamm 2015; Pennesi 2007), it

constitutes a major challenge for foreign language learners (FLL): even if they are proficient in vocabulary and grammar, they often have difficulties with the variety of expressions as well as with the formulaic (Crystal 1995: 385) or idiomatic ways of expressing a meteorological message. According to Wray (2002: 192, referring to Ellis 1996), success in second language is heavily dependent on the ability to learn sequences. For the same reason Gonzalez Rey (2013: 7) claims that language learners “need to be provided with a stock of prefabricated units in order to improve their communication skills”. Weather expressions are a well-delimited case for formulaicity, e.g. *es gibt viel Regen* (‘there is much rain’), *es regnet* (‘it rains’), *es ist regnerisch* (‘it is rainy’), or *es regnet ziemlich viel* (‘it rains quite a lot’). Difficulties in the learning process result from the conceptual and constructional differences between weather expressions in the native language (L1) and in the foreign language (L2).

Traditional foreign language teaching (FLT) focuses on fixed FL expressions from two perspectives, a grammatical and a lexical one. First, (recent) German L1 and L2 grammar books zoom in the impersonal nature of fully lexicalized weather verbs, with an impersonal *es* (‘it’) personal pronoun. These *Witterungsverben* (‘meteorological verbs’) typically admit only a semantically or referentially empty subject (Hentschel 2010: 389), as in *es schneit* (‘it snows’), *es hagelt* (‘it is hailing’), *es stürmt* (‘it is stormy’), *es tagt* (‘day breaks’), *es dämmt* (‘twilight is coming down/setting in’), *es blitzt* (‘there are flashes of lightning’). The grammatical discussion in the German tradition revolves around the semantic status of the dummy word *es* (Hentschel & Weydt 2003: 62, Nikula 2006: 915-916): should *es* be considered an element internal (i.e. governed or determined by the verb) or external (i.e. purely syntactic) to the verbal weather lexeme, and, furthermore, what could be the precise conceptual content of *es*? As a result, most modern German grammar books only refer to weather expressions in terms of valency and pseudo-actants: “Das Pronomen *es* ist zwar Subjekt des Satzes, aber es handelt nicht. Das Pronomen wird nur aus grammatischen Gründen benötigt.” (Balck et al. 2010: 149; “The pronoun *es* admittedly is the subject of the sentence, but it does not act. It is only used for grammatical reasons” [our translation]). The question about the conceptual nature of *es* has been partially answered by Smith (1985) and Langacker (1991: 365-366), who characterize *it rains* as a processual predication where the abstract setting acts as a trajector (without other discrete participants, cf. Jelonkiewicz 2006: 2-3). This German construction is similar to other (Germanic) languages as Dutch (*het regent*) or English (*it is raining*) and also appears in French (*il pleut*), in contrast with other Romance languages, such as Spanish *llueve* and Italian *piove*, which do not require such trajectory and can therefore leave the subject position and valency empty (Schwarze 1995: 120, Prandi 2006: 98). This grammatical approach does not really take into account constructional variation for weather expressions used for rain, snow, temperature and the like; other impersonal constructions such as *es ist schönes Wetter* (‘it is nice weather’) or adjectival constructions such as *es ist regnerisch* (‘it is rainy’), are left out of the picture of grammatical description.

Second, from the lexical perspective, the array of weather expressions is much richer than what language methods in communicative teaching offer. Current lexicographic resources such as Quasthoff (2011: 385 for snow (*Schnee*)), and more particularly the *Digitales Wörterbuch der Deutschen Sprache* (DWDS), offer detailed collocations from the DWDS basic corpus, displaying groups of synonyms and lexical networks (Plieger 2007: 194-195) based on carefully designed reference corpora. Nevertheless, these collocations only provide limited morpho-syntactical information, as they are organized by superordinate and subordinate concepts. An interesting development in DWDS is the word profile based on part of speech-tagging (POS-tagging). However, detailed constructional graphs based on multiple parts of speech evolving around verbs as *regnen* remain beyond the reach of lexical databases. Despite this wealth of lexical resources, many teaching manuals only propose an onomasiological lexical approach with a simplistic and unstructured set of constructions with a noun, a verb or an adjective, leaving the learner alone when it comes to combine the specific words. Figure 1 gives an illustration of such an approach from the teaching manual *Themen neu Kursbuch 2*, intended for learners at an A2 level of the Common European Framework of Reference for Languages (CEFR), which is frequently used in some West-European countries like Belgium or Italy.

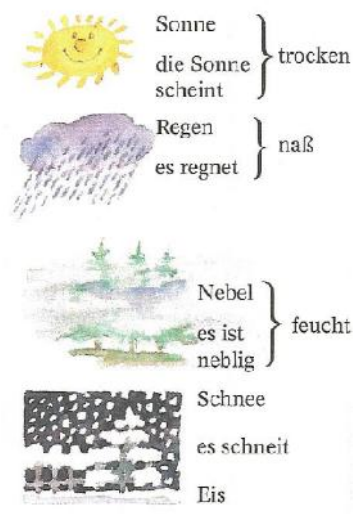


Figure 1: a pedagogical example from 'Themen neu Kursbuch 2'

This approach may be justified for intuitive pedagogical reasons, as it addresses the CEFR 'waythrough' level for basic learners, which should be able to understand and produce basic sentences and frequently used expressions. Nevertheless, it is both theoretically simplistic and not founded on empirical usage, as it solely focuses on isolated weather states, thereby discarding both the rich array of verbal and nominal constructions (and the rich array of lexical and syntactic expressions used for typical weather states and changes, as well

as the learners' needs for their production. The teaching materials do not take a particular theoretical stance with regard to the integration of lexical and structural information; neither do they rely on advanced corpus data. Not only the unsatisfactory divide between grammatical and lexical approaches to weather expressions shows the need for a usage-based and theoretically founded constructional account of L1 weather expressions, but this linguistic description should be paired with or at least bring in a realistic picture of L2 learners' needs in different languages.

The descriptive foundations of L1 and L2 weather expressions being unsatisfactory for FLL, our study aims at offering a more fine-grained description of such expressions in German as a second language. It focuses on the description and distinction of the preferred constructional patterns in L1 French, Italian and Dutch on the one hand and in German-L2 on the other. In doing so, it takes into account some typological differences between Germanic and Romance languages. In French and Italian, for instance, it is habitually the impersonal verb *faire/fare* ('to do') plus noun or adjective which is used in expressions of a meteorological state, e.g. *Il fait froid/fa freddo*, lit. *'It does cold' or *il fait jour/fa giorno*, lit. *'It makes day', whereas in Dutch and German the verb 'to be' is used by default, e.g. *Het is koud/Es ist kalt*, lit. 'It is cold'. Moreover, L1 users produce various types of constructions, reaching from fully lexical verbs (Germ. *Morgen wird es regnen*, 'tomorrow it will rain'), over predications with weather nouns and support verbs (Germ. *Morgen wird viel Schnee sein*, 'Tomorrow there will be much snow') and adjectives or adverbs (Germ. *Für morgen erwarten wir regnerisches Wetter*, lit. 'For tomorrow we expect rainy weather'; Germ. *Es regnet stark*, lit. 'It rains heavily').

In what follows, Section 2 zooms into some of the theoretical tenets of Construction Grammar and language typology. Section 3 describes the study with the Dutch, French-speaking and Italian foreign language learners of German. Section 4 provides the analysis of constructions and typical errors. Section 5 reflects on the pedagogical potential of this approach and provides perspectives for further research.

2. Theoretical framework

The weather expressions exemplified in the above examples are characterized by a continuity between structural and lexical dimensions. Since Construction Grammar (CxG) postulates form-meaning pairs and sees the lexicon and syntax as a continuum (Boas 2014: 40-41), it is an adequate model to describe such formulaic expressions. The study is based on Goldberg's Construction Grammar (1995, 2006), on Talmy's typological considerations (2000) and on the concept of 'conceptual fluency' developed by Danesi (1992). Conceptual fluency refers to the way particular target languages encode concepts in grammar based on particular cognitive mechanisms such as metaphors (Danesi 1995, 2008). More specifically, conceptual fluency in our study is about reflexive competence in constructions, i.e. the L2 speaker's "ability to transform concepts

into language categories" (Andreou & Galantomos 2009, quoting Danesi 2003). Conceptual fluency has a constructional dimension. In Construction Grammar, so-called 'constructions' (Cx) are the primary objects of description, rather than rules (Goldberg 1995, 2006; Sambre 2010: 3-4, following Langacker 2005). Lexicon and grammar are not distinct components, but form a continuum of constructions which can be defined as form-meaning pairings or assemblies of symbolic structures (Fillmore, Kay, O'Connor 1988). Apart from the degree of specificity or schematicity, expressions and the patterns they instantiate have the same basic character (see also Lakoff 1987). Linguistic knowledge comprises vast numbers of constructions, a large proportion of which are 'idiosyncratic' in relation to 'normal', productive patterns. Constructions, in this respect, are to be considered non-schematic and fully specified on the lexical level and need to integrate the inventory in a construction, a systematic inventory of lexical and grammatical information (Ziem 2014: 282 and 283). L2 learners need conceptual competence in producing such constructional information for weather expressions.

Accordingly, L2 learning implies a reconstruction of the most reliable conventional form-meaning mappings as well as the connected 'thinking for speaking' (Ellis 2013; Ellis & Cadierno 2009: 124-125) involved in these patterns. Depending on the "typological distance" (Athanasopoulos 2009) between languages there will be more or less difficulties in the learning process: It can be expected that languages which are typologically related, e.g. the Germanic languages Dutch and German, will have similar constructional patterns (see also the studies by Slobin 1996 und Talmy 2000). If L2 is close to L1, learners will have fewer difficulties to learn L2. Part of our study deals with this question as it compares constructions produced by Dutch learners of German with those produced by French-speaking and Italian learners. These latter languages belong to the category of Romance languages.

3. Corpus and method: a study with foreign language learners

In order to analyze the syntactical and lexical variation in the constructional patterns for weather descriptions by learners, the corpus under study consists of three samples of L2 learners' written responses to a set of visual stimuli in an elicitation task about weather conditions and meteorological change. The participants were respectively 20 French-, Italian- and Dutch-speaking learners of German (level B1-B2 in the reference frame of the Council of Europe, CEFR) randomly chosen among student groups at two Belgian and one Italian university: University of Leuven (campus Antwerp) for Dutch speakers, Université Saint-Louis in Brussels for French speakers, and Università degli Studi di Milano for Italian speakers. The respondents were asked to describe pictures representing weather conditions in the test, first in German-L2 and then in their mother tongue (Nunan 2004).

This task provides a basic, yet comparable corpus for describing the preferred constructional patterns used by the learners in elicited nominal (e.g.

der Regen ‘the rain’, *die Sonne* ‘the sun’, *die Kälte* ‘the cold’), verbal (e.g. *es regnet* ‘it rains’, *die Sonne scheint* ‘the sun shines’, *es wird kalt* ‘it becomes cold’), as well as in adjectival (e.g. *regnerisches, sonniges oder kaltes Wetter* ‘rainy, sunny or cold weather’) expressions for weather conditions and change. As such, this picture-word task moves slightly beyond the traditional lexical scope of L2 production (McDonough & Trofimovich 2012: 125-127): it induces the wording of a predication state in which nominal or clausal predications are fully grounded.

A grounding element can thus be thought of (at least in functional terms) as the final step in putting together a nominal or a finite clause. As the most peripheral component, it specifies an epistemic relationship between the ground and the profiled thing or process, as characterized by the remainder of the nominal or clausal expression. (Langacker 2008a: 178)

This task-based research allows to measure both complexity and accuracy (Ellis 2012: 207) of clausal constructs: the respondent needs to decide about different construals for similar weather states, and to constantly make a trade-off between accurate expression of such state (by means of combining nominal and verbal expressions) and different degrees of complexity. Further, the study can highlight the constructions displaying deficits in German-L2, compared to the individual L1-speaker patterns. Finally, all these observations and the CxG-framework can then be exploited for the development of a more efficient construction-based language teaching methodology.

Participants in the elicitation task received the following instructions: “Describe 4 weather images with temperature, 3 sentences about the weather and 1 about the temperature. If possible, vary between verb, noun, adjective etc.” Appendix I shows the test design.

4. Constructional analysis

We present a first description of German constructions proposed by the learners (4.1) and a classification of constructional deficits (4.2).

4.1. German constructional patterns by learners

In contrast with the impersonal verbs taught by common German teaching materials, our respondents produce remarkably more grammatical structures and this independently of their L1: nominal phrases without a verb (1), verbal patterns with one single part of speech such as a nominal or impersonal subject (2).

- (1) *Kaltes Wetter!*
 (‘Cold weather!’)

- Blauer Himmel!*
 ('Blue sky')
- (2) *Die Sonne scheint*
 ('The sun shines')
- Es regnet*
 ('It rains').

Verbal patterns with two (example 3) or three (example 4) additional parts of speech are also present in the samples.

- (3) *Die Temperatur steigt bis 25 Grad*
 ('The temperature rises up to 25 degrees')
- Man erwartet Schnee*
 ('One expects snow')
- (4) *Heute gibt es schönes Wetter*
 ('Today there is nice weather')
- Den ganzen Tag können Sie Regen haben*
 ('The whole day you can have rain').

Contrary to our expectations, 70 % of the constructions combine three or more parts of speech, which means that L2 learners display stronger constructional complexity than what their grammar and communication textbooks instruct them to do. Table 1 summarizes the global results for the interplay between word classes in constructions, typically involving verbs (V), noun syntagms (NS), Adjectives (Adj) and Adverbs (Adv). Abbreviation 'y' stands for 'yes', 'n' for 'no'.

Count of senter					Total
V	NS	Adj	Adv		
y	y	y	y	14%	
			n	45%	
		y Total		59%	
	y Total			59%	
	n	y	y	11%	
			n	28%	
		y Total		39%	
	n Total			39%	
y Total				98%	
n	y	y	y	0%	
			n	2%	
		y Total		2%	
	y Total			2%	
	n	y	y	0%	
		y Total		0%	
	n Total			0%	
n Total				2%	
Grand Total				100%	

Table 1: Constructional patterns

If we look at the variation of constructional patterns between the different learner groups, we get the following results. Italian learners show the lowest constructional complexity, i.e. they rarely build constructions with four parts of speech, but a high number of constructions with two parts of speech can be found. French-speaking and Dutch learners show a similar constructional profile, they use a large amount of constructions with three parts of speech (FR / NL: 26%). Taken the typological closeness between French and Italian, it comes as a surprise that there is less overlap between the constructional patterns produced by Italian and French-speaking learners. In all three groups, a dominance of the verbs can be found. Table 2 summarizes the constructional variation with the three L2 learner groups.

relevant	y						
Count of s		language					
V	NS	Adj	Adv	FR	IT	NL	Grand Total
y	y	y	y	7%	1%	6%	14%
			n	16%	15%	15%	45%
		y Total		23%	16%	21%	59%
	y Total			23%	16%	21%	59%
	n	y	y	3%	2%	5%	11%
			n	2%	17%	9%	28%
		y Total		6%	20%	14%	39%
	n Total			6%	20%	14%	39%
y Total				28%	35%	34%	98%

Table 2: Constructional variation with the three learner groups

The verbs used in the German constructions produced by learners can be different in nature. There are five subtypes: full lexical verbs are always possible,

- (5) *Es regnet*
(‘It rains’)
- (6) *Die Sonne scheint*
(‘The sun shines’)
- (7) *Es werden frierende Temperaturen erwartet*
(‘Freezing temperatures are expected’).

But often we also find support verbs (8) or copula verbs (9-10) or impersonal *es gibt* (11-12).

- (8) *Den ganzen Tag können Sie Regen haben*
(‘The whole day you can have rain’)

- (9) *Das Wetter ist schlecht*
('The weather is bad')
- (10) *Morgen wird es kalt*
('Tomorrow it will be cold')
- (11) *Morgen wird es Gewitter geben*
('Tomorrow there will be thunderstorm')
- (12) *Es gibt Schnee*
('There is snow').

In rare cases 'other verbs' appear which means verbs which are not specific weather verbs, see (13-14).

- (13) *Es betrifft das Wetter*
('It concerns the weather')
- (14) *Es geht um Regen*
('It is about rain')

If we compare the distribution of the different verb types between the learner groups, we get the following results: all three groups have a similar number of lexical verbs, but the Dutch-speaking group uses fewer copula and more *es gibt* constructions ('there is'). Table 3 summarizes the results.

relevant	y				
V	y				
Count of sentence N	language				
lexical or support	FR	IT	NL	Grand Total	
lexical	42%	42%	46%	44%	
copula	42%	45%	36%	41%	
es gibt	13%	12%	18%	15%	
support	1%	1%	0%	1%	
other	2%	0%	0%	1%	
Grand Total	100%	100%	100%	100%	

Table 3: Variation among the verb types for all three learner groups

More specifically, the combination of *es gibt* with other parts of speech like an adjective and a noun is more present among Dutch learners, but the lowest with Italian learners, as shown in Table 4. The absence of this impersonal structure in the Italian sample may be due to the fact that Italian typically has a similar impersonal structure: *C'è il sole* ('There is sun'), with the definite article (whereas French has the partitive article *Il y aura du soleil*); Italian L2s may therefore have considered their L2 impersonal German construction an Italian one and avoided the interference.

relevant	y					
V	y					
Count of sentence N		language				
lexical or support	NS	Adj	FR	IT	NL	Grand Total
es gibt	y	y	9,01%	0,90%	16,22%	26,13%
		n	15,32%	27,03%	28,83%	71,17%
	y Total		24,32%	27,93%	45,05%	97,30%
	n	y	0,00%	0,90%	0,00%	0,90%
		n	0,00%	0,00%	1,80%	1,80%
	n Total		0,00%	0,90%	1,80%	2,70%
es gibt Total			24,32%	28,83%	46,85%	100,00%
Grand Total			24,32%	28,83%	46,85%	100,00%

Table 4: Combination of *es gibt* with other parts of speech

4.2. Constructional and lexical deficits

The deficits encountered in L2 German with the three learner groups show two dimensions: either they concern the lexical poorness within a constructional profile, i.e. the poor variation of nouns, verbs or adjectives within the construction, or the types of errors produced by the learners in their constructions. Note that our perspective on lexical production is immediately embedded in a structural construction type.

4.2.1. Lexical poorness

We looked at the three word categories, namely verbs, nouns and adjectives and at the variety of words used in these categories. With the verbs, the following tendencies could be observed (see also Table 5 hereunder): Despite the lower frequency of the copula, the German constructions by the Dutch-speaking group show a higher internal variation. The Italian group exclusively used *sein* among the copulas and in spite of the high relative frequency in the use of lexical verbs, there is low internal variation as to verb choice within this group. The lowest frequency of lexical verbs is reached by the French-speaking group. The more frequent use of the support verb *haben* ('to have') is due to the similarity with the corresponding French verb *avoir*, which is favored in such constructions.

- (15) *On aura de la pluie*
 ('We will have rain')

relevant	y				
Count of sentence N		language			
lexical or support	verb	FR	IT	NL	Grand Total
⊖ copula	sein	39,71%	47,08%	33,59%	40,14%
	werden	0,96%	0,00%	6,18%	2,48%
	bleiben	0,96%	0,00%	0,39%	0,41%
copula Total		41,63%	47,08%	40,15%	43,03%
⊖ lexical	regnen	10,53%	10,51%	10,42%	10,48%
	scheinen	8,61%	7,78%	7,34%	7,86%
	schneien	5,74%	7,78%	6,18%	6,62%
	erwarten	3,83%	0,00%	3,47%	2,34%
	liegen	0,00%	5,45%	0,77%	2,21%
	fallen	2,39%	1,95%	1,16%	1,79%
	gewittern	0,00%	3,50%	1,16%	1,66%
	frieren	0,96%	0,39%	3,47%	1,66%
	erreichen	2,87%	0,00%	1,93%	1,52%
	blitzen	0,00%	2,72%	1,54%	1,52%
lexical Total		34,93%	40,08%	37,45%	37,66%
⊖ support	haben	1,44%	0,00%	0,39%	0,55%
support Total		1,44%	0,00%	0,39%	0,55%
⊕ es gibt		12,92%	12,84%	20,08%	15,45%
⊕ other		1,91%	0,00%	0,00%	0,55%
⊕ (blank)		7,18%	0,00%	1,93%	2,76%
Grand Total		100,00%	100,00%	100,00%	100,00%

Table 5: Lexical variation with verbs among the 3 learner groups.

The next table presents the 20 most frequent nouns used in the constructions (combinations of nouns in constructions are separated by semi-colon). Unsurprisingly, for all three groups, the highest frequencies are attained with generic nouns, e.g. *weather*, *sun* and *temperature*. Again, the Italian group shows the lowest internal variation, 60 % of the nouns representing the first 4 generic nouns. These generic nouns often combine with the *sein* copula and with it build a basic pattern for Italian learners. Again, French-speaking and Dutch-speaking natives have a similar array of lexical expressions.

relevant	y				
NS	y				
Count of sentence N	language				
noun		FR	IT	NL	Grand Total
Wetter		18,79%	18,33%	14,04%	16,82%
Sonne		15,44%	15,83%	15,79%	15,68%
Temperatur		17,45%	17,50%	7,02%	13,41%
Temperatur; Grad		5,37%	15,83%	16,96%	12,73%
Schnee		9,40%	7,50%	9,36%	8,86%
Gewitter		2,01%	10,83%	7,60%	6,59%
Regen		6,04%	4,17%	7,02%	5,91%
Grad		6,71%	4,17%	5,85%	5,68%
Wolke		5,37%	0,00%	1,75%	2,50%
Himmel		4,03%	0,83%	1,75%	2,27%
Tag		0,67%	0,00%	4,68%	2,05%
Blitz		0,67%	2,50%	1,75%	1,59%
Sturm		2,01%	1,67%	0,58%	1,36%
Wind		1,34%	0,00%	1,17%	0,91%
Schneefall		0,67%	0,00%	1,17%	0,68%
Donner; Blitz		0,00%	0,00%	1,75%	0,68%
Schauer		0,67%	0,00%	0,58%	0,45%
Wolke; Himmel		1,34%	0,00%	0,00%	0,45%
Nebel		0,00%	0,00%	1,17%	0,45%
Himmel; Wolke		1,34%	0,00%	0,00%	0,45%
Blitz; Himmel		0,67%	0,83%	0,00%	0,45%
Grand Total		100,00%	100,00%	100,00%	100,00%

Table 6: Lexical variation at the noun level in 3 groups.

With the 20 most frequent adverbs accompanying adjectives we find a similar picture: the Italian-speaking group showed the lowest frequency and internal variation, only two adverbs are frequently used by Italians, namely *sehr* ('very') and *ganz* ('completely'). The French-speaking group obtains the highest frequency and internal variation; this reflects the typological characteristics of the French language, which favors adjectives and adverbs (Truffaut 1963: 22-24).

relevant	y				
Adj	y				
Count of sentence N		language			
Adv	adverb	FR	IT	NL	Grand Total
y	sehr	16,30%	6,54%	6,80%	9,60%
	ziemlich	4,35%	0,00%	7,77%	3,97%
	nicht	2,17%	0,00%	1,94%	1,32%
	ganz	1,09%	0,93%	1,94%	1,32%
	zu	3,26%	0,00%	0,00%	0,99%
	so	1,09%	0,00%	0,97%	0,66%
	angenehm	2,17%	0,00%	0,00%	0,66%
	nicht so	0,00%	0,00%	1,94%	0,66%
	genug	1,09%	0,00%	0,00%	0,33%
	schön	0,00%	0,00%	0,97%	0,33%
	viel	1,09%	0,00%	0,00%	0,33%
	immer wieder	1,09%	0,00%	0,00%	0,33%
	fast; zu	1,09%	0,00%	0,00%	0,33%
	ganz; sehr	0,00%	0,00%	0,97%	0,33%
	kaum	0,00%	0,00%	0,97%	0,33%
	noch	1,09%	0,00%	0,00%	0,33%
	nicht; sehr	0,00%	0,00%	0,97%	0,33%
	nur	1,09%	0,00%	0,00%	0,33%
	relativ	0,00%	0,00%	0,97%	0,33%
y Total		36,96%	7,48%	26,21%	22,85%
n		63,04%	92,52%	73,79%	77,15%
Grand Total		100,00%	100,00%	100,00%	100,00%

Table 7: Lexical variation with adverbs among the three learner groups

4.2.2. From interferences to CxG error analysis

The difficulty for FLL is that “L2 constructions are in direct competition with those of the learners’ L1, and these may represent alternative ways of construing the same reality” (Ellis & Cadierno 2009: 112). Therefore, we expected quite a lot of interferences with the mother tongue of the learners. However, surprisingly, we found only a limited amount of interferences, for French-speaking learners 4.48 %, for Italian learners 3.36 % and for Dutch learners 8.08 %. Interference was coded for based on agreement between at least two coders in our database.

relevant	y			
Count of sentence N	language			
interference	FR	IT	NL	Grand Total
y	4,48%	3,36%	8,08%	5,46%
n	95,52%	96,64%	91,92%	94,54%
Grand Total	100,00%	100,00%	100,00%	100,00%

Table 8: Interferences in the three learner groups

Low scores for interference with learners' mother tongue may be due to higher levels of language proficiency (B1 to B2). The table below shows some examples of interference in the three groups.

German	French
(16) *Die Temperaturen sind <u>von 0 Grad</u> (‘The temperatures are of 0 degrees’)	<i>Les températures sont de 0 degrés.</i>
(17) *Man erwartet <u>einen grossen Schneefall</u> (‘One expects a great snowfall’)	<i>On attend une grande chute de neige.</i>
(18) *Es ist 15 <u>Grade</u> (‘It is 15 degrees’)	<i>Il y a 15 degrés.</i>
German	Dutch
(19) *Heute Nacht kann es ganz <u>kau</u> sein (‘Tonight it can be very cold’)	<i>Deze nacht kan het heel <u>koud</u> zijn.</i>
(20) *Wir <u>erwarten</u> Schnee ins ganzen Land (‘We expect snow in the whole country’)	<i>We verwachten sneeuw in het ganse land.</i>
German	Italian
(21) *Es <u>gibt</u> 25 Grad (‘There are 25 degrees’)	<i>Ci sono 25 gradi.¹</i>
(22) *die Temperatur ist <u>von 25 Graden</u> (‘The temperature is of 25 degrees’)	<i>La temperatura è di 25 gradi.</i>

Table 9: Examples of interferences between French, Dutch and Italian

Dutch learners showed a higher interference score, which is not surprising since Dutch and German are typologically similar. However, considering the low figures for the interference between L1 and L2 in the three learner groups, this topic cannot build the main pathway for constructional analysis. We prefer to look at the types of errors produced by the respondents.

The most frequent errors in all three groups are morphological in nature, either do they concern case, gender, or plural e.g.

- (23) *Heute gibt es das Regen
(‘Today there is the rain’, wrong gender);
- (24) *Es ist einen Sonnentag
(‘It is a sunny day’, wrong case);
- (25) *Es gibt einen Gewitter
(‘There is a thunderstorm’, wrong gender);
- (26) *Heute gibt es Blitzen
(‘Today there are lightnings, wrong plural);
- (27) *Manche Schauer werden unser Land durchqueren
(‘Some rainfalls are going to cross our country’, wrong plural).

¹ Note the fact that Italian uses the plural here, in contrast with singular German *es gibt*.

A difficulty also concerns the difference between mass and count nouns, as *Grad* ('degree') does not get any plural ending in this use. At the verbal level, wrong tense forms can be found, e.g.

- (28) **Am Abend werde es Schneefall geben*
(‘In the evening there will be snowfall’).

The derivation of some words generally seems to be a further cause of difficulties for the learners.

- (29) **Der Tag soll sonnerisch sein*
(‘The day should be sunny’; correct form: *sonnig*);
(30) **Es gibt winterischen Schneefall*
(‘There is wintery snowfall’; correct form: *winterlich*).

Other types of errors are spelling mistakes.

- (31) **Heute wird das Wetter sehr regenerisch*
(‘Today the weather will be very rainy’; correct form: *regnerisch*);
(32) **Der Sturm soll sehr häftig sein*
(‘The storm should be very intense’; correct form: *heftig*).

At the lexical level, sometimes the correct word is not properly selected.

- (33) **Der Himmel ist donkel*
(‘The sky is dark; correct word: *dunkel*);
(34) **Die Temperatur erträgt 15 Grad*
(‘The temperature contains 15 degrees; correct verb: *beträgt*).

The wrong selection can be due to an assimilation between the noun and the verb, e.g.

- (35) **Es schneet*
(‘It snows’; correct verb: *schneit*; noun: *Schnee*).

Syntactic errors were also found in the learners’ samples, e.g.

- (36) **Die Temperaturen sind von 0 Grad*
(‘The temperatures are of 0 degrees’);
(37) **Es gibt Gefahr auf Gewitter*
(‘There is danger on thunderstorm’).

Table 10 shows the results about the errors.

relevant	y				
Count of sent	language				
mistake	err type	IT	FR	NL	Grand Total
y	m	7,5%	15,7%	13,1%	11,9%
	l	2,2%	6,3%	8,4%	5,7%
	s	3,4%	6,7%	1,0%	3,4%
	sp	3,0%	2,7%	7,7%	4,7%
	l; m	1,5%	2,2%	0,7%	1,4%
	l; s	0,7%	0,4%	0,3%	0,5%
	m; s	0,7%	0,0%	0,7%	0,5%
	m; sp	0,0%	0,0%	3,4%	1,3%
	s; sp	0,0%	0,4%	0,0%	0,1%
	m; l; sp	0,0%	0,0%	0,7%	0,3%
y Total		19,0%	34,5%	36,0%	29,8%
n		81,0%	65,5%	64,0%	70,2%
Grand Total		100,0%	100,0%	100,0%	100,0%

Table 9: Types of errors²

As we can see in the table, morphological errors are a major problem. The Italian group made fewer morphological mistakes, but as we already stressed above, most of their productions are rather simple sentences. The French-speaking group made more syntactic errors, the Dutch-speaking learners more lexical and spelling errors. This is not surprising as there are many similar words in Dutch and German (sometimes even false friends).

5. Pedagogical potential and research perspectives

Our twofold analysis leads to two kinds of recommendations for language teaching. On the one hand, the more traditional typology of errors leads to the neutralization of errors, by means of general targeted exercises on morphology, and more specific exercises based on the typical profiles made by the learner groups. We recommend exercises on syntax for the French-speaking group and thorough lexical training for the Dutch-speaking sample group.

On the other hand, a more advanced and innovative idea is to take into account the specific construction profiles used by different sample groups (and even the different group levels and individual student profiles within these samples). These profiles show the gaps in the full constructional network which integrates both syntactical and lexical information. Based on our constructional analysis, we can recommend a progressive design of teaching materials based on specific L2 construction types. First, we advise to give priority to copula in L1 speakers of Italian, and then, eventually to strengthen lexical expressions for N and/or Adj within this [Vcopula + N/Adj] construction type. Second, for the

² Abbreviations: l : lexical ; m : morphological ; s : syntactic ; sp : spelling. Combinations of errors in a single clause are rendered in the following way: “m; l; sp”.

French and Italian group, we recommend to develop lexical variation in the typical impersonal construction with lexical verbs (and not support verbs) [*es* + V]. Third, for the Dutch natives, more work is to be done on adverbial adjective modifiers in the construction type [*es* + *ist* + Adv + Adj]. This is where L1 corpora come in to complement abstract construction types with lexical information.

On a more general level, the advantage of our usage-based L2 approach is that we know precisely where to look in German reference corpora for L1 construction types. We can use this specific input to enrich preferentially those L2 constructions that are more entrenched in the different L2 sample corpora before moving to other L1 constructs less entrenched in these L2 learners. The entrenched L1 form-meaning pairings are indeed likely to have an impact on L2 construction learning and production in different ways (Robinson & Ellis 2008: 491). Further elaboration on preferential construction L2 types may lead to more successful teaching of both grammar and lexicon, a method successfully tested by Tyler (2012: 127) for modal verbs. After these already known weather constructions by learners of German, the less entrenched and therefore more complex or varied construction types can then supplement this first constructional basis. Taking into account the degree of entrenchment of constructions in L2 learners (e.g. throughout the different learning modules and levels of teaching methods for German L2) is, to our mind, more realistic, more motivating for students and therefore more effective.

In this paper, construction grammar has been shown not only a useful theoretical resource for describing and learning formulaic weather expressions. We have described the formula in terms of constructions, and, within these constructions, we proposed evidence for lexical variation, comparing learners with different L1s. The functional needs of learners and the way they cope with them clearly demonstrate that there is no clear boundary between grammatical constructions and lexical content. The perspectives for further work on CxG and second language learning and teaching logically point toward other kinds of functionally inspired formulaic expressions, relying on elicitation tasks. More generally, the view on L2 learning and teaching emerging from this research is clearly calling for “putting linguistics back into L2 research and teaching” (Tyler 2012: 221-222), but doing so does not necessarily imply knowledge about grammatical terminology or cognitive linguistics, neither on the learners’ side, nor on the instructor’s side (Langacker 2008b: 85). However, developing accessible teaching materials remains a major challenge for cognitive linguistics (Tyler 2008: 485-486), in spite of the availability of large corpora which facilitate the researcher’s and teacher’s access to the full array of constructional variation.

Furthermore, our research shows evidence of which facts in the L2 are likely to be exploited (and as such to produce errors) by learners (Tyler 2012: 214). The constructions L2 learners with different L1 display in a striking way show pathways to other linguistic phenomena than what traditional teaching method and German grammar books stress. As a result, CxG in a didactical setting brings about an empirically founded functional grammar, in which

communicative goals and conceptual requirements are intricately paired with relevant constructions (Fehrmann 2014: 120) in both L2 and L1 (German). Relevance in this perspective entails both what is to be expected in L1 German, but also what is produced by L2 learners not necessarily familiar with all details of the German language. A next step in this approach is to design teaching materials based on our heuristics and to test their effectiveness. In the future, we will further explore this nexus between L2 learner corpora and the L1 construction of the German language.

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Appendix I: Test design

Describe the following four weather images with temperature

Instructions

- Write 3 sentences about the weather.
If possible vary between verb, noun, adjective,
- Write 1 sentence about temperature.

1.	 15°	1.1	
		1.2	
		1.3	
		1.4	
2.	 25°	2.1	
		2.2	
		2.3	
		2.4	
3.	 0°	3.1	
		3.2	
		3.3	
		3.4	
4.	 6°	4.1	
		4.2	
		4.3	
		4.4	