languages

MDPI

Article

The Acquisition of French Determiners by Bilingual Children: A Prosodic Account

Johanna Stahnke

Faculty of Humanities and Cultural Studies, Romance Linguistics, University of Wuppertal, Gaußstraße 20, 42119 Wuppertal, Germany; stahnke@uni-wuppertal.de

Abstract: The present longitudinal study investigates the acquisition of determiners (articles) in two simultaneously bilingual French-Italian children aged 1;6,12 until 3;5,17, one of them being French-dominant and the other one being Italian-dominant. Although French and Italian determiners and determiner phrases share some syntactic aspects, they largely differ with respect to noun length and lexical stress in the nominal domain. Prosody is expected to be a decisive factor in the early prosodification of determiners by French-Italian bilinguals. The analysis of more than 4500 noun phrases yields different acquisition paths and cross-linguistic transfer, which can neither be explained by linguistic structure nor by language balance alone. The results are analyzed within the generative framework. The proposed account integrates language-internal and external factors for determiner acquisition in French by bilingual children.

Keywords: bilingual language acquisition; language dominance; determiners; prosody; French

check for updates

Citation: Stahnke, Johanna. 2022. The Acquisition of French Determiners by Bilingual Children: A Prosodic Account. *Languages* 7: 200. https://doi.org/10.3390/languages7030200

Academic Editors: Giuliana Giusti and Anna Cardinaletti

Received: 10 January 2022
Accepted: 8 July 2022
Published: 31 July 2022

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Copyright: © 2022 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

In the generative framework, determiners (D) include definite and indefinite articles, possessives, demonstratives, numerals and quantifiers and are used for discursive anchoring of the noun. D systems present a high degree of variation and optionality in a cross-linguistic comparison, even between closely related languages. There are languages without any determiners (articles) such as Latin. D can be expressed as free or bound morphemes and in prenominal or postnominal position. In the Romance language family, most languages, including French and Italian, have free prenominal D.

D is not necessarily overtly realized, which gives rise to bare noun structures. On Longobardi's (1994) account, the D layer is always projected but D can be empty in individual languages or for individual types of nouns (e.g., proper names). Chierchia (1998), on the other hand, proposes the Nominal Mapping Parameter with predicative and argumentative features based on the syntactic-semantic mapping of nouns. Romance languages, which are specified with [−arg, +pred] features, allow bare nouns only in predicative position (e.g., *Il est professeur* 'He is a teacher'). Accordingly, N must project D in argumental positions (e.g., *Il voit le professeur* 'He sees the teacher').

This kind of variation and optionality is also reflected in bilingual first language acquisition of D, i.e., by children who simultaneously acquire two—possibly diverging—linguistic systems. In the absence of theoretical and empirical research on D acquisition in bilingual children who simultaneously acquire two Romance languages, the goal of the present study is to analyze D acquisition in French in two longitudinal case studies of bilingual French-Italian children, one of whom is French-dominant and the other one Italian-dominant. The focus will be, firstly, on French and, secondly, on prosodic factors (which bear on D acquisition) because French phonology diverges from that of other Romance languages to a considerable extent. The results point both to a crucial role of language-specific phonology as well as to the effects of language dominance in bilingual first language acquisition.

Although the role of language-specific phonology in D acquisition by monolingual French (and Italian) children is rather well documented (Tremblay 2006; Demuth and Tremblay 2008), little is known about the interaction of two prosodic systems in bilingual children acquiring French as one of their languages. Bilingual research involving French has mostly focused on syntactic aspects of D acquisition (Berkele 1983; Müller 1994; Granfeldt 2000, 2003; Hulk 2004; Kupisch 2006, 2008). Among the Romance languages, Spanish (with German as the second L1) is best described with regard to prosody in D acquisition (e.g., Lleó and Demuth 1999). When it comes to French, however, virtually no phonological accounts of D acquisition by bilinguals are available to date.

Compared to other languages of the Romance family, French phonology has a special status. According to mainstream analyses, it lacks certain prosodic features like lexical stress (Jun and Fougeron 2000; Féry 2001) or metrical feet (Andreassen and Eychenne 2013; Wauquier and Yamaguchi 2013; Özçelik 2017). In this sense, French and Italian diverge substantially from one another and more so than genetically less related languages like the Spanish/German pair, for example. The existence of feet and stress are language-specific conditions for the prosodification of D during language acquisition and have been described as parametric options, which in turn should have important implications for (bilingual) language acquisition but which have not yet been applied to research studies on bilingual children.

Although it is generally accepted that multilinguals are able to separate their languages from each other (e.g., Meisel 1990), there may be cross-linguistic influences, e.g., in terms of acceleration, delay or transfer (Paradis and Genesee 1996 on syntactic transfer; Lleó 2016 on phonological transfer). One seemingly obvious explanation for the direction of influence is language dominance, the role of which has also been discussed in the context of D acquisition—with inconclusive results (Kupisch 2006, 2008; Kupisch and Bernardini 2007). The present study, therefore, aims at disentangling language-internal factors (prosodic features of a linguistic system) and language-external factors (language dominance) in bilingual language acquisition from each other and at evaluating their effects on D acquisition in French.

The paper is structured as follows. In Section 2, the determiner systems of French and Italian are presented from a generative perspective. Section 3 outlines the theoretical status of articles and nouns in both languages, focusing on the role of prosody in acquisition. Existing studies on determiner acquisition in monolingual and bilingual French are summarized in Section 4. Section 5 provides an overview of the data and analytic criteria. The results of the study are presented in Section 6 and discussed in Section 7 with some concluding remarks.

2. Determiner Systems of French and Italian

D has first been analyzed in the specifier position of the noun phrase (NP) and was later represented as the functional head of a determiner phrase (DP) as an extended projection of N (Abney 1987; DP hypothesis).[1] In Romance, all categories within DP agree for morphosyntactic features like gender and number. Apart from its functional head and its NP complement, DP, therefore, contains at least one more functional phrase (XP) with morphosyntactic features (for proposals regarding French cf. e.g., Berstein 1993; Valois 1991, 1997). Nouns are traditionally said to have inherent (interpretable) features for gender and number with which D and other (optional) categories of the DP agree. The features of XP are uninterpretable and cause syntactic N to D movement.[2] This kind of raising within DP is relevant, for example, to derive the variable position of (pre- and postnominal) adjectives in Romance languages.

Despite their typological proximity, French and Italian (and other Romance languages) diverge from each other with respect to both the form and the use of D. Focusing on articles, they are prenominal and inflect for gender and number in both languages. There are homophonies with object clitics. Definite articles are represented as clitics, some indefinite

articles coincide with numerals (Prévost 2009; Belletti and Guasti 2015). Table 1 gives an overview of the French and Italian article systems.

Table 1. Article systems of French and Italian.

	French		**Italian**	
	indefinite			
	singular	plural	singular	plural
masculine	*un* [œ̃ (n)]	*des* [de(z)]	*un* [un] *uno* [ˈuno]	*dei* [dei] *degli* [ˈdeʎi]
feminine	*une* [yn]		*un'*, *una* [ˈun(a)]	*delle* [ˈdele]
definite				
masculine	*le* [l(ə)]	*les* [le(z)]	*il* [il] *l(o)* [l(o)]	*i* [i] *gli* [ʎi]
feminine	*la* [l(a)]		*l(a)* [l(a)]	*le* [le]

In French, the gender distinction is no longer visible in the plural forms of any article. The definite singular articles' final vowels are elided before vocalic nouns (*le* + *ami* → *l'ami* 'the friend', *la* + *église* → *l'église* 'the church'), and resyllabification (*liaison* as in *les amis* [le.za.mi] 'the friends', *enchaînement* as in *une amie* [y.na.mi] 'a (female) friend') and contraction with prepositions (*à* + *les* → *aux* 'to+the (pl.)', *de* + *le* → *du* 'from+the (masc. sg.)') occur. French articles are all monosyllabic.

In Italian, the choice of the article not only depends on definiteness, gender and number, but also on the phonological shape of the noun. Masculine articles have two allomorphs, of which the less frequent variants *uno*, *lo* and *gli* appear before nouns with [s]/[z]-initial consonant clusters. As in French, final vowels are elided before vocalic nouns and some articles contract with prepositions. Italian has both monosyllabic and disyllabic articles. Monosyllabic articles are proclitic elements, which build prosodic words with nouns. Disyllabic articles are trochaic and metrical feet on their own.

As for the use of determiners, French and Italian differ from each other in that bare nouns in French are extremely rare and restricted to non-argumental positions, idioms, vocatives and complements of individual prepositions (cf. examples 1–4).

(1) *Il est professeur* 'He is a teacher'
He is teacher

(2) *avoir peur* 'be afraid'
have fright

(3) *Garçon ! Un café, s'il vous plaît* 'Waiter! A coffee, please'
Waiter! A coffee please

(4) *par hasard* 'by chance'
by chance

Bare nouns in Italian are possible with uncountable (mass) nouns and generic plurals (cf. examples 5–6), provided that NP is dominated by a lexical head (e.g., in object position); they are ungrammatical in the subject position.

(5) *Luca beve acqua* 'Luke drinks water'
Luke drinks water

(6) *Luca vede gatti* 'Luke sees cats' (Kupisch 2007)
Luke sees cats

In child-directed speech, bare nouns in French amount to a token frequency of 6%, while in Italian they make up 12%, the difference between French and Italian being statistically significant (Kupisch 2004). In other words, children acquiring French are exposed to significantly fewer bare nouns than children acquiring Italian. The role of the input has been claimed to be decisive in the acquisition of determiners and for the explanation of cross-linguistic differences (cf. Section 4.2).

3. Prosodic Status of Nouns in French (and Italian): Implications for Acquisition

When children acquire prosodic structure, most accounts generally relate to the (different levels of the) Prosodic Hierarchy (Selkirk 1984). The different levels are related to each other by specific constraints, e.g., the Strict Layer Hypothesis requires that each level be dominated by the next higher level of prosodic structure. For example, feet must be part of a Prosodic Word, and syllables must be part of a metrical foot; unfooted syllables thus represent a violation of the exhaustivity constraint.

Phonological Utterance (Utt)

Intonational Phrase (IP)

Phonological Phrase (PP)

Prosodic Word (PW)

Foot (Ft)

Syllable (σ)

Mora (μ)

According to this hierarchy, the foot is defined as binary, i.e., it is either bisyllabic (σσ) or bimoraic (μμ). Furthermore, feet can be either trochaic or iambic.[3] These options are related to syllable weight in the following way: Trochaic languages can be quantity-sensitive or quantity-insensitive while iambic languages are always quantity-sensitive (cf. Van Oostendorp 2015). In metrical phonology, a range of binary parameters in relation to the foot have been proposed, including headedness (dominance) and quantity-sensitivity/-insensitivity (cf. Van Oostendorp 2015 for an overview).

In French, the existence of the foot is debated. Some researchers accept that French does have metrical feet (e.g., Demuth and Tremblay 2008), generally positing iambic structures (but see Selkirk 1978 for a trochaic analysis). On the other hand, more recently scholars have refrained from this position on theoretical and empirical grounds (Andreassen and Eychenne 2013; Wauquier and Yamaguchi 2013; Özçelik 2017). An alternative analysis to the constituency of the Prosodic Hierarchy includes a grid-only approach for stress assignment in French (Andreassen and Eychenne 2013). In a typological comparison, Özçelik (2017) claims that French is a footless language and that the absence/existence of the foot is a parametric option, with the absence of a foot being the default value. Wauquier and Yamaguchi (2013) demonstrate empirically that children acquiring French, after having produced early CV outputs followed by VCV and (reduplicated) CVCV forms, resort to a prosodic template (an 'accentual arc') as their first prosodic unit and not to the foot. This arc corresponds to the theoretical descriptions of the basic structure of the Phonological (or Accentual) Phrase as the domain for stress in French (cf. Section 3.2).

3.1. Noun Length

In French, (prosodic) words tend to be rather short while they are substantially longer in Italian (and other Romance languages such as Spanish, cf. Lleó 2006), as Table 2 shows:

Table 2. Length of (prosodic) words in French and Italian.

	French (Demuth and Johnson 2003)		**Italian (Guasti et al. 2008)**
monosyllabic	45% *chat* 'cat'		3% *re* 'king'
disyllabic	47% *maison* 'house'		59% *strada* 'street'
trisyllabic	7% *animal* 'animal'	8%	38% *colore* 'color'
other	1%		

Although direct comparisons of these numbers are not straightforward because of different corpora (prosodic words of child-directed speech in French, content words in Italian), it is obvious that French mostly has mono- and disyllabic words in roughly equal distribution (92% in total). Words of three or more syllables are rare (8%). Italian, by contrast, favors disyllabic (59%) and multisyllabic words with three or more syllables (38% in total). Monosyllabic nouns mount up to only 3%.

In the context of word length, truncations are a typical phenomenon in acquisition cross-linguistically. Truncations of nouns occur with multisyllabic nouns or as a strategy to produce (proto-)determiners at the expense of noun reduction (examples 7–8):

(7) *chapeau* [po] 'hat' (Demuth and Tremblay 2008, p. 125)

(8) *un médicament* [apamã] 'a medicine' (Wauquier and Yamaguchi 2013, p. 15)

In contrast to lexical stress (cf. Section 3.2), noun length certainly is not parametrized in grammar. Depending on which approach is taken, it rather comes as a result of the gradual acquisition of the Prosodic Hierarchy or the production of a template. In this line of argumentation, noun truncations are to be analyzed as performance phenomena reflecting phonological competence in language acquisition. Hence, a truncated quadrisyllabic noun, which appears as a disyllabic output, possibly indicates that the metrical foot or the two constitutive syllables of the accentual arc are acquired, respectively, but not yet higher levels of prosodic structure. However, noun truncations reflect prosodic properties of the adult language. In French, for example, the final syllable is systematically preserved (e.g., Paradis 2001).

3.2. Lexical Stress

Another prosodic difference in relation to noun length is that Italian has lexical stress, which is principally variable. There are, however, morphonological regularities and a strong preference for penultimate stress (93.3% for disyllables and 81.1% for trisyllables as in *strada* 'street' and *colore* 'color'; Mancini and Voghera 1994), yielding highly frequent disyllabic Sw and trisyllabic wSw (w = *weak*, S = *strong*) structures.

In contrast, French has an invariable phrasal accent in final position instead of word stress. Stress does fall on the final full (non-schwa) syllable in isolated words, but it is given up in larger prosodic units. Therefore, the prosodic domain for accentuation in Italian is at the word level whereas in French it is the Phonological (or Accentual) Phrase (Jun and Fougeron 2000; Post 2000). The phrasal accent thus interacts with intonational boundary tones. At the very extreme, French has been claimed to be a language without pitch accents (Féry 2001). An optional initial accent counter-balancing the final accent is widely acknowledged but interpreted differently with regard to its possible positions within the phrase (first or second syllable, H plateau) and its alignment (content words only or also functional morphemes; Jun and Fougeron 2000; Özçelik 2017).

In Italian, where the penultimate wSw template is highly frequent in trisyllabic (prosodic) words, this rhythmic template gives rise to the prosodification of unfooted monosyllabic articles and disyllabic nouns (w+Sw: *la strada* 'the street'), which are also

very common (cf. Table 2). Disyllabic articles, on the other hand, constitute metrical feet of their own in Italian and should not be in relation to noun length in acquisition, as has been shown for Spanish (Demuth et al. 2012), which features comparable prosodic properties in terms of noun length and stress. Thus, disyllabic articles only appear when two metrical feet are represented within a prosodic unit (e.g., the Phonological Phrase: *una strada* 'a street'). For D prosodification, then, Italian relies on nominal templates based on lexical stress within the (trochaic) foot.

In French, lexical stress is nonexistent, and the presence of the foot is highly contested. In other words, French does not provide early phonological evidence for D prosodification as Italian does (and many other languages displaying word stress and metrical feet). On Wauquier and Yamaguchi's (2013) templatic account, the first prosodic unit in acquisition is [,σ (σ) σ'] as derived from the input, where the first and final syllables contain stress, while the intermediate syllable(s) are optional and variable in number. The existence of lexical stress has been analyzed as a parametric option (Dresher and Kaye 1990; Hayes 1995; Van Oostendorp 2015).

4. The Acquisition of Determiners in French

The acquisition of determiners in French has been studied both in monolingual as well as in bilingual children. However, studies on bilinguals all analyze French acquired along with a Germanic language (e.g., Dutch, German), and none of them takes phonological factors into account. Studies on monolingual French, on the other hand, have yielded interesting results regarding prosody. In what follows, D omissions refer to target-deviant omissions if not indicated otherwise.

4.1. Monolingual French

Like in many other languages, monolingual French children start off with lexical categories, i.e., they omit D and only produce nouns in NPs (or DPs) to start off with. Bassano (1998, p. 36) observes an omission rate of 84% between ages 1;2[4] and 1;5. In a cross-linguistic study, D omissions amount to 44% in children aged 1;8 (MLU[5]: 1.58; Bassano et al. 2008, p. 415). Kupisch's (2007, p. 93) longitudinal data show omissions of 56% between 1;9–1;11. Two children analyzed longitudinally by Demuth and Tremblay (2008, p. 111) omit D in more than 50% between 1;11 (MLU 2.16) and 2;1 (MLU 2.34). From 2;6–2;8, D omissions decrease to 5% in Kupisch's (2007) data, corresponding to frequencies of the (adult) input (6% bare nouns; Kupisch 2004). Veneziano and Sinclair (2000, p. 37) observe omission rates as low as 2.8% at age 2;2,6 already.

As the acquisition of prosodic structure proceeds, noun truncations and D placeholders appear along with D omissions in French. The truncations are mostly found with trisyllabic nouns, which are reduced to disyllables (Demuth and Tremblay 2008, pp. 113–15). Demuth and Tremblay (2008) observe a relationship between truncations and D realizations as a function of noun length:

> [D]eterminers come to precede at least 75% of all monosyllabic nominals precisely when most disyllabic and trisyllabic target nouns are no longer truncated to monosyllabic outputs. Similarly, the percentage of determiners occurring before disyllabic words reaches at least 75% exactly when most trisyllabic target nouns are no longer truncated to disyllabic outputs (Demuth and Tremblay 2008, p. 118).

Highest percentages of placeholders are documented at around ca. 1;8, though with varying proportions across the literature (Bassano 1998: ca. 30%; Veneziano and Sinclair 2000: 39%; Bassano et al. 2008: 14%; Demuth and Tremblay 2008: 69%). The vowels/a/,/ø/and/e/represent typical D placeholders (Bassano et al. 2008, pp. 417–18).

Although D omissions decrease continually, D realizations are on the increase. At age 2;1/2,2, monolingual French children produce D in more than 50% but there is considerable individual variation (Heinen and Kadow 1990, p. 59). In Demuth and Tremblay's (2008, p. 111f.) study, target-like D realizations make up 58% and 68% at 2;1/2;2 (MLU 1.93/2.34). Veneziano and Sinclair (2000, pp. 471–72) find a (high) percentage of 91.5% at

2;2,6 (but the authors do not distinguish D realizations from D placeholders). Bassano (1998, p. 37) reports on grammatical D realizations of 75% at 2;4 and of 95% at 2;5. In Bassano et al.'s (2008, p. 415) cross-linguistic study, target-like D realizations (and target-like D omissions) are found from 2;6 (ca. 80% in sum). The first D are definite, masculine and singular articles (Clark 1986, pp. 728–30; Bassano et al. 2008, pp. 418–21).

Prosody in terms of noun length plays an important role in the acquisition of French since D first occurs with monosyllabic nouns (Demuth and Tremblay 2008, pp. 115–19). The same developmental path has been established for placeholders (Bassano et al. 2008, pp. 421–23). These observations can be explained by the gradual acquisition of prosodic structure, be it the Prosodic Hierarchy or the accentual arc. According to Demuth and Tremblay (2008), at first functional elements (like D) cannot be prosodified at all (yielding D omissions), then within a metrical foot (with monosyllabic nouns), then within a Prosodic Word (with disyllabic nouns) and only latest within a Phonological Phrase (with tri- and multisyllabic nouns; Demuth and Tremblay 2008, pp. 119–20).

(Morpho-)syntactic factors also play a role in the acquisition of D: Tremblay (2006), who analyzes data of Max, a monolingual Canadian French child aged 1;9–2;3 (corresponding to an MLU of 1.1–2.8), shows that disyllabic nouns are first produced without D before the sequence of D + monosyllabic nouns emerges, even though both structures are prosodically identical when it comes to length (number of syllables). The study focuses on the production of well-formed disyllabic nouns (2N), the sequence of D + monosyllabic noun (D1N) and the sequence of D + disyllabic noun (D2N). Max prosodifies 2N before D1N; D1N, in turn, is produced before D2N, for which 90% accuracy is not reached until the end of the analyzed period (2;3, MLU: 2.8). The highest percentage of 84.2% of D2N sequences is documented at 2;2 (MLU: 2.6).

French D are analyzed as free clitics, which adjoin to Prosodic Words within a Phonological Phrase. In the acquisition path as suggested by Demuth and Tremblay (2008) for French, following the determinerless no-clitic stage marked by the absence of functional elements, children prosodify determiners within the prosodic level of the foot. Arguably, D can be prosodified with monosyllabic nouns (*le chat* 'the cat') or in its elided form with vowel-initial disyllabic nouns (*l'orange* 'the orange') in this stage because the metrical foot comprises maximally two syllables according to the Prosodic Hierarchy. Next, D is prosodified as an unfooted syllable within a Prosodic Word, giving rise to the prosodification of D and disyllabic N (*la maison* 'the house') and in its elided form with vowel-initial trisyllabic nouns (*l'aventure* 'the adventure'). Finally, when the Phonological Phrase is acquired, D as a prosodically free clitic can be prosodified with even longer Prosodic Words (such as trisyllabic nouns or more) to build a Phonological Phrase with them (Demuth and Tremblay 2008, p. 120). The two children's data analyzed by Demuth and Tremblay (2008) for D realizations and noun truncations reveal some individual variation, which is explained by different types of access of the Prosodic Hierarchy.

Comparing monolingual English, French and Spanish, Demuth et al. (2012) find that higher rates of multisyllabic nouns in children's input lead to a relatively earlier acquisition of higher levels of the Prosodic Hierarchy. Longitudinal data from two Spanish-speaking children from the CHILDES database (MacWhinney 2000) confirm that D can be prosodified and acquired earlier in Spanish than in English and French, where nouns are comparatively short. This tendency is borne out for monosyllabic D: the longer the noun, the later monosyllabic D are prosodified with it. By contrast, this effect is not attested for disyllabic D, which are interpreted as independent Prosodic Words by the authors.

In a comparative study contrasting L1 French and L1 Dutch, Van der Velde (2004) exemplifies that Romance-speaking children acquire D earlier than children with a Germanic language. In an experimental setting with children aged between three to six years, Dutch children have substantially higher omission rates than French children, and they do so for a longer time. For example, in isolated DPs, Dutch three-year-olds produce more than 20% of bare nouns, while the omission rate of their French peers is only 5%. These results are explained by the evidence in the input of the respective target languages and have also

been evidenced in other contrastive studies of Romance/Germanic (Chierchia et al. 2001 on French and Italian vs. English and Swedish; Lleó and Demuth 1999 on Spanish vs. German). Chierchia (1998) relate their findings to the Nominal Mapping Parameter, which has different settings for Romance and Germanic languages (cf. Section 1). Lleó and Demuth (1999) provide a prosodic explanation: the higher frequency of unfooted syllables in Spanish and thus, the violation of the exhaustivity constraint, allows for an earlier prosodification of D in contrast to German. The common ground of these studies is that major importance is attributed to the linguistic input children are exposed to—be it syntactic or prosodic.

4.2. Bilingual French

Although it is generally assumed that children are able to separate their languages early on (cf. Section 1), there is code-switching (e.g., Müller et al. 2015) and cross-linguistic transfer in terms of acceleration, delay and transfer (e.g., Paradis and Genesee 1996; Lleó 2016). Explanations for (the direction of) influence include structural ambiguity, especially in syntax (Müller and Hulk 2001), linguistic complexity or markedness, which has been put forward for phonological phenomena (Kehoe 2002; Lleó 2002; Stahnke 2019), and language dominance as a language-external source (Bernardini 2003; Kupisch and Bernardini 2007).

Longitudinal studies have described the acquisition of D in French by children who also acquire a Germanic language, e.g., Dutch (Hulk 2004), English (Pupier 1982; Paradis and Genesee 1997), German (Berkele 1983; Müller 1994; Kupisch 2003, 2006, 2007, 2008) and Swedish (Granfeldt 2000, 2003). As in monolingual acquisition, omissions and placeholders dominate before 2;0 (e.g., Berkele 1983; Müller 1994; Granfeldt 2000). Another commonality is a tendency for overgeneralized definite, masculine and singular article forms, which are acquired first (Pupier 1982; Berkele 1983; Müller 1994; Hulk 2004). Müller (1994, p. 59) attributes the early production of indefinite D which have homophonous numerals to a phase in which DP corresponds to a flat structure XP + N (X being filled by numerals, adjectives or placeholders; cf. Granfeldt 2000; Hulk 2004).[6]

Cross-linguistic and longitudinal data of French-German children indicate that language dominance is not necessarily related to cross-linguistic influence. Since D is acquired later in German than in French (cf. Section 4.1), French could positively influence German. The French-dominant child in Kupisch's (2008) study shows comparable omission rates in both languages, which seems to support this assumption. However, the German-dominant child's data exhibit high omission rates in French only in an aged-based comparison, which does not fully support (negative) influence from the strong language. Kupisch (2006) finds both acceleration in German and delay in French, which are independent of dominance:

> [C]hildren with similar degrees of language balance do not necessarily show the same rate of determiner development [. . .]. Vice versa, there are children with different degrees of balance who show similar patterns in terms of influence. [. . .] In short, we may conclude that language balance alone does not allow for unequivocal predictions concerning language influence (Kupisch 2006, pp. 138–39).

Possible effects of language-specific prosody or of interactions between the two prosodic systems on D acquisition are not considered in any study on bilingual acquisition involving French.

To sum up, despite some variation across children, empirical studies on both monolingual and bilingual acquisition of French D converge on the finding that children first produce determiners between 1;5 and 2;0 but that D omissions (and D placeholders) predominate before 2;0. In monolinguals, an incidence of 50% of D realization is achieved around two years of age until ca. 2;6. 90% are reached between 2;1 and 2;9 (Tremblay 2006; Kupisch 2006, p. 105 for a review), once again revealing a high degree of variability (Prévost 2009, p. 251).

4.3. Research Questions and Hypotheses

Departing from the prosodic characteristics of French and the available studies on monolingual French children which respect to prosody as an explanatory factor in D acquisition, the following research questions and hypotheses are investigated:

RQ1. *How do bilingual children acquire D in French?*

Hypothesis 1 (H1). *D is first acquired with monosyllabic, then with disyllabic, then with tri- and multisyllabic nouns.*

H1 is postulated under the assumption that bilinguals are able to separate their two languages, which has been shown for morphosyntax (e.g., Meisel 1990) and for prosody (e.g., Paradis 2001). The fact that bilinguals acquire a grammatical property like monolinguals do has been used as evidence for separation. Nevertheless, there may be cross-linguistic influence:

RQ2. *Does Italian positively influence the acquisition of French D because of language-specific prosody?*

Hypothesis 2 (H2). *French-Italian bilinguals acquire D in French in an accelerated fashion when compared to monolinguals.*

H2 is based on the prosodic differences between Italian and French in terms of noun length (cf. Table 2). Since Italian has considerably more multisyllabic nouns than French, it is assumed that bilinguals who acquire both languages will be advantaged compared to monolingual children acquiring French: Based on the comparison between monolingual Spanish and monolingual French (Demuth et al. 2012), and given the fact that Spanish and Italian are comparable to each other with respect to noun length, Italian children should acquire higher levels of the Prosodic Hierarchy earlier than French children. Bilinguals who acquire both languages, then, should be able to prosodify D (+N) earlier because they have acquired the relevant levels of the Prosodic Hierarchy. This is especially relevant for French, where prosodic feet presumably do not exist, but stress is assigned at the phrasal level. As a consequence, bilingual children will be accelerated in French when compared to monolingual children despite overall language separation.[7]

Importantly, it must be kept in mind that D is produced significantly more often in French (6%), than in Italian (12% in child-directed speech, cf. Kupisch 2004). This gives rise to unequivocal evidence for children acquiring French, which is less clear in Italian. In French-Italian bilingual children, Italian could influence French negatively (while French could influence Italian positively). The question which needs to be addressed in this context is how phonological factors are to be weighed against syntactic factors of the input.

Language dominance, if present in bilingual children, has not yielded any clear result as to D acquisition by bilinguals (cf. Section 4.2):

RQ3. *How does language dominance affect D acquisition in French-Italian bilingual children?*

Hypothesis 3 (H3) . *Language dominance (alone) cannot account for the acquisition of French D by bilingual children.*

As a matter of fact, H3 predicts that language dominance is either not meaningful for D acquisition or that it must be linked to other factors, e.g., to phonological or syntactic ones. At any rate, it does not imply that the French-dominant child outperforms the Italian-dominant child in French.

5. Methodology

5.1. Participants

Two longitudinal case studies of simultaneous French-Italian bilingual children are contrasted with each other and described in their development of D acquisition. Both children acquire French and Italian by the one-person-one-language scenario, i.e., the parents have different native languages, and each one speaks their language to the child (Romaine 1995). They were recorded every fortnight in natural interactions with their parents for roughly half an hour in each language.[8]

Ju_fi acquires French as her dominant language. She was born in Paris, where the family also lives during the time of the recordings. Her mother is French, and her father is bilingual French-Italian. The family language is French. Ju_fi was recorded for French in 42 sessions from age 1;8,16 until 4;11,16 (Hauser-Grüdl et al. 2010), 30 of which have been analyzed for the present study until age 3;5,17. They include 3361 NPs overall.

Figure 1 shows Ju_fi's MLU development for both her languages, French and Italian. From the beginning, Ju_fi's MLU in French outranks that of Italian. For example, she arrives at an MLU of 2 at around age 2;0 in French, but only at around 2;3 in Italian. The difference in MLU continually becomes larger as Ju_fi grows older.

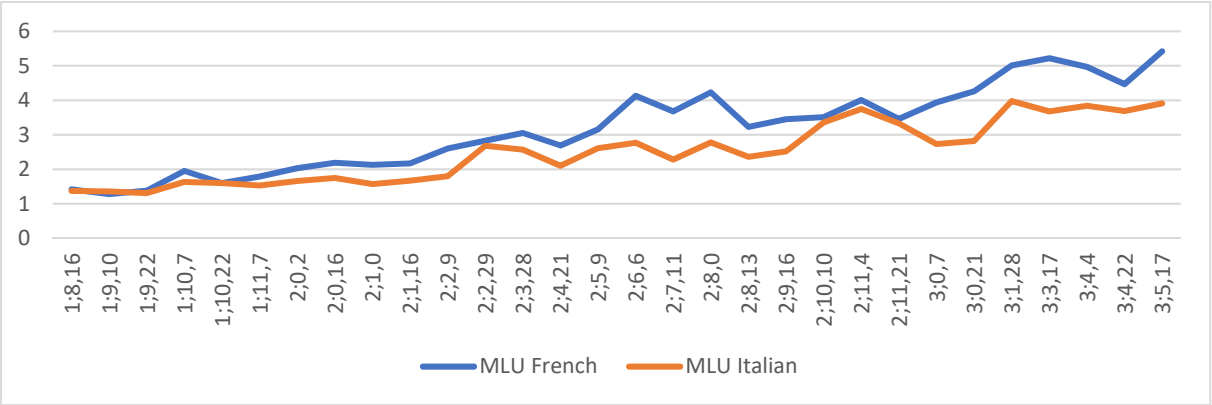


Figure 1. Ju_fi's MLU development in French and Italian.

For Si_fi, French is the weak language. She was born in Rome, Italy. Her father speaks Italian, her mother (Swiss) French. The family resides in Italy, i.e., the community (and also the family) language is Italian. Apart from her mother, Si_fi encounters French on travels to Switzerland or upon visit from her Swiss grandparents. Overall, Si_fi was recorded 66 times from 1;6,12 until 5;0,12 (Hauser-Grüdl et al. 2010); 38 recordings until age 3;5,8 including 1,156 NPs have been selected for the analysis.

According to Figure 2, which is structured like Figure 1 above, Si_fi's MLU is almost always higher in Italian when compared to French even though there are more irregularities than in Ju_fi's case. The preponderance of Italian is most marked from around 2;8 onwards.

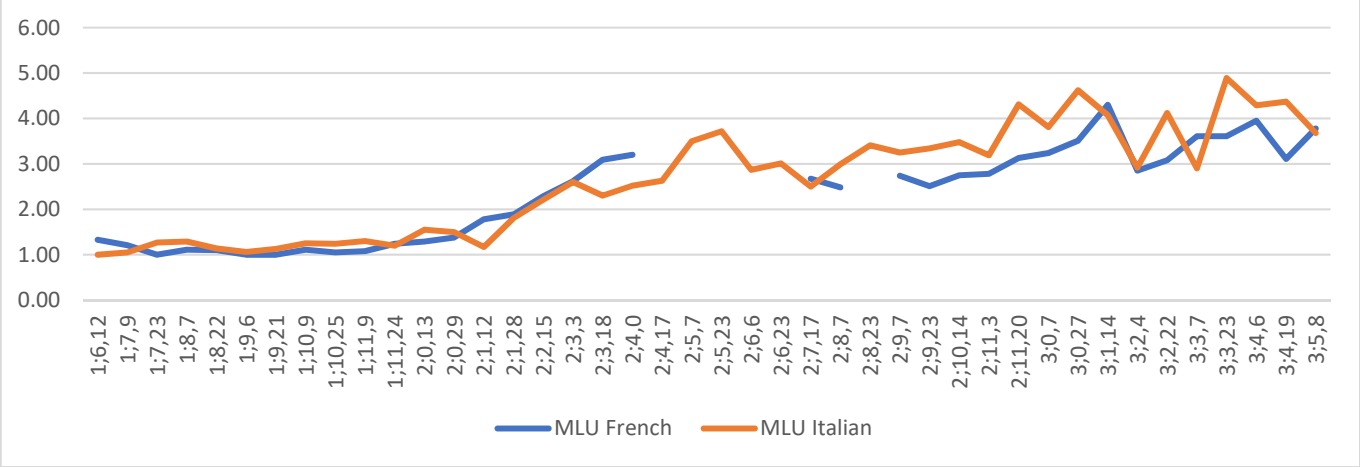


Figure 2. Si_fi's MLU development in French and Italian.

Note that even though both children's dominant language coincides with the language spoken by the community, this is not in perfect correspondence because there are also children whose community language is the weaker language (cf. Stahnke et al. 2021).

5.2. Analysis

Even though Tremblay's (2006) data are based on only one child, it is the only one that allows for comparisons with monolingual French when prosodic factors like noun length are examined. With these reservations in mind, the present study largely relies on the results in Table 3 for an evaluation of the research questions and hypotheses because no other studies are available for French. Note that comparisons to Tremblay (2006) can only be made for the D1N and the D2N contexts. D prosodifications with trisyllabic nouns or more are collapsed into the category D3+N in the data analysis.

Table 3. Max' D prosodification at different thresholds[9] (adapted from Tremblay 2006).

	First Appearance: Age (MLU)	**Stability: Age (MLU)**
50% D1N	1;1 (1.1)	2;0 (1.9)
90% D1N	2;1 (2.2)	2;2 (2.6)
50% D2N	2;1 (2.4)	
90% D2N	-	-

All NPs (except for proper names) were extracted and coded for D realization/omission as well as for several prosodic (e.g., length, stress pattern), syntactic (e.g., number, gender, definiteness) and other features (e.g., semantics, frequency). The corpus consists of 4517 nouns in total. As in Tremblay's (2006) study, fillers (proto-determiners) are analyzed as instances of D. As Tremblay (2005) lays out, these may be considered actual proto-morphemes of determiners, which is a common and cross-linguistic assumption in the literature on Romance (cf. Bottari et al. 1993 on Italian; Lleó 1998, 2001 on Spanish). Comparability between Tremblay's (2006) and the present study is therefore given.

(9)	*(je veux) pas* [a] *film* (I want) not [a] movie	'I don't want a movie'	(Ju_fi, 2;1,18)
(10)	[e] *chien* [e] dog	'a dog'	(Ju_fi, 2;2,7)

For a thorough analysis of the data, a priority was given to the MLU-based account, which has shown to be a more reliable reference than age in longitudinal studies of multilingual children (cf. Arnaus Gil and Müller 2019). MLU periods in intervals of 0.5 were

used for a readable and interpretable presentation of the results, once again following standard conventions in research on bilingual language acquisition. These periods are not meant to reflect existing stages but have been established for visual representation and statistical analyses.

There is no agreement on the question of which threshold(s) to choose for a given category to be acquired (e.g., Stahnke 2022). We will report on the 90% threshold as a marker of acquisition, following, e.g., Prévost's (2009, p. 251) incidence rate of D realizations in a comparison of several studies on L1 French. Since absolute numbers in the data at a given point in time are occasionally quite low, a percentage of 90% correct is considered only when the rate does not decrease below that mark in the following recordings (indicated as 'stability' of D prosodification in Table 3).

Statistical analyses were performed on percentages of legitimate D realizations. Since data are not normally distributed, two-tailed Mann-Whitney U tests were applied in order to test the possible effects of noun length within (H1) and across children (H2) and of language dominance (H3). To evaluate noun length within each individual, all data were included for Ju_fi and Si_fi. Where applicable, individual MLU intervals were also statistically assessed. For a comparison of the bilingual children with monolingual Max, the shared MLU ranges from 1.0–3.0 were used in the tests. When bilingual Ju_fi and Si_fi were compared to each other, the MLU range available for both children was from 1.0–4.5.

6. Results

6.1. Acquisition Paths of Bilingual Children

Figures 3 and 4 illustrate Ju_fi's and Si_fi's acquisition paths of D realizations according to noun length from MLU 1.0–5.5/4.5. D1N is represented by blue lines, D2N by orange lines and D3+N by grey lines. Exact numbers of the children's individual recordings can be found in the Appendix A (Tables A1 and A2).

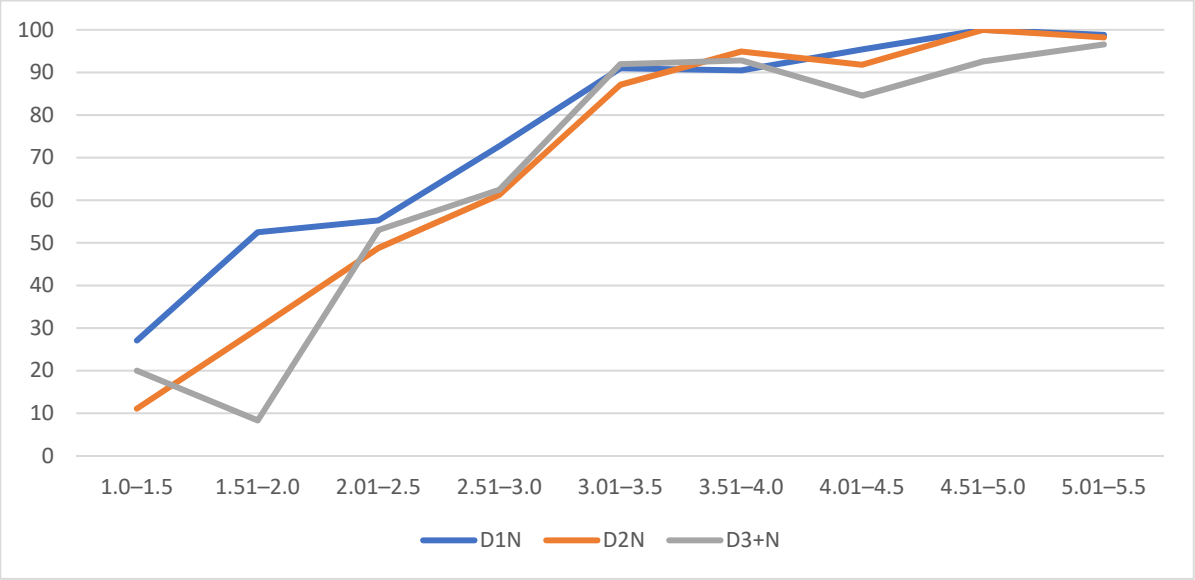


Figure 3. Ju_fi's D realizations according to noun length (%).

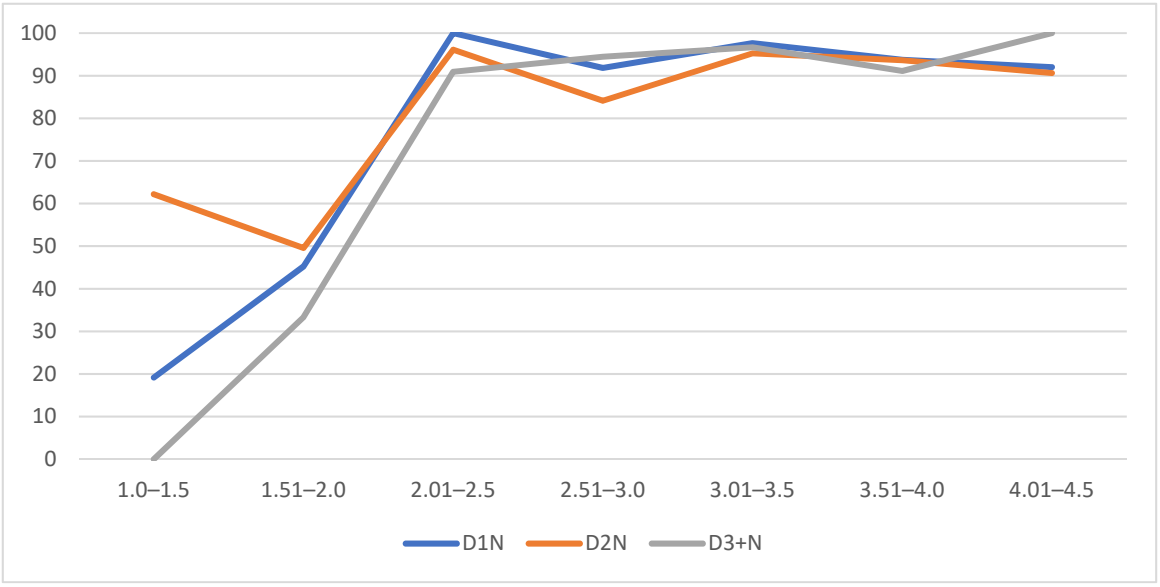


Figure 4. Si_fi's D realizations according to noun length (%).

As expected, D realizations gradually increase in all three categories. Descriptively, monosyllabic nouns feature most target-like realized determiners, especially in the beginning, followed by disyllabic nouns and trisyllabic nouns or more. More precisely, Ju_fi acquires D1N in 90% of the cases by MLU 3.94 (92.3%). As for D2N, 90% accuracy is achieved from MLU 4.23 onwards (91.0%). Finally, D3+N is acquired by MLU 4.47 (90.0%). However, none of the differences between the three prosodic contexts is significant over the entire dataset (D1N/D2N: $p = 0.59612$; D1N/D3+N: $p = 0.242$; D2N/D3+N: $p = 0.50286$). The same is true for the earliest intervals between MLU 1.0 and 2.0, where differences appear to be larger (e.g., D1N/D2N: $p = 0.88076$[10]).

Si_fi's acquisition path of D, like Ju_fi's, is also marked by a continual increase of target-like realizations in all three categories. When comparing Figures 3 and 4, it is noteworthy that there seems to be a sudden boost of D realizations in Si_fi's development at MLU 2.0–2.5, while Ju_fi rather acquires D in a piecemeal manner. In fact, while Ju_fi reaches the 90% thresholds for the three prosodic contexts one after the other in the order of noun length, this is not the case in Si_fi's data: D1N is acquired at MLU 4.30 (92.0%), D2N at MLU 3.51 (90.0%) and D3+N at MLU 3.95 (91.7%). In other words, D is prosodified with longer nouns even before monosyllabic nouns (at least in an MLU-matched comparison), and D2N and D3+N fall within the same MLU range. Despite these descriptive differences, however, no significant differences prevail in the data in an overall comparison (D1N/D2N: $p = 0.62414$; D1N/D3+N: $p = 0.93624$; D2N/D3+N: $p = 0.72786$) and also at the beginning from MLU 1.0–1.5 (e.g., D1N/D2N: $p = 0.17384$).

6.2. Bilinguals vs. Monolinguals

Figure 5 illustrates the comparison between the bilingual children and Tremblay's (2006) monolingual case study of Max for monosyllabic and disyllabic nouns (recall that Tremblay does not take into account nouns longer than two syllables) until an MLU of 3.0 (the maximum MLU value in Tremblay's study is 2.8). D1N prosodifications are represented by dotted lines and D2N by straight lines (blue: Ju_fi, orange: Si_fi, green: Max).

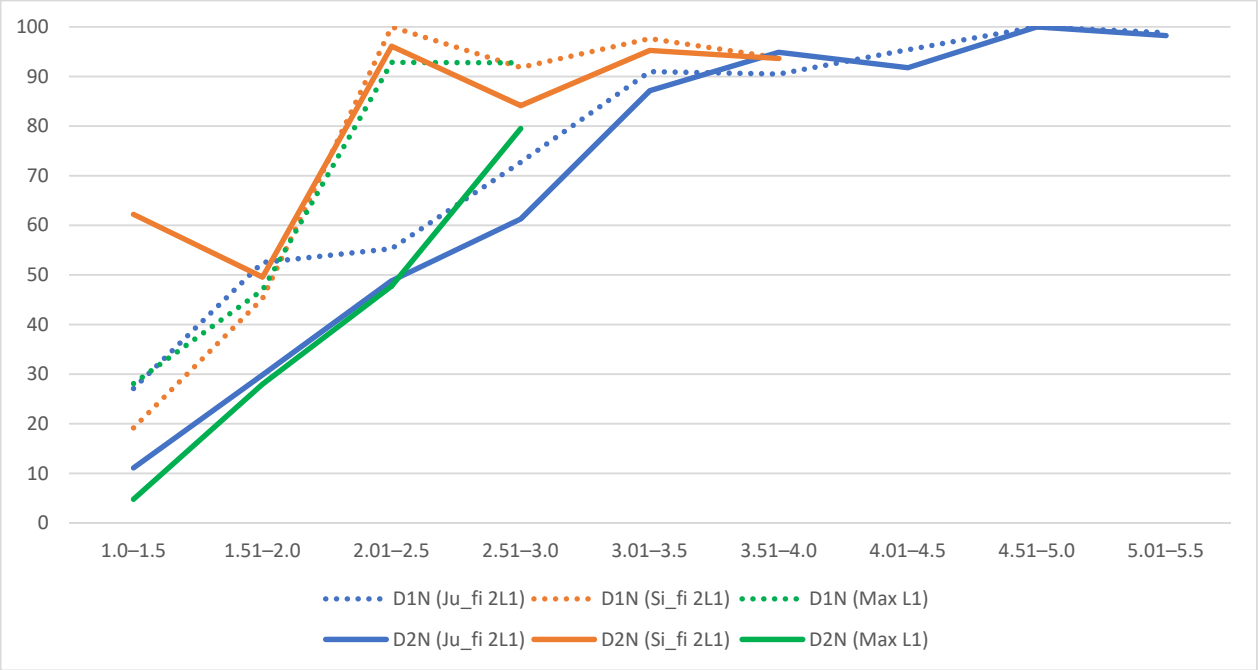


Figure 5. D realizations according to MLU—bilingual children vs. monolingual child (%).

Both Max and Ju_fi are comparable to each other in that D1N are acquired with a greater accuracy than D2N. In general, Max seems to acquire D more target-like than Ju_fi, especially in the D1N context from MLU 2.0 onwards, whereas for Ju_fi, the mean accuracy of D1N is only at 55.3% and at 92.9% for Max although the difference for D1N is not significant ($p = 0.05744$ overall; $p = 0.86502$ from MLU 2.0–3.0). A similar contrast is noticeable for D2N, especially at 2.51-3.0 with a mean percentage of 61.3% for Ju_fi and 79.5% for Max. In this case, the difference is significant in the data ($p = 0.00758$ overall).

For D1N, Si_fi's data are very much comparable to those of Max. Ultimately, she attains 91.8% at MLU 2.5–3.0, largely corresponding to 92.8% in Tremblay's (2006) study in the same MLU period. These differences are not significant ($p = 0.07508$). D realizations with disyllabic nouns appear to be more target-like for Si_fi than for Max in general. The final rates are quite similar to each other (84.1% and 79.5%, respectively) but Si_fi acquires D2N with greater accuracy than Max overall, especially in the beginning. The data reveal a significant difference between Si_fi and Max ($p = 0.00008$ overall).

The age-based literature on D acquisition by monolingual French children states that 90% accuracy is arrived at between 2;1 and 2;9 (cf. Section 3). Based on this comparison, Ju_fi lags behind. Her total D realization rate does not drop below the 90% threshold only from 3;0,10 onwards. Si_fi, on the other hand, realizes more than 90% of all determiners after age 2;3,18 already. She thus falls within the range of monolingual children, and this at a relatively early age. Even though the age span documented in the literature is quite large, the age difference between Ju_fi and Si_fi of almost nine months is considerable.

6.3. Language Dominance

In order to evaluate the role of language dominance in the two bilingual children, Figure 6 visualizes the total scores of D realizations across MLU ranges for Ju_fi (blue line) and Si_fi (orange line).

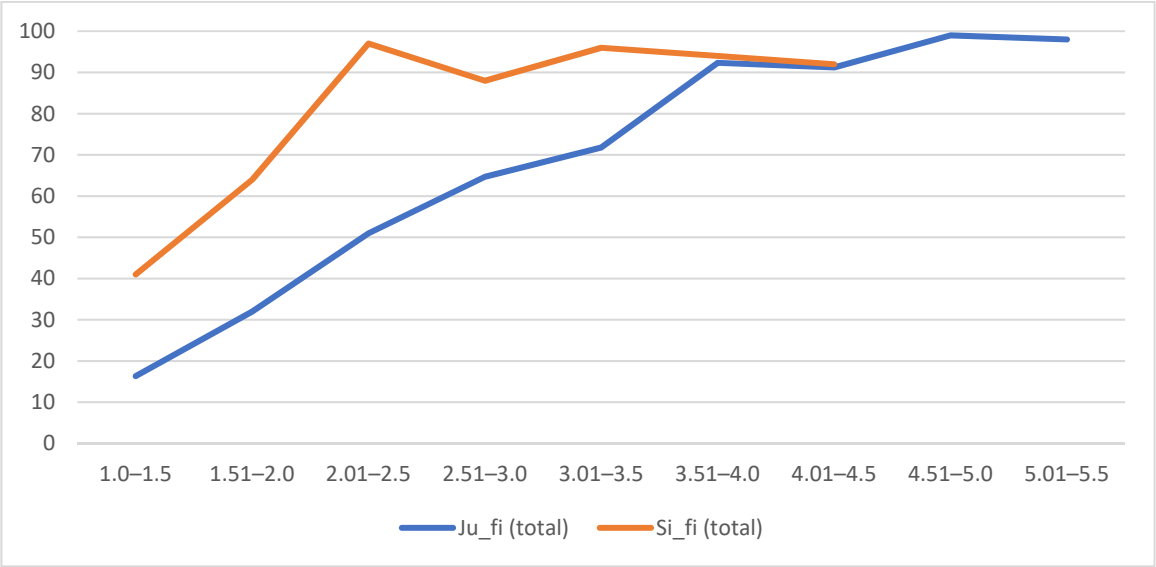


Figure 6. Total D realizations compared (%).

Si_fi's target-like D realizations permanently range above those of Ju_fi, especially at the onset of D acquisition. These differences are not significant over the entire dataset at $p = 0.12114$ but from MLU 1.0–4.0 ($p = 0.0083$). As Figure 6 indicates, the children's acquisition routes diverge from each other especially at MLU period 2.0–2.5 with a marked difference of 42.0% versus 97.0% of D realizations. Somewhat surprisingly, even though Si_fi acquires French as her weak language (cf. Section 5.1), she performs more target-like in French in early acquisition when compared to French-dominant Ju_fi.

7. Discussion and Conclusions

7.1. Interpretation of Results

Considering the hypotheses developed in Section 4.3, the following evaluations can be made:

Hypothesis 1 (H1). *D is first acquired with monosyllabic, then with disyllabic, then with tri- and multisyllabic nouns.*

The descriptive comparison of the three prosodic contexts reveals that for both bilingual children, the route of D acquisition varies greatly: Using the 90% stability measure of target-like D realizations in an MLU-matched comparison, H1 can only be confirmed for Ju_fi, who first acquires D with monosyllabic, then with disyllabic and at last with trisyllabic nouns or more in chronological order as her MLU grows. This systematic order is not attested in Si_fi's data. The prosodic differences are discernible in Ju_fi's data but not (directly) in Si_fi's data. Within children, however, the differences in noun length do not yield a significant result.

Hypothesis 2 (H2). *French-Italian bilinguals acquire D in French in an accelerated fashion when compared to monolinguals.*

On the basis of the data analyzed H2 can only be confirmed with respect to the D2N context in Si_fi. In Ju_fi's case, Max performs more target-like from MLU 2.0/2.5 onwards, with a significant difference for D2N. These results are in line with the age-based comparison. Ju_fi acquires D later than monolinguals and may therefore be characterized as delayed.

Hypothesis 3 (H3). *Language dominance (alone) cannot account for the acquisition of French D by bilingual children.*

As expected, language dominance cannot determine the overall outcome of D acquisition. Quite on the contrary, Italian-dominant Si_fi's results are significantly more target-like than French-dominant Ju_fi's until MLU 4.0. What is more, Ju_fi is even delayed in the D2N context. Based on the present data analysis, H3 can be confirmed when the last MLU interval is left unconsidered. We can conclude from these data that cross-linguistic influence is independent of language dominance, confirming previous studies (e.g., Kupisch 2008).

Summing up, D is first prosodified with monosyllabic and disyllabic nouns and only later with tri- or multisyllabic nouns in both children. On closer inspection of the children's acquisition paths, there are individual differences in that Ju_fi acquires D as a function of noun length whereas Si_fi does not (H1). Although this finding does not reach statistical significance, it needs explanation. Secondly, regarding the hypothesized positive influence in terms of acceleration, Si_fi's data indicate an acceleration effect for the D2N context. Ju_fi, on the other hand, is delayed when compared to Max, once again only when disyllabic nouns are considered (H2). Finally, when comparing the two bilingual children to each other, Si_fi significantly outperforms Ju_fi, independently of language dominance (H3).

The different acquisition routes of Ju_fi and Si_fi may be explained by the rich prosodic input of Italian and its effects on D prosodification in French. Ju_fi produces D like monolingual Max does, i.e., first with monosyllables, then with disyllables and at last with tri-/multisyllables. The prosodic input of Italian including longer nouns does not seem to have a bolstering effect on French, which could be accounted for by the status of Italian as Ju_fi's weak language. Si_fi produces D with nouns of varying length at once, roughly speaking. When Italian is dominant, we may conclude that D prosodification in French profits from the Italian prosodic input and that a step-by-step prosodification is unnecessary.

These observations can be linked to the result that Si_fi is accelerated and Ju_fi is delayed in the D2N context: Since for Si_fi there is no need to await the prosodification of D with disyllabic nouns in French, the amount of D2N structures is markedly higher than both in Ju_fi and Max because it has already taken place in Italian (where disyllabic and trisyllabic nouns are frequent). Seemingly, this kind of evidence can only be exploited when Italian is acquired as a dominant language, as in Si_fi's case, because it does not take place in French-dominant Ju_fi.

Interestingly, no significant differences exist in the D1N context among monolingual and bilingual children. It could be the case that disyllabic outputs (D1N) can be prosodified as soon as the foot or the (minimal) prosodic template is instantiated in French, irrespective of language dominance. The differences between the D1N and the D2N contexts underline the importance of more fine-grained phonological analyses and the debate on the first phonological unit in the acquisition of French.

This discussion leads us to the role of language dominance as such. Obviously, the absence of language dominance does not prevent the target-like acquisition of French D (as in Si_fi) but language dominance alone does not guarantee acquisition along the monolingual baseline either (as in Ju_fi). The differences prevailing between the children can rather be captured by an indirect role of language dominance. For example, Si_fi's dominant language (Italian) activates another order of D acquisition than in Ju_fi. This interpretation implies that language dominance affects the development of acquisition (not its outcome) and determines the nature and the direction of influence (for the conflicting evidence of phonological and syntactic factors cf. Section 7.2). Overall, there is much variability across the children and across the prosodic contexts. More data is needed to substantiate or refine these provisional results.

7.2. Parametrization of Prosody

Within generativist theory, a certain amount of input is needed to trigger the setting of a relevant parameter during language acquisition. In the context of D acquisition, the syntactic-semantic Nominal Mapping Parameter and the parametrization of stress (and possibly of feet) have been proposed (cf. Sections 1 and 3.2). For a descriptively adequate explanation of the results, we must posit that the phonological parameter(s) is/are set before the syntactic parameter. This order can motivate the priority of prosody over syntax in the context of D acquisition and the diverging results of the two children.

Language-specific prosodic phenomena including stress, rhythm and intonation are cross-linguistically acquired well before segmental phenomena, possibly during the first year of life (Stahnke 2022). The acquisition and parametrization of syntactic (and semantic) phenomena arguably take place after phonological parameters have been set (e.g., Schulz and Grimm 2019 on a range of syntactic phenomena studied in bilinguals). Generalizing from these assumptions, the phonological evidence of the dominant language can act as a booster in the weak language if phonology has repercussions on the acquisition of a given grammatical phenomenon.

In the course of language acquisition, the foot and (lexical) stress parameters, which lead to the prosodification of determiners and nouns, have to be set within a language. The specification of the French setting is considered the default (absence) value (Özçelik 2017). The opposite setting is found in Italian, where feet exist and lexical stress is systematic (cf. Section 3.2). If the foot is present, children first acquire general (trochaic or iambic) structures of their languages. As the lexicon grows, children next acquire Prosodic Words and Phonological Phrases, where stress in French is assigned. French should be more marked than Italian because stress can only be specified later during the acquisition of prosodic structure, i.e., when the prosodic template has been maximized.

The acquisition of a stress parameter should go hand in hand with the gradual building of prosodic structure. Accordingly, unmarked Italian should be parametrized early, whereas more marked French can only be parametrized when the Phonological Phrase is acquired, which constitutes a parametric difference between the two languages under consideration (and in fact between French and the majority of other Romance languages as well). Assuming that markedness is crucial as to the direction of phonological influence (Kehoe 2002; Lleó 2002; Stahnke 2019), Italian as the unmarked option can influence French as the marked option positively while French should not influence Italian in the same way. However, as we have seen above, language dominance may be crucial in order to activate parametrization.

Taking for granted that the Prosodic Hierarchy is acquired once for all languages by multilingual individuals, bilingual children are forced to parametrize their languages' options simultaneously. This should be trivial when the stress parameter of both languages has the same value, e.g., in Spanish-Italian bilinguals, where both languages have lexical stress, which is triggered by the acquisition of feet or Prosodic Words. In French-Italian bilinguals, on the other hand, the child is forced to parametrize both languages at the first available option, which is Italian. There are two possibilities: (1) The child sets the parameter for French correctly, which leads to acceleration because monolinguals at this point in time would not have set the parameter yet. The availability of longer nouns provided by the Italian lexicon can help the child acquire higher levels of the Prosodic Hierarchy earlier. This line of reasoning explains Si_fi's results (D2N context). (2) However, if the Italian-French child fails to set the French parameter accordingly, s*he must revise her*his choice at a later point in time, which possibly causes delay (cf. Ju_fi). In this way, the advantage of longer nouns in the language-specific lexicon as found by Demuth et al. (2012) can be captured theoretically by the interaction of noun length and the stress parameter.

All other things being equal, we should expect the following effects: Balanced bilinguals acquiring French and Italian are accelerated in French given the positive influence of Italian, their less marked language with respect to stress. In Italian-dominant bilinguals, the high amount of positive Italian evidence in terms of longer nouns also potentially

influences the acquisition of French stress in a positive way. In French-dominant bilinguals, on the other hand, things are more complicated because the stronger language is the more marked one. Theoretically, the parametric advantage of unmarked Italian (including its positive influence on French) may not be exploited due to the weaker status of Italian in the first place. Thus, it could also be possible for a dominant language not to be advantageous. In this way, both language-specific properties including their degree of (un)markedness and their parametric effects as well as language dominance play a role in language acquisition.

Summing up, when comparing the two children with each other, language dominance in the other language may explain a relatively better mastery of D realizations in French (Si_fi's case) while dominance in French does not guarantee successful D realization (Ju_fi's case). If we accept that language dominance is not a direct explanation for the acquisition of a given grammatical phenomenon but can have an indirect impact on the acquisition path, cross-linguistic influence in bilinguals is not only a matter of the linguistic structure of the phenomenon in question but also of its parametric value and the degree of markedness of that value. This approach thus integrates grammatical structure as well as language dominance as an account for D acquisition from a prosodic perspective.

7.3. Outlook for Future Research

Even though the interplay of language-specific phonology and language dominance can explain some findings of the analysis presented, some important prosodic aspects have not been considered in this paper. First, vocalic nouns in French should cause an elision of the final vowel of definite D, reducing the DN sequence by one syllable (*le* + *ami* → *l'ami* [la.mi] 'the friend'). If noun length, and by extension DN length, is decisive, then DN sequences with vocalic N should be prosodified before DN sequences with consonantal N. Some reservations are in order in this respect: As the cursory data show, DN sequences with vocalic nouns are often misanalyzed by children (*le lélélphant* 'the elephant') or left unaffected by elision (*le ami* 'the friend'). A systematic analysis contrasting both types of nouns is needed to evaluate these hypotheses.

Second, noun truncations have not been analyzed but should be included for a thorough completion of the overall picture. As performance phenomena, they are indicative of the acquisition of the Prosodic Hierarchy and the parametrization of stress. For a more reliable evaluation of the data, noun truncations need to be carefully examined in their development. At any rate, Ju_fi's data is expected to display more truncations than Si_fi's data in French. However, stress and its interaction with noun length is only one of several possible factors for D acquisition. We have not systematically considered other phonological or morpho-syntactic and lexical aspects such as gender, number or word frequency, which may be explanatory (e.g., Boyle and Gerken 1997; Kupisch 2007).

The conclusions drawn in this paper are based on only one monolingual control child and two bilingual case studies and must therefore be considered with caution, especially in view of the degree of normal individual variation in the route and rate of language acquisition. Further comparative data of both monolinguals and bilinguals is necessary in order to confirm, reject or refine the conclusions. Balanced children and children with other language combinations and language balance relations should be included in further analyses. Another important factor is the children's input in French. Finally, the two children's second language, Italian, has not been analyzed yet. For a complete analysis of bilingual D acquisition, both languages of one individual need to be considered and compared to each other in bilingual language acquisition.

Funding: This research was funded by the German Research Foundation, grant number 5452914, issued to Natascha Müller.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study. The author thanks the children's parents for making this study possible.

Data Availability Statement: For any questions or further information on the data, please contact Natascha Müller (nmueller@uni-wuppertal.de).

Conflicts of Interest: The author declares no conflict of interest.

Appendix A

Table A1. Ju_fi: Target-deviant bare nouns per recording.

Rec.	Age	MLU	NP	Target-Deviant Bare Nouns							
				Total	%	1N	% of 1N	2N	% of 2N	3+N	% of 3+N
1	1;8,16	1.42	37	33	89	3	100.0	30	88.2	0	
2	1;9,13	1.28	66	54	82	7	53.8	43	89.6	4	80.0
3	1;9,23	1.38	100	80	80	24	64.9	56	88.9	0	
4	1;10,7	1.95	112	58	52	18	41.9	34	55.7	6	75.0
5	1;10,25	1.60	42	33	79	1	33.3	29	80.6	3	100.0
6	1;11,10	1.79	124	91	73	35	67.3	46	74.2	10	100.0
7	1;11,27	2.03	80	34	43	8	26.7	24	55.8	2	28.6
8	2;0,16	2.19	112	55	49	19	55.9	29	44.6	7	53.8
9	2;1,0	2.13	56	35	63	14	66.7	20	60.6	1	50.0
10	2;1,18	2.17	91	37	41	8	29.6	24	43.6	5	55.6
11	2;2,7	2.60	98	40	41	9	32.1	29	43.9	2	50.0
12	2;2,29	2.83	69	30	43	16	45.7	13	43.3	1	25.0
13	2;4,0	3.05	75	9	12	2	11.1	5	11.4	2	15.4
14	2;4,20	2.69	78	17	22	1	4.0	13	28.9	3	37.5
15	2;5,10	3.16	53	11	21	4	14.3	7	28.0	0	
16	2;6,7	4.13	121	18	15	2	4.3	6	1.02	10	40.0
17	2;7,13	3.68	80	8	10	5	10.6	3	11.1	0	
18	2;8,1	4.23	161	16	10	5	7.7	7	9.0	4	22.2
19	2;8,13	3.23	165	10	6	2	3.6	8	8.3	0	
20	2;9,15	3.45	125	7	6	1	2.7	5	6.8	1	7.1
21	2;10,11	3.51	149	9	6	5	10.2	3	4.2	1	3.4
22	2;11,1	4.01	154	12	8	2	3.8	7	10.0	3	9.7
23	2;11,19	3.46	183	20	11	7	13.5	10	10.0	3	9.7
24	3;0,10	3.94	88	6	7	4	7.7	0		2	18.2
25	3;0,21	4.26	122	7	6	1	1.9	4	7.3	2	15.4
26	3;1,26	5.01	186	3	2	1	1.4	1	1.1	1	3.4
27	3;3,19	5.22	164	3	2	0		2	2.4	1	2.1
28	3;4,2	4.97	134	2	1	0		0		2	7.4
29	3;4,22	4.47	163	8	5	4	5.4	2	2.9	2	10.0
30	3;5,18	5.42	173	4	2	2	2.1	1	1.8	1	4.8
total			**3361**	**750**	**22.3**	**210**	**16.9**	**461**	**27.1**	**79**	**18.8**

Table A2. Si_fi: Target-deviant bare nouns per recording.

Rec.	Age	MLU	NP	Target-Deviant Bare Nouns							
				Total	%	1N	% of 1N	2N	% of 2N	3+N	% of 3+N
1	1;6,12	1.33									
2	1;7,9	1.21									
3	1;7,23	1.00									
4	1;8,7	1.11									
5	1;8,22	1.10									
6	1;9,6	1.00	11	6	55	0		0		6	100.0
7	1;9,21	1.00	6	1	17	0		0		1	100.0
8	1;10,9	1.11									
9	1;10,25	1.05	14	8	57	7	100.0	1	14.3	0	
10	1;11,9	1.08	11	4	36	0		4	36.4	0	
11	1;11,24	1.24	20	12	60	2	40.0	10	66.7	0	
12	2;0,13	1.29	13	13	100	9	100.0	4	100.0	0	
13	2;0,29	1.38	22	20	91	5	83.3	9	47.4	6	100.0
14	2;1,12	1.78	22	10	45	2	66.7	8	88.9	0	
15	2;1,28	1.89	46	13	28	6	42.9	3	11.5	4	66.7
16	2;2,15	2.29	86	5	6	0		3	5.5	2	18.2
17	2;3,3	2.62	53	12	23	3	12.0	9	32.1	0	
18	2;3,18	3.09	41	0							
19	2;4,0	3.20	39	5	14	1	4.2	4	28.6	0	
20	2;5,7	2.44	40	0							
21	2,6,6	2.73	33	1	3	0		1	6.7	0	
22	2;7,17	2.67	26	3	12	1	10.0	2	15,4	0	
23	2;8,7	2.48	31	1	3	0		1	6.3	0	
24	2;9,7	2.74	20	3	15	2	14.3	1	16.7	0	
25	2;9,23	2.51	18	3	17	1	12.5	2	20.0	0	
26	2;10,14	2.75	26	1	4	0		1	16.7	0	
27	2;11,3	2.78	31	4	13	1	16.7	1	6.3	2	22.2
28	2;11,20	3.13	35	0							
29	3;0,7	3.24	25	1	4	0		0		1	20.0
30	3;0,27	3.51	50	5	10	2	11.8	3	10.0	0	
31	3;1,14	4.30	61	5	8	2	8.0	3	9.4	0	
32	3,2,4	2.85	84	5	6	0		5	13.2	0	
33	3;2,22	3.08	35	0							
34	3;3,7	3.61	43	3	7	1	5.3	1	6.7	1	11.1
35	3;3,23	3.61	35	1	3	0		0		1	25.0
36	3;4,6	3.95	84	4	5	0		3	8.6	1	8.3
37	3;4,19	3.11	27	1	4	1	10.0	0		0	
38	3;5,8	3.78	68	5	7	3	14.3	2	6.7	0	
total			**1156**	**155**	**13.4**	**49**	**10.7**	**81**	**14.1**	**25**	**21.0**

Notes

[1] For an overview of the syntactic analyses of different types of D cf. e.g., Prévost (2009).

[2] Note that inanimate nouns have also been argued to have uninterpretable features (e.g., Pesetsky and Torrego 2007). Additionally, there are languages with agreement but without N to D movement.

[3] A trochaic bias has been described cross-linguistically (e.g., Jusczyk et al. 1993; Boyle and Gerken 1997 on English; Bijeljac-Babic et al. 2016 on German), even though it does not seem to be empirically grounded across the board (cf. Stahnke 2022 for an overview of Romance languages). Monolingual French children do not perceive rhythmic differences at a very young age but are 'stress deaf', i.e., they do not have any preference for either trochaic or iambic structures (Bijeljac-Babic et al. 2016). Their first productions are iambic, reflecting properties of the input (Scullen 1997; Demuth and Johnson 2003; Tremblay 2006).

[4] years;months(,days).

[5] mean length of utterance.

[6] Interestingly, the target-like reanalysis of numerals as indefinite D seems to trigger the production of gender and number features from ca. 2;0/2;4 onwards (MLU around 2.0), which coincide with a productive use of articles and complex DPs (e.g., D + A + N; Müller 1994, pp. 63–64).

[7] Of course, there may also be negative influence from French on Italian if it is accepted that cross-linguistic influence is not only positive (cf. e.g., Flynn et al. 2004 on the concept of cumulative enhancement in second and third language acquisition). In the same vein, the massive syntactic evidence of realized D in French may also positively influence the acquisition of Italian D. Since this paper analyzes French, these options are not pursued in the study.

[8] The data stem from the research project "Die Architektur der frühkindlichen bilingualen Sprachfähigkeit. Italienisch-Deutsch und Französisch-Deutsch in Italien, Deutschland und Frankreich im Vergleich" headed by Natascha Müller and financed by a grant of the German Research Foundation (project number 5452914). In this project, the role of the (Romance or German) majority language was assessed in bilingual language acquisition.

[9] 'Stability' indicates that in the following recordings production rates do not drop below 50% and 90%, respectively (cf. Section 5.2 for details).

[10] For all other pairings, numbers are too low to conduct statistical analyses.

References

Abney, Steven P. 1987. The English Noun Phrase in Its Sentential Aspect. Ph.D. thesis, MIT, Massachussetts Institute of Technology, Cambridge, MA, USA. Available online: http://www.ai.mit.edu/projects/dm/theses/abney87.pdf (accessed on 15 June 2022).

Andreassen, Helene N., and Julien Eychenne. 2013. The French foot revisited. *Language Sciences* 39: 126–40. [CrossRef]

Arnaus Gil, Laia, and Natascha Müller. 2019. *Frühkindlicher Trilinguismus. Französisch, Spanisch, Deutsch*. Tübingen: Narr.

Bassano, Dominique. 1998. Sémantique et syntaxe dans l'acquisition des classes de mots: L'exemple des noms et des verbes en français. *Langue française* 118: 26–48. [CrossRef]

Bassano, Dominique, Isabelle Maillochon, and Sylvain Mottet. 2008. Noun grammaticalization and determiner use in French children's speech: A gradual development with prosodic and lexical influences. *Journal of Child Language* 35: 403–28. [CrossRef] [PubMed]

Belletti, Adriana, and Maria Teresa Guasti. 2015. *The Acquisition of Italian. Morphosyntax and Its Interfaces in Different Modes of Acquisition*. Amsterdam: Benjamins.

Berkele, Gisela. 1983. Die Entwicklung des Ausdrucks von Objektreferenz am Beispiel von Determinanten. Eine empirische Untersuchung zum Spracherwerb bilingualer Kinder Französisch/Deutsch. State Exam thesis, University of Hamburg, Hamburg, Germany.

Bernardini, Petra. 2003. Child and adult acquisition of word order in the Italian DP. In *Invulnerable Domains in Multilingualism*. Edited by Natascha Müller. Amsterdam: Benjamins, pp. 41–82.

Berstein, D. 1993. Topics in the Syntax of Nominal Structure across Romance. Ph.D. thesis, CUNY, University Microfilms International, New York, NY, USA. Available online: http://www.ai.mit.edu/projects/dm/theses/more/bernstein93.pdf (accessed on 15 June 2022).

Bijeljac-Babic, Ranka, Barbara Höhle, and Thierry Nazzi. 2016. Early prosodic acquisition in bilingual infants: The case of the perceptual trochaic bias. *Frontiers in Psychology* 7: 1–8. Available online: https://www.frontiersin.org/articles/10.3389/fpsyg.2016.00210/full (accessed on 15 June 2022). [CrossRef]

Bottari, Piero, Paola Cipriani, and Anna Maria Chilosi. 1993. Protosyntactic devices in the acquisition of Italian free morphology. *Language Acquisition* 34: 327–69. [CrossRef]

Boyle, Mary K., and LouAnn Gerken. 1997. The influence of lexical familiarity on children's function morpheme omissions. *Journal of Memory and Language* 36: 117–28. [CrossRef]

Chierchia, Gennaro. 1998. Reference to kinds across langues. *Natural Language Semantics* 6: 339–40. [CrossRef]

Chierchia, Gennaro, Maria Teresa Guasti, and Andrea Gualmini. 2001. *Nouns and Articles in Child Grammar and the Syntac/semantics Map*. College Park: University of Milan, University of Siena and University of Maryland.

Clark, Eve V. 1986. The acquisition of Romance, with special reference to French. In *The Cross-Linguistic Study of Language Acquisition*. Edited by Dan Isaac Slobin. Hillsdale: Erlbaum, pp. 687–782.

Demuth, Katherine, and Mark Johnson. 2003. Truncation to subminimal words in early French. *Canadian Journal of Linguistics* 48: 211–41. [CrossRef]

Demuth, Katherine, and Annie Tremblay. 2008. Prosodically-conditioned variability in children's production of French determiners. *Journal of Child Language* 35: 99–127. [CrossRef]

Demuth, Katherine, Meghan Patrolia, Jae Yung Song, and Matthew Masapollo. 2012. The development of articles in children's early Spanish: Prosodic interactions between lexical and grammatical form. *First Language* 32: 17–37. [CrossRef]
Dresher, B. Elan, and Jonathan D. Kaye. 1990. A computational learning model for metrical phonology. *Cognition* 34: 137–95. [CrossRef]
Féry, Caroline. 2001. Focus and phrasing in French. In *Audiatur vox Sapientiae: A Festschrift for Arnim von Stechow*. Edited by Caroline Féry and Wolfgang Sternefeld. Berlin: Akademie-Verlag, pp. 153–81.
Flynn, Suzanne, Claire Foley, and Inna Vinnitskaya. 2004. The cumulative-enhancement model for language acquisition: Comparing adults' and children's patterns of development in first, second and third language acquisition of relative clauses. *The International Journal of Multilingualism* 1: 3–16. [CrossRef]
Granfeldt, Jonas. 2000. The acquisition of the determiner phrase in bilingual and second language French. *Bilingualism: Language and Cognition* 33: 263–80. [CrossRef]
Granfeldt, Jonas. 2003. L'acquisition des Catégories Fonctionnelles: Etude Comparative du Développement du DP Français Chez des Enfants et des Apprenants Adultes. Ph.D. thesis, Department of Romance Languages, Lund University, Lund, Sweden. Available online: https://lucris.lub.lu.se/ws/portalfiles/portal/4748375/837916.pdf (accessed on 15 June 2022).
Guasti, Maria Teresa, Anna Gavarró, Joke De Lange, and Claudia Caprin. 2008. Article omission across child languages. *Language Acquisition* 152: 89–119. [CrossRef]
Hauser-Grüdl, Nicole, Lastenia Arencibia Guerra, Franziska Witzmann, Estelle Leray, and Natascha Müller. 2010. Cross-linguistic influence in bilingual children: Can input frequency account for it? *Lingua* 12011: 2630–50. [CrossRef]
Hayes, Bruce. 1995. *Metrical Stress Theory. Principles and Case Studies*. London: University of Chicago Press.
Heinen, Sabine, and Helga Kadow. 1990. The acquisition of French by monolingual children. A review of the literature. In *Two First Languages: Early Grammatical Development in Bilingual Children*. Edited by Jürgen M. Meisel. Dordrecht: Foris, pp. 47–71.
Hulk, Aafke. 2004. The acquisition of the French DP in a bilingual context. In *The Acquisition of French in Different Contexts: Focus on Functional Categories*. Edited by Philippe Prévost and Johanne Paradis. Amsterdam: Benjamins, pp. 243–74.
Jun, Sun-Ah, and Cécile Fougeron. 2000. A phonological model of French intonation. In *Intonation: Analysis, Modeling and Technology*. Edited by Antonis Botinis. Dordrecht: Kluwer, pp. 209–42.
Jusczyk, Peter W., Anne Cutler, and Nancy J. Redanz. 1993. Preference for the predominant stress patterns of English words. *Child Development* 64: 675–87. [CrossRef]
Kehoe, Margaret. 2002. Developing vowel systems as a window to bilingual phonology. *The International Journal of Bilingualism* 6: 315–34. [CrossRef]
Kupisch, Tanja. 2003. The DP, a vulnerable domain? Evidence from the acquisition of French. In *InVulnerable Domains in Language Multilingualism*. Edited by Natascha Müller. Amsterdam: Benjamins, pp. 1–40.
Kupisch, Tanja. 2004. On the relation between input frequency and acquisition patterns from a Crosslinguistic perspective. In *Proceedings of GALA 2003*. Edited by Jacqueline van Kampen and Sergio Baauw. Utrecht: LOT, pp. 199–210.
Kupisch, Tanja. 2006. *The Acquisition of Determiners in Bilingual German-Italian and German-French Children*. München: Lincom Europa.
Kupisch, Tanja. 2007. Testing the effects of frequency on the rate of learning. In *Proceedings of the Workshop on Input Frequencies in Acquisition*. Edited by Insa Gülzow and Natalia Gagarina. Berlin: De Gruyter, pp. 83–113.
Kupisch, Tanja. 2008. Dominance, mixing and cross-linguistic influence. On their relation in bilingual development. In *First Language Acquisition of Morphology and Syntax. Perspectives Across Languages and Learners*. Edited by Pedro Guijarro-Fuentes, María Pilar Larrañaga and John Clibbens. Amsterdam: Benjamins, pp. 209–34.
Kupisch, Tanja, and Petra Bernardini. 2007. Determiner use in Italian Swedish and Italian German children: Do Swedish and German represent the same parameter setting? *NORDLYD: University of Tromsø Working Papers on Language and Linguistics* 344: 209–29. [CrossRef]
Lleó, Conxita. 1998. Proto-articles in the acquisition of Spanish. In *Models of Inflection*. Edited by Ray Fabri, Albert Ortmann and Teresa Parodi. Tübingen: Niemeyer, pp. 175–95.
Lleó, Conxita. 2001. The interface of phonology and syntax: The emergence of the article in the early acquisition of Spanish and German. In *Approaches to Bootstrapping: Phonological, Syntactic and Neurophysiological Aspects of Early Language Acquisition*. Edited by Jürgen Weissenborn and Barbara Höhle. Amsterdam: Benjamins, pp. 23–44.
Lleó, Conxita. 2002. The role of markedness in the acquisition of complex prosodic structures by German-Spanish bilinguals. *International Journal of Bilingualism* 6: 291–313. [CrossRef]
Lleó, Conxita. 2006. The acquisition of prosodic word structures in Spanish by monolingual and Spanish-German bilingual children. *Language and Speech* 49: 205–29. [CrossRef]
Lleó, Conxita. 2016. Acquiring multilingual phonologies 2L1, L2 and L3: Are the difficulties in the interfaces? In *Manual of Grammatical Interfaces in Romance*. Edited by Christoph Gabriel and Susann Fischer. Berlin: De Gruyter, pp. 519–50.
Lleó, Conxita, and Katherine Demuth. 1999. Prosodic constraints on the emergence of grammatical morphemes: Crosslinguistic evidence from Germanic and Romance languages. In *Proceedings of the 23rd Annual Boston University Conference on Language Development*. Edited by Annabel Greenhill, Heather Littlefield and Cheryl Tano. Somerville: Cascadilla Press, pp. 407–18.
Longobardi, Giuseppe. 1994. Reference and proper names. A theory of N-movement in syntax and logical form. *Linguistic Inquiry* 254: 609–65.
MacWhinney, Brian. 2000. *The Childes Project: Tools for Analyzing Talk: The Database*. Hillsdale: Lawrence Erlbaum Associates Publishers.
Mancini, Federico, and Miriam Voghera. 1994. Lunghezza, tipi di sillabe e accento in italiano. *Archivo Glottologico Italiano* 79: 51–77.

Meisel, Jürgen M., ed. 1990. *Two First Languages. Early Grammatical Development in Bilingual Children*. Dordrecht: Foris.
Müller, Natascha. 1994. Gender and number agreement within DP. In *Bilingual First Language Acquisition. French and German Grammatical Development*. Edited by Jürgen M. Meisel. Amsterdam: Benjamins, pp. 53–88.
Müller, Natascha, and Aafke Hulk. 2001. Crosslinguistic influence in bilingual language acquisition: Italian and French as recipient languages. *Bilingualism: Language and Cognition* 41: 1–21. [CrossRef]
Müller, Natascha, Laia Arnaus Gil, Nadine Eichler, Jasmin Geveler, Malin Hager, Veronika Jansen, Marisa Patuto, Valentina Repetto, and Anika Schmeißer. 2015. *Code-Switching: Französisch, Italienisch, Spanisch. Eine Einführung*. Tübingen: Narr.
Özçelik, Öner. 2017. The foot is not an obligatory constituent of the prosodic hierarchy: "Stress" in Turkish, French and child English. *The Linguistic Review* 341: 157–213. [CrossRef]
Paradis, Johanne. 2001. Do bilingual two-year-olds have separate phonological systems? *International Journal of Bilingualism* 5: 19–38. [CrossRef]
Paradis, Johanne, and Fred Genesee. 1996. Syntactic acquisition in bilingual children. Autonomous or interdependent? *Studies in Second Language Acquisition* 18: 1–25. [CrossRef]
Paradis, Johanne, and Fred Genesee. 1997. On continuity and the emergence of functional categories in bilingual first-language Acquisition. *Language Acquisition* 62: 91–124. [CrossRef]
Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and Clausal Architecture: Syntactic Derivation and Interpretation*. Edited by Simin Karimi, Vida Samiian and Wendy K. Wilkins. Amsterdam: Benjamins, pp. 262–94.
Post, Brechtje. 2000. *Tonal and Phrasal Structures in French Intonation*. The Hague: Holland Academic Graphics.
Prévost, Philippe. 2009. *The Acquisition of French: The Development of Inflectional Morphology and Syntax in L1 Acquisition, Bilingualism, and L2 Acquisition*. Amsterdam: Benjamins.
Pupier, Paul. 1982. L'acquisition des déterminants français chez les petits enfants français-anglais. In *L'acquisition Simultanée du Français et le L'anglais chez des Petits Enfants de Montréal*. Edited by Paul Pupier. Québec: Édition officielle du Québec, pp. 173–214.
Romaine, Suzanne. 1995. *Bilingualism*. Oxford: Oxford University Press.
Schulz, Petra, and Angela Grimm. 2019. The age factor revisited: Timing in acquisition interacts with age of onset in bilingual acquisition. *Frontiers in Psychology* 9: 1–18. Available online: https://www.frontiersin.org/articles/10.3389/fpsyg.2018.02732/full (accessed on 15 June 2022). [CrossRef]
Scullen, Mary Ellen. 1997. *French Prosodic Morphology: A Unified Account*. Bloomington: Indiana University Linguistics Club.
Selkirk, Elisabeth. 1978. The French foot: On the status of the 'mute' *e*. *Studies in French Linguistics* 1: 141–50.
Selkirk, Elisabeth O. 1984. *Phonology and Syntax: The Relation between Sound and Structure*. Cambridge: MIT Press.
Stahnke, Johanna. 2019. Cross-linguistic prosodic influence in bilingual language acquisition. In *Proceedings of the 19th International Congress of Phonetic Sciences*. Edited by Sasha Calhoun, Paola Escudero, Marija Tabain and Paul Warren. Melbourne: Australia, pp. 3403–3407.
Stahnke, Johanna. 2022. First language acquisition of Romance phonology. In *Manual of Romance phonetics and phonology*. Edited by Christoph Gabriel, Randall Gess and Trudel Meisenburg. Berlin: De Gruyter, pp. 375–406.
Stahnke, Johanna, Laia Arnaus Gil, and Natascha Müller. 2021. French as a heritage language in Germany. *Languages* 6: 122. [CrossRef]
Tremblay, Annie. 2005. On the status of determiner fillers in early French: What the child knows. In *Proceedings of the 29th Annual Boston University Conference on Language Development*. Edited by Alejna Brugos, Manuella R. Clark-Cotton and Seungwan Ha. Somerville: Cascadilla Press, pp. 604–15.
Tremblay, Annie. 2006. Prosodic constraints on the production of grammatical morphemes in French: The case of determiners. *University of Connecticut Occasional Papers in Linguistics* 4: 377–88.
Valois, Daniel. 1991. The Internal Syntax of DP. Ph.D. thesis, Department of Linguistics, UCLA, Los Angeles, CA, USA. Available online: https://linguistics.ucla.edu/general/Dissertations/Valois.1991.pdf (accessed on 15 June 2022).
Valois, Daniel. 1997. On French DPs. *La revue Canadienne de Linguistique* 41: 349–75. [CrossRef]
Van der Velde, Marlies. 2004. L'acquisition des articles définis en L1. Étude comparative entre le français et le néerlandais. *Acquisition et Interaction en Langue Étrangère* 21: 9–46. [CrossRef]
Van Oostendorp, Marc. 2015. Parameters in phonological analysis: Stress. In *Contemporary Linguistic Parameters*. Edited by Antonio Fabregas, Jaume Mateu and Michael Putnam. London: Bloomsbury, pp. 234–58.
Veneziano, Edy, and Hermine Sinclair. 2000. The changing status of 'filler syllables' on the way to grammatical morphemes. *Journal of Child Language* 27: 461–500. [CrossRef] [PubMed]
Wauquier, Sophie, and Naomi Yamaguchi. 2013. Templates in French. In *The Emergence of Phonology: Whole-Word Approaches and Cross-Linguistic Evidence*. Edited by Marilyn M. Vihman and Tamar Keren-Portnoy. Cambridge: Cambridge University Press, pp. 317–42.