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Language synchronization north and south of the Brenner Pass: modeling the continuum

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Abstract: The term Sprachbund refers to the convergence of typologically different languages in the same region and represents an interesting challenge to the notion of parameter conceived as a fixed value of a core syntactic option, i.e. \pm null subjects. This contrast could be resolved by the methodological differentiation between surface forms and structural differences. Analyzing the status of clitic subjects and the effects of the so called “that-trace filter” in both Northern Italian and Bavarian dialects we will observe that continua primarily refer to surface forms – i.e. linear word orders – whereas the core option of a given (macro)parameter captures basic typological differences. In this perspective, we revisit the traditional *Wellentheorie* as a prototypical approach to analyze contact phenomena.

Keywords: Alps; Bavarian; Cimbrian; Mòcheno; North-Italian dialects; null subject; Sprachbund; *Stammbaumtheorie*; that-trace filter; verb second; *Wellentheorie*

1 Introduction: Sprachbund, the haunting specter

The beginning of linguistics as a scientific discipline coincided with the moment in the nineteenth century at which scholars became aware of systematic correspondences among apparently very different languages and determined the rules that disclose the process of differentiation. As explained in every introduction to linguistics, two complementary approaches to addressing correspondences among divergent languages can be traced in the history of linguistics:

- a. The first goes back to the well-known historical-comparative method that established relationships among languages on a phylogenetic basis. The reconstruction of an original system corresponding to a hypothetical original

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stage represented a way of modeling the variation. In fact, according to this approach, all representatives of a language family share the same elementary lexicon and, in their grammars, show traits that can be traced back to an original model, in which all languages converge, despite their present stages of distance from the archetype. This idea led to various well-known theories concerning the process of differentiation and the common origin of individual languages, such as the *Stammbaumtheorie* (Schleicher 1863), the *Wellentheorie* (Schmidt 1872), the *Substrattheorie* (Hirt 1894) and, in the framework of structuralism, the development theory (*Entfaltungstheorie*).

- b. Similarly, linguists noted that there were structural correspondences among languages that could not come from their dependency from a common ancestor. This second approach grouped different languages by examining their morphosyntactic patterns, such as the possible realization of dependent morphemes (inflection, agglutination, absence of dependent morphemes, and so on) or the position of the verb with respect to the object (SVO, SOV, VSO, and so forth). The German term *Sprachtypologie* (linguistic typology) was originally introduced by Gabelentz (1894), but it was Greenberg (1963) who developed this concept in the most fruitful way many years later. The real novelty of Greenberg's approach, which would lead to the typology becoming one of the most flourishing branches of linguistics, was the introduction of implicational hierarchies; in other words, if language *L* shows the characteristic *X*, then it should also have the characteristic *Y* (see Graffi 2010: 378). In this way, it has been possible to establish a typological classification of languages that can be completely different phylogenetically, yet structurally similar.

The term *Sprachbund* crucially refers to a third kind of correspondence among diverging languages that concerns varieties that are neither phylogenetically cognate nor typologically comparable. Humboldt (1903–1936, vol. IV) was presumably the first scholar who identified languages that were not structurally related, but which shared parts of their lexicon. They did not belong to the same linguistic family (German: *Stamm*), but rather to the same geographic area (*Gebiet*), according to Humboldt (see Graffi 2010: 110). In the twentieth century, Humboldt's intuition was formalized by Nikolai Trubetzkoy, who introduced the notion of *yazykovoy soyuz* 'language union' (Trubetzkoy 1923), which he later translated into German as *Sprachbund* 'linguistic league' (see Trubetzkoy 1930). In fact, a robust body of research has discovered similar grammatical phenomena in languages that are typologically very different, but which crucially belong to the same region (see Berésin 1980; Joseph 2013; Haarmann 1976; Roelcke 2011). These languages normally have many words in common, although such words cannot be attributed to the languages' lexica having the same phylogenetical origin. However, to the best of our knowledge, linguistic theories that can model the form of the continuum of *Sprachbund* is still lacking.

Of course, several causes of structural convergence have already been considered, particularly from a sociolinguistic point of view. Joseph (2013: 624ff.) mentions the following possible sources for the formation of a convergence area in the Balkans, which was the first case that was studied as Sprachbund (see Trubetzkoy 1923 and, more recently, Aikhenvald 2007, McMahon 1994: 218–220 and Friedman and Joseph 2020, among many others):

- i. The substratum effect. When first-language speakers shift to a second language, for example as a result of marriage or resettlement, they “carry over their habits and structures of the first language into the second, producing an altered form of the second language” (Joseph 2013: 624).
- ii. The adstratum effect. When the contact language is more prestigious than the speakers’ own variety, the speakers of the less prestigious variety tend to import structures or forms into their native language from the more prestigious one.
- iii. Pidginization. Speakers develop a simplified version of a *lingua franca* as communication strategy.
- iv. Speaker-to-speaker accommodation. A speaker may adapt his/her speech to the level of the non-native speaker to facilitate communication. This process “involve[s] selection by both speakers of structures for the target language that are ‘comfortable’ to both, that is, acceptable as a variant in the target language and matching some structural element in the other language” (Joseph 2013: 624).

However, as Joseph (2013: 624) makes clear, the above-mentioned sources (i)–(iv) are only “putative causes” of Sprachbund formation. Their formalization gives rise to several problems. For example, the same linguistic feature in a Sprachbund area can be often explained via different causes; however, the opposite is a problem as well: A cause that may give rise to one phenomenon in a specific area may not be the cause of another in a similar area. In conclusion, Joseph (2013: 625) emphasizes that only “intense and intimate bilingualism” can be considered to be “direct evidence of the sort of contact that breeds a Sprachbund”¹ as discourse-related borrowings, such as elements that have a highly conversational function or are interjectional, and other expressive forms seem to confirm. Moreover, he stressed the need to examine phenomena at the dialectal level and on a feature-by-feature basis (see also Bidese et al. 2018).

¹ The very same observation was made by Brugmann (1917: 55): “... im Syntaktischen werden Lehnbeziehungen folgenreicher Art erst möglich, wenn Leute da sind, die zu ihrer Muttersprache die fremde Sprache hinzugelernt haben und diese nun wenigstens bis zu einem gewissen Grad schon beherrschen“ [syntactic relationships of a momentous nature only become possible when there are people who have learnt the foreign language in addition to their mother tongue and who are at least already proficient in it to a certain degree].

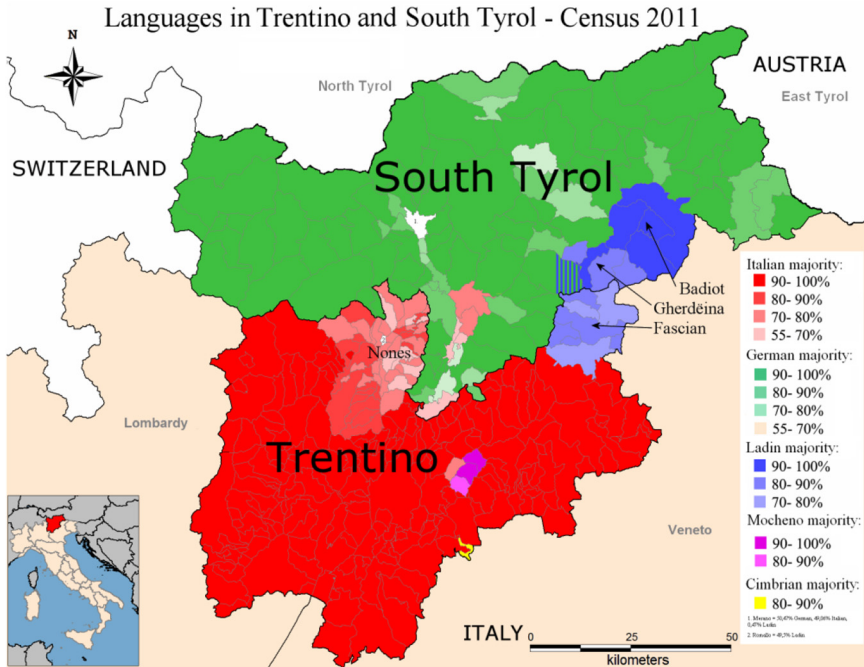


Figure 1: Language distribution in the region of Trentino-South Tyrol, according to the 2011 Census (https://commons.wikimedia.org/wiki/File:Language_distribution_in_South_Tyrol_and_Trentino.png 22.10.2019).

The aim of our paper is to contribute to solving the problems that arise from the Sprachbund perspective of modeling this kind of continuum among different languages. By adopting a methodological differentiation between surface forms and structural differences, our purpose is to show that Sprachbund phenomena reveal the convergence of surface linear orders, which does not imply a convergence of grammars. We will focus on language synchronization effects north and south of the Brenner Pass. The reason for this choice is that different Germanic and Romance varieties (German, Italian, Bavarian dialects, minority/endangered languages such as Cimbrian and Mòcheno, and Northeast-Italian dialects) share the same space along the Brenner axis, which connects Munich in Germany and Verona in Italy, thus forming a colorful kaleidoscope of languages and dialects (cf. Figure 1).

This variegated situation provides the best opportunity to investigate the nature of convergent phenomena in a Sprachbund area.

The paper is organized as follows. In Section 2, we summarize the syntactic phenomena that have been discussed in the literature as evidence of an Alpine Sprachbund. In Section 3, we focus on a phenomenon that could be considered to

be an effect of Sprachbund, namely the relaxation of one of the main, well-known macro-parameters of variation between Romance and Germanic varieties in the Alpine region, namely the null-subject (henceforth NS) parameter. In Section 3.1, we discuss the distribution of subject clitics north and south of the Brenner Pass, and observe the quality of the differences between the Germanic and the Romance paradigms of subject clitics. Furthermore, we analyze and compare the different strategies for the violation of the ‘that-trace’ filter among the investigated varieties (see Section 3.2). Section 4 attempts to model the continuum between Germanic and Romance languages by proposing a way to account for partial overlaps among different groups of languages in contact areas. In our model, the positive value of a certain parameter, for example +NS, defines the presence of the core aspect of the linguistic phenomenon.

Regarding NS, this corresponds, as is well-known from the relevant literature, to the drop of the referential subject and the absence of expletives. Opposite values, i.e. ±NS, represent different foci and describe the centers of the circles, which typify the individual languages. In a Sprachbund area, the peripheries of the circles overlap giving rise to convergent phenomena. In this way, we revisit the traditional *Wellentheorie* of Johannes Schmidt (1872) as a conceptual model for Sprachbund phenomena. Section 5 summarizes the results and concludes the contribution.

2 The ‘Alpine Sprachbund’

Some linguistic phenomena in the Alpine region have been analyzed from a Sprachbund perspective. In particular, the following main syntactic aspects have been foregrounded in the literature: preterite decay (German: *Präteritumschwund*) by Abraham and Conradie (2001: 11 and 19ff.), anticausative constructions by Ziegler (2010), the prepositional use of indirect objects by Seiler (2004), and the ‘Alpine passive’ by Gaeta (2018; see also Ramat 1998: 227). Further phenomena were mentioned by Mayerthaler and Mayerthaler (1990), Mayerthaler (1999), and Seiler (2004).²

With regard to the first phenomenon, Abraham and Conradie (2001: 11, based on Thieroff 2000: 284) noted that, among the 28 European languages they considered, only South-German (*Oberdeutsch*) and North-Italian (together with Yiddish and Hungarian) share the same developmental stage in tense forms. Specifically, South-German and North-Italian are on the same level of the preterite decay scale, which

² The multilingual and multicultural nature of many alpine areas is the main object of investigation of the *VerbaAlpina* project, conducted at the Ludwig-Maximilian-Universität Munich (see Krefeld and Lücke 2014). In this regard, see also Bidese et al. (2018), and the contributions by Eller-Wildfeuer et al. (2018).

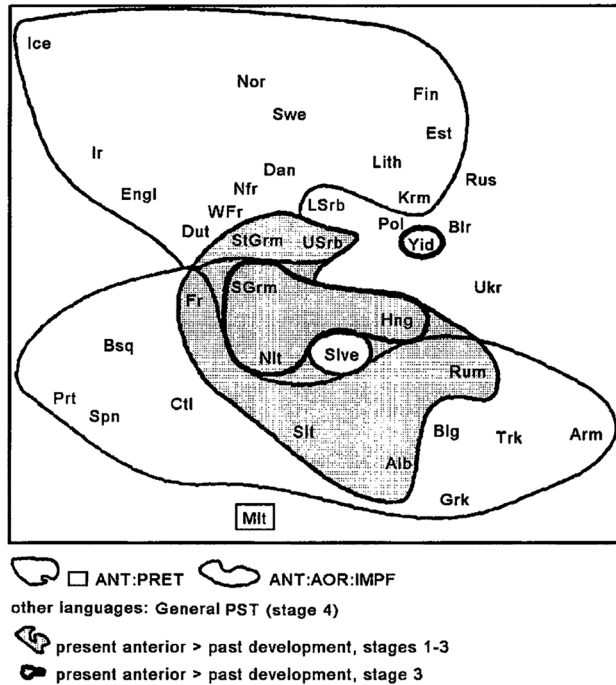


Figure 2: Areal distribution of preterite decay according to Abraham (1999: 15) based on Thieroff (to appear) 2000: 285.

ranges from 0 (the most conservative level) to 4 (the most ‘developed’ level, when the anterior form has evolved into a modal use), i.e. level 3. At this level 3, the preterite form is lost, and therefore also the distinction between an imperfective versus perfective past (see Abraham and Conradie 2001: 20; Thieroff 2000: 284). According to Abraham and Conradie (2001: 20), preterite decay is a widespread phenomenon among the central European languages. However, the varieties that share the distributional criteria of level 3 are distributed in the same area in Central Europe thus forming the core of a Sprachbund, as Abraham and Conradie (2001: 20) claim.³ As mentioned previously, these languages are South-German, North-Italian, Yiddish and Hungarian, as shown by Figure 2.

³ “Auffällig ist die areale Verteilung auf Stufe 3. Die Distributionskriterien teilen Sprachen, die man den Kern eines Sprachbundes nennen kann – etwas, was kaum eine Zufallsverteilung sein kann“ [The areal distribution at level 3 is eye-catching. The distribution criteria divide languages that can be called the core of a sprachbund – something that can hardly be a random distribution] (Abraham and Conradie 2001: 20).

The second phenomenon was observed by Ziegler (2010) for the German variant spoken in Austria and Switzerland. It concerns the extension of the verbal paradigm and the development toward the formation of a middle voice. This is realized through the re-analysis of the reflexive pronoun *sich* as a marker for agentivity deletion (see also Abraham 2008), resembling the use of reflexive *si* in Italian (see Cennamo and Jesek 2011).

This usage of the reflexive pronoun seems to be typical for verbs that express an event related to the psyche, the mind, or the body of the agent (see Ziegler 2010: 76), as in the following examples taken from Ziegler (2010: 72–73):

- (1) *Denn manchmal erwartet sich der Kunde im Urlaub*
 because sometimes expects REFL the customer on holiday
Ruhe und Frieden [Reisen 6/1997: 82]
 quiet and peace
 ‘Because sometimes the customer expects peace and quiet on holiday’
- (2) *Irgendwann hört sich der Spaß auf* [Profil, 30.03.1998: 8]
 at some point stops REFL the fun PRT
 ‘At some point, the fun will stop’
- (3) *All das schlägt sich unter anderem auch auf den Magen*
 all this beats REFL among others also on the stomach
 ‘All this also has an effect on the stomach’ [Medizin populär 5/1995: 28]

A similar development toward the formation of a middle voice through the re-analysis of the reflexive marker was observed for Cimbrian by Bidese and Turolla (2018: 31–33):

- (4) *Dòpo in toat ’z pluat izz-e=se darstòtet bahemme*
 after the death the blood is=REFL coagulated rapidly
 ‘After death, the blood coagulated rapidly’
- (5) *’Z hatt getondart un ’z liacht izz-e=se darléscht*
 it has thundered and the light has=REFL gone out
 ‘It thundered and the light has gone out’

A further phenomenon that has been considered from a Sprachbund perspective is the prepositional use of the indirect object, as in (6) (taken from Seiler 2004):

- (6) Glarus, Schweiz [originally in Streiff 1915: 67]
Brìñη das phak æ mīr
 Bring the pack to me
 ‘Bring me the pack’

This syntactic peculiarity is well documented not only in central Switzerland, but also in other areas in which Upper German varieties are spoken, such as in Alsace and in Tyrol, as well as in the (Rhaeto-)Romance varieties of the Alpine area (see further details in Seiler 2003).

Another phenomenon that has attracted scholars' attention as robust evidence of the Alpine Sprachbund is the so-called 'Alpine passive' (see Ramat 1998 and, recently, Gaeta 2018). It has been observed that, in some Alpine varieties, the passive is formed by the auxiliary verb 'to come' which corresponds to the Romance construction with 'venire', as in following examples taken from Gaeta (2018) (originally in Ramat 1998: 239) and Wiesinger (1989: 258), respectively:

- (7) Gressoney in Lysthal, Walser German
ds hus chent verchouft-s
 The house comes.AUX sold-N.SG
 'Das Haus wird verkauft'

- (8) Pernegg, Austria, Central-Eastern Bavarian
dqs khimp asō kšřbm
 that comes.AUX so written
 'That should be written that way'

The following are additional examples of the use of the auxiliary 'to come' with the perfect and infinite perfect in another Walser variety (taken from Gaeta 2018, originally in Russ 2002: 187–198):

- (9) Bosco Gurin, Walser German
 a. *Un tas Fäscht ischt gmachut-s chu*
 and the party is made-N.SG come
 'And the party was done'
 b. ... *dass 'z ganz Volch im römisch-a Rych miassi*
 that the whole people in-the Roman Empire must
zollt's chu
 counted-N.SG come
 '... that the entire population in the Roman Empire should be counted'

Similar data have also been reported for the Tyrolean variety in Puster Valley (cf. 10) and the South-Bavarian variety of Klagenfurt (cf. 11) (from Mayerthaler 1999: 19):

- (10) Puster Valley, Tyrolean
In der Frua kemmen di Kúa gefuatert
 in the morning come.AUX the cows fed
 'Cows are fed in the morning'

- (11) Klagenfurt, South-Bavarian
Kummt *dås* *eingepäckt?*
 comes.AUX this wrapped up
 ‘Should this be wrapped up?’

The same can be observed for Cimbrian (cf. 12) (taken from Panieri et al. 2006: 90):

- (12) Cimbrian
Dar libar *khint* *gelest* *von* *khinn*
 the book comes read by-the child
 ‘The book is read by the child’

Another interesting syntactic phenomenon that has been numbered among the Sprachbund phenomena in the Alpine region (see Hack 2011: 206) is the violation of the Doubly-filled Comp Filter (see Schallert and Bidese, this volume):

- (13) Bavarian [adapted from Bayer 1984: 212, 213]
I *woaß* *ned* *wer* *daß* *des* *tõa* *hod*
 I know not who that this done have
 ‘I don’t know who did that’

The phenomenon also appears in other West Germanic languages (see Schallert et al. 2018); nevertheless, it is typical of the South-German dialects (see Weiß 2017), and is quite well-attested in almost all the Bavarian language islands in Italy (with the prominent exclusion of Cimbrian), as well as in other language families in and around the Alps, such as in Rhaeto-Romance (cf. 14) and in many Northern Italian varieties (cf. 15) (see Hack and Kaiser 2013; Poletto and Vanelli 1995; see also Poletto 2000). In addition, it can appear in South Slavic, such as in Slovenian (cf. 16) (see Marušič 2008: 414), and in Burgenland Croatian (cf. 17) (see Schallert et al. 2018: 8):

- (14) Rhaeto-Romanian, Sursilvan [Spescha 1989: 550]
El *damonda* *contas* *gadas* *che* *nus* *haveien* *fatg*
 he asks how many times that we have made
quella *excursiun*
 this excursion
 ‘He is asking how many times we have made this excursion’

- (15) a. Livorno Ferraris, North-Italian [Poletto and Vanelli 1995: 147–148]
I sai *nen* *anté* *che* *mama* *al* *abia* *catà* *le* *fior*
 I know not where that mommy she had found the flowers
 ‘I don’t know where mommy bought the flowers’

- b. Trento, North-Italian
No so chi che l=à parlà con la Maria
 not know-1SG who that s/he=has spoken with the Mary
 ‘I don’t know who talked to Mary’
- c. Albosaggia, North-Italian, Lombardian
Al so ca chi ca laverà i piac’
 I know not who that wash.FUT the dishes
 ‘I don’t know who is going to wash the dishes’
- d. Padova, North-Italian, Venetian
No so cossa che go da fare
 not know-1SG what that have-1SG to do
 ‘I don’t know what I have to do’
- e. Friulian
Dimi ce c al fas Giuan
 tell=me.DAT what that he do-2SG John
 ‘Tell me what John does’
- f. Forlì, Romagnol, North-Italian
An so indù che li epa cumprà la mama
 not know-1SG where that them had bought the mommy
 ‘I don’t know where mom bought them’
- g. Montagnola, Ticinese, North-Italian
I m a domandat indova che ra Maria la sia nada
 they me.DAT have asked where that the Mary she has gone
 ‘They asked me where Maria went’

- (16) Slovenian
Kaj praviö kdo (da) je priöel?
 wha say who that is come
 ‘Who are you saying came?’

- (17) Burgenland Croatian
Zna-m koga da je prehinjio
 know-1SG who.ACC that is betrayed
 ‘I know whom he betrayed’

The question that now arises is how to account for the observed convergence of syntax phenomena among different languages that are close to each other geographically.

In some highly influential studies of language contact, the central idea is that every property of a given language can be transferred to another language when

languages come into contact with each other (see Johanson 1999: 60 or Thomason 2001: 60) until, in the ideal case, “a total isomorphism of the two languages” (Sasse 1992: 61) takes place. This explanation has been adopted especially with regard to the situation of “total language contact”⁴, in which long-term, collective bilingualism usually predominates. According to Kolmer (2012: 19), this is typical for small minority languages. Actually, to capture the sociolinguistic situation of small minorities, Mattheier (1996: 34) proposed the more precise term of *Advergenz* (‘advergence’) since the minority language (crucially called the ‘replica language’) converges unilaterally with the linguistic structures of the majority language (the ‘model language’). Nevertheless, according to the isomorphism approach, the overarching idea behind both Sprachbund reciprocal convergence and small minorities’ unilateral ‘advergence’ is that the diachronic trend leads to “the emergence of a greater similarity through the reduction of differences” (Kolmer 2012: 19).⁵

A different view is taken within the theoretical framework of generative grammar, which traditionally conceives of universal grammar as a system of (invariable) principles and parameters (of variation), the value of which is fixed through a core syntactic option ($\pm V2$, \pm null subjects, VO vs. OV, and so forth). At first glance, the notion of Sprachbund contrasts with this traditional understanding of variation in the generative grammar approach. Hence, contact phenomena represent a fruitful research area that interacts with the revision of the same notion of parameter in comparative generative grammar studies by pointing to the relevance of microvariation (see Rizzi 2014). The main aim is to explain whether and how two different parameter values can converge.

In the following, we will focus on the apparent relaxation of one of the main well-known macro-parameters of variation between Romance and Germanic varieties, in the Alpine region, namely the above-mentioned NS parameter and its interrelation with the verb second phenomenon (= V2).

3 The value of the NS parameter and the variable pattern of pro-drop (epi)phenomena

The NS parameter is one of the most well-known and well-studied parameters of variation within the framework of generative grammar (see Cognola and Casalicchio

⁴ The term can be traced to Walter Breu (see a.o. Breu 2013). It defines the situation of linguistic contact in which the minority language is the L1, the majority language is the L2, in which all the speakers of the L1 are bilingual, and the L2 is the roofing language of the L1.

⁵ “[...] eine Herstellung größerer Ähnlichkeit durch den Abbau von Unterschieden“ (Kolmer 2012: 19).

2018, and the literature cited therein). Since Luigi Rizzi's seminal work on the topic (see Rizzi 1982), Standard Italian has been considered to represent the prototypical pro-drop language (+NS), and English its prototypical counterpart (–NS). In fact, Standard Italian is not only characterized by the occurrence of referential null subjects, but also exhibits all the phenomena that usually correlate with the core definition of pro-drop:

- a) The lexicon does not include pronominal forms for expletive subjects;
- b) The subject of the embedded sentence may undergo WH-extraction through the lexical complementizer *che* 'that' (in technical terms, Italian allows for the violation of the 'that-trace' filter);
- c) The subject NP allows 'free inversion' with the entire VP (Sub V_{fin} V_{pp} O / XP V_{fin} V_{pp} (O) Sub (O)).

By contrast, English requires the lexicalization of the referential pronominal subject (cf. 18a) as well as impersonal subjects (cf. 18b) and expletive subjects (cf. 18c); it does not allow the violation of the 'that-trace' filter (cf. 19), and subject-free inversion is confined to extremely limited contexts (cf. 20):

- (18)
 - a. *(**He**) has just arrived
 - b. *(**It**) is raining
 - c. *(**It**) is evident that he has just arrived
- (19) Who do you think (***that**) has just arrived?
- (20)
 - a. *There has arrived **your friend**
 - b. There arrives **a man**

While Standard German behaves similarly to English, coherently with the negative value of the NS parameter, the contact between German and Romance varieties in the Alpine region seems to favor notable convergence effects. In fact, all the (Romance and Germanic) dialects north and south of the Brenner Pass require the lexicalization of the third person singular subject pronoun (that is, they behave similarly to German with regard to the core aspect of the NS parameter); at the same time, however, they seem to contradict one of the correlative phenomena of pro-drop by allowing for a systematic violation of the 'that-trace filter', exactly like Italian (see Bidese and Tomaselli 2018; Rabanus and Tomaselli 2017). In the following, we will argue that the theoretical status of these convergent patterns is very different.

Regarding the lexicalization of the pronominal subject (see Section 3.1), we follow the well-established view by assuming that:

- i. In the Italian dialects, subject clitics are to be considered as belonging to verbal morphology; that is, they behave like verbal prefixes (see Brandi and Cordin 1989; Rizzi 1982) and imply an empty structural subject position (= null subject in SpecTP);
- ii. Bavarian dialects (including Cimbrian and Mòcheno) are clearly non-null-subject languages; they exhibit a fully-fledged typology of formal expletives (impersonal subjects, positional expletives, and pronominal correlates to extraposed subject clauses), and are all characterized by mandatory V to C movement in the root declarative clause (V2). With regard to the violation of the ‘that-trace’ filter, we propose (see Section 3.2) that it depends on two different morphosyntactic strategies (that is, two different structural analyses):
 - a. In the Italian dialects, it relies on free subject inversion, what is consistent with the positive value of the NS parameter;
 - b. In Bavarian dialects, it relies on the modality of Nominative Case assignment (henceforth *NOM*) (by C) in a V2 language that is equipped with a full paradigm of subject clitics.

3.1 The morpho-syntax of clitics: enclisis versus proclisis, and the quality of the gaps in the paradigm

It is well known that clitic syntax in Germanic varieties diverges from clitic syntax in Romance varieties, at least in two main aspects (see Tomaselli and Bidese 2019):

- i. Germanic varieties are characterized by enclisis alone and do not display proclisis;
- ii. Enclisis occurs in the *Wackernagelposition*; that is, to the right of either the finite verb or the lexical complementizer, i.e. to the lexical element in C:

- (21) Bavarian [Weiß 1998: 86]
- a. *Ea* ***hod=da=n*** *geem*
 he has=you.DAT=him.ACC given
 ‘He gave it to you’
 - b. ... ***das=a=da=n*** *hod geem*
 that=he=you.DAT=him.ACC has given
 ‘... that he gave it to you’

In Romance varieties, enclisis and proclisis alternate on the basis of the verbal form (proclisis to the finite verb [cf. 22] vs. enclisis to the non-finite verbal form [cf. 23]; that is, both the infinitive and past participle, plus the imperative verbal form) and are conditioned by specific syntactic contexts (subject clitics occur in enclisis to the

finite verbal form only in WH root clauses [cf. 24], and object clitics always occur to the left of the finite verb, independently of the \pm WH modality [cf. 22 and 24]):

- (22) a. *El* $\dot{l}^i=\mathbf{a}$ *magnà su tuta (la torta)^i* (Trentino)
 he it=has eaten PRT whole.F.SG (the cake)
 ‘He ate the whole cake’
- b. ... *che el* $\dot{l}^i=\mathbf{a}$ *magnà su tuta (la torta)^i*
 that he it=has eaten PRT whole.F.SG (the cake)
 ‘... that he ate the whole cake’
- (23) *Per magnar=la su tuta, el deve aver avù fam*
 for eat=it PRT whole.F.SG he must have had hunger
 ‘To eat it all he must have been hungry’
- (24) $\underline{L}=\mathbf{a}=\underline{lo}$ *magnà su tuta?*
 it=has=he eaten PRT whole.F.SG
 ‘Did he eat it all?’

From a theoretical perspective (see Tomaselli and Bidese 2019 for an introduction), these divergences are due to the different hosting head: C in Germanic V2 languages and T in Romance varieties, which corresponds to the different landing site of V_{fin} movement.

- (25) C ← (CliticP) → T

Even if cliticization does not target the same hosting head, from a morphological point of view, it is uncontroversial that both Romance and German varieties present a paradigmatic distinction between (full) pronominal and clitic subjects (for Bavarian, see Bayer 1984 and Weiß 1998: 87, among others).

It is also interesting that the two groups of languages display evident asymmetry when the possible gaps are taken into consideration. While a German dialect such as Bavarian only allows a gap in the second person singular and plural (also in the first plural in some dialects; see Weiß 1998: 119), the second person is never dropped in Italian dialects, which usually drop the first person singular. Table 1 (adapted from Rabanus and Tomaselli 2017) summarizes the situation in the dialect continuum in the North-East Alpine region (the minuses represent the absence of pro-drop, i.e. the mandatory expression of the subject pronoun of the singular forms, whereas pluses show the occurrence of the null subject pronouns).

Table 1: Referential null subjects north and south of the Brenner Pass.

	Dietfurt (Bayern)	Meran ^a (BZ)	Salurn ^a (BZ)	Palai ^b (TN)	Lusern ^c (TN)	Salorno ^d (BZ)	Illasi ^e (VR)	S. Pietro ^e (VR)
NS 3SG	–	–	–	–	–	–	–	–
NS 2SG	+	+	+	+	–	–	–	–
NS 1SG	–	–	–	–	–	+	+	+

^aGerman variety, i.e. South-Bavarian, Tyrolean, ^bFersina valley (Fersental): Mòcheno, ^cLuserna: Cimbrian, ^dItalian variety, i.e. Trentino dialect, ^eItalian variety, i.e. Venetian.

The possible gaps in the paradigm on the one hand (cf. NS 2SG for Dietfurt, Meran and Salurn in Table 1) and the mandatory occurrence of the subject clitic in the third person on the other (cf. NS 3SG for Salorno, Illasi and S. Pietro in Table 1) have led theoreticians to consider Bavarian to be a semi-pro-drop language (see Biberauer 2010), and North-Italian dialects as non-null-subject languages (see Manzini and Savoia 2005), which is in contrast to the original hypothesis by Brandi and Cordin (1989).

The ‘relaxation’ of the value of the NS parameter in the German and Romance varieties north and south of the Brenner Pass compared to the respective standard variety (Standard German vs. Standard Italian) is reinforced by the observation that all the German varieties that we considered do not exhibit any ‘that-trace’ effect; that is, they allow for a systematic violation of the ‘that-trace’ filter. Among these varieties, the Germanic minority languages Mòcheno and Cimbrian even allow free subject inversion in the same way as Italian does (see Bidese and Tomaselli 2018; Cognola 2013). Table 2 from Rabanus and Tomaselli (2017) provide an overview of all these phenomena.

The grey area shows an interesting convergence among the German(ic) varieties ‘on the border’ (the Germanic minority varieties of Palai and Lusern, and the

Table 2: Null subjects and traditionally related phenomena.

	Dietfurt (Bayern)	Meran (BZ)	Salurn (BZ)	Palai (TN)	Lusern (TN)	Salorno (BZ)	Illasi (VR)	S. Pietro (VR)
That-trace violation	–	–	–	–	–	–	–	–
Expletive subjects	+	+	+	+	+	+	–	–
Free subj. inv. (VP-DPSubj)	–	–	–	+	+	+	+	+

German dialect of Salurn). This observation sheds light on the possible role of linguistic contact between South-German varieties and North-Italian ones, and poses an interesting question concerning the format of parameters. However, the core aspect of the NS parameter, namely the mandatory realization of the third person singular (see Table 1), which correlates systematically with the occurrence of the lexical expletive subject (see Table 2) – the third person neuter in German varieties – allows us to draw a clear line between German and Italian varieties that behave coherently with their respective standard models.

The divergences with regard to the two other correlative phenomena of pro-drop, namely free subject inversion and the violation of the ‘that-trace’ filter, should be traced back to the interference of different syntactic aspects such as the OV–VO typology that constitutes a premise for free subject inversion (VP-DPSubj), and the modality of NOM Case assignment, which defines the relationship between the case-assigning head and the position to which the NOM case is assigned.

In other words, our idea is that convergence does not imply a (partial) resetting of the parameter value, which remains differently fixed in the two groups of languages. Convergence in the contact and Sprachbund area consists of the superficial overlapping of linear word orders that are the result of different structural aspects.

This is particularly clear as far as free subject inversion is concerned: In the Alpine region, the only German(ic) varieties that allow this phenomenon are those characterized by a VO typology (that is, Cimbrian and Mòcheno⁶: cf. 26 and 27, which pattern similarly to the Italian variety spoken in Salorno; cf. 28). By contrast, Bavarian varieties (such as those spoken in Diefurt, Meran, and Salurn), which belong to the OV typology, like Standard German, do not allow subject extraposition to the right of the verbal complex (that is, the subject never occurs in the so-called *Nachfeld*, cf. 29):

- (26) Cimbrian
Haüt iz=ta khent dar nono atz Lusérn
 today is=SUBJ.EXPL come the grandpa to Lusérn
 ‘Today, the grandpa arrived in Lusern’

⁶ OV syntax is still possible for Mòcheno. Nevertheless, it is marked information-structurally, as it is associated with the focalization of the object (see Cognola 2013; Cognola and Bidese 2013). In addition, Cognola and Moroni (2018) provided evidence that the object must carry the nuclear pitch accent in OV syntax. Moreover, the possibility of inverting the nominal subject and the finite verb, as in German, is connected strongly to the fact that the DP subject must have a focus reading in Mòcheno (see Cognola 2019: 89).

- (27) Palai, Mòcheno
*Hait is [pro] ka Verona kemmen **der nono** za kontarn ...*
 today is [pro] to Verona arrived the grandpa to tell ...
 ‘Today, the grandpa arrived in Verona to tell ...’
- (28) Salorno, Trentino, North-Italian
*Cos’è che lⁱha meso (su) sul fogo **la nona**ⁱ?*
 what=is that she=has put PRT on-the fire the grandma
 ‘What did the grandma put on fire?’
- (29) Dietfurt, Bavarian
Heid is [ø] nach Verona kemma **də Opa*
 today is to Verona arrived the grandpa

The only extraposed subject that is allowed implies the doubling of subject NP by a pronominal enclitic subject, which results in a right dislocation. This construction is possible in all the Germanic varieties considered here (cf. 30a–c):

- (30) a. Dietfurt, Bavarian
*Heid is=a nach Verona kemma (**də Opa**) a=er=he*
 today is=he to Verona come (the grandpa)
 ‘Today, the grandpa arrived in Verona’
- b. Cimbrian
*Haiüt iz=ar khent (**dar nono**) atz Lusérn ar=er=he*
 today is=he come the grandpa to Lusérn
 ‘Today, the grandpa arrived in Lusern’
- c. Palai, Mòcheno
*Hait is=er ka Verona kemmen (**der nono**) za kontarn... er=er=he*
 today is=he to Verona arrived the grandpa to tell ...
 ‘Today, the grandpa arrived in Verona to tell ...’

Of course, we do not mean to imply that the VO typology allows free subject inversion per se, but that subject inversion/extraposition to the right of the VP is difficult to realize without a VO type. It is a necessary, but not a sufficient condition, as French and the Scandinavian languages demonstrate well.

With regard to the violation of the ‘that-trace’ filter (see Section 3.2), we will pursue the idea that languages may adopt different strategies in order to extract the subject from a subordinate clause introduced by a lexical complementizer on the basis of the different modalities in which subject agreement is realized.

Figure 3 depict the different configurations of subject agreement in Italian, Cimbrian, and German (for a detailed analysis, see Bidese et al. 2020):

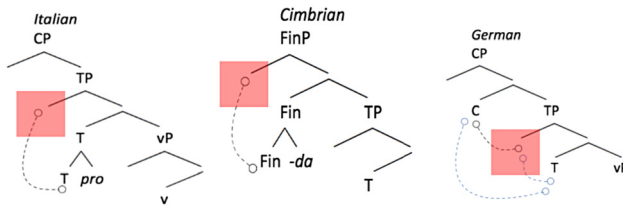


Figure 3: Different configurations of NOM case assignment.

In Italian, subject agreement and NOM case assignment (see the red squares in Figure 3) involve the Spec-Head relation in the TP domain; in Cimbrian, the same relationship is realized in the lower CP domain (= FinP), while in German, subject agreement implies a double relationship of SpecTP with both C and T, where C acts as case assigner into the lower domain via T.

As we propose in the next paragraph, the possibility of blocking the ‘that-trace’ effect implies circumventing Spec-Head agreement in TP, and either the activation of Spec-Head agreement within CP or a post-VP subject position. In any case, what is important for the purpose of this paper is that the ‘that-trace’ violation turns out to be a convergent result of different morphosyntactic strategies, that is, of structural configurations.

3.2 Different strategies for the violation of the ‘that-trace’ filter

Since Rizzi (1982), the systematic violation of the ‘that-trace’ filter in Italian has been correlated with the possibility of extracting the subject from a postverbal position:

- (31) a. *Credo che tuo figlio abbia mangiato tutta la torta*
 believe-1SG that your son has.SBJV eaten whole the cake
 ‘I think that your son has eaten the whole cake’
- b. *Credo che [pro] abbia mangiato tutta la torta tuo figlio*
 believe-1SG that [pro] has eaten whole the cake your son
- c. *Chi credi che [pro] abbia mangiato tutta la torta [tuo figlio]?*
 who believe-2SG that [pro] has eaten whole the cake your son
 ‘Who do you think has eaten the whole cake?’

This hypothesis has been confirmed by Italian varieties that display different agreement patterns with regard to pre- versus postverbal subjects. This means that the verbal inflection displays agreement features with preverbal subjects but,

crucially, not with postverbal ones (cf. 32a–b). In this last case, the finite verb is always inflected for the third person singular (see Brandi and Cordin 1989: 121–125):

(32) Fiorentino, Italian

- a. *Gli è venuto delle ragazze*
 EXPL is come-3M.SG some girls
 ‘Some girls came’
- b. **Le son venute delle ragazze*
 they are come-3F.PL some girls

The same holds for the case in which the subject is extracted from an embedded sentence:

(33) Fiorentino, Italian

- a. *Quante ragazze tu credi che e’ **sia** venuto?*
 how-many girls you believe that EXPL is.SBJV come-3M.SG
 ‘How many girls do you think came?’
- b. **Quante ragazze tu credi che le **siano** venute?*
 how-many girls you believe that they are.SBJV come-3F.PL

Other North-Italian dialects also exhibit a similar phenomenon. In the following examples in Venetian provided by Cecilia Poletto (p.c.), the preverbal subject displays clitic doubling and agrees with the ending of the past participle (cf. 34a). By contrast, the postverbal subject shows neither clitic doubling nor past participle agreement (cf. 34b). The subject extraction from a postverbal subject position prevents Spec-Head agreement in TP (cf. 34c):

(34) Venetian, Italian

- a. *Ancuo le tose **le** ze riva*
 today the girls they are come-3F.PL
 ‘Today, the girls arrived’
- b. *Ancuo ze rivá le tose*
 today are come the girls
 ‘Today, the girls arrived’
- c. *Quante tose credi=to che ze rivá?*
 how-many girls believe=you that are come
 ‘How many girls do you think came?’

We do not wish to speculate on the modalities of NOM case assignment to the postverbal subject (via the expletive *pro* or directly via T). Crucially, SpecTP is inert, as the absence of both clitic doubling and past participle agreement proves (cf. 34c, again).

Standard German represents the opposite situation:

- (i) It is characterized by a negative value of the NS parameter;
 (ii) NOM case is assigned by C via T on the lower domain:

- (35) a. **Wer glaubst du [[t] dass [t] die Torte gegessen hat]?*
 who believe you that the cake eaten has
 b. **Wer glaubst du [[t] dass [t] gekommen ist]?*
 who believe you that arrived is
 c. **Wer glaubst du [[t] dass [t] von dem Professor [t] gelobt wurde]?*
 who believe you that by the professor praised was

As expected in a non-null-subject language, the complementizer *dass* ‘that’ acts as filter and blocks the extraction of the subject intervening in the chain between the intermediate trace in SpecCP and the trace in subject position, independently of the modality of NOM case assignment (in SpecTP or directly in the verbal phrase). The only way to avoid the ‘that-trace’ filter is to adopt a V2 strategy, as in (36):

- (36) a. *Wer glaubst du [[t] hat [t] die Torte gegessen]?*
 ‘Who do you believe has eaten the cake?’
 b. *Wer glaubst du [[t] ist [t] gekommen]?*
 ‘Who do you believe has come?’
 c. *Wer glaubst du [[t] wurde [t] von dem Professor [t] gelobt]?*
 ‘Who do you believe has been praised by the professor?’

It is evident that the finite verb in C does not block the extraction of the subject but, on the contrary, allows the intermediate trace in SpecCP.

Crucially, Bavarian permits both strategies:

- (i) The embedded V2 strategy as in German (cf. 37); and
 (ii) Extraction over the lexical complementizer *dass* (cf. 38).

- (37) *Wer moanst-n hod des Buach g’lesn?*
 who think-2SG-IP has the book read
 ‘Who do you think has read the book?’

- (38) *Wer moanst-n, dass des Buach g’lesn hod?*
 who think-2SG-IP that the book read has
 ‘Who do you think has read the book?’

Note that the occurrence of the clitic subject activates the ‘that-trace’ effect (cf. 39):

- (39) **Werⁱ moanst-n, dass=aⁱ des Buach g’lesn hod?*
 who think-2SG-IP that=he the book read has

Subject clitics are attracted by agreement morphology in C and require NOM case assignment; hence, they are incompatible with subject extraction. In other words, the subject either cliticizes onto C⁰ or it moves out of CP via SpecCP. Bavarian subject clitics have not yet generally become verbal morphology; this is usually limited – as noted previously – to the second person (and to the first person plural depending on the variety considered). Nevertheless, from a comparative perspective, it is precisely

the Comp agreement morphology that makes the difference between Standard German and Bavarian and could be the reason for allowing the intermediate subject trace in SpecCP.

A similar pattern holds for both Cimbrian and Mòcheno, in which subject extraction from the subordinate clause is blocked by the occurrence of the personal subject pronoun (cf. 40 and 41), but is perfectly compatible with the enclitic expletive *-da* in Cimbrian (see Bidese and Tomaselli 2018) (cf. 42) or a null expletive subject in Mòcheno (cf. 43) (see also Cognola 2013: 147–148), which we observed previously in the sentences with a post-VP subject (cf. 27 above):

(40) Cimbrian

- a. **Ber gloabst=(t)o, azz=**ar** habe gelest disan libar?*
 who believe=you that=he has.SBJV read that book
- b. **Ber gloabst-(t)o, azz=**ar** khemm atz Lusérn haiüt?*
 who believe=you that=he come.SBJV to Lusérn today

(41) Mòcheno

- a. **Ber moast, as er hòt galesn s doi puech?*
 who think-2SG that he has read the this book
- b. **Ber moast, as er khimmp ka Oachlait haiüt?*
 who think-2SG that he come to Oachlait today

(42) Cimbrian

- a. *Ber gloabest-(t)o, az=**ta** habe gelest disan libar?*⁷
 who believe=you that=SUBJ.EXPL has.SBJV read that book
 ‘Who do you think has read that book?’
- b. *Ber gloabst-(t)o, az=**ta** khemm atz Lusérn haiüt?*
 who believe=you that=SUBJ.EXPL come.SBJV to Lusérn today
 ‘Who do you think will come to Lusérn today?’

7 Note that the same strategy in Cimbrian is possible with the complementizer *ke* ‘that’, which triggers a symmetric word order pattern. In this case the expletive subject *da* appears encliticized to the finite verb, as in following examples (see Bidese and Tomaselli 2018: 59):

(i) Cimbrian

- a. *Ber gloabest-(t)o, ke 'z hatt=(**ta**) gelest disan libar?*
 who believe=you that it has=SUBJ.EXPL read that book
 ‘Who do you think has read that book?’
- b. *Ber gloabst-(t)o, ke 'z khint=(**ta**) atz Lusérn haiüt?*
 who believe=you that it comes=SUBJ.EXPL to Lusérn today
 ‘Who do you think will come to Lusérn today?’

- (43) Mòcheno
- a. *Ber moast, as [pro] hòt galesn s doi puech?*
 who think-2_{SG} that [pro] has read the this book
 ‘Who do you think has read that book?’
- a. *Ber moast, as [pro] khimmp ka Oachlait hai?*
 who think-2_{SG} that [pro] come to Oachlait today
 ‘Who do you think will come to Oachlait today?’

The comparison between Bavarian on one hand and Cimbrian and Mòcheno on the other shows that these three German(ic) varieties rely on different strategies to extract subjects from subordinate clauses introduced by a complementizer. Bavarian is characterized by Comp subject agreement morphology, which means that the lexical complementizer has at least different morphological forms (*wenn* vs. *wennsd* and *wenns*) (see Weiß 1998: 119), resembling the *da* versus *dan* alternation in West Flemish, based on number agreement, and the *que* versus *qui* alternation in French subject relative clauses. The hypothesis that we want to propose here – without further details – is that Comp morphology makes an agreement relationship with the intermediate subject trace in SpecCP possible. By contrast, Cimbrian and Mòcheno do not display Bavarian Comp agreement, but allow a post-VP subject position that is compatible with their VO typology. Hence, it is reasonable to assume that they may rely on the Italian strategy, even if there are evident differences with regard to the value of the NS parameter:

- i. Italian is a null-subject language in which NOM is assigned by T;
- ii. Cimbrian and Mòcheno are coherent V2 languages in which NOM is assigned by C, and the referential *pro* is not allowed. In fact, the postverbal subject always requires the expletive *-da* in Cimbrian, while the expletive *pro* is allowed in Mòcheno (which perfectly reflects both Bavarian and Standard German with regard to this specific aspect).

In conclusion, the violation of the ‘that-trace’ filter represents the superficial convergence of different morphosyntactic configurations. If we are on the right track, the ‘that-trace’ effect results from different syntactic strategies concerning both NOM case assignment and the possible subject agreement configuration in languages that differ strongly with regard to both the value of the NS parameter and the realization of V2 (which is, ultimately, the landing site of finite verb movement).

4 Modeling the continuum

Within a principles and parameters approach, the possibility of explaining the linear convergence of different structures was based on the concept of re-analysis (see Lightfoot 1997), which was also assumed to be one of the drivers of language change/diachronic variation. Though, it is much more difficult to account for the variation in the parameter settings of a given language.

The perspective adopted in the research project *Rethinking Comparative Syntax (ReCoS)* revisited the notion of parameters assuming an implicational scale of different micro-parameters, which resembles the traditional notion of ‘parameter correlates’ to some extent. Regarding the NS parameter, Biberauer (2010: 155) proposed the following implicational scale:

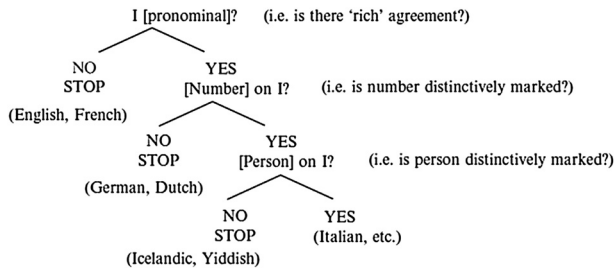


Figure 4: The implicational scale for the NS parameter.

The explosion of the NS parameter in a subset of micro-parameters of variation opens the possibility to analyze partial overlaps among different groups of languages on the basis of their position on the scale, with interesting consequences for language contact.

Nevertheless, there are at least two critical aspects in Biberauer’s (2010) analysis:

- i. The choice of the ‘core’ aspect/starting choice; and
- ii. The effects on language classification/grouping.

In her implicational scale for the NS parameter (see Figure 4), the hypothesis that the positive value of the NS parameter begins with a choice concerning the pronominal nature of the functional head I (= T) is conditioned strongly by Italian as a prototypical NS language (at the end of the right branch). With regard to V2 languages such as German and Dutch, there is a general consensus on the hypothesis that mandatory V to C movement is driven by the ‘pronominal’ nature of C, with further consequences for the modalities of NOM case assignment and the possible configuration of subject agreement. From the perspective suggested by

Hulk and van Kemenade (1995), V2 Germanic varieties are not suitable for the first option of the parametric choice (= I pronominal) proposed in Figure 4, since a C-dominant language such as German or Dutch, in which C attracts V_{fin} , assigns the NOM case and eventually licenses the expletive *pro*, is incompatible with a strong/dominant T domain.

More specifically, the pronominal nature of a functional head (either C or I/T) is ultimately linked to both finite verb movement and subject agreement, that is, *pro* licensing. In fact, there is general agreement that I in Italian acts as a trigger for both *pro* licensing and V_{fin} movement to I/T. However, the same does not hold for French, in which agreement in I/T is sufficiently rich to attract the V_{fin} even if it does not act as a licensor for *pro*. Classifying English and French in the same segment (the left branch of the first choice in Figure 4) does not take the fact that I/T in English does not even act as landing site for V_{fin} movement into account.

Furthermore, the expletive value of *pro* in V2 Germanic varieties could be linked directly to the pronominal nature of C, the overt manifestation of which results in Comp agreement morphology. This excludes German and Dutch from the branch that leads to Italian (the right branch of the second choice in Figure 4).

As proposed tentatively by Rabanus and Tomaselli (2017: 314), a different way to analyze partial overlaps among different groups of languages (Germanic and Romance varieties) in contact areas is to assume that a converging area – as far as one single parameter is concerned – begins from two different foci (that is –NS vs. +NS), where the positive value of the NS parameter is defined by its core aspect, the referential *pro*, which – contrary to the representation in Figure 4 – becomes the starting point for differentiation in our model of superficial overlapping (cf. 44):

(44) Model of superficial overlapping (= Sprachbund synchronization):

(C-dominant languages) NSP [-] A --- A'--- || A'' ||--- A'''--->
<--- B''' --- || B'' ||--- B'---- B NSP [+]
(I/T dominant languages)

Line A–A''' represents the German typology, which is characterized by the negative value of the core phenomenon (= -NSP: no null-subject parameter). Line B–B''' represents the Italian typology, which exhibits a positive value. A''/B'' shows the point of overlap (in our case study, the violation of the ‘that-trace’ filter) of these two different systems of variability: Bavarian, Cimbrian and Mòcheno within the Germanic line (= A–A'''), and the dialects of Salorno (Trentino), Illasi, and San Pietro (Veronese) (cf. Tables 1 and 2, above) within the Romance line (= B–B''').

This representation considers the point of overlap (A''/B'') to be the Sprachbund synchronization as the result of superficial convergence in contrast to a

model that implies system A changing into system B within the same line of development, as hypothesized, for instance, by Sasse (1992) (see Section 2), and represented in (45):

(45) Model of system changing

$$\text{NSP [-]} \quad A - A' - \| A'' / B'' \| - B' \longrightarrow - B \quad \text{NSP [+]}$$

The two different ways to account for language variation (44 vs. 45) with regard to a specific phenomenon, namely:

- i. Starting from a given choice (= I pronominal in Figure 4) that branches gradually, and
- ii. Starting from two different foci that overlap along their peripheries, seem to represent two complementary conceptual models for linguistic variation and, ultimately, for language classification. It is interesting to note that this opposition resembles the historical competition between Schleicher’s (1863) *Stammbaum* model and Schmidt’s (1872) *Wellentheorie*. As we will show in the next paragraph, only the second theoretical perspective was designed specifically to account for ‘overlapping at the borders’ and is, therefore, suited to capture synchronization effect in a Sprachbund area.

4.1 Revisiting Schmidt’s *Wellentheorie* as a conceptual model for Sprachbund

Schleicher’s (1863) and Schmidt’s (1872) approaches to language relationships within the Indo-European family have traditionally been represented via the following well-known figures (Figure 5).

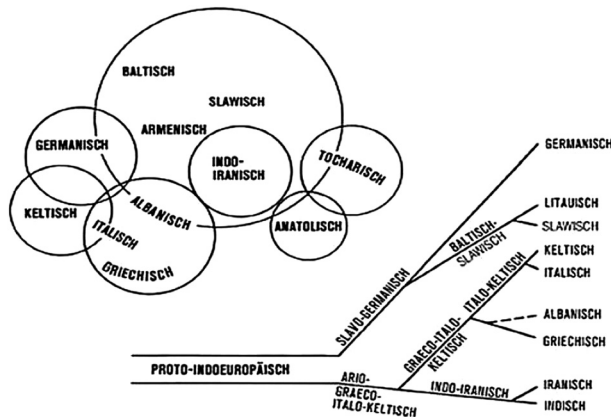


Figure 5: Representation of models of the relationships among the languages of the Indo-European family (from König 1996: 38).

It is evident that only the perspective opened by the *Wellentheorie* was designed to take intersecting areas as possible spaces for convergence features among different groups of languages into account (see also Pirazzini 2013: 30). By contrast, Schleicher's *Stammbaum* starts from a first binary branching between *Slavo-Germanisch* and *Ario-Graeco-Italo-Keltisch*, excluding any possibility of convergence between Germanic and Romance, which cannot be traced back to a common proto-Indo-European ancestor. Obviously, Schleicher's model was not designed to explain contact phenomena, unlike Schmidt's model.

The two different perspectives used to explain microvariations with regard to a given parameter (cf. Figure 4 vs. 44) echo the opposition between *Stammbaumtheorie* and *Wellentheorie* in Figure 5. In fact, Biberauer's (2010) model starts from one given feature, which is the \pm pronominal nature of I/T, and results in a gradual bipartition of which the core aspect of the parameter, which is rich person agreement, is the final point of the ramification. The model in (44), by contrast, starts from two different foci determined by the two possible values of the core parametric choice (that is, \pm NS parameter = \pm referential *pro* and expletives), perfectly matching the metaphor of the waves produced by two stones thrown into a lake that intersect and become level at the peripheries of the convergence area (see also König 1996: 39–40).

These two complementary conceptual approaches can only be combined within a new model of language variation in which the interplay of different macro-parameters produces the intersection of single aspects of microvariations.

5 Conclusions

In our contribution, we argued for an interpretation of Sprachbund phenomena as the convergence of linear patterns that derive from different structural analyses, namely divergent parameter settings. This perspective led us to reflect on the format of parameters, and to acknowledge the relevance of the new theoretical approach that is based on the notion of microvariation and resolves a single parameter value into a wide scale of subparametric possibilities (see among others Biberauer 2010). At the same time, important questions arose, such as:

- i. The choice of the starting point from peripheral features to the core feature or from the core value (referential *pro* in the case of NS) to peripheral correlates (such as the expletive *pro* and 'that-trace' violations); and
- ii. The interplay of different parameters.

About (i), the representation that starts with the core choice implies a model in which potential convergence effects apply at the peripheries of two different

starting points (\pm referential *pro*). By contrast, in the representation proposed by Biberauer (2010), convergence represents the starting point for further branching divergences. With regard to (ii), the possibility of designing a model that takes the interplay of different parameters understood in their subparametric complexity into account goes beyond the limits of the actual theoretical discussion. Of note, it revitalizes the debate between the two complementary approaches that characterize the historical-comparative method, namely the *Stammbaumtheorie* (conceived as prototypical example of a binary branching model) and the *Wellentheorie* (conceived similarly to the contemporary development of set theory by John Venn), whereby only the second is suitable to account for Sprachbund phenomena at the area of intersection.

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Abbreviations

ACC	accusative
AUX	auxiliary
DAT	dative
EXPL	expletive
F	feminine
FUT	future
IP	interrogative particle
M	masculine
N	neuter
NOM	nominative
NS	Null Subject
NSP	Null-Subject Parameter
PL	plural
PRT	particle
REFL	reflexive
SBJV	subjunctive
SG	singular
SUBJ	subject

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