

Pathways of Counterfactual Markings: A Diachronic Typology

Qian Yong¹

¹ College of Foreign Studies, Jinan University, Guangzhou, China

Correspondence: Qian Yong, College of Foreign Studies, Jinan University, Tianhe District, Guangzhou, Guangdong Province, China. E-mail: 181538346@qq.com

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Abstract

Previous accounts show that markings of CF (counterfactual) clauses tend to be complex. One frequent combination of markers that shows up in many languages is that of a past tense together with perfect in past CFs. According to Dahl (1997), the stacking use of CF markings consists of elements of varying historical layers. This motivates a closer look at the diachronic history of each marking in the combinations that do occur. This paper is therefore devoted to a diachronic development of CF markings. A diachronic study of frequently used CF markers such as past tense, perfective/imperfective aspect, irrealis mood markers is conducted. I propose a cross-linguistic whole life-cycle of CF markers which start as pragmatic clues, termed as CFEnhancing (Counterfactual Enhancing) markers in this paper. The following part will address the question concerning the origins of counterfactuality ahead of the main discussion.

Keywords: counterfactuals, typology, grammaticalization, diachronic

1. Introduction

1.1 Counterfactuality as a Pragmatic Implicature

Ippolito (2003) provides an explanation for the presupposition and implicature in CF inference. Van linden & Verstraete (2008) explain in depth why there is polarity reversal in the CF context. They come up with a compelling proposal according to which counterfactuality is derived as a pragmatic implicature. These observations coincide with Givón (1990)'s finding that CFs tend to be marked by a combination of two semantically conflicting verbal inflections: (i) a prototypical realis operator (past, perfective or perfect) and (ii) a prototypical irrealis operator (future, subjunctive, conditional or modal). In this sense, patterns of CF markings are compositional in nature, that is, different forms input their individual meanings to the general interpretation of the utterance in a compositional way. This is also proved in the **Israeli Sign Language** where CF conditionals are systematically distinguished from factual ones by applying raised brows (connected with conditional mood) and squint (connected with shared factual basis). However, it seems that the compositional nature of CFs cannot justify the existence of imperfective. Grønn (2008) outlines an evolutionary process of imperfective from factual to CF uses. It has been pointed out that CF use of imperfective comes up as a pragmatic implicature known as "cancellation of result". Since the perfective is typically used for denoting a complete event whose result still holds at the utterance time, the imperfective is accordingly pragmatically strengthened to the opposite meaning, thus giving rise to the implicature of a reversible target state. Compare the following examples:

1) Imperfective

A: Did John go to the party last night?

B: Yes, he did. / He was going to, but...

The answer with progressive aspect can produce a reversal of polarity which is contrary to the sentential meaning at the surface level. The same scenario is also applicable to the sentences with habitual aspect, like in Mandarin (Sino-Tibetan: China):

2) *wangwang* (往往, used to)

A: 昨天	晚上	德國	和	巴西	的
Zuotian	wanshang	deguo	he	baxi	de

Yesterday night	German	and	Brazil	PTCL		
足球	比賽	哪	個	隊	贏	了?
zuqiu	bisai,	na	ge	dui	ying	le.
football	match	which	CLF	team	win	MDL

“Which team won the football match last night, German or Brazil?”

B: 巴西	隊	往往	會	贏,	但是...
baxi	dui	wangwang	hui	ying,	danshi
Brazil	team	used_to	MDL	win	but

“Brazil used to win, but...”

It is quite natural to use *wangwang* (往往, used to) denoting a past generic fact in Mandarin here to negate the fact that “Brazil won the match”. However, if replaced by the perfective sentence like *baxidui ying le* (巴西隊贏了, Brazil won), the sentence is hard to denote any polarity reversal. The tentative uses of imperfective as “negative terms” may enter the semantic component of the analyses due to pragmatic strengthening from the non-use of perfective with “actuality entailment” (Bhatt & Pancheva, 2005). Another evidence of imperfective as a counterfactuality indicator is found in Russian (Indo-European: Russia), as shown in the following example:

3) (Grønn, 2008, p. 19)

K schat’ju ja ne provalilsja na ekzamene. V sluchae provala menja vygonjali imperfective+past iz universiteta

“Luckily, I did not fail the exam. In case of failure, I would have been thrown out of the university.”

Pragmatic CFs differ from the standard CFs in that the former can only be marginally used in past context. Grønn (2013) further lists an example to illustrate the ungrammaticality of the non-past uses:

4) Imperfective in the past (Grønn, 2008, p. 29)

A: Ekzamen otmenen!

“The exam is cancelled.”

B: Kakoe oblegchenie! *V sluchae provla menja vygonjali imperfective+past iz universiteta.

“What a relief! In case of failure, I would have been thrown out of the university.”

The pragmatic CFs with *vygonjali imperfective+past* should be replaced by the standard form with *vygnali perfective+past* here. Additionally, counter factuality produced through pragmatic means can be easily cancelled. For example, sentences with past imperfective in Russian may not necessarily have a CF reading. According to Grønn (2008), the CF use of past imperfective is mainly restricted on the chess game. However, we cannot simply ignore the pragmatic implication as an important origin for counterfactuality, since through pragmatic strengthening, we are expecting to see a fossilization of tentative pragmatic meaning along the process of grammaticalization.

1.2 Counterfactuality as a Coded Meaning

Other linguists differ by resorting to some formal features. Von Stechow (1998) claims that it is the subjunctive mood that triggers the presupposition. Iatridou (2000) maintains that the nature of counterfactuality can be traced back to the exclusion feature of past tense. In some languages, this meaning has been grammaticalized into a coded rather than an implicated meaning. Later, it has been picked up by McGregor (2008) who argues that the “reversal of polarity” is naturally coded cross-linguistically in modal categories employed in CFs. In some languages, counterfactuality has grammaticalized into a coded rather than an implicated meaning. This is not necessarily an argument against an implicature analysis, but on the contrary, it provides additional support in favor of implicature approach in that counterfactuality in these languages still shows traces of an origin as implicature. If this is correct, one may further expect that in languages with counterfactuality encoded by past/perfective/imperfective, CFs with tenses other than the past should also be possible. This is also true for the following languages:

5) Palestinian Arabic (Afro-Asiatic: Palestinian West Bank and Gaza)- past perfective in present CF (Halpert & Karawani, 2012, p. 101)

iza	tileʕ	halaʔ,	kaan	b-iwsal	ʕal	waʔt
if	leave.PST.PFV	now	be.PST.PFV	B-arrive.IPFV	on	the_time

la l-muhaadara

for the-lecture

“If he left now, he would arrive on time for the lecture.”

6) Persian (Indo-European: Iran)- past durative (imperfective) in future CF

(p.c. data from Arsalan Kahnemuyipour)

Age	fardaa	mi-raft	hafte-ye	ba'd	mi-resid
if	tomorrow	DUR-go.PST	week-suffix	next	DUR-arrive.PST

“If he left tomorrow, he would arrive next week.”

Through the semanticisation of pragmatic implicatures (Ziegeler, 2000), we are expecting to see an analogical extension of counterfactuality to the future domain with the similar marking strategy. Along with the path of analogy, the original temporal or aspectual meaning is gradually replaced by the modal meaning. The supporting evidence can be found in the coexistence of these verbal features with the seemingly contradictory categories, like past with future and perfective with imperfective. Therefore, we may claim that these fake uses of tense or aspect in CFs are a result of grammaticalization as counterfactuality is expressed irrespective of temporal references. Interestingly, if the time of the event is irrelevant for the grammaticalized CF markers, we may not explain why in some languages, non-past CFs, although with fake tense/aspect, are marked in a different way from past CFs. The diachronic development of CF markers in the following sections accounts for this problem.

But we can still find some traces of pragmatic implicature as origin of counterfactuality before it has finally been grammatically encoded. The persistence of pragmatic implicature allows the counterfactuality to be cancelled or reinforced in some certain context, such as:

7) Cancellation (Nevins, 2002, p. 447)

If the patient had measles, he would have exactly the symptoms he has now. We conclude, therefore, that the patient has the measles.

8) Reinforcement (Nevins, 2002, p. 447)

If the butler had done it, the knife would be bloody. The knife was clean; therefore, the butler must be innocent.

Past tense shows a more pervasive use by extending to non-past CFs in many Indo-European languages. Therefore we may take the fake past as a more grammaticalized category than the real past. This is also true for languages with TAM features denoted by lexicalized concepts, such as isolated languages, where no evidence of fake tense/aspect could be found. Languages may differ largely concerning the prominence of the CF category. Those with counterfactuality mainly produced through pragmatic implicature are positioned at the lowest scale of prominence.

2. CF (Counterfactual) Markers and CFEnhancing (Counterfactual Enhancing) Markers

In the languages of the world, one can encounter two different CFs. The first relates to language forms which work to increase the information specificity for an utterance from which the CF meaning is pragmatically implicated. These language forms are used to enhance CF meaning, and are identified as CFEnhancing markers. CF meaning, as implicated by CFEnhancing markers, emerges as a pragmatic implicature that can be easily cancelled or reinforced. The second type, which concerns the use of language forms to encode counterfactuality, is referred to as CF markers. For example, fake past tense and perfect are CF markers in English, as seen in the following sentence:

9) If John had been at the scene of the crime, Mary would have seen him. (Mary probably saw him, and probably not.)

9) is classified as a CF because of the back-shifting use of pluperfect (past+perfect). However, the counterfactuality will be cancelled by introducing an additional clause into the bracket. The case will be different if we exert a negation marker on the protasis, as in (10):

10) If John had not been at the scene of the crime, Mary would have seen him. (It is highly likely that Mary did not see him.)

The degree of counterfactuality will henceforth be enhanced. Thus, negation can be taken as a CFEnhancing marker. Wierzbicka (1997) depicted a core category of CF as: IF X HAD NOT HAPPENED, Y WOULD NOT HAVE HAPPENED. This can be further proven by applying double negation in the above sentence, as in:

11) If John had not been at the scene of the crime, Mary would not have seen him. (I am sure Mary did see him.)

For now, I will return back to counterfactuality cancellation by proposing the hypothesis that the greater the degree of counterfactuality, the more difficult it is to cancel the counterfactuality. Double Affirmative is very likely to invite the addressee to imagine some positive facts (X and Y actually happening) and to think of them as unreal. This exercise required of the addressees may be confusing, and it is easy to understand why informants may easily cancel the counterfactuality and doubly assert the negation without redundancy. But for the Double Negative CFs, we may not vary in the range of interpretations, as shown in the following examples:

12) *If they had not found the water, they would not have survived; so let's hope they found it.

13) *If they had not found that water, they would not have survived; and it is unlikely that they found it.

Comrie (1986) claims that all traditional descriptions of the classic languages typically assume a neat bipartite or tripartite division by making use of such oppositions as open versus closed conditions, or real versus unreal, or real (open) versus hypothetical versus CF, referring to different degrees of hypotheticality of the truth of the propositions involved. A factual sentence represents the lowest degree of hypotheticality, while a CF clause represents the highest degree. However, there is no clear-cut division, in that different languages simply distinguish different degrees of hypotheticality along this continuum. Here two views are theoretically simultaneously possible: both “there are fundamental distinctions between the real, potentially real and unreal sentences” and “the scale of hypotheticality is a real continuum”. CF markers are used to differentiate unreal sentences from those real and potentially real, while CFEnhancing markers work to pull the distance closer between the hypothetical world envisaged in the if-clause and the world contrary-to-fact. Therefore, the occurrence of CFEnhancing markers may influence the degree of hypotheticality along this continuum. For languages lacking CF markers, some commonly used CFEnhancing markers discussed above, such as negation, modal words, irrealis mood (optative), past tense reference, first person pronoun, demonstratives can be employed based on the needs of communication to enhance the hypotheticality to a degree that the CF meets.

It should, however, be noted that through language evolution, the CF meaning implicated by CFEnhancing markers may be conventionalized and gradually encoded by these markers. This leads to the forming of CF markers. The evolution from a CFEnhancing marker to a CF marker, is perfectly displayed by some languages with TAM inflections. Once the CF marker is formed, it spreads to mark CFs with non-past tense, which may lead to a relaxation of past tense meaning; therefore a renewal evolution from CFEnhancing marker to CF marker is required to strengthen the counterfactuality. This in turn may lead to the rise of new markers being stacked onto the original ones, and to the start of another round in the cycle, as shown in figure 1.

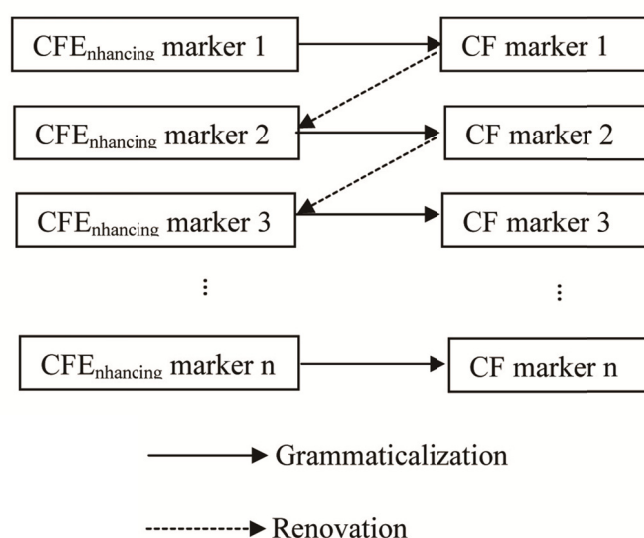


Figure 1. The cycling development of CF markings

At the initial stage of the figure 1, the concept of counterfactuality is denoted as a pragmatic function which has not been coded by grammatical or lexical means. Therefore, CFEnhancing markers actually function as pragmatic clues optionally employed by the speaker to satisfy various communicative purposes. The various clues make it more likely to the listener that a sentence is false or known to be false. CFs at this level are expressed by periphrastic means potentially different for different speakers. Through grammaticalization, the most frequently used CFEnhancing markers may alter their functions and gradually develop into CF markers. For example, CFEnhancing markers coding TAM features like past, perfect/perfective, imperfect/imperfective, past subjunctive mood are employed for coding the counterfactuality. The CF markers come into being after CFEnhancing markers have been grammaticalized to code a given function and have thus become the direct means of coding. Languages vary with respect to the choices of the CFEnhancing markers. Thus there are a number of means to code counterfactuality in the world languages. It is theoretically possible that there are languages in which this grammaticalization does not occur, and CFs are mainly expressed by CFEnhancing markers, such as Mandarin.

Interestingly, languages may grammaticalize other means to code the same function. Once the construction becomes possible with non-past reference, the past tense meaning will also be relaxed. Through renovation by reinforcement, languages may compensate the decay by introducing a novel element in the past CFs. Therefore, another layer of CFEnhancing marker is grafted to the original system to strengthen the counterfactuality. A well-known example is the appearance of perfect in the past CFs of some Indo-European languages. Similarly, the added CFEnhancing marker may be further grammaticalized into a CF marker which can even code the counterfactuality in non-past reference. Theoretically, the cycling development will continue with no ending, but our cross-linguistic data show that the upper bound layer is only three, such as past subjunctive, conditional mood (would) and the perfect in Germanic CFs. The resulting synchronic systems may consist of layers of forms of varying age. In following sections, we will explore the evolution process by putting together fragments from the history of different languages and snapshots of synchronic states.

3. The Evolution of Past Tense

Prior to discussing the role of the past tense in CFs, two different past tenses need to be differentiated: the real past and the fake past. As their names imply, the real past- which retains its real temporal value- can only denote past events, while the fake past- which *loses* its temporal value- can be employed in non-past sentences. The real past may enhance the CF effect by indicating events known in the past since a hypothesis about a fact will naturally lead to a CF reading. It may not be proper to classify real past as a CF marker since it cannot sufficiently mark CFs, as in (14). Considering its effect on enhancing a CF reading, it is termed as a CFEnhancing marker. Languages with CFs denoted through past CFEnhancing markers stay at the very initial stage of CF expression which is normally restricted in the past reference.

14) Context: Malena saw the weather report two days ago (Tonhauser, 2006, p. 250)

Kuehe	o-ký-ta	kuri.
yesterday	3-rain-FUT	back_then

“It was going to /supposed to rain yesterday.”

... ha o ky.

... and 3 rain

“... and it rained.”

Past tenses in Indo-European languages are situated at different stages along the evolutionary process from CFEnhancing markers to CF markers. As shown in these languages, the past tense gradually crosses its boundary and extends to include non-past CF situations. In a language like Parači, past tense is employed when expressing a CF event:

15) Parači (Indo-European: Iran) (Efimov, 2009, p. 101)

ágar	tân	teč	rušán	bi	bâ,	tō
if	your	eyes	bright	be.PST.3SG	IRR	you
thō	naýón	ná-xur		bâ.		
scorched	bread	NEG-eat.PST.3SG		IRR		

“If your eyes had been clear, you would not have eaten the burnt bread...”

According to Vydrin (2013), examples of the extension of past tenses to the non-past uses also exist, albeit

more rarely. In another extinct Iranian language-Sogdian, we have also found a rare non-past use of past tense in CF clause:

16) Sogdian (Indo-European: Iran) (Gershevitch, 1954, p. 123)

'XRZY	prtr	'WZY	'kwty	'PZY	'WZY	k'sy
and	better	either	dog	and	either	pig
wδwh	wm't-'w	'YKZY	tw'xky.			
wife	be.PST-1SG	than	yours			

“then I would rather be a dog's or a pig's wife than yours.”

Compared with the above languages, Marathi shows a more frequent use of past tense in non-past CFs:

17) Marathi (Indo-European: India) (Bhatt, 1997, (51), (52))

a. tuu	maajhyaakade	laksh-dilē	tar	chuuk	karnaar
you	me...	hear-PST	then	mistake	do.FUT.INF

naahiis.

NEG.be.PRS.2SG

“If you listened to me, you wouldn't make mistakes.” (Pres/Fut CF)

However, it is only optionally employed in non-past CFs, as we can still find many examples of non-past CFs in absence of past tense, as shown in (17b/c):

b. mii	tujhyaa	jaagñ	asto	tar
I	your	place_in	be.FUT.1SG	then
(mii)	tyaala	maarlē	astē.	
I	him	hit.PST.2SG	be.FUT.3SG	

“If I was/had been in your place, I would hit/have hit him.”

c. tyaachyaajaval	paise	aste	tar	gaariinē	aalaa	Astaa.
he_near	money	be.FUT.3SG	then	train_in	come.PST.3SG	be.PST.3SG

“If he had/had have any money, he would come/have come by train.”

Similar evidence can be found in Palestinian Arabic where a past perfective auxiliary *kaan(o)* is syntactically (and morphologically) specified for the value [PAST] (Karawani & Zeijlstra, 2010; Bjorkman, 2011). Past perfective auxiliary *kaan* can occur without any perfective syntax, as shown in the example by Bjorkman & Halpert (2012):

18) Palestinian Arabic(Afro-Asiatic: Palestinian West Bank and Gaza) (Bjorkman & Halpert, 2012, (16))

Kannat	tuktub.
be.PST.PFV	write.IPFV

“He used to write.”

Therefore, like languages depicted above, Palestinian Arabic marks CFs with past alone.

19) Palestinian Arabic (Afro-Asiatic: Palestinian West Bank and Gaza) (Bjorkman & Halpert, 2012: (16))

a. Past CF

Iza	kaano	tileʕ	mbaareh,	kaan	
if	be.PST.PFV	leave.PST.PFV	yesterday	be.PST.PFV	
wisel		ʕ	al-waʔt	la	l-muhaadara.
arrive.PST.PFV		on	the-time	for	the-lecture

“If he had left yesterday, he would have arrived on time for the lecture.”

In past CFs, *kaan(o)* is obligatorily marked both in protasis and apodosis.

b. Present CF

Iza țileʃ halaʔ, **kaan**
 if leave.PST.PFV now, be.PST.PFV
 b-iwsal ʃ al-waʔt la l-muhaadara.
 B-arrive.IPFV on the-time for the-lecture

“If he left now, he would arrive on time for the lecture.”

c. Present CF

Iza **kaano** ʃam yitlaʃ halaʔ min
 if be.PST.PFV PROG leave.IPFV now from
 l-bet, **kaan** b-iwsal ʃa l-waʔt.
 the-home, be.PST.PFV B-arrive.IPFV on the-time

“If he left now, he would arrive on time for the lecture.”

In present CFs, *kaan(o)* is only obligatory in the apodosis and conditionally obligatory in the protasis when the event in the protasis is imperfective, such as (19c). In future CFs, *kaan(o)* can not appear in the protasis but is optionally used in the apodosis.

As observed above, the past perfective in Palestinian Arabic is only specified for the past. Palestinian Arabic shows fake use of the past in CFs such as (23b/c/d) where the past tense can co-occur with the non-past reference. The use of *kaan(o)* “be.PST.(PFV)” in Palestinian Arabic can be depicted as follows:

Table 1. Past in Palestinian Arabic

	Past CF		Present CF		Future CF	
	Protasis	Apodosis	Protasis	Apodosis	Protasis	Apodosis
<i>kaan(o)</i>	Obligatory	Obligatory	Conditionally Obligatory	Obligatory	Forbidden	Optional

This elaborates the scenario outlined by the Dahl (1997), who suggests that before evolving into a CF marker, the form first occurs in CFs with past time reference as an optional element, after which it gradually becomes obligatory. Later, the temporal constraints are gradually relaxed and the same path from being optional to obligatory is repeated. This evolutionary path of the past (perfective) in Palestinian Arabic can be depicted as follows:

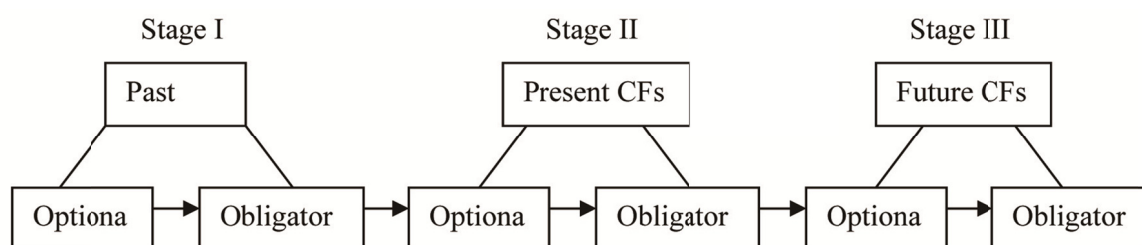


Figure 2. The evolutionary process from CFEnhancing marker to CF marker

Like Marathi, in Palestinian Arabic the past (perfective) has just entered the Future CFs (Stage III) as an optional element.

4. The Evolution of Perfect and Perfective

As observed above, both the perfect and the perfective are closely related to the past tense category by locating an event before the moment of speaking. In CFs that are neutral with respect to time references, languages may introduce the perfect or perfective as past tense operators in CFs. As in Domari (an endangered archaic Indo-Aryan language), the perfective stem forms the basis for the perfect in the past CFs, as shown in this example: *lake-d-om-r-a'* “I would have seen you”. Then, counterfactuality is gradually encoded by the

perfective/perfect, which subsequently gives rise to the non-aspectual (fake) use of the perfective/perfectas CF markers. The proposed steps in the evolutionary process from CF_{enhancing} markers to CF markers in the case of starting from the past and extending into the non-past are described in sections I and II.

I. Starting from the past

It is mentioned above that in Old English, some originally used past modals (wolde, mihte, sceolde, ahte) has already started to be used in present time contexts, as shown in (22):

20) (W.Sax. Gosp. Luke 16.2)

Ne **miht** þu lencg tun-scire bewitan.

“Thou mayest be no longer steward.”

Therefore, in Early Middle English, a new way is needed for expressing the present-past contrast. Since there is no other way to express past time reference than resorting to perfect for help (Brunner, 1962), the perfect comes up as a natural therapeutic make-up for the loss of the morphologically marked preterite, like the following examples in the 13th century:

21) (Molencki, 1999b, p. 94)

Ich mihte **habbe** bet i-don, hefde ich þen i-selðe.

“I might **have** done better if I had had good sense then.”

A hypothesis about the past domain will easily lead to counterfactuality, such as in the Middle German mentioned by Mettke (1983) where perfect is combined with modal elements to denote counterfactuality:

22) Und **solde** mit in hân gestriten.

“And **should** have fought with him.”

At almost the same time, the perfect was also introduced to the past CFs. As in Middle Dutch, the perfect auxiliary “have” is introduced in the CF clauses.

23) (Kern, 1912, p. 138)

Haddi	hem	oec	niet	ontlopen,	si	haddent...
had	he	them	also	not escaped,	they	had

“Had he also not escape from them, they would have...”

Ledgeway (2003) reports a similar pattern for 14th and 15th century Neapolitan (an Italian dialect). As mentioned above, past tense in CFs experiences a gradual loss of time restrictions, therefore the perfect is grafted onto the original system to help express time. One case in point is Bulgarian, where the perfect is optionally used in the protasis of the past CFs:

24) Bulgarian (Indo-European: Bulgaria) (Lindstede, 1985, p. 241)

a. ako	Germanija	zavlađee-še	Anglija	šteše
if	Germany	conquer-IPRF	England	FUT.AUX-IPRF
da	spečeli	vojna-ta.		
PTCP	win	war-DEF		

“If German had invaded England, they would have won the war.”

b. ako	Germanija	be-še	zavlad- jala	Anglija	šteše
if	Germany	be-IPRF	conquer- PRF	England	FUT.AUX-IPRF
da	spečeli	vojna-ta.			
PTCP	win	war-DEF			

“If German had invaded England, they would have won the war.”

It looks as if the perfect in (24b) is an extra element and is non-essential. Similarly, the history of the Germanic languages reveals that the perfect comes about as an innovation that is added to an older system where time reference is not marked in CFs (Dahl, 1997). In the oldest well-attested Germanic language- Gothic, past (optative) is employed in both protasis and apodosis irrespective of time distinctions, such as:

25) Gothic

a. jabai gup atta izwar **wesi**,
 if God father your be.**PST.OPT.3SG**
friodedeip þau mik
 love.**PST.OPT.2PL** you.PL.NOM me.ACC

“If God were your father, ye would love me.” (John 8, 42)

b. jabai in Saudaumjam **waurþeina** mahteis þos
 if in Sodom become:**PST:OPT:3PL** miracles PL:NOM
waurthanos in izwis, aiþþau eis weseina
 become.**PST.PL** in you.PL.DAT else 3PL.ACC be.PRET.OPT.3PL
 und hina dag.
 to this day

“For if the mighty works, which have been done in thee, had been done in Sodom, it would have remained until this day.” (Matthew 11, 23)

Considering the following Mid-English version, the only essential difference from the old system of Gothic is the addition of perfect auxiliary for past time reference:

26) (Kern, 1912, p. 138)

If he ne **had** risen fra ded to lijf had ben us all for noght.
 if he not had risen from dead to life had been us all for nothing

“If he hadn’t risen from the dead, everything would have lost its significance for us.”

(Cursor Mundi, 1340)

Relevant diachronic records for the evolution of the perfective aspect in CFs are quite rare, however, we can still find some evidence of the perfective as a tense operator to differentiate the past from the non-past. For example in Warlpiri, past CFs are marked with perfective (realized as zero morpheme) while the non-past CFs are marked with imperfectives:

27) Warlpiri (Australian: Australia) (Legate, 2003, p. 160/158)

a. Past CF

Kala kaji-**ø**-rna rupe marda-karla, ngula
 but NFACT-**PFV**-1SG rope have-IRR then
 kapi-**ø**-rna puuly-marda-karla rupe-ngku-ju.
 FUT-**PFV**-1SG catch-have rope-ERG-TOP

“Well, if I had had a rope, then I would have caught it with the rope.”

b. Present CF

Yapa panu kaji-**lpa**-lu karri-yarla,
 person many NFACT-**PST.IPFV**-3PL stand-IRR
 kaji-**ka**-rna raakujarra-yirra-rni yungu-rna
 NFACT-PRS.IPFV-1SG clear-put-NPST CAUS-1SG
 nya-nyi-rra.

see-NPST-thither

“If there were a lot of people, I would clear a passage in order to see there.”

c. Future CF

Kaji-**lpa**-ji paji-karla nyanungu-rlu,
 NFACT-**PST.IPFV**-1SG.OBJ sting-IRR 3-ERG
 kaji-**ka**-rna-rla marlaja rularula-jarri-mi
 NFACT-PRS.IPFV-1SG-DAT because_of swollen-INCH-NPST

nyanungu-ku-ju nganayi-ki waripakarnu-ku.

3-DAT-TOP whatchamacallit-DAT snake-DAT

“If it were to bite me I would swell up as a result, from that little green snake.”

The perfective in (27a) is fake, since it can denote an imperfective (stative) action. The imperfective as a necessary element in non-past CFs such as (27b/c) is not allowed to appear in (27a).

II. Extending to the non-past

As in the evolution of the past tense, the perfective/perfect may extend to non-past CFs through analogy. Jespersen (1924) alludes to the following example in favor of the argument that chiefly in colloquial speech, pluperfect conditionals may be also used in the present time.

28) If I **had had** money enough (at the present moment), I would have paid you.

Dahl (1997, p. 106) provides the exact parallel Swedish translation as follows:

29) Om jag hade (perfect) haft pengar nu, skulle jag ha betalat dig.

Leirbukt (1991) discovers a general tendency for the pluperfect CFs to be used in the non-past cases to differentiate potential and CF representation of future events. This analogical process also applies to the perfective aspect. It is interesting to see that the perfective/perfect in the CFs of different languages is situated at different stages along this evolutionary path. In Norwegian, speakers unanimously prefer to use the pluperfect/conditional perfect to express CFs with present temporal reference although the imperfect is also acceptable. Therefore, the perfect in Norwegian CFs is optional in present tense (Stage II in Figure 2). However, in French, the use of the pluperfect/conditional perfect in present CFs has been considered informal. Therefore, the perfect in French has not yet entered the Present CFs (Stage I in Figure 2).

5. The Evolution of Imperfective and Imperfect

Discussions concerning the role of imperfective/imperfect on CFs concentrate on whether the imperfective/imperfect makes a semantic contribution that is necessary to achieve counterfactuality. Iatridou (2009) argues that since languages with imperfectives in CFs always have a special paradigm for past imperfectives, it is the past rather than the imperfective that works here to denote counterfactuality. In this view, the imperfective is there purely for morphological reasons. The question arises, then, as to why the imperfective aspect in CFs appears at all instead of fading away like the subjunctive mood in the past-subjunctive paradigm if it makes no semantic contribution. In contrast with Iatridou (2009)’s claim that [the set of languages having a fake imperfective] belongs to [the set of languages that have a fake past], there are languages with only imperfective aspect in CFs in absence of the past tense, as shown in Hindi:

30) Hindi (Indo-European: India) (Iatridou, 2000, p. 258)

Agar	Yusuf	lambaa	ho- taa	to	us-ko	yeh	naukrii	mil
if	Yusuf	tall	be- HAB	then	he-DAT	this	job	found

“If Yusuf was tall, he would have gotten this job.”

The event described in (30) is non-habitual. Habitual (imperfective) here does not contribute its aspectual meaning. According to Bhatt (1998), the habitual (imperfective) in Hindi is a CF marker. Likewise, before evolving into a CF marker without aspectual meaning, the imperfective/imperfect enters in CFs as a CFenhancing marker with real aspectual value. The diachronic records of Greek will illustrate this evolutionary process.

In Classical Greek, the past tense can be applied to non-past reference, however, at that time the real aspectual meaning (progressive) is still retained in the imperfective:

31) Classical Greek (Beck, Malamud & Osadcha, 2012, p. 60)

ταῦτα	δὲ	οὐκ	ἂν	ἐδύναντο	οἰεῖν,	εἰ	μὴ
these	but	not	CF	can.3PL.IPFV.PST	do.IPFV.PST.INF	if	not
καὶ	διαίτη	μετρία	ἔχρῳντο.				
also	diet	measured	use.3PL.IPFV.PST				

“But they would not be able to do these things, if they were not also following a temperate diet.”

32) Classical Greek (Perelmouter, 2005, p. 266)

ei	keinón	ge	íd-oi-mí	katelthónt'	Áidos
if	him	only	see. AOR-OPT-1SG	gone_down	Hades
eisō	phaiēn	ke	phrén'	atérpou	oizýos.
to	say.PRS.OPT.1SG	MDL	heart	about_joyless	affliction

"If only I could see him gone down to the home of the Death God, then I could say [my] heart has forgotten its joyless affliction."

In Classic Greek, imperfect (past+ imperfective) can only occur in past CFs with imperfective meaning as in (31). Aorist (past+ perfective) is employed in non-past CFs as in (32). In Modern Greek, imperfective can appear in non-past CFs with perfective meaning:

33) (Iatridou, 2009: (6))

An	eperne	to	farmako,	tha	ginotan
if	take.PST. IPFV	the	medicine,	FUT	become.PST. IPFV /*PST.PFV

kalitera.

better

"If s/he took the medicine, she would get better."

Propositions in the apodosis "she would get better" are based on the completed event "she has already taken the medicine", however, it is the imperfective rather than the perfective that is employed here. The imperfective, the interpretation of which is not what it is in non-CF constructions, is fake here. It is hypothesized that imperfective has experienced an evolution from a real aspect to a fake one. Traces of usage of real imperfective in Modern Greek can support this hypothesis, as shown in (34):

34) Modern Greek (Iatridou, 2000, p. 255)

An	ton	ayapuse	avrio,	tha	imun
if	him	love. IPFV .PST	tomorrow	FUT	was

poli eftixlismeni.

very happy

"If tomorrow she was in the state of loving him, he would be happy."

Similarly, diachronic evidence from an archaic version of Bengali (Indo-European: Bangladesh, India) called Sadhu Bhasa shows an imperfective and perfective contrast in CFs, which never happens in the CFs of modern Bengali. The imperfective with no aspectual value (fake imperfective) is employed in CFs. Questions may then arise concerning the way in which the evolutionary process unfolds. Luckily, the evolution of the imperfect in CFs of Latin provides the answer. At the very beginning, the imperfect is used in CFs to denote an action in progress that began in the past, i.e. real imperfect(ive):

35) Latin (Sabaneyeva, 2005a, p. 292)

Si	id	domi	esse-t	mihi,	iam
if	this	at_home	be- IPRF .3SG	mine	already

pollic-**ere**-r.

promise-**IPRF**-1SG

"If this were in my home, I would have promised already."

Since the event with imperfective aspectual meaning is normally temporally unlimited, therefore the imperfect in the apodosis seems to combine past and present time scopes.

36) Early Latin (Sabaneyeva, 2005a, p. 294)

Si...nune	habe-a-s	alia	verba	perhibe-a-s.
if... now	have-PRS-2SG	other	words	say-PRS-2SG

"If you had something now in your procession..., you would speak differently."

37) Classical Latin (Sabaneyeva, 2005a, p. 294)

Ni	vera	ista	esse- nt	numquam	fac- ere -t
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if_not truth this be-**IPRF**.3SG never do-**IPRF**-3SG
 ea quae nunc fac-it.
 that what now do-**PRS**.IND.3SG

“If it were not true, he would never do what he is doing now.”

Then, imperfect is gradually grafted to CFs with present reference. (36) in absence of imperfect with the highest frequency in early Latin has been replaced by (37) in Classical Latin. The transposition of the imperfect from the past to the present, and later to the future time scope results in the loss of the temporal content of the past. Since most events in the future are uncertain, CF sense is therefore weakened. Consequently, another round of evolution starting with perfect(ive) entering into the past CFs (surfacing as pluperfect) arises, such as:

38) (Sabaneyeva, 2005a, p. 294)

Si habu-**isse**-m satis cep-**isse**-m cep-**isse**-m liberis
 if have-**PLUP**-1SG much take-**PLUP**-1SG miseries children

“If I had children, I would take a lot of misery from them.”

This may explain why many languages have pluperfect marking in past CFs and imperfect(ive) in non-past CFs. Sabaneyeva (1990) claims that a further transposition of the pluperfect to the present time scope is detected.

The imperfective follows a similar path as the perfective. It is always starting with past CFs, extending to present CFs and then to future CFs. The evolutionary path of imperfect(ive) in CFs can be depicted as follows:

I. Starting from the past

According to our above analyses, imperfective is introduced as an addition to the earlier system. The examples in Talysh suggest that the imperfective starts out as an optional element in past CFs. Compare the following two sentences with and without imperfect(ive) in CFs:

39) Talysh (Indo-European: Iran)

a. (Pirejko, 1976, p. 350)

i sor bəna əyɪn əʃim, əw-ən
 one year before there go.**IPFV**.PST.1SG he-then
 čimɪ ton əwoj.
 POSS.1SG side come.**IPFV**.PST.3SG

“If I had gone there a year ago, he would have come to me.”

b. (Miller, 1953, p. 216)

agar ba sa haisa hɪʃta baim
 if PREP PREP donkey sit.**PTCP**.PST be.COND.1SG
 az čo rūž gin bā bim.
 I four day missing be.**PTCP**.PST be.PST.1SG

“If that time I had been sitting on the donkey, I would have been missing four days ago.”

The imperfective is optionally chosen when expressing counterfactuality in Talysh. According to Vydrin (2013), the imperfective in Talysh is not a dedicated CF marker since conditionals with imperfect(ive)s are not necessarily understood counterfactually. Additionally, the only evidence of imperfective in past CFs is found in the examples provided by Miller (1953), Pirejko (1976) Yarshater (1996), and Schulze (2000). The evolution of the imperfective in Talysh CFs is situated at the initial stage, i.e. (i) restrained to past time reference, (ii) implying counterfactuality in the strict sense (dependence on a condition known to be false), and (iii) optional.

II. Extending to the non-past

In some languages, the fake imperfective has extended to non-past CFs. It is taken as a CF marker since the produced counterfactuality is less likely to be cancelled.

40) Spanish (Indo-European: Spain) (Anand & Hacquard, 2010, p. 45)

Si Jean arrivait demain, il rencontrerait Jeanne.
 if Jean arrive.**IPRF** tomorrow, he met.COND Jane

“If Jean arrived tomorrow, he would meet Jane.”

In (40), the proceeding of event in the apodosis is based on the completed event in the protasis. Only after accomplishing the action of “arrive” will “Jean have the possibility of meeting Jane”. Therefore, the imperfect is fake here.

6. The Evolution of Mood

In the early stages, it is the paradigm of past optative/ subjunctive that is used to denote counterfactuality. The subjunctive formations retain their original temporal significance at that time. Supporting evidence can be found in the formal correspondences between the past tense and past subjunctive. For example, in Gothic, if a verb introduces a long /e:/ in place of zero grade in the past plurals, the copied phenomenon will appear in the past subjunctive form of the same verb (*bērun*-past indicative vs. *bēreina*-past subjunctive). These similarities in origin have not arisen accidentally. According to Gothic data, during the pre-old English stage, CFs were characterized by parallel preterite optative forms both in protasis and in apodosis, as shown in the following example:

41) Past time reference (Molencki, 1999a, p. 312)

FrauJa,	iþ	veseis	her,	ni	þau	gadauþnodedi	broþar	meins
Lord	if	thou_were	here	not	then	died	brother	mine

“Lord if thou hadst been here, my brother had not died.”

Behre (1934) claims that in Early Germanic, the preterite optative is only restricted to the past time reference. At that time, counterfactuality is implicated by knowledge of the past. In other words, past optative works only to enhance a CF effect, thus being termed as a CFEnhancing marker.

The past optative gradually crossed its boundary and extended to include present CF situations. This is the case in Old English as exemplified in (42) and (43), and in Middle English as exemplified in (44) by Mitchell (1985: §3607):

42) General present time reference (ÆDT 80 Early 11 th c.)

He	nære	na	æelmihtig,	gif	him	ænig	gefadung	earfoðe
he	not-were(SBJV)	no	almighty	if	him	any	order	difficult

wære.

were(SBJV)

“He would not be almighty if any order were difficult for him to maintain.”

43) Specific present time reference (ÆCHom i.404.27 Early 11th c.)

Gif	þu	wistest	hwæt	þe	toward	is	þonne	weope
if	thou	knewest(IND)	what	thee	imminent	is	then	wept(SBJV)
þu	mid	me.						
thou	with	me						

“If you knew what is to come to you, you would weep with me.”

Similar non-past use of mood forms in CFs can also be found in Middle English:

44) Specific present time reference (ÆCHom i.404.27 Early 11th c.)

ge	witon	þæt	ge	giet	todæge	wæron	Somnitus	þeowe,
you	know	that	you	yet	today	were(IND)	to-Samnites	slaves
gif	ge	him	ne	alugen	iowra	wedd	7	
if	you	them	not	denied(SBJV)	your	pledges	and	
eowre	apas	þe	ge	him	sealdon.			
your	oaths	that	you	them	gave			

“You know that you would be Samnites’ slaves still today if you had not broken the pledges and oaths that you swore to them.”

The presence of temporal adverbials, such as “today”, allows us to determine the time reference. Harbert (2006)

argues that in Germanic languages, there is no contrast in time references between past subjunctive and the present subjunctive, and that the only difference lies in the realization of the event: past subjunctive is used for low likelihood while the present subjunctive is used for high likelihood.

45) German (Indo-European: Germany) (Schulz & Griesbach, 1960, pp. 73/75)

a. Es **lebe** der König!
it live-PRS.SBJV the king
“Long live the King!”

b. hish ‘akcek’i c’ana ‘ash-e-p kok^w.
very boy small die-CONT-PST.SBJV katchina
“If only my father came!”

46) Gothic (Extinct Germanic Language) (Streitberg, 1920, p. 204)

a. Nu **fraleitais** skalk þeinana.
now release-2SG.PRS.SBJV servant your
“Now may you release your servant.”

b. jah wainei **þiudanodedeiþ**.
and I-wish reign-2PL.PST.SBJV
“And I wish you might reign.”

47) Icelandic (Indo-European: Iceland) (Kress, 1982, p. 237)

a. Guð **fyrigefi** þér!
God forgive-3SG.PRS.SBJV you
“Hope that God will forgive you.”

b. **Væri** ég kominn til tunglsins!
were-1SG.PST.SBJV I come to moon-the
“If only I were on the moon!”

There is a cross-linguistically frequent association of CF interpretation with combinations of past and subjunctive or conditional mood. Even in languages where the subjunctive mood is quite marginal, we can still find traces of paradigms for tense-mood combination. For example: in

Modern English, it is the obsolescent past subjunctive form “were” rather than the usual indicative form “was” that appears in the protasis to mark CFs. In languages lacking of portmanteau form denoting past subjunctive, we can still find the similar evolutionary path from past to non-past for mood category (albeit not so obviously). At the initial stage, the irrealis mood could only indicate counterfactuality in the past tense, as seen in Yoruba:

48) Yoruba (Niger-Congo: Nigeria, Benin) (Salone, 1979, p. 71)

bí ó bá **ṣe** pé ó lè **sò** Yorùbá ni,
if it INDF be that he able speak PN COP
wón **ìbá** ti gbà á.
they **IRR** PRF accept him

“If he had been able to speak Yoruba, they would have accepted him.”

The application of unreality marker *ìbá* differentiates CFs from open conditionals. However, if it extends to present sentence, the sentence will be ambiguously interpreted as either a non-CF or a CF.

In a neighbouring language Haya, recent past is denoted through P1 (Past 1) and remote past is expressed by P1 (Past 1) combined with P2 (Past 2). Evidence of the irrealis mood extending to CFs in the recent past (near present) can be found in Haya, as shown in the following example:

49) Haya (Niger-Congo: Tanzania) (Salone, 1979, p. 75)

a. ká n-a-**ku**-bona éfarasy’ ein’ ámabába ti-n-á-**ku**-amini.

if I-P1-**IRR**-see horse having wings NEG-I-PL-**IRR**-believe

“If I had seen a horse with wings, I wouldn’t have believed it.” (Recent past CF)

b. ká n-a-**ku**-g-ile omúká n-a-**ku**-l-ile ébitooke n-énfulú.

if I-P1-**IRR**-go-P2 home I-P1-**IRR**-eat-P2 bananas and-fish

“If I had gone home, I would have eaten bananas and fish.” (Remote past CF)

Whether the CF has extended to the future tense is hard to say in some non-tense prominent languages where there are unclear morphological distinctions among tenses. Time references, therefore, need to be contextually determined. But at least, we can get some hints from the translation given in the reference materials.

50) Chaga (Niger-Congo: Tanzania) (Salone, 1979, p. 77)

a. ngí-**we**-henda shúle ngí-**we**-soma kiingerésa.

I-**IMG**-go school I-**IMG**-study English

“If I went to school, I would study English.”

b. ngí-**we**-henda shúle mfiri to káwí

I-**IMG**-go school day of 2nd

ngí-**we**-kulosha kiingeréza.

I-**IMG**-study English

“If I had gone to school last Tuesday, I would have studied English.”

51) Swahili (Niger-Congo: Tanzania) (Salone, 1979, p. 77)

a. kama ni-**nge**-kwenda nyumba-ni kiangazi

if I-**IMG**-go house-to summer

ki-ja-cho ni-**nge**-penda ku-kaa nyumba-ni

pro-come-rel I-**IMG**-like to-stay home-at

na wazee wangu kwa

with parents my for

siku chache.

days few

“If I were to go home this coming summer, I would like to stay at home with my parents for a few days.”

b. kama ni-**nge**-kwenda nyumba-ni kiangazi

if I-**IMG**-go house-to summer

ki-li-cho-pita ni-**nge**-penda ku-kaa nyumba-ni na

pro-PST-RELI-PASS I-**IMG**-like to-stay home-at with

wazee wangu kwa siku chache.

parents my for days few

“If I had gone home last summer, I would have like to have stayed with my parents for a few days.”

The imaginative marker *we* in Chaga can denote a CF event even in non-past sentences, like (50a). If the trace of extension to future tense in Chaga is less convincing, adverbial *kiangazi ki-ja-cho* “this coming summer” in (51a) clearly shows that the imaginative marker *nge* in Swahili can mark CFs regardless of the time restrictions.

The evolution of mood category in CFs follows a similar path, i.e., (i) starting from the past; and (ii) extending to the non-past. Another piece of supporting evidence can be found in *law* of Arabic which displays a cross-temporal evolution from past to non-past. During the medieval Arabic period, *law* is essentially associated with past CFs. In modern Arabic standard grammar, *law* can be used to introduce impossible or unreasonable (non-past) CFs (Ryding, 2005).

7. Implications

By combining fragments from the history of different languages and snapshots of synchronic states to form a larger picture, we can conclude a spiral evolutionary path (depicted in figure 1) where grammaticalization and

renovation alternate with each other. According to Lehmann (1982), grammaticalization is a process in which something becomes more grammatical. It differs from renovation and innovation in that it outlines a diachronic relations-“y continues x” rather than “y replaces x” (renovation). As analyzed above, the path of evolution from a CFEnhancing marker to a CF marker can be depicted as follows (adapted from Dahl [1997, p. 109]):

Stage I: The form (i) is employed in the CF sentences with past time references, (ii) implies counterfactuality with the help of pragmatic contexts (dependence on a condition known to be false), and (iii) is optional.

Stage II (grammaticalization: reanalysis): The form becomes obligatory in the past CF sentences and the generated counterfactuality is less influenced by pragmatic inference.

Stage III (grammaticalization: analogy): Then, with the gradual relaxation of temporal constraints, the marker extends to the CFs with non-past references.

Stage IV (grammaticalization: reanalysis): The form becomes obligatory in the non-past CF sentences.

Stage V (renovation by reinforcement): The counterfactuality is weakened after extending use of the forms. Then another form from TAM inventory is needed to emphasize the counterfactuality in the past reference. Then Stage I, II III, IV will be repeated again.

7.1 Mechanisms: Reanalysis and Analogy

The evolution from CFEnhancing markers to CF markers is an example of cycling interaction of reanalysis and analogy. According to Hopper & Traugott (1993, 2003, p. 51) reanalysis involves a change in constituency, and reassignment of morphemes to different semantic-syntactic category labels. For example, at stage II, the CFEnhancing marker which has been optionally employed to enhance a CF reading is reanalyzed as an obligatory form to mark counterfactuality in past temporal reference. The form has begun to be grammaticalized when the limitation to the TAM value no longer holds. When this constraint is removed, the form may further extend to CFs contradicting its original value, such as past tense in non-past CFs, imperfective aspect in perfective CFs. This may lead to the process of analogy. Different from reanalysis, analogy refers to the attraction of extant forms to already existing constructions (Hoppe & Traugott, 2003, p. 64). For example, at stage III, the form extends analogically to CFs with non-past temporal references. After the grammaticalized form enters into the non-past domain, it may be further reanalyzed as an obligatory marker for the general CF reading. A dedicated CF marker is then formed to mark CFs irrespective of the temporal references. To be noted, this development might be followed up by a subsequent renovation which may lead to another cycle of grammaticalization again. The world's languages display a wide variety of techniques for marking CFs. If taking a dynamic view, we find that many isolating languages such as Mandarin are situated at a very initial stage of grammaticalization where CFs are mainly denoted through the optionally used CFEnhancing markers. Many Australian languages show more grammaticalized markings of CFs where certain TAM features (most frequently with past tense) are obligatorily employed in past CFs. However, they may not have an effective way to express non-past CFs except the ones in an obvious violation of the reality such as “if I were you...”. But for many Indo-European languages, they have developed well-formed CF markers to mark CFs irrespective of the temporal constraints such as habitual in Hindi, past (perfective) in Palestinian Arabic, durative in Persian and so on. Some Indo-European languages like Romance languages, Germanic languages have further developed another cycle of grammaticalization which started with perfect in past CFs.

7.2 Pragmatic Factors

Ziegeler (2000, p. 7) argues that “the grammaticalization considers language evolution to be represented in a long series of overlapping pragmatic changes in the use of a grammaticalized item”. Therefore the diachronic evolution of CF markers can be taken as a result of the gradual conventionalisation of conversational implicatures, i.e., pragmatic strengthening (Traugott, 1988). Pragmatic strengthening, as its name implies, will lead to fossilization of casual pragmatic inference into lexical meaning by strengthening and conventionalizing the conversational implicatures. For example, bi-conditional uses of conditions, which are at first denoted as total pragmatic inferences, are fossilized in some conditions through pragmatic strengthening at a later stage (Geis & Zwicky, 1971). Ziegeler (2000) applies this principle to the analysis of the grammatical morphologies which are most often associated with “information specificity in the context of the CF utterance”. Then the conversational implicature of counterfactuality is strengthened and gradually encoded in those grammatical morphologies. A dedicated CF marker is thus formed.

This notion has cross-linguistic implications for the evolution of CF markers. At the very beginning, the CF interpretation is obtained through hearer's inferences from the CFEnhancing markers. At this stage, counterfactuality is obtained through pragmatic means rather linguistic forms. Later, counterfactuality, as a

pragmatic implicature, will be conventionalized and gradually encoded in CFEnhancing markers. Therefore the modal use of CFEnhancing markers is derived. The modal use may override the original TAM value of CFEnhancing markers, thus giving rise to the so called “fake use”. The produced counterfactuality at this level is less influenced by the pragmatic contexts. In this way, the CF markers are evolved from CFEnhancing markers. To be noted, this is only a part of the life cycle of the CF markers, and a similar evolution will also apply to other TAM features which may be realized as another layer of CF marker to the original marking system.

7.3 Renovation by Reinforcement

As discussed above, the CFEnhancing markers might be finally grammaticalized into CF markers conveying counterfactuality irrespective of the temporal references. According to Dahl (1997), once the construction becomes possible with non-past reference, the risk of the counterfactuality constraint also being relaxed will be imminent. Lehmann (2002) claims that if an element is weakened through grammaticalization, there are, perhaps, two possibilities: the first is to give it up and replace it with a new, but similar one, which is termed pure renovation; the second is to reinforce it by compensating the decay by introducing a novel element, for which we may speak of renovation by reinforcement. For example, Latin *non* “not” was reinforced by *passum* “step” in a construction *non V passu*, to yield French *ne V pas*, English “not a bit” and so on. Looking in general at the CFs in the languages mentioned above, we can discover that many of them consist of more than one layer of CF markings such as fake past, conditional mood (would), and perfect auxiliary in English. Each of them experiences a similar process of grammaticalization as depicted above. We may go one step further and consider the motivation of their occurrences. It may be surmised that the driving factor is the need to reinforce the counterfactuality, which has been weakened through the grammaticalization. CFEnhancing markers employed to reinforce the counterfactuality, may begin as a redundant additive to the original system, such as in Bulgarian where the perfect seems to be grafted onto the system as an extra element and could be optionally deleted.

It is a well-attested fact that renovation by reinforcement always alternates with grammaticalization during the evolution of a grammatical element. Through a long history of evolution, the resulting synchronic systems, then, have developed layers of CF markers of varying age, distribution and semantic content. For the sake of brevity, we will employ the following symbolism: $x > y$ = “x is grammaticalized to y”; $x \Rightarrow y$ = “x is reinforced by y”. The famous example of the evolution of determiner in Latin can be written as follows (Lehmann, 2002): Pre-Latin *is* “that (one)” \Rightarrow Latin *iste* “that one on your side” \Rightarrow Proto-Romance *eccuistu* “lo that one” $>$ Italian *questo* “this” \Rightarrow *questo...qui* and French *ce...-ci* “this (one) here”. This example illustrates an arbitrary reiterated process of reinforcement and grammaticalization that can also be reflected by the evolution of CF markings in English:

past optative $>$ fake past optative $>$ fake past \Rightarrow would + fake past \Rightarrow would + pluperfect (perfect + fake past) $>$ would + fake pluperfect (fake perfect + fake past)

Unlike Germanic languages, Romance languages display an alternation between their grammaticalization processes and the renovation processes of imperfect and perfect. However, other languages with underdeveloped CF morphology, like Mandarin, hardly experience a grammaticalization process of markers in CFs where reinforcement only happens through the introduction of more CFEnhancing markers.

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References

- Anand, P., & Hacquard, V. (2010). The Role of the Imperfect in Romance Counterfactuals. *Proceedings of Sinn und Bedeutung*, 14, 37-50. Vienna.
- Beck, J. E., Malamud, S. A., & Osadcha, I. (2012). A Semantics for the Particle *äv* in and outside Conditionals in Classical Greek. *Journal of Greek Linguistics*, 12, 51-83. <https://doi.org/10.1163/156658412X649986>
- Behre, F. (1934). *The Subjunctive in Old English Poetry*. Göteborg: Elanders Boktryckeri Aktiebolag.
- Bhatt, R. (1997). *Ergativity in Indo-Aryan Languages*. MIT Ergativity Seminar. Handout.
- Bhatt, R., & Pancheva, R. (2005). *The Syntax and Semantics of Aspect*. MIT: Linguistic Society of America (LSA) Summer School.
- Bjorkman, B. (2011). *The Syntax of Inverted Conditional Antecedents*. Annual Meeting of Linguistic Society of America (LSA). Handout.

- Bjorkman, B., & Halpert, C. (2012). *In an Imperfect World: Deriving the Typology of Counterfactual Marking*. Presented at Modality Workshop, University of Ottawa. Handout.
- Comrie, B. (1986). Conditionals: A Typology. In E. C. Tragugott, A. T. Meulen, J. S. Reilly, & C. A. Ferg (Eds.), *On Conditionals* (pp. 77-79). New York: Cambridge University Press. <https://doi.org/10.1017/CBO9780511753466.005>
- Dahl, Ö. (1997). The Relation between Past Time Reference and Counterfactuality: a New Look. In A. Athanasiadou & R. Diven (Eds.), *On Conditionals Again* (pp. 97-114). Amsterdam & Philadelphia: John Benjamins Publishing Company. <https://doi.org/10.1075/cilt.143.06dah>
- Efimov, V.A. (2009). *Jazyk Parači*. Moscow: Vostochnaja literatura.
- Gershevitch, I. (1954). *A Grammar of Manichean Sogdian*. Oxford & New York: Oxford University Press.
- Givón, T. (1990). *Syntax: A Functional-Typological Introduction (vol. 1)*. Amsterdam & Philadelphia: John Benjamins Publishing Company.
- Grønn, A. (2008). An Amazing Come-Back: A Counterfactual Imperfective in Russian. *Scando-Slavica*, 54, 5-31. <https://doi.org/10.1080/00806760802494158>
- Grønn, A. (2013). Aspect and Tense in Counterfactual Main Clauses: Fake or Real? In F. Josephson & I. Söhrman (Eds.), *Diachronic and Typological Perspectives on Verbs* (pp. 133-158). Amsterdam & Philadelphia: John Benjamins Publishing Company. <https://doi.org/10.1075/slcs.134.05gro>
- Halpert, C., & Karawani, H. (2012). Aspect in counterfactuals from A(rabic) to Z(ulu). *Proceedings of the 29th West Coast Conference on Formal Linguistics (WCCFL)*, 99-107. Massachusetts.
- Harbert, W. (2006). *The Germanic Languages*. New York: Cambridge University Press. <https://doi.org/10.1017/CBO9780511755071>
- Hopper, P. J., & Traugott, E. C. (1993/2003). *Grammaticalization* New York: Cambridge University Press.
- Iatridou, S. (2000). The Grammatical Ingredients of Counterfactuality. *Linguistic Inquiry*, 31, 231-270. <https://doi.org/10.1162/002438900554352>
- Iatridou, S. (2009). *Some Thoughts about the Imperfective in Counterfactuals*. Handout.
- Ippolito, M. (2003). Implicatures and Presuppositions in Counterfactuals. *Natural Language Semantics*, 11(2), 145-186. <https://doi.org/10.1023/A:1024411924818>
- Jespersen, O. (1924). *The Philosophy of Grammar*. London: Allen and Unwin.
- Karawani, H. (2014). *The Real, the Fake, and the Fake Fake in Counterfactual Conditionals, Crosslinguistically*. Utrecht: Landelijke Onderzoeksschool Taalwetenschap, Netherlands National Graduate School of Linguistics.
- Karawani, H., & Zeijlstra, H. (2010). *The Semantic Contribution of the Past Morpheme in Palestinian counterfactuals*. Handout of a talk given at the Workshop on Tense and Aspect in Generative Grammar. Lisbon.
- Kern, J. H. (1912). *De Met Her Participium Praeteriti Omschreven Werkwoordsvormen in 't Nederlands*. Amsterdam: Johannes Mueller.
- Kress, B. (1982). *Isländische Grammatik*. München: Hueber.
- Ledgeway, A. (2003). The Distribution of the Perfective Auxiliary *avere* in Early Neapolitan: Split Intransitives Conditioned by Modal Factors. *Archivio Glottologico Italiano*, 88, 29-71.
- Legate, J. A. (2003). The Morpho-Semantics of Warlpiri Counterfactual Conditionals. *Linguistic Inquiry*, 34(1), 155-162. <https://doi.org/10.1162/ling.2003.34.1.155>
- Lehmann, C. (1982). Universal and Typological Aspects of Agreement. In H. Seiler & F. J. Stachowiak (Eds.), *Apprehension*, 2, 201-267. Tübingen: G.Narr.
- Lehmann, C. (1995/2002). *Thoughts on Grammaticalization*. München: Lincom Europa.
- Leirbukt, O. (1991). Nächstes Jahr Wäre er 200 Jahre Alt Geworden: Über den Konjunktiv Plusquamperfekt in Hypotetischen Bedingungsgefügen mit Zukunftsbezug. *Zeitschrift für germanistische Linguistik*, 19, 158-193. <https://doi.org/10.1515/zfgl.1991.19.2.158>
- Lindstedt, J. (1985). *On the Semantics of Tense and Aspect in Bulgarian*. Helsinki: University Press.

- McGregor, W. (2008). Another View of the Gooniyandi “Counterfactual” and its Implications to the Van Linden-Verstraete Typology. *Journal of Pragmatics*, 41, 157-162. <https://doi.org/10.1016/j.pragma.2008.10.012>
- Mettke, H. (1983). *Mittelhochdeutsche Grammatik* (5th ed.). Leipzig: VEB Bibliographisches Institut.
- Miller, B. V. (1953). *Talyšskij jazyk*. Moscow: Izdatel'stvo akademii nauk SSSR.
- Mitchell, B. (1985). *Old English Syntax* (vol. 2). Oxford: Clarendon Press. <https://doi.org/10.1093/acprof:oso/9780198119357.001.0001>
- Molencki, R. (1999a). A History of English Counterfactuals. Katowice: Wydawnictwo Uniwersytetu Śląskiego.
- Molencki, R. (1999b). A History of the English Perfect Infinitive. *Studia Anglica Pasnaniensia*, 34, 91-121.
- Nevins, A. I. (2002). Counterfactuality without Past Tense. *Proceedings of North East Linguistic Society (NELS)* 32, 441-450. Massachusetts: Perelmouter: 2005
- Pirejko, L. A. (1976). *Talyssko-russkij Slovar*. Moscow: Russkij Jazyk.
- Ryding, K. C. (2005). *A Reference Grammar of Modern Standard Arabic*. New York: Cambridge University Press. <https://doi.org/10.1017/CBO9780511486975>
- Sabaneyeva, M. K. (2005). Conditional Constructions in Asiatic Eskimo. In V. S. Xrakovskij (Ed.), *Typology of Conditional Constructions* (pp. 279-301). München: Lincom Europa.
- Saloné, S. (1979). Typology of Conditionals and Conditionals in Haya. *Studies in African Linguistics*, 10(1), 65-80.
- Schulz, D., & Griesbach, H. (1960). *Grammatik der deutschen Sprache*. München: Max Hueber Verlag.
- Schulze, W. (2000). *Northern Talysh*. München: Lincom Europa.
- Streitberg, W. (1920). *Gotisches Elementarbuch*. Carl Winter's Universitätsbuchhandlung.
- Tonhauser, J. (2006). *The Temporal Semantics of Noun Phrases: Evidence from Guarani*. Ph.D. Dissertation of Stanford University, Palo Alto.
- Van linden, A., & Verstraete, J. C. (2008). The Nature and Origins of Counterfactuality in Simple Clauses: Cross-linguistic Evidence. *Journal of Pragmatics*, 40, 1865-1895. <https://doi.org/10.1016/j.pragma.2008.03.008>
- Von Fintel, K. (1998). The Presupposition of Subjunctive Conditionals. In U. Sauerland & O. Percus (Eds.), *The Interpretive Tract* (pp. 29-44). Cambridge: MIT Working Papers in Linguistics.
- Vydrin, A. (2011). Counterfactual Mood in Iranian. In P. Ludwig (Ed.), *Handbuch Der Iranistik (Topics in Iranian Linguistics)* (pp. 72-86). Wiesbaden: Dr. Ludwig Reichert Verlag.
- Wierzbicka, A. (1997). Conditionals and Counterfactuals: Conceptual Primitives and Linguistic Universals. In A. Athanasiadou & R. A. Diven (Eds.), *On Conditionals Again* (pp. 15-60). Amsterdam & Philadelphia: John Benjamins Publishing Company. <https://doi.org/10.1075/cilt.143.04wie>
- Yarshater, E. (1996). The Taleshi of Asalem. *Studia Iranica*, 25(1), 83-113.
- Ziegeler, D. P. (2000). *Hypothetical Modality: Grammaticalisation in an L2 Dialect*. Amsterdam & Philadelphia: John Benjamins Publishing Company. <https://doi.org/10.1075/slcs.51>

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