

## On the interpretation of the participle *-GAN* in Uyghur

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**Abstract.** Most previous research argue that the suffix *-GAN* in Uyghur is a past participle and conveys perfectivity, contrasting with the simple past tense marker *-D* (Asarina 2011; Major 2014). However, the translations presented in the previous research only indicate that sentences with *-GAN* have both a past and a perfective reading, but fail to determine the specific contribution of *-GAN* in such contexts. This study examines the tense and aspect contribution of *-GAN* in both root and complement clauses, comparing it with the simple past tense marker *-D*. I argue that *-D* always contributes to a past and a neutral perfective interpretation in both root and complement clauses. In contrast, *-GAN* functions as a neutral perfective marker but not a past marker as it does not consistently convey past tense. I also show that *-GAN*-clauses are indicative.

**Keywords.** *-GAN*; past; perfective; indicative; root clauses; complement clauses; Uyghur

**1. Introduction.** In Uyghur, the suffix *-GAN*, with its phonologically-conditioned allomorphs *-gen*, *-ken*, *-ghan* and *-qan*, can be used in root, relative and complement clauses. Based on the data in (1)<sup>1</sup>, Major (2014) contends that *-GAN* is a past participle and conveys perfectivity, which contrasts with the simple past tense marker *-D*.

- (1) a. Ali polu et-**ken**.  
 Ali polu make-**GAN**  
 ‘Ali made/had made pilaf.’ (Major 2014)
- b. Ali polu et-**t-i**.  
 Ali polu make-**PAST-3SG**  
 ‘Ali made pilaf.’ (Major 2014)

While Asarina (2011) agrees that the matrix *-GAN* always results in past/perfective reading in root clauses, she further argues that *-GAN* is ambiguous when occurring in relative clauses and noun complement clauses<sup>2</sup>. Specifically, *-GAN* can be a past/perfective marker when it stands alone, yielding the past interpretation in (2a). It can also be a plain relative clause marker when combined with the non-past marker *-Idi*. This yields a present interpretation for a stative verb (2b), and a future interpretation for a non-stative verb (2c).

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<sup>1</sup> While I argue that the suffix *-GAN* is a neutral perfective marker, in this paper I gloss it as *GAN* to maintain neutrality regarding its interpretation.

<sup>2</sup> Asarina (2011) mentions that the suffix *-GAN* plays the same role in relative clauses and noun complement clauses, but her examples mainly involve relative clauses.

- (2) a. [ mening ye-**gen** ] tamaq-im jaxshi.  
 [ 1SG.GEN eat-GAN ] food-POSS.1SG well  
 ‘The food that I ate is good.’ (Asarina 2011)
- b. [ Mehemmet-ning jaxshi kör-idi-**ghan** ] qiz-i güzel.  
 [ Mehemmet-GEN well see-NONPAST-GAN ] girl-POSS.1SG pretty  
 ‘The girl that Mehemmet likes is pretty.’<sup>3</sup> (Asarina 2011)
- c. [ mening ye-idi-**ghan** ] tamaq-im jaxshi.  
 [ 1SG.GEN eat-NONPAST-GAN ] food-POSS.1SG well  
 ‘The food that I will eat is good.’ (Asarina 2011)

From the discussion above, it is clear that although the translations presented in the previous research indicate that sentences with *-GAN* convey both a past and a perfective readings, they fail to determine the specific contribution of *-GAN* in such contexts. Additionally, very little is known about the interpretation of *-GAN* in complement clauses, and it remains unclear whether *-GAN* plays the same role in all embedded environments. In this paper, I examine the tense (section 2) and aspect (section 3) contributions of *-GAN* in both root and complement clauses. By comparing *-GAN* to the simple past tense marker *-D*, I argue that *-GAN*, unlike *-D*, functions as a neutral perfective but not as a past marker, as it does not consistently convey past tense. In section 4, I present evidence to demonstrate that clauses marked with *-GAN* convey an indicative interpretation. Section 5 concludes and outlines further directions for research.

**2. Past interpretation of *-GAN*.** While data in the previous research appear to suggest that the suffix *-GAN* encodes past semantics, this section presents evidence demonstrating that *-GAN* does not consistently convey a past meaning, in contrast to the past tense marker *-D*. In the following discussion, I first examine the interpretation of root clauses with *-GAN* (section 2.1), and then proceed to examine its usage in complement clauses (section 2.2).

2.1. **ROOT CLAUSES.** When either *-GAN* or *-D* appears alone, the sentence can only have a past reading, regardless of whether the predicate is stative or non-stative. For example, when attached to a non-stative verb as in (3), both *-GAN* or *-D*-sentences yield only a past reading. The same observation can also be found in sentences with stative verbs, as illustrated in (4).

(3) *Non-Stative Verb:*

- a. Ali xet-ni jaz-**ghan**.  
 Ali letter-ACC write-GAN  
 Only reading: ‘Ali wrote the letter.’
- b. Ali xet-ni jaz-**d-i**.  
 Ali letter-ACC write-PAST-3SG  
 Only reading: ‘Ali wrote the letter.’

<sup>3</sup> Asarina (2011) maintains that when combined with the non-past marker *-Idi*, the sentence with a stative verb in (2b) can also have a future reading, meaning ‘The girl that Mehemmet will like is pretty’. But my consultants can only identify the present reading.

(4) *Stative Verb:*

- a. Ali Aygül-ni jaxshi kör-**gen**.  
Ali Aygül-ACC well see-GAN  
Only reading: ‘Ali liked Aygül.’
- b. Ali Aygül-ni jaxshi kör-**d-i**.  
Ali Aygül-ACC well see-PAST-3SG  
Only reading: ‘Ali liked Aygül.’

Besides, both *-GAN* and *-D* are incompatible with the non-past marker *-Idi*. This incompatibility is evident in sentences with non-stative verbs, as shown in (5), and in those involving stative verbs, as shown in (6).

(5) *Non-Stative Verb:*

- a. \*Ali xet-ni jaz-idi-**ghan**.  
Ali letter-ACC write-NONPAST-GAN  
Intended meaning: ‘Ali will write the letter.’
- b. \*Ali xet-ni jaz-idi-**d-i**.  
Ali letter-ACC write-NONPAST-PAST-3SG  
Intended meaning: ‘Ali will write the letter.’

(6) *Stative Verb:*

- a. \*Ali Aygül-ni jaxshi kör-idi-**ghan**.  
Ali Aygül-ACC well see-NONPAST-GAN  
Intended meaning: ‘Ali likes Aygül.’
- b. \*Ali Aygül-ni jaxshi kör-idi-**d-i**.  
Ali Aygül-ACC well see-NONPAST-PAST-3SG  
Intended meaning: ‘Ali likes Aygül.’

However, both *-GAN* and *-D* can combine with the progressive marker *-(i)wat*, yielding only a past progressive reading, as demonstrated in (7).

(7) *Non-Stative Verb:*

- a. Ali xet-ni jaz-iwat-**qan**.  
Ali letter-ACC write-PROG-GAN  
Only reading: ‘Ali was writing the letter.’
- b. Ali xet-ni jaz-iwat-**t-i**.  
Ali letter-ACC write-PROG-PAST-3SG  
Only reading: ‘Ali was writing the letter.’

Taken together, the data from root clauses seem to suggest that *-GAN*, similar to *-D*, contributes to a past interpretation. However, as I will demonstrate in the following section, this pattern does not hold consistently across all environments, particularly in complement clauses. This inconsistency indicates that *-GAN* is not inherently tied to past semantics. Instead, the past read-

ing of sentences with *-GAn* should arise from other factors within the clause.

2.2. COMPLEMENT CLAUSES. Before introducing the Uyghur data, I would like to briefly discuss the *Sequence of Tense* (SOT) phenomenon commonly observed in complement clauses. Consider the English example below.

(8) John said that he was at Poulton Hall.

The sentence in (8) is ambiguous because the event described in the embedded clause can occur at different times with respect to the event in the matrix clause. Specifically, (8) could report the scenarios depicted in both (9a) and (9b). In the case of (9a), the timing of the event “being at Poulton Hall” precedes John’s act of speaking, which I refer to as the *relative past* reading in this paper. When (8) is interpreted as a report of (9b), the event of ‘being at Poulton Hall’ overlaps with the saying event. Even though both events are situated in the past, the use of two consecutive simple past tenses yields a simultaneous reading. This reading is what traditionally the term SOT refers to, which I label as *relative present* reading in this paper.

(9) a. John: “I was at Poulton Hall.” (*Relative Past*)

b. John: “I am at Poulton Hall.” (*Relative Present*)

While (8) can describe events occurring in either the relative past or relative present, it cannot be a report of the situation described in (10). To accurately convey the scenario in (10), a future tense would be necessary in the embedded clause, as shown in (11). I term this reading as the *relative future* reading, where the event of the complement clause must occur after the matrix event.

(10) John: “I will be at Poulton Hall.”

(11) John said that he would be at Poulton Hall. (*Relative Future*)

To have a better understanding of the relevant time points of these events, a graphical summary is given below in Figure 1. In this figure, the matrix event consists of the time when the matrix verb *say* occurs and the Utterance Time (UT), with the former happening prior to the latter. The tenses of the embedded events—designated as E1, E2, and E3—are evaluated in relation to the tense of the saying event. Meanwhile, E4 is depicted as occurring after the UT.

(12) a. Relative Past (E1):  $\mathbf{E1} > E_{say} > E_{UT}$

b. Relative Present (E2):  $\mathbf{E2} = E_{say} > E_{UT}$

c. Relative Future (E3):  $E_{say} > \mathbf{E3} > E_{UT}$

d. Absolute Future (E4):  $E_{say} > E_{UT} > \mathbf{E4}$

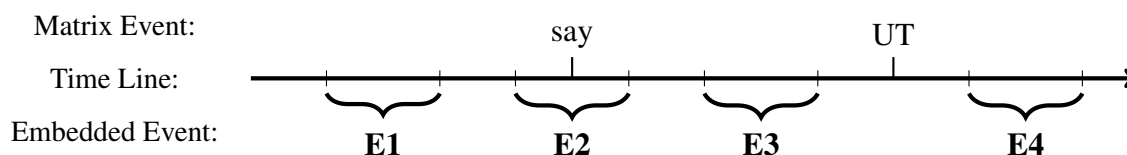


Figure 1. The sequence of tenses

With this background in hand, let us now turn to complement clauses in Uyghur. When non-stative verbs are marked solely by *-GAN* or *-D* without other tense or aspectual markers, they consistently convey a relative past reading, as demonstrated in (13). In the case of stative verbs, those in *-D*-sentences similarly convey a relative past reading (14b). However, stative verbs in *-GAN*-sentences can additionally convey a relative present reading, as shown in (14a). These differing temporal interpretations are visually represented in Figure 2.

(13) *Non-Stative Verb:*

- a. Ali [ Aygül-ning xet-ni jaz-ghan-liq-i-ni ] di-d-i.  
 Ali [ Aygül-GEN letter-ACC write-GAN-COMP-POSS.3SG-ACC ] say-PAST-3SG  
 RELATIVE PAST: ‘Ali said that Aygül wrote the letter.’
- b. Ali [ Aygül xet-ni jaz-d-i ] di-d-i.  
 Ali [ Aygül letter-ACC write-PAST-3SG ] say-PAST-3SG  
 RELATIVE PAST: ‘Ali said that Aygül wrote the letter.’

(14) *Stative Verb:*

- a. Ali [ Aygül-ning Otkur-ni jaxshi kör-gen-lik-i-ni ] di-d-i.  
 Ali [ Aygül-GEN Otkur-ACC well see-GAN-COMP-POSS.3SG-ACC ] say-PAST-3SG  
 RELATIVE PAST: ‘Ali said that Aygül liked Otkur.’  
 RELATIVE PRESENT: ‘Ali said that Aygül liked Otkur at that time.’
- b. Ali [ Aygül Otkur-ni jaxshi kör-d-i ] di-d-i.  
 Ali [ Aygül Otkur-ACC well see-PAST-3SG ] say-PAST-3SG  
 RELATIVE PAST: ‘Ali said that Aygül liked Otkur.’

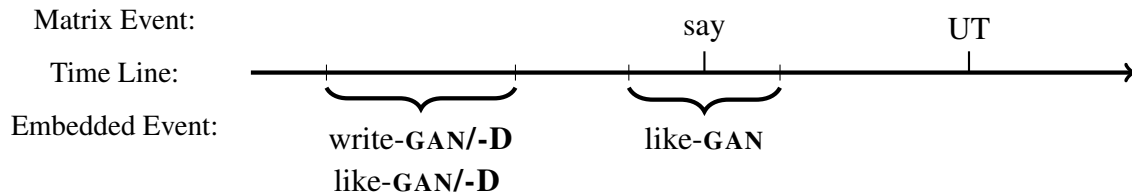


Figure 2. Tenses in *-GAN/-D*-sentences without other markers

Recall that in root clauses, both *-GAN* and *-D* are incompatible with the non-past marker *-Idi*. However, in complement clauses, the situation differs as *-GAN* can be effectively combined with *-Idi*. Specifically, non-stative verbs marked with *-Idi* in *-GAN*-sentences convey a relative future reading, as exemplified in (15a). In contrast, stative verbs marked in this manner exhibit a relative present interpretation, as shown in (16a). This ability of *-GAN* to combine with the non-past marker *-Idi* in complement clauses contrasts sharply with the simple past tense marker *-D*, which, when used with *-Idi*, renders the sentences ungrammatical, as evidenced in (15b) and (16b). These nuances in tense interpretation for *-GAN*-sentences within complement clauses are visually summarized in Figure 3.

(15) *Non-Static Verb:*

- a. Ali [ Aygül-ning xet-ni jaz-idi-ghan-liq-i-ni ]  
 Ali [ Aygül-GEN letter-ACC write-NONPAST-GAN-COMP-POSS.3SG-ACC ]  
 di-d-i.  
 say-PAST-3SG  
 RELATIVE FUTURE: ‘Ali said that Aygül would write the letter.’
- b. \*Ali [ Aygül xet-ni jaz-idi-d-i ] di-d-i.  
 Ali [ Aygül-GEN letter-ACC write-NONPAST-PAST-3SG ] say-PAST-3SG  
 Intended meaning: ‘Ali said that Aygül would write the letter.’

(16) *Stative Verb:*

- a. Ali [ Aygül-ning Otkur-ni jaxshi kör-idi-ghan-liq-i-ni ]  
 Ali [ Aygül-GEN Otkur-ACC well see-NONPAST-GAN-COMP-POSS.3SG-ACC ]  
 di-d-i.  
 say-PAST-3SG  
 RELATIVE PRESENT: ‘Ali said that Aygül liked Otkur.’
- b. \*Ali [ Aygül Otkur-ni jaxshi kör-idi-d-i ] di-d-i.  
 Ali [ Aygül Otkur-ACC well see-NONPAST-PAST-3SG ] say-PAST-3SG  
 Intended meaning: ‘Ali said that Aygül liked Otkur.’

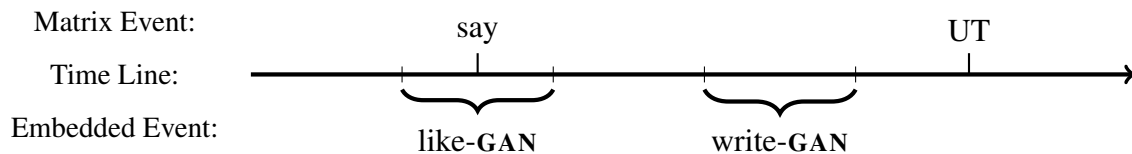


Figure 3. Tenses in *-GAN*-sentences with *-Idi* (past matrix predicate)

Given that root sentences marked with *-GAN* always have a past interpretation, one may easily assume that the relative future reading in (15a) and the relative present reading in (16a) are derived via the application of the SOT rule. According to this view, the past interpretation given by *-GAN* in the embedded clause is invisible to the semantic interpretation when embedded under another past tense, provided by *-D* in the matrix clause. Under this theory, the LFs of (15a) and (16a) are given in (17) and (18) respectively. Here, the sequence [NONPAST]-[PAST] is interpreted from Ali’s perspective as future for non-stative verbs and present for stative verbs.

(17) Ali say-**D**<sub>[PAST]</sub> [ that Aygül write-Idi<sub>[NONPAST]</sub>-GAN<sub>[PAST]</sub> the letter ].

(18) Ali say-**D**<sub>[PAST]</sub> [ that Aygül like-Idi<sub>[NONPAST]</sub>-GAN<sub>[PAST]</sub> Otkur ].

While the analysis described above seems to support the idea that *-GAN* consistently encodes past semantics unless it is marked as a SOT rule, problems arise for this analysis when additional data are considered, as shown below:

(19) *Non-Static Verb:*

- a. Ali [ Aygül-ning xet-ni jaz-idi-ghan-liq-i-ni ]  
 Ali [ Aygül-GEN letter-ACC write-NONPAST-GAN-COMP-POSS.3SG-ACC ]  
 bil-i-du  
 know-PRES-3SG  
 RELATIVE FUTURE: ‘Ali knows that Aygül will write the letter.’
- b. \*Ali [ Aygül xet-ni jaz-idi-d-i de-p ] bil-i-du.  
 Ali [ Aygül letter-ACC write-NONPAST-PAST-3SG say-CNV ] know-PRES-3SG  
 Intended meaning: ‘Ali knows that Aygül will write the letter.’

(20) *Stative Verb:*

- a. Ali [ Aygül-ning Otkur-ni jaxshi kör-idi-ghan-liq-i-ni ]  
 Ali [ Aygül-GEN Otkur-ACC well see-NONPAST-GAN-COMP-POSS.3SG-ACC ]  
 bil-i-du.  
 know-PRES-3SG  
 RELATIVE PRESENT: ‘Ali knows that Aygül likes Otkur.’
- b. \*Ali [ Aygül Otkur-ni jaxshi kör-idi-d-i de-p ] bil-i-du.  
 Ali [ Aygül Otkur-ACC well see-NONPAST-PAST-3SG say-CNV ] know-PRES-3SG  
 Intended meaning: ‘Ali knows that Aygül likes Otkur.’

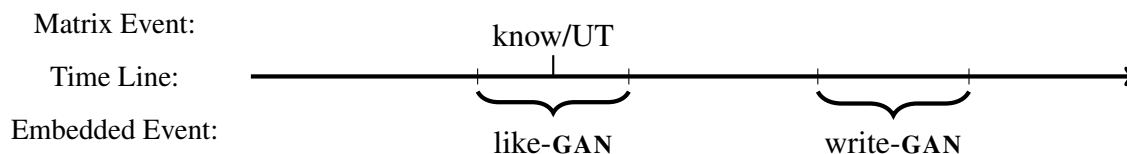


Figure 4. Tenses in *-GAN*-sentences with *-Idi* (present matrix predicate)

All of the four examples presented above have the same structure as those in (15) and (16). The only difference is that the matrix predicates in (19) and (20) have present tense rather than past tense. Of interest here are *-GAN*-sentences in (19a) and (20a). If *-GAN* inherently contributed to past semantics, we would expect its past meaning to be visible even when embedded under a present matrix predicate. It follows that *-GAN* should not be compatible with the non-past marker *-Idi* in these clauses due to the tense conflict. However, as seen in (19a) and (20a), these expectations do not hold in practice. An alternative explanation for these patterns, which I argue for in this paper, is that *-GAN* does not inherently function as a past tense marker. Rather, the past meaning observed in some *-GAN*-sentences may emerge as a default reading or through the presence of a null past tense morpheme. When other tense markers (e.g., *-Idi*) or lexical factors (e.g., the stativity of the predicate) are present, they play a more decisive role in determining the temporal interpretation of the sentence.

The absence of a direct relationship between *-GAN* and the past interpretation is further demonstrated in sentences with the progressive marker *-(i)wat*. As shown below, only *-D*-sentences are limited to a past progressive reading (21b), while *-GAN* sentences allow for a more flexible read-

ing (21a). This variability again indicates that *-GAN* and *-D* do not contribute to the same tense interpretations.

- (21) a. Ali [ Aygül-ning xet-ni jaz-iwat-**qan**-liq-i-ni ]  
 Ali [ Aygül-GEN letter-ACC write-PROG-**GAN**-COMP-POSS.3SG-ACC ]  
 bil-i-du.  
 know-PRES-3SG  
 RELATIVE PAST/PRESENT/FUTURE PROGRESSIVE: ‘Ali knows that Aygül is/was/will be writing the letter.’
- b. Ali [ Aygül xet-ni jaz-iwat-**t-i** de-p ] bil-i-du.  
 Ali [ Aygül letter-ACC write-PROG-**PAST**-3SG say-CNV ] know-PRES-3SG  
 RELATIVE PAST PROGRESSIVE: ‘Ali knows that Aygül was writing the letter.’

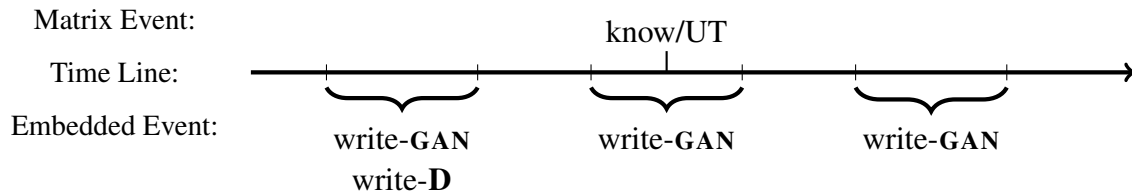


Figure 5. Tenses in *-GAN/-D*-sentences with *-(i)wat*

To sum up, the past tense marker *-D* consistently conveys a past reading in both root and complement clauses. Although *-GAN* might initially seem to contribute to a past interpretation, particularly in root clauses, a closer examination of its behavior in complement clauses reveals that *-GAN* does not inherently encode past tense. Instead, the past reading associated with *-GAN*-sentences is better attributed to other factors, such as a default temporal rule or the presence of a null tense morpheme that leads to a past interpretation in the absence of overt tense marking. Crucially, what *-GAN* consistently contributes across both root and complement clauses is a neutral perfective aspect, which will be explored in the next section.

**3. Perfective interpretation of *-GAN*.** In this section, I show that both *-GAN* and *-D* consistently contribute a *neutral perfective* reading in root and complement clauses. The concept of *neutral perfective* was introduced by Singh (1991, 1998) to describe aspectual forms that exhibit semantic characteristics of both the perfective and imperfective aspects. To illustrate this, consider the contrast between the English examples in (22) and their Hindi equivalents in (23) below.

- (22) a. I ate the cookie.  
 b. # I ate the cookie, but some of it still remains.  
 c. I ate some of the cookie.



- (23) a. maayaa-ne biskuT-ko khaa-yaa.  
 Maya-ERG cookie-ACC eat-PERF  
 ‘Maya ate the cookie.’ (Hindi, Arunachalam & Kothari 2010)
- b. maayaa-ne biskuT-ko khaa-yaa, (par use puuraa nahiin khaa-yaa)  
 Maya-ERG cookie-ACC eat-PERF, but it-ACC finish not eat-PERF  
 ‘Maya ate the cookie, but did not finish it.’ (Hindi, Arunachalam & Kothari 2010)

In English, the past perfective predicate *ate*, as shown in (22a), by default implies that the cookie has been eaten completely. Therefore, the ‘but’ continuation in (22b) is strongly infelicitous. To indicate that the action was stopped at an arbitrary point, we need an additional description in the form of determiners, as shown in (22c). By contrast, the Hindi equivalent allows for more flexibility. Not only can it support a completive reading as in (23a), indicating the cookie was entirely eaten, but it also describes a scenario where the cookie was only partially eaten, as confirmed by a well-formed (23b). Therefore, the Hindi past perfective predicate marked by *-yaa* (and its phonological variants) has the neutral perfective property. It indicates the event has reached an endpoint, but *not* necessarily the natural one that would signify the accomplishment. In addition to Hindi, this phenomenon is also observed in Chinese (Soh & Kuo 2005), Japanese (Singh 1991, 1998) and Thai (Koenig & Muansuwan 2000).

It is crucial to note that not all verbs marked by *-yaa* in Hindi can lead to a cancelable inference, and the neutral perfective aspect is particularly sensitive to the type of telic verbs involved. With accomplishments, the completion of the action may not be definitively implied, as in (23b). However, for achievements, the neutral perfective aspect typically leads to the entailment that the described event was completed. For example, when *-ye* (a phonological variant of *-yaa*) is used with the verb *come* as in (24), it entails that the father crossed the threshold of the speaker’s house. Therefore, any subsequent statement attempting to negate or cancel this inference would be infelicitous, as it contradicts the completion entailed by the use of *-ye* with an achievement verb.

- (24) pitaa-jii hamaare ghar aa-ye (# lekin hamaaraa ghar nahiiN DhuunD sake).  
 father our house come-PERF ( but our house not find could)  
 ‘Father came to our house (# but was unable to find it).’ (Hindi, Altshuler 2013)

To summarize what we have seen so far, the traditional three-way distinction between the perfective, the imperfective and the perfect, though compelling, is not quite correct. The data from languages like Hindi motivate a new aspectual class called *neutral aspect*, which can present an event as a whole but does not require the event to be completed. With this setup, let us now turn to the Uyghur data. Following a similar approach as used in the analysis of tense, I first explore the perfective interpretation of root clauses (section 3.1), and then analyze the complement clauses (section 3.2).

3.1. ROOT CLAUSES. Recall that English simple past tense typically describes an action that has occurred and been completed in the past. However, this is not necessarily the case in Uyghur, where the simple past tense marker *-D* contributes a neutral perfective reading. This can be observed in (25), where the continuation of the sentence does not force a contradiction, suggesting that Ali may not have completed writing the entire letter.

- (25) Ali xet-ni jaz-**d-i** (lekin u jaz-ip bol-ma-d-i).  
 Ali letter-ACC write-PAST-3SG (but 3SG.NOM write-CNV complete-NEG-PAST-3SG)  
 ‘Ali wrote the letter (but he did not finish writing it).’

Interestingly, when it comes to achievement verbs like *kel* (‘come’) in Uyghur, the use of the past tense marker *-D* leads to a completion entailment. This is evident from the example in (26), where the follow-up statement that asserts the otherwise yields infelicity. This behavior aligns with the usage of the neutral perfective marker *-yaa* in Hindi, which also leads to a completion entailment only when used with achievement verbs.

- (26) Ali mening öy-um-ga kel-**d-i** (# lekin u mening  
 Ali 1SG.GEN home-POSS.1SG-DAT come-PAST-3SG ( but 3SG.NOM 1SG.GEN  
 öy-um-ni tapal-ma-d-i).  
 home-POSS.1SG-ACC find-NEG-PAST-3SG)  
 ‘Ali come to my home (# but he did not find my home).’

Similar to *-D*, the suffix *-GAN* in Uyghur also exhibits the characteristics of the neutral perfective aspect. When *-GAN* is applied to accomplishment verbs, it results in a cancelable completion inference, as shown in (27). Conversely, when *-GAN* is used with achievement verbs, it entails the completion of the action, as demonstrated in (28).

- (27) Ali xet-ni jaz-**ghan** (lekin u jaz-ip bol-ma-ghan).  
 Ali letter-ACC write-GAN (but 3SG.NOM write-CNV complete-NEG-GAN)  
 ‘Ali wrote the letter (but he did not finish writing it).’
- (28) Ali mening öy-um-ga kel-**gen** (# lekin u mening  
 Ali 1SG.GEN home-POSS.1SG-DAT come-GAN-3SG ( but 3SG.NOM 1SG.GEN  
 öy-um-ni tapal-ma-ghan).  
 home-POSS.1SG-ACC find-NEG-GAN)  
 ‘Ali come to my home (# but he did not find my home).’

Taken together, the data above suggests that both *-GAN* and *-D* convey a neutral perfective reading when used in root clauses.

3.2. COMPLEMENT CLAUSES. In complement clauses, there are two cases to consider. The suffixes *-D* and *-GAN* can stand alone or be combined with the non-past marker *-Idi*.

When no other tense or aspect markers are present, *-D*-sentences maintain a neutral perfective reading, in which the completion reference can be contextually canceled in scenarios involving accomplishment verbs. This is demonstrated in (29), where the completion of the letter-writing event by Aygül can be negated without causing a contradiction. However, attempting to negate the completion of an event involving an achievement verb results in infelicity, as shown in (30).

- (29) Ali [ Aygül xet-ni jaz-**d-i** (lekin jaz-ip bol-ma-d-i) ]  
 Ali [ Aygül letter-ACC write-PAST-3SG (but write-CNV complete-NEG-PAST-3SG) ]  
 di-d-i.  
 say-PAST-3SG  
 ‘Ali said that Aygül wrote the letter (but did not finish writing it).’

- (30) Ali [ Aygül mening öy-um-ga kel-**d-i** (# lekin mening  
 Ali [ Aygül 1SG.GEN home-POSS.1SG-DAT come-PAST-3SG ( but 1SG.GEN  
 öy-um-ni tapal-ma-d-i) ] di-d-i.  
 home-POSS.1SG-ACC find-NEG-PAST-3SG) ] say-PAST-3SG  
 ‘Ali<sub>i</sub> said that Aygül come to his<sub>i</sub> home (# but did not find it).’

Likewise, the use of *-GAN* in complement clauses also leads to a completion implicature, which is cancelable for accomplishment predicates, as shown in (31). However, when *-GAN* is attached to an achievement predicate, a completion entailment is derived, as illustrated in (32). This behavior mirrors that of *-D* and illustrates that both suffixes contribute to a neutral perfective reading when used alone in complement clauses.

- (31) Ali [ Aygül-ning xet-ni jaz-**ghan** (lekin jaz-ip bol-ma-ghan)  
 Ali [ Aygül-GEN letter-ACC write-GAN (but write-CNV complete-NEG-GAN)  
 -liq-i-ni ] di-d-i.  
 -COMP-POSS.3SG-ACC ] say-PAST-3SG  
 ‘Ali said that Aygül wrote the letter (but did not finish writing it).’

- (32) Ali [ Aygül-ning mening öy-um-ga kel-**gen** (# lekin mening  
 Ali [ Aygül-GEN 1SG.GEN home-POSS.1SG-DAT come-GAN ( but 1SG.GEN  
 öy-um-ni tapal-ma-ghan) -lik-i-ni ] di-d-i.  
 home-POSS.1SG-ACC find-NEG-GAN) -COMP-POSS.3SG-ACC ] say-PAST-3SG  
 ‘Ali said that Aygül come to my<sub>speaker</sub> home (# but did not find it).’

Recall that while the past tense marker *-D* is incompatible with the non-past marker *-Idi* in complement clauses, *-GAN* can combine with *-Idi*. In such cases, *-GAN* maintains a neutral perfective reading when used with accomplishment predicates. This is illustrated in (33), where the completion of the action can be canceled by the follow-up statement. Conversely, when *-GAN* is used with achievement predicates, only a completive interpretation can be derived, as shown in (34).

- (33) Ali [ ete Aygül-ning xet-ni jaz-**idi-ghan** (lekin jaz-ip  
 Ali [ tomorrow Aygül-GEN letter-ACC write-NONPAST-GAN (but write-CNV  
 bol-ma-ydi-ghan) -liq-i-ni ] bil-i-du.  
 complete-NEG-NONPAST-GAN) -COMP-POSS.3SG-ACC ] know-PRES-3SG  
 ‘Ali knows that Aygül will write the letter tomorrow (but will not finish it).’

- (34) Ali [ ete Aygül-ning mening öy-um-ga kel-**idi-ghan** (#  
 Ali [ tomorrow Aygül-GEN 1SG.GEN home-POSS.1SG-DAT come-NONPAST-GAN (   
 lekin mening öy-um-ni tapal-ma-ydi-ghan) -liq-i-ni  
 but 1SG.GEN home-POSS.1SG-ACC find-NEG-NONPAST-GAN) -COMP-POSS.3SG-ACC  
 ] bil-i-du.  
 ] know-PRES-3SG  
 ‘Ali knows that Aygül will come to my<sub>speaker</sub> home tomorrow (# but will not be able to find it).’

In sum, although *-GAN* differs from *-D* in that it does not inherently contribute to a past read-

ing, the two suffixes pattern together in consistently contributing a neutral perfective reading in both root and complement clauses. Consequently, *-GAN* should not be viewed as a past marker, but rather as a neutral perfective marker.

**4. Indicative interpretation of *-GAN*-clauses.** In this section, various pieces of evidence are given to show that *-GAN*-clauses are indicative. These pieces of evidence come from the types of verbs that select *-GAN*-clauses, nuanced meanings conveyed by *-GAN*-sentences in comparison to others, and the type of adjunct clauses in which *-GAN* occurs.

To begin with, using the term indicative for *-GAN*-clauses is based on the parallels that these clauses have with other indicative complement clauses. Despite some cross-linguistic differences, it has been acknowledged that mood distribution is not completely random. In particular, predicates with the following semantics labels in (35) have a strong tendency to take subjunctive complements.

(35) *Verbs taking the indicative* (Farkas 1992):

- a. FICTION VERBS: *dream, imagine, ...*
- b. ASSERTION VERBS: *say, claim, ...*
- c. FACTIVE VERBS: *know, be sure, ...*
- d. COMMISSIVES: *promise, ...*

Other types of predicates under semantics labels in (36) generally favor the indicative across languages:

(36) *Verbs taking the subjunctive* (Farkas 1992):

- a. DESIDERATIVES: *want, hope, wish, ...*
- b. DIRECTIVES: *order, ask, request, ...*
- c. EMOTIVE FACTIVES: *regret, be sad, ...*

In Uyghur, among 19 attitude predicates investigated in this study, predicates that take *-GAN* clauses overlap substantially with the verbs that take the indicative mood in other languages. These include fiction verbs (e.g., ‘dream;’), assertion verbs (e.g., ‘say’, ‘claim’, ‘complain’, ‘brag’), factive verbs (e.g., ‘know’) and commissives (e.g., ‘promise’), with examples shown below from (37) to (40). It is important to note that *-GAN*-clauses do not appear with verbs where the subjunctive would typically be expected.

(37) FICTION VERBS: *dream*

- a. Ali [ Aygül-ning ket-idi-**ghan**-liq-i-ni ] xejal qil-d-i.  
 Ali [ Aygül-GEN leave-NONPAST-**GAN**-COMP-POSS.3SG-ACC ] dream do-PAST-3SG  
 ‘Ali dreamed that Aygül would leave.’

(38) ASSERTION VERBS: *say, claim, complain, brag*

- a. Ali [ Aygül-ning ket-idi-**ghan**-liq-i-ni ] di-d-i.  
 Ali [ Aygül-GEN leave-NONPAST-**GAN**-COMP-POSS.3SG-ACC ] say-PAST-3SG  
 ‘Ali said that Aygül would leave.’

- b. Ali [ Aygöl-ning ket-idi-**ghan**-liq-i-ge ] jakar qil-d-i.  
 Ali [ Aygöl-GEN leave-NONPAST-**GAN**-COMP-POSS.3SG-DAT ] claim do-PAST-3SG  
 ‘Ali claimed that Aygöl would leave.’
- c. Ali [ Aygöl-ning oyun-ni uttur-**ghan**-liq-i-din ] aghrin-d-i.  
 Ali [ Aygöl-GEN game-ACC lose-**GAN**-COMP-POSS.3SG-ABL ] complain-PAST-3SG  
 ‘Ali complained that Aygöl lost the game.’
- d. Ali [ Aygöl-ning oyun-ni ut-**ghan**-liq-i-din ] maxtan-d-i.  
 Ali [ Aygöl-GEN game-ACC win-**GAN**-COMP-POSS.3SG-ABL ] brag-PAST-3SG  
 ‘Ali bragged that Aygöl won the game.’

(39) FACTIVE VERBS: *know*

- a. Ali [ Aygöl-ning ket-idi-**ghan**-liq-i-ni ] bil-i-du.  
 Ali [ Aygöl-GEN leave-NONPAST-**GAN**-COMP-POSS.3SG-ACC ] know-PRES-3SG  
 ‘Ali knows that Aygöl will leave.’

(40) COMMISSIVES: *promise*

- a. Ali [ Aygöl-ning ket-idi-**ghan**-liq-i-ge ] wede  
 Ali [ Aygöl-GEN leave-NONPAST-**GAN**-COMP-POSS.3SG-DAT ] promise  
 qil-d-i.  
 do-PAST-3SG  
 ‘Ali promised that Aygöl would leave.’

Thus, the distribution of *-GAN*-clauses indicates that these clauses should be considered indicative.

Another interesting observation is that *-GAN*-clauses may feature a different meaning in comparison to other embedded clauses, even when they are selected by the same verb. For example, the verb *de-* ‘say’ in Uyghur can select for both a *-GAN* and an *-(I)sh* complement clause, shown in (41) and (42) respectively.

- (41) Ali [ Aygöl-ning ket-idi-**ghan**-liq-i-ni ] di-d-i.  
 Ali [ Aygöl-GEN leave-NONPAST-**GAN**-COMP-POSS.3SG-ACC ] say-PAST-3SG  
 ‘Ali said that Aygöl would leave.’ (Aygöl has made up her mind.)

- (42) Ali [ Aygöl-ning ket-**ish** ] xewer-i-ni di-d-i.  
 Ali [ Aygöl-GEN leave-**ISH** ] news-POSS.3SG-ACC say-PAST-3SG  
 ‘Ali said that the news that Aygöl would leave.’ (Aygöl has not made up her mind.)

Even though both complements are future-oriented, the one with *-GAN* in (41) implies that Aygöl has made up her mind, whereas the other one with *-(I)sh* does not have such an implicature. This contrast can be readily explained if we consider that *-GAN*-clauses are indicative. It follows that the *-GAN*-construction signifies a decisive commitment to the action, suggesting that Aygöl’s departure is indeed a forthcoming factual event. This nuanced contrast is another piece of evidence that *-GAN*-clauses are indicatives.

In addition, the types of adjunct clauses that occur with *-GAN* again show that these clauses are indicatives. Previous studies have shown that crosslinguistically purpose clauses are uni-

formly in the subjunctive mood (43), whereas reason clauses in the indicative mood (44).

(43) Sona uscita di casa affinché lei studi/\*studia in pace.  
I.am excited of house so,that she study.SUBJ/\*IND in peace  
'I left the house so that she studies in quiet.' (Italian, Predolac 2018)

(44) Sona uscita di casa perché  $\emptyset$  ha/\*abbia bisogno di carta.  
I.am excited of house because she/he have.IND/\*SUBJ need of paper  
'I left the house because she needs paper.' (Italian, Predolac 2018)

Consistent with the pattern in Italian, in Uyghur *-GAN*-clauses occur in reason clauses (45) but not purpose clauses (46). Thus, we can conclude that *-GAN*-clauses also interpreted as indicative.

(45) Men aghrip qal-ghan-liq-im üchün, u meni  
1SG.NOM ache become-GAN-COMP-POSS.1SG because 3SG.NOM 1SG.ACC  
yighin-gha chaqir-mi-d-i.  
meeting-DAT summon-NEG-PAST-3SG  
'He did not summon me to the meeting, because I was ill.'

(46) Ular doklar angla-sh-qa ket-t-i.  
3PL.NOM lecture hear-ISH-DAT leave-PAST-3PL  
'They went in order to hear the lecture.'

Overall, we have observed that complement clauses with *-GAN* are associated with an indicative interpretation. However, it is still too hasty to attribute this mood directly to *-GAN* itself as all such *-GAN*-clauses also involve the suffix *-liK*. Thus, it is plausible that the indicative interpretation may actually originates from *-liK*. But I leave this for future research.

**5. Conclusions and remaining issues.** The current paper set out to examine the tense and aspect contributions of *-GAN* in Uyghur. We have established that the simple past tense marker *-D* consistently contributes a past and a neutral perfective interpretation in both root and complement clauses. In contrast, *-GAN* primarily functions as a neutral perfective marker, and does not inherently contribute to a past reading. Although *-GAN* may seem to convey a past meaning in root clauses, a closer examination reveals that such interpretations should be attributed to other factors rather than *-GAN* itself.

This phenomenon is not unique to Uyghur, and similar patterns are observed in other languages, including Mandarin (Lin 2003) and Quechua (Weber 1989). Take Mandarin as an example, where past interpretations are often inferred without explicit tense marking. In (47), the sentence-final particle 'le' marks perfective aspect, and the sentence is interpreted as past without requiring a dedicated past tense morpheme.

(47) ta qu xue-xiao le.  
he go school PERF  
'He went to the school'. (Mandarin)

Likewise, in Uyghur, the past interpretation of *-GAN*-clauses may result from a default temporal rule or a null tense morpheme. This view is further supported by the behavior of *-GAN* in complement clauses, where the presence of overt tense markings or the lexical semantics of the verb

play a more decisive role, while *-GAn* consistently contributes only a neutral perfective aspect. Therefore, *-GAn* should be understood as a neutral perfective marker, not as a past tense marker. Further research is necessary to explore how past readings are derived in *-GAn*-clauses, particularly whether they arise from a null tense morpheme or a default tense rule.

Another direction for future research concerns the indicative interpretation raised in *-GAn*-clauses. Given that all *-GAn*-clauses in section 4 also involve the suffix *-liK*, it raises the possibility that the indicative interpretation may actually stem from *-liK* rather than *-GAn* itself. Further investigations are needed to clarify the specific contributions of *-liK* and *-GAn* to sentence meaning.

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