TWO TYPES OF TEMPORAL WHEN CLAUSES IN HAUSA

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ABSTRACT:

Hausa has simple temporal clauses, introduced by the conjunction dà ‘when’, that many researchers derive from temporal relative clauses introduced by lookâcin dà ‘time that’, through the deletion of the pseudo head word lookâcii ‘time’. This paper shows that this analysis, however natural it may appear, is inadequate. Indeed, the two temporal clauses have different uses, which would not be surprising if simple temporal clauses are derivationally independent from temporal relative clauses, as proposed in this paper.

1. INTRODUCTION

There are in Hausa two types of temporal when clauses. The first type has the structure of relative clauses while the second type shows no immediate connection to relative clauses. The two types of temporal clauses are illustrated in the following:

(1) a. Sun kaawoo ma-nà zìyaaRàa lookàci-n dà mu-kèe kàalàacii.
   3P.CPL bring to-1P visit time-DF that 1P-RI meal
   ‘They visited us when we were having a meal.’

1 Hausa (Chadic) is spoken mainly in Niger and Nigeria. Primary data in this paper are mostly from the Katsinanci dialect and Standard Hausa. The transcription follows the Hausa standard orthography with some changes. Long vowels are represented as double letters, low tone as grave accent, and falling tone as circumflex accent. High tone is unmarked. Small capitals <B, D, K> represent glottalized/laryngealized consonants, and <R> represents an alveolar trill distinct from a flap [r]. Written <f> is pronounced [h] (or [hʰ] before [a]) in Katsinanci and other western dialects. The abbreviations are: 1, 2, 3 ‘1st, 2nd, 3rd person’; cop. ‘copula’; CPL ‘completive’; DF ‘definite’; F ‘feminine’; FUT ‘future’; imp ‘impersonal’; IPV ‘imperfective’; M ‘masculine’; P ‘plural’; RI ‘relative imperfective’; RP ‘relative perfective’; S ‘singular’; SUB ‘subjunctive’.

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The temporal clause in (1a) is structurally a relative construction where the relative clause introduced by dà seems to modify the apparent head word lookàci ‘time, moment, period’. Sometimes, instead of lookàci, an alternative word may appear such as sa’aá, sàa’ídií, yàayii, etc., all meaning ‘time, moment, etc.’ In (1b) by contrast, the temporal clause is introduced by the particle dà alone which is here translated as ‘when’. Furthermore, the two temporal clauses differ in the fact that the temporal relative clause can optionally take the “relative marking”, i.e., alternate forms of the perfective and imperfective that appear in relative clauses and out-of-focus clauses of focus and wh question constructions (see among others Bearth 1993; Hyman and Watters 1984; Schachter 1973). For this reason, the temporal relative clause in (1a) has the relative imperfective mu-kèe ‘1P-RI’ contrasting with the regular imperfective mu-nàa ‘1P-IPV’ found in the simple temporal clause in (1b).

Nearly all descriptions of Hausa temporal clauses claim or assume that temporal relative clauses, especially the ones headed by the word lookàci ‘time’, are the source of simple temporal clauses introduced by dà. The derivation would involve the deletion of the word lookàci ‘time’ or its equivalents (cf. Bagari 1976/87: 117; Jaggar 2001: 624; Newman 2000: 556; Tuller 1986: 113). In fact, for most authors (cf. Jaggar 2001: 624, 629), the lookàci temporal relative clause derives a whole series of temporal clauses introduced by phrasal subordinators involving the particle dà, such as: (lookàcin) dà ‘(time) when’, sai (lookàcin) dà ‘till (time) when’, tun (lookàcin) dà ‘since (time) when’, etc. The claim that temporal relative clauses are the source of simple temporal clauses is usually based on examples where the word lookàci ‘time’ seems optional, as illustrated next (cf. also Bagari 1976/87: 117; Watters 2000: 223):

(2) a. Naa san Abdù (lookàci-n) dà ya-nàa yaaròo.
   1s.CPL know Abdu time-DF DA 3MS-be child
   ‘I know Abdu (at the time) when he was a child.’

b. Yàaraa sun ga sarkii (lookàci-n) dà su-kà
   children 3p.CPL see emir time-DF DA 3P-RP
   shiga gàrii.
   enter town
‘The children saw the emir when they visited the town.’

‘The children saw the emir when they were entering the town.’

In the sentences in (2), the presence or absence of the word lookàcii ‘time’ has no consequence on the meaning of the sentences. In (2b) for example, with or without lookàcii, there is an ambiguity between the interpretations ‘the children saw the emir at the exact moment when they entered the town’ and ‘the children saw the emir when they were visiting the town’. It thus seems completely natural to derive the simple temporal clause from the more complex temporal relative clauses through the deletion of the word lookàcii.

In fact, this process is thought to be general and, according to Wald (1987: 509n5), many West African languages commonly use a relative conjunction (such as dà in Hausa) as a conjunction introducing temporal when clauses. ²

The aim of this paper is to show that the assumption of a systematic derivation of simple temporal clauses from temporal relative clauses cannot be maintained when one closely examines the uses of the two types of clauses. The paper thus presents a series of indications suggesting that the simple temporal clauses are not derived from temporal relative clauses.

As will be seen in due course, in trying to establish the independence of simple temporal clauses, this paper retraces the development of both types of clauses using the grammaticalization framework. Normally, a grammaticalization process, in a specific context, turns a lexical or derivational item into a grammatical marker, or a grammatical marker becomes more grammatical (cf. for example Hopper and Traugott 1994: 2). In this process, the original lexical item becomes progressively eroded, both at the phonological and semantic levels. However, there is another process that also falls under the domain of grammaticalization, where an entire construction undergoes expansion in new contexts and/or acquires new functions while becoming syntactically more integrated and less flexible. This type of grammaticalization has been discussed in, among others, Givón (1990: 651); Güldemann (2003: 183); Heine and Reh (1983: 34); Himmelmann (1997); and Hopper and Traugott (1994: 167ff). In this paper, we will see both types of changes. Indeed, simple temporal clauses stem from the grammaticalization of the dà, which evolved from an existential predicate, through a comitative and instrumental marker, to a temporal conjunction.

² This pseudo head deletion process is actually thought by some writers to apply to all adverbial relative clauses. For example, Reineke (1998: 103) reports that in Ditammari (and other Gur languages), locative and manner adverbial clauses are headless relative clauses that however incorporate noun class markers compatible with, respectively, the lexemes meaning ‘place’ and ‘manner’. However, in the two Gur languages described by Reineke (Ditammari and Biali), the head words meaning ‘time’ are not deleted in temporal relative clauses.
Temporal relative clauses on the other hand are derived from typical head modifying relative clauses and have a frozen structure characteristic of grammaticalized constructions.

The paper is structured as follows. Section 2 presents the relationship between temporal relative clauses and regular relative clauses. Section 3 sketches a possible development scenario for simple temporal clauses that makes no appeal to relative constructions. Finally, Section 4 discusses other differences between the two types of temporal clauses, in particular their semantics and their interaction with times/aspects/modes (TAM), differences that show the derivational independence of simple temporal clauses vis-à-vis temporal relative clauses.

2. DEVELOPMENT OF TEMPORAL RELATIVE CLAUSES

It has naturally long been evident that adverbial clauses in general may in some languages be closely connected to relative constructions (cf. Lehmann 1984: 320; Thompson and Longacre 1985: 178). This section shows that temporal relative clauses in Hausa can be derived from relative clauses where the head word lookàcii ‘time’ has a true referential reading.

Like any noun phrase functioning in a sentence (as subject, direct object, etc.), the word lookàcii can be modified by at least four kinds of relative clauses. One of the two fundamental contrasts in Hausa relative clauses distinguishes relative clauses with a complex structure involving a copular predicate kè(e) ‘be’ and simpler, reduced relative clauses that have no copula.

These two types of relative clauses are illustrated in the following (cf. also Newman 2000: 540):

(3) a. Kà àuni lookàci-n dà ya-kè yaa daacèe.
   ‘You must/may aim at the really appropriate moment.’
   2MS.SUB aim time-DF that 3MS-be 3MS.CPL fit

b. Kà àuni lookàci-n dà ya daacèe.
   ‘You must/may aim at the appropriate moment.’
   2MS.SUB aim time-DF that 3MS.RP fit

In the sentences in (3), the main clause is kà àuni [lookàcii... ‘you should target [a time...’] where the word lookàcii functions as direct object in the main clause. In (3a), the relative clause is introduced by the conjunction dà ‘that’ and is made up of an impersonal copular predicate ya-kè ‘it be’ and the relative clause proper. We will assume that the relative clause proper here functions as a complement to the copula –kè. By contrast, in (3b), the relative clause is reduced in structure and is introduced only by the conjunction dà ‘that’. As may be seen, the reduced relative clause in (3a) has the relative perfective marker ya ‘3MS.RP’ replacing the regular completive marker yaa.
'3MS.CPL' found in the copular relative clause in (3a). It may be noted that reduced relative clauses as illustrated in (3b) are more frequent, while the copular relative clauses illustrated in (3a) have an associated emphatic reading, as indicated in the translation. The second fundamental contrast in Hausa relative clauses is the presence or absence of a relative pronoun introducing the relative clause. Indeed, the relative clauses illustrated in (3) all have variants with a relative pronoun, as illustrated in the following:

(4) a. Kà àuni lookàcii wa-n-dà ya-kè
   2MS.SUB aim time one-DF-that 3MS-be
   yaa daacèe.
   3MS.CPL fit
   ‘You must aim at the really appropriate moment.’

b. Kà àuni lookàcii wa-n-dà ya daacèe.
   2MS.SUB aim time one-DF-that 3MS.RP fit
   ‘You must aim at the appropriate moment.’

c. wa-n-dà ya-kè yaa daacèe
   one-DF-that 3MS-be 3MS.CPL fit
   ‘the one that is really appropriate.’

Relative clauses without a relative pronoun, as illustrated in (3), are usually taken to be more basic (cf. Newman 2000: 540). Indeed, relative clauses introduced by a relative pronoun, as illustrated in (4a-b) are historically secondary and stem probably from the grammaticalization of free relative clauses headed by the indefinite pronoun wàa ‘one’, as illustrated in (4c). The free relative clauses are now alternating with the original då relative clauses in modifying a head noun. In (4a-b), the sequence made up of the indefinite pronoun and the conjunction (i.e., wa-n-dà ‘the one-masc. that’) is reinterpreted as a relative pronoun wandà ‘who-masc.’. The relative pronoun is written as one word in Hausa orthography and the other forms are: waddà/waccè ‘who-fem.’, wàdàndà ‘who-plur.’ (these pronouns in fact have a variable tone pattern, see Jaggar 2001: 528; on the development of relative pronouns in general, see among others Givon 1990: 657; Lehmann 1984: 389; van der Auwera and Kučanda 1985: 927, 953). Data (3-4) illustrate the noun lookàcii ‘time’ functioning as direct object of the main clause and this noun can naturally also assume other syntactic functions in the main clause. In particular, lookàcii can also function as a temporal adverb in the main clause. However, in such case, lookàcii and its accompanying relative clause have a double interpretation, as seen in the next examples:
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(5) a. BàaKii sun zoo lookàcî-n dà
visitors 3P.CPL come time-DF that
mu-kèe cîn àbinci.
1P-RI eat food
‘The visitors came at our meal time.’
‘The visitors came while we were eating.’
b. BàaKii sun zoo jiyà/ Karfèe biyu.
visitors 3P.CPL come yesterday/ o’clock two
‘The visitors came yesterday/ at 2 o’clock.’
c. Lookàcî-n nan nèe bàaKî-n su-kà zoo.
tile-DF that cop. Visitors-DF 3P.RP come
‘It was at that moment that the visitors came.’

In the first meaning of (5a), lookàcîi is referential and designates a precise moment. In this interpretation, the people visited do not need to actually be eating. In (5a) then lookàcîi fulfills a function in the main clause and is comparable to simple temporal adverbs such as jiyà ‘yesterday’, etc., as illustrated in (5b). The difference between the two types of adverbs is that the word lookàcîi must necessarily be specified by a relative clause to have a reference, unless this reference is clear from context. For example, in (5c) the reference of lookàcîi is would be specified in the preceding discourse. In the second meaning of (5a), the word lookàcî ‘time’ is not referential and its interpretation seems to be closely tied to the action described in the apparent relative clause (the action of eating). In particular, the action of eating refers to a specific event (unlike in the first interpretation), which so determines the temporal reference. In this case, it is the entire apparent relative construction that acts as a temporal adverbial clause in the main clause. That is, since lookàcî is not referential (or is lexically empty, cf. Lehmann 1984: 320), one no longer has the construction “Head lookàcî + relative clause”. Indeed, many relative constructions with the word lookàcî can only be interpreted as adverbial clauses, in particular when they refer to single occurrence events, as illustrated in the following:

(6) a. Lookàcî-n dà su-nàa faDàa nee ùbâ-n
time-DF that 3P-IPV fight cop. father-DF
naa-sù ya fitoo.
of-3P 3MS.RP come.out
‘It is when they were fighting that their father came out.’
b. Lookàcî-n dà Saanii ya buuDoo Koofàa
time-DF that Sani 3MS.RP open door
sai su-kà ruugàa.
then 3P-RP run

‘It is when Sani opened the door that they fled.’

In sentences (6), the action described in the temporal relative clause is a single occurrence event, whether the tense/aspect is imperfective, as in (6a), or perfective, as in (6b). In such cases, the event in the temporal relative clause can be interpreted as causal, leading to the event described in the main.

Indeed, in (6a-b), the relation between subordinate and main clause event can be temporal (fortuitous) or causal (i.e., respectively, the father came out in order to see what was going on and the children ran away from Sani; cf. also the discussion of data (16) below).

The functional/semantic changes observed in data (5-6) can be naturally apprehended in the grammaticalization framework whereby the regular relative clauses would be the source of the specialized temporal relative clauses. Indeed, there are indications that the semantic changes are accompanied by formal changes as well. As expected in a grammaticalization process, the derived temporal relative clauses are indeed more reduced and less flexible syntactically. We have at the beginning of this section seen that one contrast opposes copular and reduced relative clauses (cf. discussion of data (3)) while another contrast opposes relative clauses that have a relative pronoun and those that have no relative pronoun (cf. discussion of data (4)). It happens that temporal relative clauses have no variants with the copula -kè and cannot take a relative pronoun, as illustrated in the following data:

(7) a. *Lookàci-n då ya-kè su-nàa faDàa...
time-DF that 3MS-be 3P-IPV fight
‘When they were fighting…’
b. *Lookàcii wa-n-dà su-kèe faDàa...
time one-DF-that 3P-RI fight
‘When they were fighting…’
c. *Lookàcii wa-n-dà ya-kè su-nàa faDàa...
time one-DF-that 3MS-be 3P-IPV fight
‘When they were fighting…’

Examples (7a-c) show that temporal relative clauses cannot, respectively, have the copula –kè, the relative pronoun, or both features at the same time. It may noted that copular relative clauses have an emphatic connotation, which would apparently apply to lookàcii ‘time’ only if it is referential. At the beginning of the section it was suggested that relative clauses with a relative pronoun are a secondary development and incorporate a free relative clause. It appears then that only reduced relative clauses without a relative pronoun specialized to become temporal relative clauses, the more complex relative
clauses (relative clauses with copula –kè and/or a relative pronoun) are incompatible with the adverbial function.

3. DEVELOPMENT OF SIMPLE TEMPORAL CLAUSES

In relative clauses and temporal relative clauses, the particle dà is generally taken to be a purely grammatical marker, i.e., a subordination conjunction without semantic load. By contrast, the same particle in simple temporal clauses is translated by all writers as the conjunction ‘when’ (cf. for example Jaggar 2001: 606, 624; Newman 2000: 556; cf. also data (1b) above). Nonetheless, such translation is only an approximation and is context bound since dà appears in other temporal expressions where it is not exactly translatable as ‘when’. This is illustrated in the following (cf. also Jaggar 2001: 650; Wolff 1993: 440):

(8) Abdù yaa zoo dà saafe/
Abdu 3MS.CPL come during early.morning/
(dà) Karfèe takwàs.
at o’clock eight
‘Abdu arrived early in the morning/ at 8 o’clock.’

As seen in (8), the particle dà can, obligatorily or optionally, accompany certain temporal adverbs such as the times of day, prayer moments, hours, seasons, etc. (however, some temporal adverbs such as maakòo/saatii ‘week’, the months and the years –such as MaaRìs ‘march’, ‘1999’, bana ‘this year’, bàara ‘last year’, and bàDi ‘next year’, etc.- do not take dà). As indicated, in contexts such as (8), dà can be translated as ‘at, in/during’, which shows that the temporal particle is in fact semantically complex and the meaning of ‘when’ may be a derived meaning.

In this regard, there are indications showing that particle dà ‘when’ may have derived from the comitative/instrumental preposition dà ‘with’. In fact in certain temporal uses, the comitative semantics of dà is quite explicit, as illustrated next:

(9) a. Abdù yaa zoo dà wurii.
Abdu 3MS.CPL come with margin
‘Abdu came very early (i.e., with “space, margin”).’

b. Ciiwò-n nân yaa zoo dà dàamanaa.
sickness-DF this 3MS.CPL come DA rainy.season
‘This disease came with the rainy season.’

In (9a), the adverb wurii comes very likely from wurii ‘place, space’ and the expression dà wurii literally means ‘with (time) room/margin’. Data (9b)
however may more clearly show the semantic/functionual shift from comitative
dà to temporal dà. Indeed, dà in (9b) can mean ‘with’, as in the first
interpretation, or ‘during’, as in the second interpretation. One may assume
that once particle dà took up the function of introducing temporal adverbs, the
new function spread to events expressed in finite or non finite clauses. This is
illustrated in the following (example (10a) adapted from Hiskett 1971: 78 and
(10b) from Moussa-Aghali 2000: 8; cf. also Jaggar 2001: 635 for similar
examples):

(10) a. Dà gaanàawaa dà kau ràsuwaa taa-sà.
on meeting on indeed dying of-3MS
‘He died as soon as they greeted.’

b. Dà ji-n hakà sai uwaa-taa
on hearing-of this then mother-of.1S
ta buushèe dà dàariyaa.
3FS.RP blow with laughter
‘On hearing this, my mother laughed.’

c. Dà ta ji hakà sai uwaa-taa
when 3FS.RP hear this then mother-of.1S
ta buushèe dà dàariyaa.
3FS.RP blow with laughter
‘When she heard this, my mother laughed.’

In (10a), particle dà introduces two verbal nouns and is probably the same
preposition found introducing nominals in data (8-9). The construction “dà +
verbal noun + (complement)” is quite frequent in Hausa and can appear even
in frozen expressions (such as dà faaràawaa dà iyàawaa ‘early talent’, lit. ‘on
starting (is) on knowing how’; cf. further examples in Newman 2000: 44). For
this reason, the construction is frequently an alternative to finite temporal
clauses, as seen in (10b-c) where the two sentences are essentially equivalent
(although (10b) is also used to convey the ‘as soon as she heard this…’
reading). The shift from a preposition to a subordinating conjunction seen in
(10b-c) characterizes the development of many particles in Hausa (cf. sai
Abdù ‘only Abdu (can do something)’ and sai kaa jee can ‘only [if] you go
there (can you achieve something)’). Other particles introducing a noun
phrase or a finite clause are: baayan ‘after’ (from baayaa ‘back’), koo ‘even’,
is clear that examples (8-10) evidence some temporal uses of dà that are
unrelated to lookàcin dà relative clauses. The proposal that temporal
conjunction dà stemmed from comitative/instrumental dà is hence a viable
alternative to the lookàciin deletion analysis.
4. DIFFERENCES BETWEEN THE TWO TYPES OF TEMPORAL CLAUSES

In the previous two sections, we saw that simple temporal clauses and temporal relative clauses may have different origins. This section shows that the two types of clauses also differ with regard to their use in ways that cannot be accommodated in the framework of the lookàcii deletion analysis. Indeed, the two types of temporal clauses do not express the same range of temporal when relations and behave differently with regard to the tense/aspect paradigms.

4.1 Semantic differences between the two types of clauses

In the general linguistic literature (cf. Michaelis 2006, Vlach 1981) there are essentially two types of temporal relations between the event in a temporal when clause and the event in its main clause. Regarding English for example, Vlach (1981) considers that the relation is overlapping when one of the event refers to a state (i.e., when the event is durative). By contrast, the relation is consecutive when both events in the subordinate and main clause are non durative. The overlapping relation is well illustrated for both types of Hausa temporal clauses, as seen in data (1-2) where one of the events is durative. The consecutive relation with two punctual events is also well illustrated in (6c) for the temporal relative clauses and in (10c) for the simple temporal clauses. However, in Hausa the interpretation of the temporal relation may not in fact depend on the durativity of the events per se. Indeed, the two types of temporal clauses may in some cases have an overlapping or consecutive reading when both subordinate and main clauses describe punctual events.

This is illustrated in the following:

(11) a. (Lookàci-n) dà ya taashì, sai
time-DF DA 3MS.RP stand then
ya habrà kwaanò ruwâ-ì.
3MS.RP kick bowl-of water-DF
‘When he was standing up, he kicked over the water bowl.’
‘When [after] he stood up, he kicked over the water bowl.’

b. (Lookàci-n) dà ya diRoo, sai
time-DF DA 3MS.RP jump then
ya karè Kafàa/ sàndà-ì.
3MS.RP break leg/ stick-DF
‘When he jumped, he broke his leg/the stick.’

In (11), the presence of the word lookàcii has no effect on the interpretation of the sentences so that all interpretations apply both to simple temporal clauses and temporal relative clauses. In (11a), the sentence is ambiguous between an
overlapping and a consecutive interpretation. This seems to hinge on the
durative vs. punctual perspective taken for the event in the temporal clause.
Sentence (11b), too, is ambiguous between an overlapping and a consecutive
reading but in way different from (11a). While in the first interpretation of
(11a) the kicking of the bowl may happen anytime during the process of
standing up, in (11b) the breaking of the leg can only happen, normally, at the
end of the jumping process. It is clear that there is here a minimal overlapping
of the events. Depending on the nature of the object, sentence (11b) can also
have a consecutive reading (jumping and then breaking a stick). The various
types of temporal when relations seen so far between subordinate and main
clause event can be diagrammed as in the following:

(12) Full/partial overlapping -- minimal overlapping -- consecution

As illustrated in the examples, both types of temporal clauses can express all
three relations in (12). However, there is one further type of consecutive when
relation that can be expressed only by simple temporal clauses. In this
temporal relation, the close sequencing of the events is stressed or particularly
explicit. The stressing of the close sequence relation is illustrated next:

(13) a. (Lookàci-n) då su-kà zoo, sai mu-kà
time-DF DA 3P-RP come then 1P-RP
ci àbinci.
et meal
‘When [once] they arrived, we then ate.’

b. Koo (*lookàci-n) då su-kà zoo, sai mu-kà
even time-DF DA 3P-RP come then 1P-RP
ci àbinci.
et meal
‘As soon as they arrived, we ate.’

In (13a), the closeness of the consecutive relation is not stressed and both
types of temporal clauses are possible, as shown by the optionality of lookàcii
‘time’. In (13b), the sentence is introduced by koo ‘even’, which is an
emphatic particle (cf. König 1991), stressing the close sequencing of the
events. One notes that in this case, the word lookàcii is not possible. Another
case of explicit close sequencing is illustrated next:

(14) Ta tàmbàyi Saanii. (*Lookàci-n) då ya
3FS.RP ask Sani time-DF DA 3MS.RP
baa tà, sai ta tàfi.
give 3FS then 3FS.RP go
‘She asked Sani [for sth.]. When he gave [it to] her, she went.’
In (14), which could be a piece of narrative, the close consecutive relation is explicit, i.e., in the context of asking, the woman left as soon as she was given something. Here too, the word *lookàcii* is not possible. The narrative context in fact provides a further illustration of a close consecutive relation that excludes the temporal relative clauses. This is seen in the following:

(15) Su-kà fita. (*Lookàcì-n) dà su-kà fita,
    3P-RP go.out time-DF DA 3P-RP go.out
    sai ta rufè Koofàa.
    ‘They then left. Once they exited, she then closed the door.’

Narratives, by definition, relate events that are sequenced and single occurrence (Adam 1994: 92-105), typically in a close succession. In Hausa, a frequent narrative technique is to repeat a previous event in a temporal clause, before chaining up with the next event. In (15), the event of getting out is presented. Then the same event is repeated in the subordinate clause and linked with the next new event. This repetition in fact stresses the close connectedness of the events, as shown in the translation. One notes that here, too, the word *lookàcii* is not possible. In fact, the repeated event can explicitly be introduced by *baayan* ‘after’ or a hybrid conjunction *baayan dà* ‘after that/when’, instead of *dà* alone. This is illustrated in the following:

(16) a. Su-kà fita. Baayan (*Lookàcì-n) dà su-kà fita,
    3P-RP go.out after time-DF DA 3P-RP go.out
    sai ta rufè Koofàa.
    ‘They then left. After they exited, she then closed the door.’

b. Su-kà fita. Baayan sun fita, sai
    3P-RP go.out after 3P.CPL go.out then
    ta rufè Koofàa.
    3FS.RP close door
    ‘They then left. After they exited, she then closed the door.’

In (16a), the first event of the passage is repeated and introduced by *baayan dà* ‘after that/when’ and *lookàcii* cannot be used. *Baayan* is a preposition and conjunction meaning ‘behind, after’ (cf. *baayan iccèe* ‘behind the tree’, *baayan sallàw* ‘after the festival’). As seen in (16b), *baayan* can appear alone and mark the close sequence relation.³

³ There is nonetheless a difference between a hybrid temporal *baayan dà* ‘after that/when’ illustrated in (16a) and a temporal *baayan* ‘after’ clause illustrated in (16b). The simple *baayan* clause allows a more or less extended time between the two events. By contrast, the hybrid *baayan dà* clause typically implies a relatively short
Because of this ability of simple temporal clauses to mark close consecutive events, they usually have, given the appropriate context, more causative implication than temporal relative clauses. This is illustrated in the following:

(17) a. Lookāći-n dà su-nàa fatàa nee ëbà-n
    time-DF that 3p-IPV fight cop. father-DF
     naa-sù ya fitoo.
     of.3P 3MS.RP come.out
     ‘It is when they were fighting that their father came out.’

b. Dà su-nàa fatàa nee ëbà-n naa-sù
    when 3p-IPV fight cop. father-DF of.3P
     ya fitoo.
    3MS.RP come.out
     ‘It is when they were fighting that their father came out.’

In the discussion of data (6a) above, we said that temporal relative clauses can have causative implications. Nonetheless, when asked to contrast the sentences in (17), most Hausa speakers interpret (17a) [= (6a)] as implying that the father came out inadvertently to find the fighting going on while (17b) is taken to imply that the father came out on purpose (say upon hearing that a fight is going on). It should be noted that both clauses primarily have a temporal function and, with some main verbs, may or may not have a causative implication. For example if the verb fitoo ‘come out’ is replaced by zoo ‘come’, then both (17a-b) would have a simple contingency reading (that is, if the father came from work or from somewhere not knowing about the fight). Conversely, if, instead of a father coming out, the main clause describes the police making arrest, then both temporal clauses would in this context naturally get the causative implication (that is, the fighters were arrested because of their fighting).

To summarize, simple temporal clauses and temporal relative clauses do not have the same uses. In the lookāći deletion analysis, which derives simple temporal clauses from temporal relative clauses, this difference in use will have to be explained in one way or another. By contrast, if the two clauses developed independently (cf. Sections 2 and 3), then one can expect them to have different properties. Next we see some further differences between the two clauses.

4.2 TAM paradigms and their interpretation in the two clauses

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time between the two events. Besides koo ‘even’ and baayan, the conjunction dà combines with other particles, such as tun ‘since’, sai ‘only, then’, to express a close consecution between events (usually with an implied causal relation).
This subsection explores the tense/aspect paradigms that can appear in simple temporal clauses and in temporal relative clauses, as well as the temporal interpretations of the paradigms (i.e., whether they can refer to past or future events). Table 1 presents the tense/aspect possibilities with temporal lookàcin dà relative clauses.

Table 1: TAM paradigms and their interpretations in temporal relative clauses (with 3rd person plural su- and verb fìta ‘go out’)

<table>
<thead>
<tr>
<th></th>
<th>Past (Single event)</th>
<th>Future (Single event)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperfective:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lookàcin dà sunàa fìtaa</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Relative Imperfective:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lookàcin dà sukèe fìtaa</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Relative Perfective:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lookàcin dà sukà fìta</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Future I:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lookàcin dà zaa sù fìta</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Eventual:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lookàcin dà sukàa fìta</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Hausa has about ten TAM paradigms (cf. Abdoulaye 2008) but Table 1 shows that only five of them can appear in temporal relative clauses: the regular imperfective, the relative imperfective, the relative perfective, the future I, and the eventual. Temporal relative clauses cannot take the habitual, the future II, the subjunctive, etc. It should be noted that a relative clause containing the habitual aspect can modify the word lookàciit, ‘time’, but in this case the word lookàciit receives a referential interpretation only (i.e., the clause would not have an adverbial use; cf. lookàcin dà sukàn fìta ‘the time/moment when they usually go out’). Also, only clauses describing one-time events are considered in Table 1 since they allow the adverbial use, while clauses with recurrent events would tend to have a referential lookàciit head. It may also be noted that a temporal relative clause takes the regular or the relative imperfective with the same meaning, as indicated in the introductory section.

The second significant aspect of Table 1 is that all admissible tense/aspect paradigms can refer to the past or the future, given an appropriate context (as determined by the main clause). This is illustrated in the following for the relative perfective:

(18) a. Lookàci-n dà bààkii su-kà zuo, an
time-DF that visitors 3P-RP come imp.CPL
Hausa is a predominantly aspectual language so that most TAM paradigms can be used to refer to past and future events. In (18a), the relative perfective \( su-kà \) ‘3p-RP’ has a past interpretation in a narrative-like context, while in (18b), the same TAM marker has a future interpretation in a context where the hearer is given some instruction concerning a future situation.

When one turns to the simple temporal clauses, one observes a more restricted number of possible TAM paradigms. The possible paradigms and their interpretations in simple temporal clauses are presented in Table 2.

Table 2: TAM paradigms and their interpretations in simple temporal clauses
(with 3rd person plural \( su-\) and verb \( fìta \) ‘go out’)

<table>
<thead>
<tr>
<th>Past</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single</td>
</tr>
<tr>
<td>Completive:</td>
<td></td>
</tr>
<tr>
<td>( dá sun fìta)</td>
<td>Yes</td>
</tr>
<tr>
<td>Rel. Perfective:</td>
<td></td>
</tr>
<tr>
<td>( dá sukà fìta)</td>
<td>Yes</td>
</tr>
<tr>
<td>Imperfective:</td>
<td></td>
</tr>
<tr>
<td>( dá sunàa fìta)</td>
<td>Yes</td>
</tr>
<tr>
<td>Future I:</td>
<td></td>
</tr>
<tr>
<td>( dá zaa sù fìta)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 2 shows that simple temporal clauses accept only four TAM paradigms: the completive, the relative perfective, the regular imperfective, and the future I. In particular, the simple temporal clauses do not normally take the relative imperfective, despite their admitting the regular imperfective. One may also note that Table 2 takes into account both single and multiple occurrence events, since this has no incidence on the ability of the clause to function adverbially.

Regarding the temporal interpretation of the TAM, one notices in Table 2 a general shift to a past interpretation for most tense/aspect paradigms. For
example, of all admissible TAMs, the completive alone can be used to refer to past or future events, under the conditions given in the table. The two interpretations of the completive are illustrated in the following:

(19) Dà sun fita, sai ta rufë Koo ìa/
    when 3P.CPL go.out then 3FS.SUB close door/
    kà shàídaa ma-nì.
    2MS.SUB advise to-1S
    ‘As soon as they go out, she (usually) closes the door/
you should advise me.’

In this example, a completive simple temporal clause can modify a main clause referring to recurrent past or future situations. The other three TAMs in Table 2 can only be used to refer to past events. This is illustrated in the following:

(20) a. Dà su-kà fita, sai ta rufë Koo ìa/
    when 3P-RP go.out then 3FS.RP close door/
    *kà shàídaa ma-nì.
    2MS.SUB advise to-1S
    ‘Once they exited, she closed the door/ [once they exit]
    please advise me.’

b. Dà su-nàa fita, sai ta rufë Koo ìa/
    when 3P-IPV go.out then 3FS.RP close door/
    *kà shàídaa ma-nì.
    2MS.SUB advise to-1S
    ‘When they were going out, she closed the door/ [when they
    will be going out] please advise me.’

c. Dà zaa sù fita, sai ta rufë Koo ìa/
    when FUT 3P go.out then 3FS.RP close door/
    *kà shàídaa ma-nì.
    2MS.SUB advise to-1S
    ‘When they were about to go out, she locked the door/
    [when they will be about to go out] please advise me.’

As the examples show, a simple temporal clause with the relative perfective, regular imperfective and future I is compatible only with a main clause describing past events. The future I in (20c), for example, describes a “future-in-the-past”, i.e., the event in the main clause precedes, and sometimes cancels, the event in the temporal clause. A probable reason for the shift to past interpretation observed in Table 2 may be the influence of the ultimate origin of temporal conjunction dà. In Section 3, it was suggested that simple temporal clauses developed on the model of temporal “dà + Noun/Adverb”
phrases, which themselves are based on comitative constructions. It happens that the comitative use of dà very likely developed from the ultimate function of dà, i.e., the existential function (cf. Abdoulaye 2006). In this context, the anchoring of simple temporal clauses in the past may be a survival of the existential function, which tend to describe realized situations (on the long survival or influence of the original semantics of grammaticalized items, see Bybee and Pagliuca 1987: 117 and Hopper and Traugott 1993: 87-93). Whatever the validity of this explanation, it is clear that the shift will be difficult to explain in the framework of the lookàcii deletion analysis.  

5. CONCLUSION

This paper showed that in Hausa, one cannot straightforwardly derive simple temporal dà ‘when’ clauses from temporal lookàcin dà ‘time that’ relative clauses through deletion of the head word lookàcii. Instead, the paper proposes two different development paths for the temporal clauses. Temporal relative clauses are grammaticalized forms of ordinary relative clauses, while simple temporal clauses developed very likely when the preposition dà (introducing temporal adverbs, nouns, or verbal nouns) turned into a conjunction introducing finite temporal clauses. The paper shows that the two types of temporal clauses differ in their semantics, the list of the TAMs they allow, and the temporal interpretation of the TAMs. These differences show that simple temporal clauses are derivationally independent from temporal relative clauses.

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4 Beside the facts reported in this paper for Hausa, the deletion analysis is also problematic on principled grounds. Indeed, in this analysis, the word lookàcii ‘time’, which surely keeps some semantic load, is deleted while the semantically empty relative conjunction dà acquires, after deletion of lookàcii, the more substantive meanings of ‘as soon as, once, when, as, because, etc.’ This normally violates known grammaticalization tendencies. In fact, if something should be deleted in a temporal relative clause introduced by lookàcin dà ‘time that’, it would probably be the weaker grammatical element dà. For example, Schuh (1998: 272) reports that some temporal clauses in Miya (Chadic) can be introduced by múkwá ‘day [that]’ or múku ma ‘day that’, i.e., the weak head múkwá ‘midday’ (a temporal word derived from múku ‘sun, day’) requires no relative pronoun/conjunction.
TWO TYPES OF TEMPORAL WHEN CLAUSES IN HAUSA

BIBLIOGRAPHY


