1. Introduction

The traditional analysis for relative clauses suggests that these are comparable to DP-modifiers that are adjoined to the noun phrase. It is therefore commonly assumed that the relative clause involves a CP that right adjoins to the DP. In addition, spec,CP of the relative clause hosts a null operator that is co-indexed with the relative head noun. In terms of this analysis, a sentence like (1a) is assigned the partial representation in (1b).

(1) a. The man that Mary invited.
    b. \[DP \text{ the man } [DP [CP Op, [C° that [IP Mary invited t_i]]]]\]

Under Kayne (1994), however, the relative clause involves a complementation structure similar to that in (2), where the proposition (IP) merges as the complement of the relative complementizer under C to form CP, whose specifier hosts the relative noun that raises there. The CP with the relative head noun in its specifier then merges with D, which hosts the determiner to form the DP, that is, the relative clause.

(2) \[DP [D the [CP man, [C° that [IP Mary will invite t_i]]]]\]

The question naturally arises how to choose between these two competing analyses. This paper discusses new data from Gbe (Kwa)\(^1\) that can be interpreted as evidence for the complementation analysis under (2). I further

\(^1\) See Capo (1991), Aboh (2004a) and references cited there for discussion on the Gbe as a cluster of Kwa languages.
show that the complementation analysis explains the contrast between relative and factive clauses.

The sentences under (3) and (4) illustrate the contrast between relative clauses and factive clauses in Gungbe. The example (3a) shows that, in this language, the NP (or the extended projection of N) may precede the specificity marker glossed here as Det, and the number marker, glossed as Num. I assume that these markers manifest the determiner system of Gungbe, that is, they are D-type elements, the nominal counterparts of C-type elements (see section 2 and references cited there for discussion). The specificity marker refers to strongly D-linked elements in the sense of Pesetsky (1987), and is translated here as “the aforementioned…” As for the parentheses in (3a), they indicate that the Gungbe D-type elements need not be realized (simultaneously), and the language allows for bare noun phrases. Sentence (3b) shows that the nominal modifiers, such as adjectives, numerals and demonstratives, must follow the noun, but precede the D-type elements. Note from example (3c) that, like noun modifiers, the Gungbe relative clause is sandwiched between the head noun and the D-type elements that are set off to the right (i.e. NP-[relative clause]-D, see Aboh 2004a for detailed discussion on the DP in Gungbe).

(3)  a. Kòfì wè ×ɔ  ágásá (lɔ) (lɛ)  Kofi Foc buy crab Det Num
    ‘KOFI bought the [aforementioned] crabs’

    ‘KOFI bought these [aforementioned] three big crabs’
  c. Kòfì wè ×ɔ ágásá ɗɔxɔ [ɗɛ  mĩ  wlɛ] lɔ lɛ  Kofi Foc buy crab big that[Rei] 1pl catch Det Num
    KOFI bought the [aforementioned] big crabs that we caught’

At first sight, these examples support the adjunction approach because the noun modifiers and the relative CP clause share the same space within the noun phrase. Yet, in situations where a noun immediately precedes the D-type elements and surfaces to the left of the relative complementizer (i.e. NP-D-[CP clause]), the sentence is assigned a factive reading, as in (4).

(4)  Ágásá ɗɔxɔ lɔ lɛ [ɗɛ  mĩ  wlɛ] vɛ ná Kɔfì  
    crab big Det Num that[Rei] 1pl catch hurt for Kofi
    ‘The fact that we caught the aforementioned big crabs hurt Kofi’

    * ‘The aforementioned big crabs that we caught hurt Kofi’
Since this factive meaning is not available in the English example (1a), or in the Gungbe example (3c), I propose to describe the Gungbe factive constructions as sentences where a full DP immediately precedes the relative marker ɖé and the resulting sentence is interpreted factively. These sentences are translated here by their English equivalent introduced by ‘the fact that…’, which are traditionally regarded as clausal complements to nouns. I argue in this paper that these constructions are not complements to the head nouns, but truncated relative clauses (see section 3.2 and subsequent). Note from sentence (5) that factive clauses differ in interpretation from relative clauses. Indeed, if factive and relative clauses were identical, this sentence would be a contradiction because the first part would mean that the crab that Kòfì caught was good, while the second part would imply that the very same crab was not good (see Collins 1994 for discussion).

(5) Àgásá lɔ [ɖé Kòfì wlé] nyɔn, crab Det that[C] Kofi catch good
âmɔŋ âgásâ lɔ kpàkpà mà nyɔn
but crab Det itself Neg good
‘The fact that Kofi caught the crab was a good thing but the crab (itself) wasn’t good/sweet’

Assuming there is a direct correlation between the relative clause reading assigned to the sequence NP-[CP clause]-D, and the factive reading associated with the structure NP-D-[CP clause] in (3–4), there seems to be no obvious explanation for such contrast under the adjunction analysis. On the contrary, the complementation view offers a possible analysis that captures the Gungbe data in a straightforward manner and appears to handle this contrast without further stipulation. The reason for this is that the complementation analysis implies two layers: the CP level and the DP level. In what follows I argue that it is the presence of this DP level (or the lack thereof) that determines the restrictive relative versus factive reading found in Gbe. Before getting on to this discussion, the following section presents the architecture of the D-system that is assumed in this paper.

2. The DP-Structure

Following work on the syntax of DPs (e.g. Abney 1987; Szabolcsi 1994; Ritter 1995; Siloni 1997; Carstens 2000; Bernstein 2001a, b; Longobardi 1994, 2001; Panagiotidis 2000, Aboh 2002, 2004a, b, among others), I assume that the nominal structure is parallel to the clausal structure in that it involves a predicate layer (i.e. NP), a functional layer (i.e. ΣP) that encodes
inflectional specifications (e.g. agreement and definiteness), and a left periphery (i.e. DP). Extending Rizzi’s (1997) split-C hypothesis to the nominal domain, I propose that the D-system splits into distinct projections that encode number, focus, topic, as represented in (6) (see Giusti 1996, and Aboh 2004a, b for discussion).

\[
(6) \quad [\text{DP} \left[ D \right] \left[ \text{Top} \right] \left[ \text{Top} \right] \left[ \text{FocP} \right] \left[ \text{Foc} \right] \left[ \text{tê} \right] \left[ \text{NumP} \right] \left[ \text{Num} \right] \left[ \text{ê} \right] \left[ \text{EP} \right] \left[ \text{NP} \right] ]]
\]

Under this hypothesis, D is a subordinator comparable to the clausal C. It heads the highest projection of the D-system, whose specifier provides an escape hatch for extraction out of the DP as is the case in the Hungarian dative extraction in (7) (Szabolcsi 1994). As the highest projection of the D-system, DP represents the interface between the noun phrase (or the nominal predicate) and the discourse.

\[
(7) \quad \text{[Péter-nek] mindenki csak [a kalap-já -t ] láttá}\n\]
\[
\quad \text{Peter-DAT everyone only the hat-Poss-3sg-ACC saw}\n\]
\[
\quad \text{‘As for Peter, everyone saw only his hat (e.g. no one saw his coat’)}\]
\[
\quad \text{(Szabolcsi 1994: 205)}\]

Num°, on the other hand, delimits the nominal left periphery downward as the interface between the nominal left periphery and the inflectional domain. It encodes number (i.e. \([\pm \text{number}]\)) as well as nominal agreement (e.g. definiteness) features that match those of the nominal inflectional domain. This can be seen in the Gungbe examples under (8). These examples show that while a bare noun is interpreted as indefinite, definite or generic, depending on the context, as in (8a), a noun plus the number marker is necessarily definite, as in (8b).

\[
(8) \quad \text{a. Mi sà àkwékwè àtôn ná mi [Indefinite]}\n\]
\[
\quad \text{2pl sell banana five for 1sg}\n\]
\[
\quad \text{‘Sell me five bananas’}\n\]
\[
\quad \text{b. Mi sà àkwékwè àtôn lè ná mi [Definite]}\n\]
\[
\quad \text{2pl sell banana five Num for 1sg}\n\]
\[
\quad \text{‘Sell me the five bananas’}\n\]

However, the examples under (9) show that the complex [noun + numeral modifier] àkwékwè àtôn ‘five banana’ cannot be marked as specific in the absence of the number marker. Recall from examples (3a) that the specificity marker and the number marker need not co-occur.
DERIVING RELATIVE AND FACTIVE CLAUSES

(9) a. Mì sà àkwékwè átín lè ná mi
2pl sell banana five Det for 1sg
’Sell me the aforementioned five bananas’
b.*Mì sà àkwékwè átún lè -- ná mi
2pl sell banana five Det for 1sg
’Sell me the aforementioned five bananas’

It appears from this description that the number marker lè encodes definiteness (8b) and establishes a concord between the plurality expressed in the nominal inflectional domain and the nominal left periphery (9a). Assuming that phrase structure builds in a bottom-up fashion, I interpret the impossibility of (9b) as evidence that the head Num must merge before D. This is indirect evidence for the hierarchy DP > NumP assumed throughout this paper (see Aboh 2004a for discussion).

Under the split-D hypothesis, I further propose that the specificity marker lén in (10a) expresses the topic head, while the nominal question particle te in (10b) is comparable to the Gungbe clausal focus marker wè, and therefore encodes the nominal focus head (Aboh 2004b).

(10) a. Kókú màn távò titán bò qè
Koku see table first and say
3sg Fut buy table Det
‘Koku saw the first table and said that he would buy that specific table’
b. [Távò xáxó xè] wè Kòfì xɔ?
table old Q Numb Foc Kofi buy
‘Which old table did Kofi buy?’

Example (11) further shows that the topic-focus articulation can project (assuming that qè and the specificity marker lén compete for the same position Top).

(11) [Távò xáxó qè xè lè] wè Kòfì xɔ?
table old Top[particle] Q Numb Foc Kofi buy
‘Which one of the old tables did Kofi buy?’

Assuming representation (6) above, I conclude that the NP- lénqè-lè order, which is typical of Gbe, derives from movement of the nominal inflectional domain as a whole (i.e. ΣP) to spec,NumP and spec,TopP (ignoring the focus
projection), in order to check the features number and specificity, as illustrated in (12).

\[(12) \text{[DP} [\text{TopP távò [TopP [FocP [Foc tê [NumP lê [Num lê [ΣP [NP távò]]]]]]]]]

The representation under (12) therefore suggests that the Gungbe DP involves the nominal counterpart of predicate/proposition fronting because the inflectional domain ΣP that includes the noun phrase must front to spec,NumP and spec,TopP, due to number and specificity licensing. The following sections discuss to what extent such fronting strategy may apply to relative clauses and what the implications are with regard to the presence or absence of fronting rules for the described relative versus factive asymmetry.

3. The derivation of relative and factive clauses in Gungbe

As I briefly discussed in the introductory section, Gungbe manifests a relative versus factive clause asymmetry whereby the former reading is assigned to the sequence NP-[CP-clause]-D, while the latter is assigned to the sequence NP-D-[CP-clause]. I first discuss relative clauses.

3.1. Relative clauses

Gungbe manifests the types of relative clauses in (13). Example (13a) illustrates what could be referred to as a bare noun relative clause (i.e. a bare noun immediately precedes the relative marker). In this context, the head noun is interpreted as definite, thanks to the relative clause. We can therefore describe the Gungbe relative sentences as restrictive relative clauses (de Vries 2002). In (13b), however, the relativised noun is interpreted as specific due to the presence of the specificity marker to the right edge. Similarly the example (13c) illustrates a relative clause where the head noun is plural and the plural marker occurs to the right edge. Finally, the sentence under (13d) indicates that when the relative noun is plural and specific, both the specificity marker and the number marker must surface to the right edge.

\[(13) \text{a. Kòfi xɔ àgásá [dɛ mi wlɛ]}
\text{Kofi buy crab that[Rel] 1pl catch}
\text{‘Kofi bought the crab that we caught’}
\text{b. Kòfi xɔ àgásá [dɛ mi wlɛ] lɔ}
\text{Kofi buy crab that[Rel] 1pl catch Det}

270
DERIVING RELATIVE AND FACTIVE CLAUSES

‘Kofi bought the [aforementioned] crab that we caught’

c. Kòfì xɔ̀ əgàsà [ɖë mi Ṽlɛ] lɛ
   Kofi buy crab that[Rel] 1pl catch Num
   ‘Kofi bought the crabs that we caught’

d. Kòfì xɔ̀ əgàsà [ɖë mi Ṽlɛ] ongsTo lɛ
   Kofi buy crab that[Rel] 1pl catch Det Num
   ‘Kofi bought the [aforementioned] crabs that we caught’

Assuming the derivation in (12), an analysis of the Gungbe relatives in terms of adjunction would be that the relative clause right adjoins to ΣP, and this complex phrase pied-pipes to spec,NumP and spec,TopP, as shown in (14).

(14)

[DP[DTopp[TopP lɛ [ζP əgàsà: [ζP CP OPi [CP ɖë [IP mi Ṽlɛ t]]]]]]]

Setting aside issues about free adjunction rules (see Kayne 1994), such an analysis does not seem to carry over to the distribution of the D-type elements with regard to the head noun, and the implications of the discussed distributive facts with regard to the relative versus factive asymmetry as illustrated in (15) and schematized in (16).

(15) a. Àgàsá ɖàxó [ɖë mi sà] ná Kòfì lɛ lɛ
   crab big that[Rel] 1pl sell to Kofi Det Num
   ‘the aforementioned big crabs that we sold to Kofi’
   *‘the fact that we sold the [aforementioned] big crabs to Kofi’

b. Àgàsá ɖàxó lɛ lɛ [ɖë mi Ṽlɛ] vě ná Kòfì
   crab big Det Num that[Rel] 1pl catch hurt for Kofi
   ‘The fact that we caught the aforementioned big crabs hurt Kofi’
   *‘The [aforementioned] big crabs that we caught hurt Kofi’

(16) a. NP-[CP clause]-lɛ-lɛ = restrictive relative clause

b. NP- lɛ-lɛ-[CP clause] = factive clause

The only difference between (16a–b) is the placement of the relative CP clause vis-à-vis the determiners. Under the adjunction analysis, a possible solution that comes to mind would be to treat the asymmetry in (16) as evidence that the CP clause may adjoin at different sites prior to movement: at the ΣP level in (16a) or at the DP level in (16b). In the literature, however (e.g. Toribio 1992, de Vries 2002), such distinction is related to the
restrictive versus appositive reading, but not to the relative versus factive clause asymmetry that Gungbe manifests. Similarly, that certain adverbs may adjoin to different sites within the clause (e.g. VP versus IP) is traditionally linked to scope effects, but not to the type of change in meaning that we face here, where sequence (16a) equals to a restrictive relative clause (with the relative CP) acting semantically as a modifier of the noun, while in (16b), the clause relates to the event that is expressed by the verb inside what in (16a) appears as the relative CP. Put differently, while (16a) has to do with the relative noun, (16b) has to do with the event head, that is, the verb.

Building on this, I propose that the contrast described in (16), as well as the restrictive nature of Gungbe relative clauses can be accounted for if we adopt Kayne’s (1994) complementation analysis for relative clauses. Under the split-D hypothesis, I further propose that relative clauses manifest a structure where Num° encoded by the number marker merges with a CP clause headed by the relative complementizer as its complement to form NumP. The latter merges with TOP°, encoded by the specificity marker to form TOPP, which merges with D to form DP. In terms of Kayne (1994) the relativised noun must move in overt syntax to spec,CP, presumably to check the strong features under C. Building on this, I further argue that, in the Gbe languages, the CP-clause headed by the relative marker ɖé (with the NP raised into its specifier) must raise to spec,NumP and spec,TopP as an instance of predicate fronting in order to check the features [specific, plural]. Under this approach, a sentence like (17) is derived as in (18).

(17) Kofí xɔ̀ əgàsà [ɖé mì wlbè] ló lè
   Kofí buy crab that[Rel] 1pl catch Det Num
   ‘Kofi bought the [aforementioned] crabs that we caught’

(18) [DP[D°[TOPP[TOPP] ló lè [NumP tCP [Num° lè [CP əgàsà [C° [ɖé [ip mì wlbè t]]]]]]]]]

This would mean that, being a complement of D, the relative clause is subject to the same raising constraint as the inflectional nominal domain ΣP as illustrated in (12) (see Aboh 2002, 2004a). Note also that predicate or proposition fronting in (18) is last resort generalized pied-piping process. The operation seeks to raise the features of the NP in spec,CP (i.e. the relative head) but the whole CP is pied-piped for convergence.

---

2 Gungbe does not have appositive relative clauses.
3 See also Bianchi (1995), de Vries (2002) and references cited there for discussion.
There are open questions as to the categorial status of the constituent in spec,CP (i.e. whether it is an NP or a DP). Under Kayne’s (1994) approach, this constituent is a bare NP or some of its extended projection, but not a DP. Alternatively, De Vries (2002) proposes that the relative head starts out as a full relative DP, whose head hosts the relative pronoun when there is one.\(^4\) This would mean that a German relative clause such as (19a) could be partially represented as in (19b) whereby the NP moves DP-internally to the specifier of the relative DP prior to raising to spec,CP (De Vries 2002: 123). In this framework, the strong [\textit{wh}] features of the relative pronoun (e.g. \textit{which}, \textit{whom}) under D trigger movement of the relative DP to spec,CP. In addition, the outer D is still needed because it allows the relative head noun to ultimately associate with a determiner, so that its \(\phi\)-features can be checked and the whole relative clause can function as a proper argument.

\begin{enumerate}[a.]
\item \textit{Ich fürchte den Herrn der eine Pistole trägt}
\hspace{1cm} I fear the.Acc gentleman.Acc who.Nom one gun carries \[\text{[DP } \text{den } \text{[CP } \text{Herr} \text{ der } \text{[IP } \phi \text{ eine Pistole trägt} ]} ]\]
\end{enumerate}

The empirical motivation for this view is that the gap inside the CP clause represents an argument position (i.e. a legitimate position for argument DPs), and the trace of the relative noun is parallel to a variable (i.e. a DP-trace) in many respects (e.g. binding or control properties, licensing of parasitic gaps, case marking, weak island effect). Finally, in some languages (e.g. Southern Dutch dialects) the relative NP or PP may be realized alongside with the relative pronoun and the relative complementizer (den Besten 1998).

\begin{enumerate}[a.]
\item \textit{De stoelen die (dat) kapot zijn}
\hspace{1cm} ‘The chairs which are broken’ \hspace{1cm} (den Besten 1998)
\item \textit{De man an wie dat ik het gegeven heb}
\hspace{1cm} ‘The man to whom I have given it’ \hspace{1cm} (den Besten p.c.)
\end{enumerate}

Building on this, De Vries (2002) further suggests that in languages where there is no relative pronoun (e.g. Gungbe), or else in ‘that-relatives’ the head D is empty.

Given that Gungbe manifests the relative complementizer \(d\-\text{e} ‘\text{that’ only, there is no empirical ground in this language for the IP-internal relative DP hypothesis for relative clauses. However, I conjecture in what follows that}}

\(^4\) See also Bianchi (1995) for discussion.
the presence of a relative DP in spec,CP that may or may not interact with
the outer D provides us with a possible account for the relative versus factive
reading discussed above. Put differently, I suggest that factive clauses are
truncated relative clauses whereby the truncated CP clause (i.e. without the
outer DP) hosts a factive (or an event) DP in spec,CP. However, the proposal
made here departs slightly from De Vries’s (2002) own work in that I’m
assuming (following Szabolcsi 1994, Longobardi 1994 among others) that
the outer D is an argument introducer, which is why it can select (or
nominalise) a clause in various languages (e.g. the Gungbe clausal
determiner, see example 25).

3.2. Factive clauses

The sentences under (15) and the descriptions in (16) indicate that relative
clauses and factive clauses differ with respect to both the interpretation and
the positioning of the CP clause. The following examples illustrate further
differences between the two constructions. The sentences under (21) indicate
that, unlike relative clauses, factive clauses may involve two different
structures without a change in meaning. In (21a) the DP object is left
adjacent to the relative complementizer and the sentence is read as factive. In
(21b), however, it is the verb that fronts, leaving a copy IP-internally. Yet,
the sentences (21a) and (21b) have the same meaning even though they may
differ pragmatically. In (21a), the speaker is more concerned with referring
to specific crabs that were caught, while in (21b) s/he puts some emphasis on
the event of catching those crabs.

(21) a. Àgásá ló lé [ɖë mi wlé] vë ná Kôfì
crab Det Num that[Rel] 1pl catch hurt for Kofi
‘The fact that we caught the crabs hurt Kofi’

b. Wlé [ɖë mi wlé] Àgásá ló lé vë ná Kôfì
catch that[Rel] 1pl catch crab Det Num hurt for Kofi
‘The fact that we CAUGHT the crabs hurt Kofi’

I will not discuss these subtleties here. The point I want to make though is
that the parallel between (21a) and (21b) does not arise in relative clauses.

(22) a. Àgásá [ɖë mi wlé] ló lé vëvìí
crab that[Rel] 1pl catch Det Num sweet
‘The crab that we caught were sweet’
b. Wlé [ɖë mi wlé] Àgásá ló lé vivi
catch that[Rel] 1pl catch crab Det Num sweet
*‘The crabs that we caught were sweet’
‘The fact that we caught the crabs was great [i.e. we enjoyed
catching the crabs]’

These facts point to the interesting possibility that even though the factive
reading in (21a) is achieved by fronting an internal DP argument, the
intended meaning (e.g. in 21b) is that of ‘the event of catching crabs’. Put
differently, the fronted internal DP argument relates to the event expressed
by the verb wlé ‘catch’. That this might be the right characterization is
further suggested by the fact that factive constructions manifest a type of
external versus internal argument asymmetry. The sentences under (23a) and
(23b) indicate that internal arguments (e.g. theme, goal, beneficiary) may be
fronted in factive constructions, while factive constructions with fronted
external arguments (e.g. agents) are excluded or at least considerably
dergraded (see also Collins 1994).  

(23) a. [Dáwè ló] [ɖë náwè ló kân wé xlán ti]
man Det that[Rel] woman Det write letter to
vé ná mi gbáú
hurt for me a lot
‘The fact that the woman wrote a letter to the man hurt me a lot’
b. [Wé ló] [ɖë náwè ló kân ti xlán dáwè ló]
letter Det that[Rel] woman Det write to man Det
vé ná mi gbáú
hurt for me a lot
‘The fact that the woman wrote a letter to the man hurt me a lot’
c. ??/*[Náwè ló] [ɖë ti kân wé xlán mi]
woman Det that[Rel] write letter to me
vé ná mi gbáú
hurt for me a lot
‘The fact that the woman wrote to me hurt me a lot’

Relative clauses, on the other hand, show no such effect: all arguments can
be relativised, and there is no subject versus object asymmetry.

---

5 The boldface in the translation is meant to show that the fronted elements appear to have a
more prominent discourse status, but I leave this question open pending new pragmatic
research in Gbe.
(24) a. Dáwè [ɖè náwè lò kàn wè xlán ṭí] lò wá \[\text{man that}_\text{[Rel]} \text{woman Det write letter to Det come}\]
    ‘The aforementioned man that the woman wrote a letter to came’

b. Wè [ɖè náwè lò kàn ṭí xlán dàwè lò] lè [ɖè]
    letter that[\text{[Rel]} \text{woman Det write to man Det Num here}]
    ‘Here are the letters that the woman wrote to the man’

c. Náwè [ɖè ṭí kàn wè xlán dàwè lò] lè wá
    man that[\text{[Rel]} \text{write letter to man Det Num come}]
    ‘The women who wrote a letter to the man came’

I interpret these facts as evidence that both the fronted internal DP argument \( \text{âgâsâ} \) ‘crab’ and the verb \( \text{wlé} \) ‘catch’ in (21a–b) share some event feature.\(^6\)

That internal arguments (but not external arguments) typically tend to manifest such feature is not surprising. For instance, several works on aspect licensing (e.g. Aktionsart), event structure, and argument structure have shown the role of internal arguments in determining certain event types (e.g. Tenny 1987, Dowty 1991, Torrego 1998, Basilico 1998).

Building on this, I further propose that, unlike the relative DP, whose D bears a strong nominal [wh] feature that forces movement of the relativised DP argument to spec,CP (see De Vries 2002), the D head of a factive DP is endowed with a strong [wh] event feature that may trigger movement of an event DP to spec,CP.\(^7\) That the Gungbe D (i.e. of the internal argument) can encode such feature is indirectly supported by the presence in this language of a clausal determiner that is homophonous with the nominal determiner. In example (25), the clausal determiner \( \text{ló} \) occurs sentence-finally and indicates that the event being referred to is pre-established in discourse (see Aboh 2004a and references cited there for discussion).

(25) Dé Kōfī hòn lò kpácá dó mí káká
    as Kofi flee Det surprise at me a lot
    bò mà nyôn nú [ɖè ná dɔ̭]
    and 1sg-Neg know thing that 1sg-Fut say
    ‘As Kofi fled, I was so surprised I didn’t know what to say’

Assuming that the DP in spec,CP may also bear an event [wh] feature, I therefore conclude that the D head of a relativised DP may bear an argument-related [wh] feature (i.e, a nominal feature), or an event-related

\(^6\) More research is needed to determine the type of event feature involved here, but I refer the interested reader to the cited references for discussion.

\(^7\) I’m using the label [wh] in the sense of a strong C-type feature that is checked against the relative feature under C, and expressed by the relative complementizer.
[wh] feature (i.e. a verbal feature). As a first description, I label the former as [wh_A] and the latter as [wh_E]. These features trigger the relativisation of the argument or the event such that, a relative DP with the feature [wh_A] binds a relevant argument in the clause, while a relative DP with the feature [wh_E] binds the event. Given the parallel in (21), I further propose that the event head (i.e. the verb) may bear the [wh_E] feature as well. This amounts to saying that factive constructions are types of event relative clauses.

With this in mind, let us go back to De Vries’ (2002) analysis sketched in (19) and let us assume, as before, that the outer DP layer is needed in relative clauses in order for the whole relative clause to function as an argument. If this is indeed the case, there is the possibility that a factive clause (i.e. an event relative clause) that embeds an event DP in spec,CP, but lacks the outer DP layer converges, just as any CP clause with some relevant material in spec,CP (e.g. wh-questions in matrix clauses). Put differently, the outer DP does not and therefore cannot merge in such event relative clauses because the latter do not qualify as arguments. This leads me to conclude that relative and factive constructions differ in that the latter don’t involve the DP layer typical of arguments and relative clauses.

This analysis captures both the surface similarities and differences between relative and factive clauses. Unlike the relative clauses analyzed in (18), the factive constructions cannot involve D-type elements to the right edge of the clause because there is no outer DP involving a TopP such that the whole factive clause would move to spec,TopP as in relative clauses with a specific noun phrase. Contrast, for example, the factive (26a) to the relative (26b).

(26) a. Ágásá ló lé [ɖë mi wlé] ló lé vè ná Kôfì
crab Det Num that[Rel] ipl catch Det Num hurt for Kofi
b. Ágásá [ɖë mi wlé] ló lé nyón ná Kôfì
crab that[Rel] ipl catch Det Num good for Kofi
‘The aforementioned crabs that we caught are good for Kofi’ [i.e. he will like them].

Factive constructions and relative clauses are parallel, however, with regard to the relative C. The latter has strong relative [wh_{A,E}] features expressed by ɖë that must be checked before spell-out. In factive constructions, this requirement is met by raising the event DP in spec,CP, as in (27b).

---

In this regard, the interested reader is referred to Aboh (2004a) where it is shown that the focus feature is distributed over arguments, adjuncts, and verbs. These categories are attracted to the focus phrase (spec,FocP, or Foc) to check their focus features.
(27) a. Àgásá ló lé [ɖē mi wlé] vè ná Kòfì
    crab Det Num that[Rel] lpl catch hurt for Kofi
    ‘The fact that we caught the crabs hurt Kofi’
b. [CP [DP àgásá ló lé]i [c° ɖē [iP mi wlé tį]]]…

Even though the proposed analysis suggests that relative clauses and factive clauses share a common part (i.e. the CP clause) it does not imply that factive clauses are headless relatives. In the representations (18) and (27b), for instance, both the relative clause and the factive clause have a relevant DP (i.e. DP[whA/DP[whA]]) in spec,CP. These constructions do differ structurally because relatives involve an outer DP layer, but factives do not. This analysis is compatible with the fact that factives are more restricted in their distribution than relatives. The former mainly occur in subject positions while the latter occur in virtually any argument position. In this regard, the ungrammatical sentence (28a) indicates that, like CP-clauses (28b) but unlike relatives (28c), factives cannot occur in the pre-verbal object position in Gungbe progressives.⁹

(28) a.* Ùn tò [àgásá ló lé ɖē mi wlé] jrè ná Kòfì
    1sg Prog crab Det Num that[Rel] lpl catch report for Kofi
    ‘I’m telling Kofi about the fact that we caught the crabs’
b.* Ùn tò [ɖō mi wlé àgásá ló lé] ɖō ná Kòfì
    1sg Prog that[Comp] lpl catch crab Det Num tell for Kofi
    ‘I’m telling Kofi that we caught the crabs’
c. Ùn tò [àgásá dē mi wlé] ló lé jrè ná Kòfì
    1sg Prog crab that[Rel] lpl catch Det Num report for Kofi
    ‘I’m telling Kofi about the aforementioned crabs that we caught’

The proposed analysis is also compatible with the factive constructions in (29a), whereby the event head (i.e. the verb) left adjoins to the relative complementizer leaving a copy in the IP-internal position. Examples (29b-c) indicate that the event head and the fronted factive noun exclude each other. Accordingly, the factive DP and the event head V fulfill the same requirement in checking the strong [wh₁] features of the relative complementizer.

⁹ See Aboh (2004a) and references cited there for the discussion of CP-clauses in Gbe.
(29) a. Wlé [ɖé mí wlé ágásá ḍáxor ọ̀  lé] vè ná Kòfì
catch that[Rel] lpl catch crab big Det Num hurt for Kofi
‘The fact that we CAUGHT the [aforementioned] big crabs hurt
Kofi’

b.*ágásá ḍáxor wlé [ɖé mí wlé] lọ̀ lè vè ná Kòfì
crab big catch that[Rel] lpl catch Det Num hurt for Kofi
c.*ágásá ḍáxor lọ̀ wlé [ɖé mí wlé] vè ná Kòfì
crab big Det Num catch that[Rel] lpl catch hurt for Kòfì

The copy strategy adopted in factive constructions (e.g. 29a) is reminiscent
of the copy strategy observed in verb focus constructions whereby the
fronted verb leaves a copy IP-internally, as illustrated in (30).

(30) Ùn sè ḍọ̀ xọ̀ (wè) Kòfì xọ̀ ágásá ọ̀
1sg hear that buy Foc Kofi buy crab Det
‘I heard that Kofi BOUGHT the [aforementioned] crab’

Under the analysis developed here, and building on the similarities between
factives involving event head fronting (29a) and focused verbs constructions,
where the fronted verb leaves a copy IP-internally (30), two scenarios arise,
as described in (31a) and (31b). In (31a) the factive verb adjoins to the
relative complementizer, leaving a copy IP-internally. In (31b), however, a
remnant VP moves to spec,CP that is spelt out in concord with the lower V,
as indicated by the index. Note that, in (31b), the lower V does not spell out
the trace of the fronted VP, but represents the lexical verb that has moved to

Choosing between these two options requires a discussion that goes beyond
the scope of this paper and I leave the matter for further research. Note,
however, that these issues could not have been raised if we were to adopt the

279
adjunction analysis to relative/factive clauses. I now move to the Gungbe equivalents of relative and factive clauses in Romance and Germanic.

3.3. Relative and factive clauses in Romance and Germanic

Building on the discussion in Gbe, I propose that in languages, which do not manifest predicate fronting (i.e. CP-movement to spec,TopP), specificity within D is checked thanks to the presence of an operator in spec,TopP within the outer DP. Consider, for instance, the English and French relative clauses in (32) where the head noun is interpreted as specific (Aboh 2002). In (32a) spec,TopP is filled by a null operator unlike (32b) where the demonstrative *cette* is moved to spec,TopP to check the specificity feature (see Bianchi 1995, De Vries 2002 and references cited there for discussion on relative clauses in Romance and Germanic).

(32) a. \[DP\top Opt_i [DP the [NumP \[CP \text{-table}\_i \[CP that [IP I bought \_t]]]]]]\]
b. \[DP\top Opt Cet\_te_i \[DP [NumP \[CP \text{-table}\]] \[CP that [IP j’ai achetée \_t]]]]\]

It appears from this analysis that the Gungbe-type languages and the French- or English-type languages differ because CP-to-spec,TopP movement must apply before spell-out in the former but not in the latter. Assuming this is the right characterization, I propose that in Romance and Germanic factives where an event DP does not raise to spec,CP, the factive reading can only be achieved by inserting a factive expletive DP (i.e. *the fact*) in spec,CP that binds the event head. This factive expletive noun can also be null as shown in examples (33a–b).

(33) a. The fact that John came worried me/that John came worried me
   b. Le fait que Jean soit venu m’embête/que Jean soit venu m’embête

The sentences under (33) are represented in (34).

(34) a. \[CP [DP the fact/∅] [CP that [IP John came]]] worried me a lot
   b. \[CP le fait/∅ [CP that [Jean soit venu]]] m’embête

Note that if the sequences in (33) were true relative clauses, we would expect the relative clause reading. But the absence of the outer D-system above C precludes such reading here, also restricting as such the distribution of these factives. As mentioned previously, factive constructions tend to occur in subject position mainly, and when they occur in object position, they are selected by certain verbs only. It is not clear yet whether this
selection restriction is semantic or syntactic, but no such constraint seems to
hold for relatives. In example (35a), the factive sentence is felicitous in
subject position, but not in object position (35b). The relative sentences
under (35c–d) are not sensitive to this effect.

(35)  a. Le fait que Jean soit venu à la réunion décrit bien l’ambiance au
sein du groupe.
b.*Je décrit le fait que Jean soit venu à la réunion
c. Je décrit l’homme qui est venu à la réunion
d. L’homme qui est venu à la réunion décrit la situation au sein du
groupe

That the expletive DP can be null in both English and French lends further
support to this analysis. Indeed, headed relatives introduced by a null head
are not allowed in these languages, hence the ungrammatical example (36).

(36)  *[DP [CP Ø[les crabes] [C° que [IP nous avons acheté t[les crabes]]]]

4. Some further implications

The proposed analysis has further implications as to the characterization of
the so-called sentence complements to nouns, and to the contexts of that-
deletion.

4.1. Expletive factive versus referential factive

Assuming the proposed analysis is on the right track, I conjecture that the so-
called clausal complements to nouns as in (37a) are actually types of factive
constructions, where a referential DP merges in spec,CP as in (37b).

(37)  a. The rumour that Jacques Chirac likes beer annoys the party people
b. [CP The rumour [C° that [Jacques Chirac likes beer]]] annoys the
party people

For the discussion sake, I assume that the factive DP first merges in spec,CP
similarly to the factive expletive. Be it so, one can make the following
observations:

1. Referential factives differ from expletive factives because the former can
   be modified unlike the latter.
(38) a. The persistent rumour that Jacques Chirac likes beer annoys the party people
   b.*The persistent fact that Jacques Chirac likes beer annoys the party people

2. Referential factives allow equative constructions unlike expletive factives.

(39) a. The rumour that Jacques Chirac likes beer is a well-known rumour around here
   b.*The fact that Jacques Chirac likes beer is a well-known fact around here

3. Referential factives allow inversion unlike expletive factives.

(40) a. Jacques Chirac loves beer says the rumour
   b.*Jacques Chirac loves beer says the fact

Under the assumption that referential factives and expletive factives share the same underlying structure, these facts indicate that a refinement is needed to account for their differences. A possibility that comes to mind is that the observed differences could be linked to the (traditional) contrast between expletive DPs and referential DPs. I leave this matter for further research.

4.2. A unified approach for that-deletion

An interesting, though seemingly unrelated, aspect of this analysis is that it may provide the basis for a unified account for that-deletion as illustrated by the sentences under (41).

(41) a. The man that/Ø I saw in Amsterdam
    b. I propose that/Ø you come to Amsterdam
    c. The fact that/*Ø John came to Amsterdam

Under the adjunction analysis to relative clauses and the traditional analysis of (41c) as sentence complement to the noun fact, two different scenarios need to be imagined to account for that-deletion in certain adjunct structures as in (41a), and in certain complementation contexts only (41b-c), but not others (41c). In terms of the approach developed here, however, the generalization seems to be the following:
(42) That-deletion is licensed in complementation context, only.

Under the analysis of factive constructions as truncated relatives, the impossibility of deletion in (41c) is straightforward. What we have here is an instance of spec-head relationship where the factive constituent the fact is in spec,CP. Accordingly, that-deletion is not allowed. Under Pesetsky’s (1996) analysis, where the null C is an affix that must raise to the matrix V (i.e. C-to-V movement) this would mean that, in relative clauses (41a), null C is possible due to C-to-D movement. Put differently, the embedded C incorporates into the D of the outer DP-layer. Such incorporation is obviously impossible in factive and related clauses where there is no outer DP layer. While supporting Pesetsky’s analysis to some extent, (42) has an advantage that it unifies that-deletion phenomena in relative clauses and embedded clauses without invoking affix hopping (i.e. an instantiation of Morphological Merger or PF Merger) as recently proposed by Boskovic & Lasnik (2003). Obviously, more needs to be said before we reach a full understanding of that-deletion in English. However, the analysis outlined here appears very promising and I hope to return to these facts in future work.

5. Conclusion

On the assumption that the D-system represents the nominal left periphery that provides room for topic and focus nominals, this paper shows that the distribution of the specificity marker (i.e. the nominal topic marker) and the number marker in Gungbe provides evidence for Kayne’s (1994) analysis of relative clauses where D selects a CP clause as its complement and the relative noun raises to spec,CP. Under this approach, the Gungbe sequence Noun-[relative clause]-Det-Num results from DP-raising to spec,CP followed by movement of the relative clause (i.e. CP) to spec,NumP and spec,TopP, in order to check the features [number] and [specific], respectively.

In terms of the proposed analysis the semantic contrast between the relative clauses and the factive constructions is accounted for by suggesting that factive clauses do not project the outer D-system typical of relative clauses. Factive constructions, instead, are simple CP-clauses, where spec,CP hosts an event DP that has moved out of the embedded IP. This would mean that factive constructions are truncated relative clauses because the top projections DP and NumP have been pilled off. This analysis extends to Romance and Germanic, where it is argued that the factive reading is achieved by inserting an expletive factive DP in spec,CP. In this regard, it is argued that the so-called sentence complement to nouns represent types of
factive clauses where a referential DP merges in spec,CP. The proposed analysis has far reaching consequences as to the analysis of sentence complement to nouns as sub-types of factive constructions. Finally, this analysis suggests that that-deletion occurs in complementation context only.

References


Ihsane, Tabea, and Genoveva Puskás. 2001. “Specific is not Definite”. In *Generative Grammar in Geneva* 2:39-54


