1. Introduction

1.1 The puzzle

traditional assumption:
- subordinate clauses represent presupposed background information, thus are not assertions
- they don’t have an internal information structure on their own, i.e. they only play a role in the overall information structure of the whole complex sentence (cf. Cristofaro 2003: 34, Matić et al. 2014: 17).

But:
- this general assumption not valid for all kinds of subordinate clauses
- one counter-example: ‘as soon as’ clauses that display special formal encoding, including the use of predicate-centered focus marking,

(1) Wolof (Niger-Congo)

[Dafa  ågg (rekk)], taw bi ∅ door.  
VFOC.3S arrive (only) rain DEF AOR begin
As soon as he arrived, the rain started. (Robert 2010: 480)

1.2 Traditional view of subordinate clause linkage

1.2.1 Formal properties of subordinate clauses

<table>
<thead>
<tr>
<th>Main clause</th>
<th>Subordinate clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>can stand alone</td>
<td>cannot occur in isolation, i.e. is syntactically dependent</td>
</tr>
<tr>
<td></td>
<td>is embedded, i.e. is constituent of main clause or modifies (part of) the main clause</td>
</tr>
<tr>
<td>finite verb morphology</td>
<td>less finite verb morphology</td>
</tr>
</tbody>
</table>

Table 1: Formal properties of subordinate clauses (based on Cristofaro 2003)

(2) Hausa (Afro-Asiatic, Chadic): temporal clause: subordinating conjunction, less-finite verb morphology – PFV2 (= relative, out-of-focus form)

[Dan ya  ga zâkî], bâi gudû ba, ....
CNJ 3S.M.PFV2 see lion NEG:3S.M run NEG ...
When he saw the lion, he didn’t run away, (but stood his ground.) (Newman 2000: 556)

1.2.2 Functions of subordinate clauses

<table>
<thead>
<tr>
<th>Main clause</th>
<th>Subordinate clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>autonomous profile</td>
<td>lacks an autonomous profile, i.e. depends on main clause</td>
</tr>
<tr>
<td>locus of assertion</td>
<td>lack of illocutionary force – no assertion</td>
</tr>
<tr>
<td>clear defined IS configuration</td>
<td>external: is part of the IS profile of the whole sentence</td>
</tr>
<tr>
<td></td>
<td>internal: no IS on its own or less possibilities for expressing own IS</td>
</tr>
<tr>
<td>foreground event</td>
<td>often presupposed, background</td>
</tr>
</tbody>
</table>

Table 2: Functional properties of subordinate clauses (based on Cristofaro 2003)

(3) I finally met the woman who moved in downstairs.

assertion: I met the woman
presupposition: someone moved in downstairs (Lambrecht 1994: 51)

+ useful division of external IS and internal IS in Matić et al. (2014: 9f.)
- external IS of dependent elements: complex sentence is one unit of information – dependent clause may have IS function within the complex clause
- internal IS of dependent elements: dependent element is IS unit of its own, with properties different from that of an independent predication
+ external information structure

1. dependent clauses are often presupposed, build the background for the main clause event (cf. the notion of topicality of subordinate clauses, Haiman 1978)

(4) After/when/before he came, Mary started to prepare the meal.
   assertion: Mary started to prepare the meal.
   presupposition: he came at some point in time
   \rightarrow temporal clause delivers the frame “within which the main predication holds”
   (Chafe 1976: 50)

2. dependent clauses can be focused

(5) Fon (Niger-Congo, New Kwa).
   K'kù lìn [ɖɔ̀ Àsibá gbà mšò 5 wè] PN think COMP PN destroy car DEF FOC
   Koku thinks that it is that Asiba destroyed the car. (Lefebvre & Brousseau 2002: 135)
   \rightarrow new information is reported in complement clause

+ adverbial clauses can be freely assigned topic or focus roles without specific restrictions within the complex clause (as their link to matrix clause is weaker) (cf. Matić et al 2014: 12f.)

+ internal information structure
- possibility of expressing an internal IS of dependent clauses is gradual but language-specific, depends on structural, lexical and discourse factors (Matic et al 2014: 13)
- in some languages there is an absolute ban of focus marking in subordinate clauses (cf. Aghem), others allow IS marking of its own
  \rightarrow “Ad-subordinate clauses [= adverbial and relative clauses] are virtually always presupposed and never asserted in the same way as complement clauses can be [...]”

Therefore, the internal IS of these clauses is much less likely to be expressed than in the case of complement clauses, ...
  (Matic et al. 2014: 17)
- complement clauses seem to convey (stronger) assertions (cf. Güldemann 1996: 159-87, van Valin & LaPolla 1997: 485f, and others)

+ but also some adverbial clauses can show an internal information structure

(6) Avatime (Niger-Congo, Kwa) – left-dislocation (mostly in complement clauses, but also in adverbial clauses, even though rarely)
   bò pete k'kù-tsa tọ [kì-bọ-c]
   IP all 1P.SBJ.POT-meet PURP 4S-money-DEF
   b'á-le=kà=kì fì là k'à-kàa
   C1P.SBJ.POT-share=4S give C2S-town every
   We will all meet so that we share the money to every town. (lit.: We will all meet so that, as for the money, we will share it to every town.) (van Putten 2014: 167)

- for a number of other languages (e.g. English, Thompson & Mulac 1991, German, Freywald 2013), an information reversal can be claimed for some complement clauses:
  “… in which the main assertive point of the sentence shifts from the main to the subordinate clause.” (Matic et al 2014: 15)

2. ‘As soon as’-clauses in African languages

2.1 Fon (Niger-Congo, New Kwa)
+ prototypical temporal clause consists of a temporal head noun followed by a relative clause (ɖéè ... 5)
- relative clause is introduced by relative morpheme and ends with backgrounding particle ɔ̀

(7) [hwènú ɖéè K'kù wá ɔ̀,] à dò xwègbè ǎ.
   time REL PN come TP 2S be.at house NEG
   When Koku came, you were not at home. (adapted from Lefebvre & Brousseau 2002: 171)

+ ‘as soon as’ clause:
- juxtaposition of both clauses, linked by coordinating conjunction
- verb focus preposing strategy
- adverb with meaning ‘quickly, immediately’

(8) [wà (wè) K'kù wá (tìlòlò)] bò Bàyì yi
   come FOC PN come (as soon as) CNJ PN leave
   As soon as Koku arrived, Bayi left. (Lefebvre & Brousseau 2002: 503)
+ predicate-centered focus: verb focus preposing strategy

(9) wá wɛ̀ Kɔ̀kú wá
come FOC PN come
It is arrived that Koku has. (not e.g. leave) (Lefebvre & Brousseau 2002: 503)

2.2 Ama (Nilo-Saharan, Eastern Sudanic)
+ ‘when’ clause
- introduced by conjunction é
- finished with dâ, which otherwise functions as topic marker

(10) [é wùdâŋ nɔ sîr wûlê dâ,
CNJ person DEM out move.PFV TP
é in nɛ̀ sâ jɔn.
CNJ 3S FOC watch take.PFV
When the person went out, then he took the watch. (Fiedler, f.n.)
+ ‘as soon as’ clause
- focus-sensitive particle, meaning ‘only’
- verbal particle ka that indicates predicate-centered focus

(11) [à nyà wɔ̂ŋ gîrʃ-ɔ̀ ka tî]
1S just 1S.POSS money-ACC PC.FOC catch.PFV
έ ká yŋŋ kîdʒí tā ʃɛ̀l-ɔ̀ t ā n.
and FUT 2S.DAT thing sweet-ACC buy.PFV-for
As soon as I get my wages, I buy you some sweets. (Fiedler, f.n.)

2.3 Wolof (Niger-Congo, Atlantic)
+ mainly paratactic clause-chaining to express subordinate relations (Robert 2010)
- use of different verb paradigms important for interpretation
  + perfect: indicates that a process (initially known to be ongoing) has now reached its end-point (active verbs)
  + aorist: obligatory in some subordinate sentences (REL, ADV), but not in causal, complete and comparative

(12) bwɛ̂r, kâ tîtî.
no, PC.FOC call.PFV
(The woman hit Kamal.) No, she CALLed (him). (Fiedler, f.n.)

2.4 Kanuri (Nilo-Saharan, Western Saharan)
+ ‘when’ clause
- consists of relative clause whose head is a noun meaning ‘time’, ends in determiner (here: dâ, triggering a definite interpretation of factual past events)
- finished by postposition –(la)n indicating place/means
- whole construction understood as complex NP, i.e. nominalized clause
- only verb form allowed is perfect or imperfect

(13) when clause: use of perfect form

[Daga na] taw bi door na
arrive PERF rain DEF begin PERF
He arrived, then it started to rain.
→ succession of events, “link is purely temporal” (Robert 2010: 482)

(14) when: subordinating conjunction, use of aorist, VFOC in main clause

when come-DIST.PST child all VFOC-3P-IPFV be_satisfied
Quand il venait, tous les enfants étaient contents.
(When he came, all children were happy.) (Robert 1996: 159)

(15) as soon as: Verb focusing form in dependent clause + aorist

[Daʃa ãgg (rekk)], taw bi ∅ door.
VFOC:3S arrive only rain DEF AOR begin
As soon as he arrived, the rain started.
→ “describes a situation in which the first event triggers the second one” (Robert 2010: 480), i.e. the first event is the causal source for the second one (2010: 487)
+ predicate-centered focus expressed by verb focusing conjugation

(16) Wax-u-ma la sax rekk lekk, da-ma ko wann
tell-NEG-1S 2S.OBJ even only eat VFOC-1S 3S.OBJ swallow
I did not just eat it, I DEVoured it.
[lit. I do not just say only “eat”, in fact I “devoured” it) (Robert 2010: 253)
When she went to the market, she bought KOLA. (Hutchison 1981: 270)

+ ‘as soon as’ clause (Hutchison 1981: 294 – 300)
- same structure as for other adverbial clauses, without final determiner
- associative postposition -a used
- use of verb emphasis completive which is otherwise not allowed in adverbial clauses
- use of nominal focus marker -ma

→ still dependent, nominalized clause, but with more assertive force than other temporal clauses
- normally, the structure of VEC + ASS gets the meaning “When X happens, than Y will happen) or a generic interpretation
- when associative subordinate VEC clause is immediately followed by the emphatic – ma, then the interpretation is best rendered as ‘as soon as’, ‘right when’

As soon as he gets it, he will ruin it. (Hutchison 1981: 297)

As soon as he sees it, he will grab it. (Hutchison 1981: 297)

When he stopped they kept on beating him. (Newman 2000: 558)

+ ‘as soon as’ clause
- subordinate conjunction dà

2.4 Hausa (Afro-Asiatic, Chadic)

+ when clause:
  - subordinate conjunction dà which links a subordinate clause to a matrix clause (Jaggar 2010: 70f.)
  - special verb form with reduced verbal properties (out-of-focus form = PFV2)

(21) [dà ya tsayàa] sai sukà yi ta bugùn-sà.

CNJ 3S.M.PFV2 stop then 3P.PFV2 do CONT hit.VN-GEN-3S.M.POSS
When he stopped they kept on beating him. (Newman 2000: 558)

2.5 Shona (Niger-Congo, Bantu)

+ ‘when/if’ clause: use of conditional verb form (dependent)

(24) va-ka-svika# ku-no-bva kwa-tanga ku-naya 2-COND-arrive IP-PRS-turn.out IP:DEP:ant-start INF-rain
When/if they arrive, it starts raining. (adapted from Güldemann 2002: 266, Shumirai Nyota, p.c.)
+ ‘whenever’ clause:
- use of lexeme ti ‘be so’
- the verb following ti is in dependent form
(25) ku-no-ti va-ka-svika # ku-no-bva
  IP-PRS-PV 2-COND-arrive IP-PRS-turn.out
  kwa-tanga ku-naya
  IP-DEP-ant-start INF-rain
  Whenever they come, it starts raining. (Güldemann 2002: 266)

(26) ti is "emphasizing that one proposition is strict, exclusive, exceptionless
  condition/situational frame for the fulfillment of the other"
  Whenever the little man struck he would drop on one knee ... (Güldemann 2008:
  491)

+ lexeme ti is used as emphasizing and foregrounding device for state of affairs
  - ti selects an event in a narrative and stresses its final achievement, unexpectedness,
    general significance for the storyline (Güldemann 2008: 490)
(27) shumba i-ka-ti zvino ya-va ku-da ku-va-dya.
  9.lion 9-SEQ-PV now 9:PERF-become INF-want INF-3P.OBJ-eat
  Now, the lion was about to eat them. (Dale 1972: 133, cited in Güldemann 2008:
  490)

+ ‘as soon as’ clause
- subordinating particle at the beginning
- whole clause focused with kòm, a nominal focus marker
(29) [ká ò [àè kxò-à toà kòm] mì gàè kà à zì
  SUB 2S touch pot.5-REL be.that FOC 1S arrive CONN 2S shit
  As soon as you touch that pot, I come and beat the shit out of you. [lit. I come
  and you shit] (Lee Pratchett, f.n., p.c.)
  
  (same construction can also get ‘whenever’ reading)

+ focus constructions
- kòm is foremost a term focus marker
(30) !’hoàn kòm dshàú njà’m
  man.1 FOC woman.1 hit
  {Who did the woman hit?} The woman hit the man. (Lee Pratchett, f.n., p.c.)

- the possibility that kòm has a role in some PCF occurrences cannot be completely
  ruled out, e.g. in truth value
(31) mì tè kòm njàq’árà hì
  1S ? FOC read it.4
  {You didn’t read the book!} I DID read it. (Lee Pratchett, f.n., p.c.)

2.8 Summary: Properties of ‘as soon as’ clauses in the sample
+ in all languages shown here, ‘as soon as’ clauses show properties different from
  those of ‘when’ clauses
(NB: in most languages, ‘as soon as’ clauses can also be expressed by other
constructions)
- ‘when’ clauses show all properties of typical adverbial clauses
- ‘as soon as’ clauses show a deviation from this subordinate clause pattern
Table 3: Properties of ‘as soon as’ clauses in the sample

<table>
<thead>
<tr>
<th>Features</th>
<th>Fon</th>
<th>Ama</th>
<th>Wolof</th>
<th>Kanuri</th>
<th>Hausa</th>
<th>Shona</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sem. interdependence</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Synt. integration</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+/-</td>
<td>?+</td>
</tr>
<tr>
<td>Subordinating morphology/syntax</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>nomina-lized clause with assoc. PP</td>
<td>dependent verb form</td>
<td>subordinating conjunction</td>
</tr>
<tr>
<td>PC Focus marking</td>
<td>verb focus preposing</td>
<td>verbal particle ka</td>
<td>verb focus conjugation</td>
<td>verb emphasis completive</td>
<td>in-focus verb form</td>
<td>emphasizing ti</td>
</tr>
<tr>
<td>Other indicators</td>
<td>immediate</td>
<td>just</td>
<td>only</td>
<td>term focus marker</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>External IS</td>
<td>BG</td>
<td>BG</td>
<td>BG</td>
<td>BG</td>
<td>BG</td>
<td>BG</td>
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<tr>
<td>Internal IS</td>
<td>PCF</td>
<td>PCF</td>
<td>PCF</td>
<td>event-centered thetic</td>
<td>PCF</td>
<td>PCF</td>
</tr>
</tbody>
</table>

3. ‘As soon as’ and predicate-centered focus

3.1 ‘As soon as’ as special type of temporal subordination

+ temporal adverbial clauses give the temporal frame for the event expressed in the main clause – indicate temporal relation between the two clauses: simultaneity, or sequenciality, e.g. anteriority or posteriority wrt. to main clause event

+ ‘when’ clauses often indicate anteriority (but are underspecified), but do not indicate when exactly the event in the main clause will happen

(32) Als Maria nach Hause gekommen war, hat sie ihre Freundin angerufen.
When/after Mary arrived home, she called her friend.

⇒ loose temporal relation between both clauses
- the main clause event may happen at any moment after the event in the dependent clause is accomplished;
- thus the dependent event is a necessary precondition for the main clause event

+ ‘as soon as’ clauses
- anteriority of the event in the subordinate clause
- the main clause event follows immediately after the subordinate event
- achievement of the event in the ‘as soon as’ clause is presupposed (also the case for ‘whenever’)

(33) Sobald Maria nach Hause kam, rief sie ihre Freundin an.
As soon as Mary arrived home, she called her friend.

(34) Sobald ich nach Hause komme, werde ich dich anrufen.
As soon as I arrive home, I'll call you.

⇒ tight temporal relation between the events in both clauses
- the main clause event begins in exactly that moment when the ‘as soon as’ clause event is accomplished;
- thus the dependent event is a necessary precondition for the main clause event

⇒ the main difference between ‘as soon as’ clauses and ‘when’ clauses lies in the fact that there is a tight relationship between both events – more concrete, this relationship implies ‘immediateness’, that is a very high level of temporal relation

⇒ not necessarily formal subordination, but semantic subordination,
+ from a pragmatic point of view, the ‘as soon as’ clause represents background information for the main event (external IS)
- at the same time, this background information is asserted by using formal main clause properties; the assertive value is even increased by marking the dependent event with predicate-centered encoding devices
⇒ mismatch in two ways:
1. more general: between syntax/morphology and semantics of the constructions
2. more specifically: between internal and external information structure
+ encoding of this tight relationship
- by special subordinating particles, like in English and German
- some African languages use predicate-centered focus marking – but which effect has this marking exactly?

### 3.2 Effect of predicate-centered focus marking in ‘as soon as’ clauses

+ predicate-centered focus = focus on any sentential element that is related to the predicate (centered around the predicate), i.e. it involves the semantic content of the verb (SoA focus), the TAM operators, or the truth value operator (Güldemann 2009)
- function of the predicate: is the bearer of the illocutionary force of the clause and host of assertiveness (what again is related to finiteness)
- relation between focus and assertiveness: when focusing, I assert that X (X = NP, VP, clause)

+ claim: predicate-centered focus entails focus on the assertion
1. predicate-centered focus normally requires a plain assertion, therefore in most cases the ‘as soon as’ clause does not show dependent, non-finite verb forms – formal explanation
2. by focusing (part of) the predicate, the assertive value of it is again increased

+ ‘as soon as’ with PCF marking could be paraphrased as:

As soon as main event
ext. IS [Background] [Foreground]
int. IS [Focused assertion] [Plain assertion]
I assert that EVENT is accomplished (I assert that) EVENT

Hypothesis:
- as the assertion of the first event is strengthened by predicate-centered focus marking, an interpretation as simple succession of events, i.e. low on the scale, is unlikely
- focusing on the assertion that the event is accomplished increases its importance for the whole sentence and triggers the conventional implicature that there must be a close temporal relationship which has as condition that the first event is accomplished
- thus, the temporal relationship is not directly encoded, but focusing on the first event entails “focus on the domain of temporal relation” (Güldemann 2002, Güldemann 2008: 489ff.)

- as claimed, the temporal relation has a high degree on a scale - this ‘immediateness’ could thus be seen as some kind of intensification which is claimed to be a semantic subtype of predicate-centered focus

### 3.3 Summary and outlook

+ the interaction of ‘as soon as’ clauses with PCF marking contradicts the traditionally assumed non-assertiveness feature of subordinate clauses in general, as focus on the predicate is correlated with illocutionary force of the clause
+ this PCF marking can be functionally explained – by marking the dependent event with predicate-centered focusing devices
1. the semantic and pragmatic weight of the dependent clause predicate is increased
2. at the same time, the main clause event is still asserted, i.e. there is no information reversal, but the dependent event is marked as higher in assertiveness
3. as the dependent event provides the background for the main clause event and is at the same time focused, there must be a reason for that - the only possible interpretation is that it signals via the accomplishment of the dependent that there is a special temporal relation between both events which is high on a scale of temporal relations

+ as most languages have more than just one ‘as soon as’ construction at their disposal, future research must show whether these constructions (without predicate-centered focus marking) fit into this scenario
- it must also be investigated whether there is a relation between the type of verb and its capacity to occur in predicate-centered focus marked adverbial clauses
- the position of the dependent clause to the main clause might also have an effect on the availability of this reading
Abbreviations

Glosses:

Arabic numerals indicate a noun class or, when immediately followed by a gloss for gender and/or number, a person category.

<table>
<thead>
<tr>
<th>ACC</th>
<th>Accusative</th>
<th>M</th>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT</td>
<td>Anterior</td>
<td>NEG</td>
<td>Negative</td>
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<tr>
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<td>Aorist</td>
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<td>(Direct) object</td>
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References


