Towards a unified analysis of correlatives and indefinites in Balkar
Ekaterina Morgunova, Ilya Naumov*

Abstract. In this paper we consider two morphosyntactically similar constructions in Balkar: correlative clauses and wh-indefinites. They both consist of three elements: (i) an interrogative pronoun, (ii) a verb marked by the conditional suffix -sa, and (iii) the particle da ‘even’. We demonstrate that despite superficial similarities there are certain semantic and syntactic differences between them. Specifically, the correlatives are interpreted definitely and are merged as clausal adjuncts and the wh-indefinites function as indefinite NPs and are merged as arguments of the main predicate. We develop an analysis that maintains the contribution of wh-expressions and the particle da and argue that the point of divergence is the -sa marked element. While in correlatives it is a true verbal predicate, in wh-indefinites it is a grammaticalized marker that denotes a choice function.

Keywords. correlatives; wh-indefinites; choice functions; even; Balkar.

1. Introduction. In Balkar we find two constructions that have similar morphosyntax. We will be calling them “correlatives” and “wh-indefinites”. They are exemplified by (1a) and (1b), respectively.

(1) a. Correlative
kim e-se da ol kel-di.
who be-COND even that come-PST
Lit.: ‘Whoever it is, that came.’
b. Indefinite
kim e-se da kel-di.
who be-COND even come-PST
‘Some or other person came.’

Correlatives and wh-indefinites both consist of three elements: (i) an interrogative pronoun, (ii) a verb marked by the conditional suffix -sa, and (iii) the particle da ‘even’. The only visible difference is that (1a) involves a demonstrative pronoun ol ‘that’, which is absent in (1b). Importantly, the two constructions differ semantically: the former is interpreted definitely and the latter receives an indefinite interpretation.

The goal of this paper is to answer the following question: How is it possible that two superficially similar constructions are interpreted in different ways? We propose that the observed semantic difference comes from the syntactic properties of the constructions and the status of the -sa marked element. Correlatives are full clauses merged as adjuncts and the -sa marked element is a true verb. In contrast, wh-indefinites are indefinite NPs merged as arguments and the -sa marked element is a grammaticalized marker that lexicalizes a variable ranging over choice functions. The rest of the paper is structured as follows. In section 2, we provide data on correlatives

* Balkar data presented in this talk was obtained during a collective field-trip work to the village of Verkhniaya Balkaria in the summer of 2019. We thank all the members of our team. We also would like to thank two anonymous reviewers for their helpful comments. Authors are listed alphabetically. This research has been supported by Russian Foundation for Basic Research Grant #19-012-00627. Authors: Ekaterina Morgunova, Lomonosov Moscow State University (morgunova.kate@gmail.com) & Ilya Naumov, Higher School of Economics (6nlv@mail.ru).

© 2020 Author(s). Published by the LSA with permission of the author(s) under a CC BY 4.0 license.
and wh-indefinites discussing their main syntactic and semantic characteristics. In section 3, we develop an analysis of correlatives and indefinites building on previous accounts of related constructions. Section 4 concludes the paper.

2. Balkar data.

2.1. CORRELATIVES. Correlativization is a relativization strategy wherein a relative clause appears on the left periphery of the clause and is linked to a nominal correlate in the main clause. (2) exemplifies a correlative construction from Hindi.

(2) Hindi (Srivastav 1991:642)

[jo laRkii khaRii hai ] vo lambii hai
REL girl standing is that tall is
Lit.: Which girl is standing, that is tall.
‘The girl who is standing is tall.’

As Iatridou (2013) argues, correlatives are also found in Turkish.

(3) Turkish (Iatridou 2013: 130)

[Yarış-ı kim kazan-ir-sa] prenses-le evlen-ecek.
[race-ACC who win-AOR-COND] princess-with marry-FUT
‘Whoever wins the race will marry the princess.’

Balkar has a similar construction which we treat as a correlative as well. The correlative clause contains an interrogative NP and its predicate is marked with the conditional suffix -sa and the particle da ‘even’, (4).

(4) [CorrP kim kel-se da bügün] ol kitap kelti-riq-di.
[come-COND even today that book bring-FUT2-3SG]
‘Whoever comes today will bring the book.’

This construction exhibits all the properties of regular correlatives in other languages with correlativization, such as Hindi (Lipták 2009). First, the correlative clause must precede the correlate, as in (4); the opposite linear order is ungrammatical, as shown in (5).

(5) *ol kelter-gen-di xarbus-nu tünen
that bring-PFCT-3SG watermelon-ACC yesterday
[CorrP kim kel-gen e-se da].
[come-PFCT be-COND even]
‘Whoever came yesterday brought a watermelon.’

Second, there is a demonstrative requirement on the correlate, i.e. it must contain a demonstrative element. Sentences in which the correlate does not contain a demonstrative, are ungrammatical, (6).

(6) qaisɨ sabij bügün oram-da ojna-ɾan e-se da
which child today street-LOC play-PFCT be-COND even
* (ol) sabij ullu kül-e e-di.
[that child big laugh-IPFV be-PST.3SG]
‘Whatever child that was playing on the street today was laughing loudly.’
Finally, Balkar correlatives have maximalizing semantics: they refer to the “largest” individual in the set of contextually salient individuals. As noted in Grosu & Landman (1998), this property is responsible for why the correlate DP must be definite or universal. In addition to (6), this can be further seen in (7).

(7) qaisɨ zašciq-la süel-ip e-se-le da
which boy-PL stand-COND be-COND-PL even
‘The boys that stand there…’

a. …ala fatima bla birge oqu-j-du-la.
   they Fatima with together study-IPFV-3-PL
   ‘...those are Fatima’s classmates.’

b. …? az fatima bla birge oqu-j-du-la.
   minority Fatima with together study-IPFV-3-PL
   ‘...the minority of them are Fatima’s classmates.’

Balkar correlatives have one interesting semantic feature: they obligatorily convey modal inferences (parallel to those of the so-called “ever free relatives” in English). It can be an ignorance inference (8) or an indifference inference (9).

(8) kim et-gen e-se da ani kör-ür-ge sü-e-me.
   who do-PFCT be-COND even (s)he.ACC see-POT-INF want-IPFV-1SG
   ‘Whoever did this, I want to see them.’

(9) ol erge kim caqɨr-sa da aŋa bar-liq-di
   (s)he marry who invite-COND even that.DAT come.out-FUT-3SG
   ‘She will marry whoever asks her to marry him.’

The “bland definite” reading, which is usually available for correlatives in other languages (see Srivastav 1991 for Hindi, Iatridou 2013 for Turkish) is considered to be odd by the speakers (10).

(10) tünene kim kel-gen e-se da
    yesterday who come-pfct be-cond even
    ol kitap-ni ketlir-gen-di.
    that book-acc bring-pfct-3sg
1. ??‘The one who came yesterday brought the book.’
2. ‘Whoever came yesterday brought the book.’

Notably, in Balkar the correlate in correlative construction can be omitted, as in (11).

(11) kim kel-se da bügün kitap kelti-riq-di.
    who come-COND even today book bring-FUT2-3SG
    ‘Whoever comes today will bring the book.’

Building on the proposal in Iatridou (2013) for Turkish correlatives, we assume that even when there is no overt correlate, the correlative clause is a correlative adjunct, rather than an English-style free relative occupying an argument position, (12).

(12) [FR Whoer Mary invited to the party] came.

One argument in favor of this view has to do with case-matching effects. In general, the wh-phrase in free relatives must bear a case marker that satisfies the case requirements of both the matrix and the embedded predicate. This is shown in (13).
(13) German (Vogel 2001: 902)

a. Ich folge [FR wem ich vertraue]
   I follow→DAT who.DAT I trust→DAT
   ‘I follow who I trust.’

b. *Ich folge [FR wem || wen ich bewundere]
   I follow→DAT who.DAT who.ACC I adore→ACC
   ‘I follow who I adore.’

In Balkar correlatives with no overt correlate, however, there are no case matching effects. For instance, in (14) the verb in the correlative clause assigns accusative to the wh-word, while the verb in the matrix clause assigns nominative. If constructions like in (11) were free relatives, we would expect (14) to be ungrammatical due to the case mismatch. However, the sentence is fully acceptable. Instead, if we assume that there is a silent correlate, that the matrix verb assigns the nominative to, the acceptability of (14) is expected.

(14) fatima kim-ni süj-e e-se da
    Fatima who-ACC love-IPFV be-COND even
    qonaq-ʁa kel-liq-di.
    guest-DAT come-FUT2-3SG
    ‘Whoever Fatima likes will come to visit.’

In light of these data, we conclude that the correlative clause is always an adjunct, while the (possibly null) correlate occupies an argument position in the main clause.

In sum, Balkar correlatives exhibit properties of regular correlatives. They appear on the left periphery of the main clause and obligatory precede the correlate; they have maximalizing semantics and require that the correlate is a demonstrative NP. In contrast to correlatives in other languages discussed so far, they obligatory convey modal inferences of ignorance or indifference. We have demonstrated that structures with no overt correlate are structurally identical to correlatives with an overt correlate. Correlative clauses always occupy an adjunct position, while the argument position of the main verb is reserved for the correlate.

2.2. WH-INDEFINITES. Balkar possesses what is in descriptive grammars called “indefinite pronouns” — items build from three elements: (i) an interrogative pronoun, (ii) the copula e ‘be’ marked by the conditional suffix -sa and (iii) the particle da ‘even’. These items function as indefinite noun phrases: they have existential force and serve to introduce new referents into discourse, (15).

(15) kim e-se da kel-di kim e-se da kel-me-di.
    who be-COND even come-PST who be-COND even come-NEG-PST
    ‘Some or other person came, some or other person did not come.’

Crucially, in contrast to regular indefinites, they give rise to the inference that the speaker does not know the identity of the individual they refer to, (cf. (16a) and (16b)).

(16) a. bir adam kel-di.
    one man come-PST
    ‘Someone came.’

b. kim e-se da kel-di.
    who be-COND even come-PST
‘Some or other person came.’

This inference is obligatory, which can be seen from that the speaker cannot explicitly add that she knows who the referent is, (17).

(17)  kim  e-sa  da  kel-di.
      who  be-COND  even  come-PST
    #men  bil-e-me  alim  bol-ban-in.
I  know-IPFV-1SG  Alim  be-PFCT-ACC.3SG
‘Some or other person came. #I know that it was Alim.’

Similarly, utterances containing them cannot be followed by questions asking about the identity of the referent, (18).

(18)  A: fatima  kim-ge  e-se  da  erge  cik-di.
     Fatima  who-DAT  be-COND  even  marry  get-PST
‘Fatima married some or other person.’
    B:  #kim-ge?
     who-DAT
‘Who?’

Based on these facts, we conclude that Balkar *wh*-indefinites are “Epistemic Indefinites” (EIs) — expressions that conventionally convey ignorance on part of the speaker (see, e.g., Haspelmath 1997; and much further literature).

Balkar *wh*-indefinites demonstrate peculiar scope behavior. First, they are banned from being interpreted under sentential negation, (19).

(19)  kerim  ne  zat  e-se  da  sati-p  al-ma-di.
   Kerim  what  thing  be-COND  even  sell-CONV  take-NEG-PST
1. ‘There is something that Kerim did not buy.’  ∃ > ¬
2. *‘Kerim did not buy anything.’  ¬ > ∃

Second, they can, but do not have to, take scope out of semantic islands, such as antecedents of conditionals, (20), and clauses embedded under attitude predicates, (21).

(20)  kim  e-se  da  kel-se  alim  quani-riq-di.
   who  be-COND  even  come-COND  Alim  be.happy-FUT2-3SG
1. ‘There is a particular unknown to the speaker person such that if this person comes, Alim will be happy.’  ∃ > if
2. ‘If any person comes, Alim will be happy.’  if > ∃

(21)  alim  umut  ete-di  kim  e-se  da  keli-r  dep.
   Alim  hope  do-3SG  who  be-COND  even  come-FUT1  COMP
1. ‘There is a particular unknown to the speaker person such that Alim hopes that he comes.’  ∃ > hope
2. ‘Alim hopes that at least someone will come.’  hope > ∃

Unlike some EIs in other languages, which place a constraint that their domain is not a singleton (see Kratzer & Shimoyama 2002 for the German *irgendein*, Alonso-Ovalle & Menéndez-Benito

\[1\] We discuss the case marking of indefinite pronouns later in this section.
2010 for the Spanish algún; a.o.), Balkar wh-indefinites are felicitous if the domain contains a single individual. Consider an example in (22)².

(22)  
[**Context:** I came to a village school to speak with the principal. I have never been to this village and this school before.]

men kim e-se da bir direktor bla tüb-er-ge
I who be-COND even one principal with meet-POT-INF
kel-gen-me.
come-PFCT-1SG
‘I have come to meet some principal.’

As there can be only one principal, we can be sure that in (22) the domain is a singleton. These data make domain-based approaches inapplicable to Balkar because under these approaches the effect of epistemic ignorance would arise via competition with a stronger alternative involving a smaller domain. Obviously, the domain cannot be smaller than a singleton.

Let us turn to one important syntactic difference between the wh-indefinites and correlatives. Previously we have demonstrated that correlative clauses always occupy an adjunct position. Thus, only the predicate of the correlative clause can assign case to wh-elements. Crucially, wh-indefinites behave differently. The -sa marked element internal to the wh-indefinite cannot assign nominative to the wh-expression; instead, interrogatives must receive case from the matrix predicate. This is shown in (23). kim ‘who’ must bear dative case assigned by the matrix verb erge cɨkdi ‘marry’ and cannot be marked nominative, which the verb e ‘be’ assigns to its argument, (24).

(23) fatima kim-*sa e-se da erge cɨk-dɨ.
Fatima who-dat be-cond even marry get-pst
‘Fatima married some or other man.’

(24) ramazan e-se men quanɨ-rɨq-ma.
Ramazan be-COND I be.happy-FUT2-1SG
‘If it is Ramazan, I will be happy.’

We take this fact to indicate that wh-indefinites occupy an argument position.

To sum up, Balkar wh-indefinites obligatorily convey that the speaker does not know which individual satisfies the existential claim they make. They cannot be interpreted under negation and can be interpreted outside of semantic islands. As they are felicitous in contexts with a singleton domain, their epistemic ignorance effect cannot arise via a competition-based mechanism. In contrast to correlatives, wh-expressions in wh-indefinites bear case marking assigned by the main predicate, which indicates that they occupy an argument position.

3. Towards an analysis.

3.1. CORRELATIVES. For the analysis of Balkar correlatives we adopt the proposal for Turkish correlatives in Demirok (2017).

(25) Demirok (2017: 162)
John kim ciğer-sa o partiye gelir
John who invite-SA DEM party come.will
‘Whoever John invites will come to the party.’

² In this example kim ese da takes an overt nominal restrictor and the whole complex functions as an indefinite NP.
Demirok’s approach involves the following crucial components. First, unlike Dayal (1995), he does not treat \(wh\)-expressions as relative operators. Turkish lacks \(wh\)-relativization and does not exhibit \(wh\)-movement in general, which is evident from the island-insensitivity of \(wh\)-expressions. Instead Demirok argues that \(wh\)-words are alternative denoting expressions in the sense of Hamblin (1973).

Building on the analysis of English unconditionals by Rawlins (2013), Demirok treats correlative clauses as denoting sets of conditional antecedents and the whole correlative construction as a conjunction of conditional statements. Thus, the meaning of (25) can be paraphrased as (26).

(26) If John invites Bill, he will come to the party & If John invites Susan, she will come to the party & …

Note that under this analysis the maximalizing semantics observed in correlatives does not come from the correlative clause itself. Rather it is introduced by the correlate being an E-type pronoun that picks up the maximal individual in the context (Heim 1990). With that said, (25) denotes (27).

(27) If John invites Bill, the max individual John invites will come to the party & If John invites Susan, the max individual John invites will come to the party & …

Balkar is similar to Turkish in many relevant aspects. It is a \(wh\)-in-situ language lacking \(wh\)-relativization. \(wh\)-words are also island-insensitive in situ. This is shown in (28). Complex NP in Balkar, as in many other languages, is an island for extraction, (28a). Still, \(wh\)-words can be used in-situ inside a complex NP (28b). This fact indicates, that Balkar does not employ covert movement for question formation.

(28) a. *kerim-ni alim [[fatima qonaq-ʁa caqɨr-di dep] xapar-la] Kerim-ACC Alim Fatima guest-DAT invite-PST.3SG COMP rumor-PL eʃit-gen-di. hear-PFCT-3SG
   ‘Alim has heard rumors that Fatima invited Kerim to come visit her.’

b. sen fatima [[kim-ni qonaq-ʁa caqɨr-di dep] xapar-la] you Fatima who-ACC guest-DAT invite-PST.3SG COMP rumor-PL eʃit-gen-se?
   hear-PFCT-2SG
   ‘You heard rumors that Fatima invited who to come visit her?’

There is one additional similarity concerning the structural position of the correlative clause. Namely, both the correlative clause in Turkish (under Demirok’s analysis) and the correlative clause in Balkar seem to be TP-level adjuncts. In Bhatt (2003) it was proposed that in principle correlative clauses may be generated either as TP adjuncts or as adjuncts to the correlate DP. He argues that in Hindi the latter option is realized. However, there is evidence suggesting that in Balkar correlative clauses are base-generated as TP adjuncts. For example, the relationship between the correlative clause and the associate demonstrative is not sensitive to island constraints. (29) shows that the correlative clause and the correlate can be separated by a complex NP boundary. This fact indicates, that the correlative clause is not generated as the adjunct to the correlate (that would entail that (29) features an illicit A’-movement over an island boundary), but rather higher up in the structure.
I who-ACC love-ACC be-COND even
Alim [[ Fatima ani qonaq-ra caqir-di dep] 
Alim Fatima that.ACC guest-DAT invite-PST.3SG COMP
xapar-la] ešit-gen-di.
rumor-PL hear-PFCT-3SG
‘Whoever I love, Alim has heard rumors that Fatima invited him to come visit her.’

These facts allow us to adopt Demirok’s (2017) analysis for Balkar correlatives. What cannot be accounted for within Demirok’s (2017) approach is the contribution of the particle da ‘even’ simply because Turkish correlatives lack it. We develop an analysis of its semantics in section 3.3.

3.2. INDEFINITES. Given that Balkar wh-indefinites are built from the same items as correlatives but occupy an argument position, one may think that they are Free Relatives (FRs). According to the standard analysis of FR (see, e.g., Jacobson 1995, Caponigro 2003; a.o), they denote properties shifted to maximal individuals. However, under the approach we adopted for correlatives, correlative clauses denote sets of propositions. It has been argued that going from sets of propositions is impossible (Rooth 1992, Krifka 2011, Xiang 2017). Specifically, Demirok (2019) uses this constraint to explain why languages with wh-in-situ composition of questions, to which Balkar belongs, do not have FRs. So, that Balkar wh-indefinites are FRs is not plausible. Moreover, this analysis cannot account for one crucial fact: Balkar wh-indefinites can only involve the copula e ‘be’ as part of the complex.

We take another route and propose that Balkar wh-indefinites do not have clausal structure and the ese element is not interpreted as a true verbal predicate but instead is a grammaticalized marker that lexicalizes a choice function (CF) variable. We maintain the assumption that wh-words denote sets of alternatives. The choice function variable ranges over those sets and returns their members, (30). Thus, (31a) has the denotation in (31b).³

\[(30) \quad [ese]_{<T,d>} = \lambda a.T_a[f(a)], \text{where } T \text{ is the type of Hamblin sets}\]

\[(31) \quad \begin{align*}
\text{a.} & \quad \text{kim e-se da kel-di.} \\
& \quad \text{who be-COND even come-PST} \\
& \quad ‘\text{Some or other person came.’} \\
\text{b.} & \quad \exists f[CH(f) & \text{& came}(f(\text{human}))] \\
\\end{align*}\]

Here we follow some other accounts of wh-indefinites according to which CFs they introduce combine not with properties (as is standardly assumed for English indefinites) but with Hamblin sets (see Yanovich (2005) for Russian, Yatsushiro (2009) for Japanese, Dawson (to appear) for Tiwa; a.o.)⁴.

Choice functional nature of Balkar wh-indefinites immediately allows us to account for their scopal behavior discussed in section 2.2. Following Reinhart (1997), Winter (1997) and Matthews (1999), we assume that the CF denoted by ese is subject to obligatorily existential closure. In particular, we propose that the ∃-operator is located at the level of CP. Due to this,

---

³ See section 3.3. for the semantic contribution of -da.

⁴ An anonymous reviewer notes that Hamblin semantics has issues with binding (Shan 2004). Here we do not attempt to resolve this issue. Some possible ways of overcoming this problem are suggested in Novel and Romero (2010), Charlow (2014) and Ciardelli et. al. (2017).
*wh*-indefinites obligatorily take wide scope with respect to sentential negation. As they can take scope inside and outside semantic islands, we claim that ∃-operator can be inserted both in the embedded and matrix CP domain.

Moreover, under this approach, there is a way to derive the epistemic ignorance effect without appealing to domain constraints. Dawson (2018), based on data from Tiwa, provides an account for how higher order existential quantification can give rise to epistemic ignorance effect. She claims that if a language uses both non-choice functional indefinites and choice-functional indefinites, existentially quantifying via the latter implicates that the speaker is not in the position to use a referring expression or at least an expression that involves direct quantification over individuals. Via pragmatic reasoning this gives rise to the implicature that the speaker is ignorant about the way the individual is to be selected from the set and thereby triggers the observed epistemic ignorance effect.

We believe that this approach can and should adopted for Balkar *wh*-indefinites. However, on its own it cannot be the whole story because it says nothing about the contribution of the particle *da* ‘even’ that is part of Balkar *wh*-indefinites.

### 3.3. CONTRIBUTION OF *-DA

So far, we have ignored the particle *da* ‘even’, which is an obligatory part of both correlatives and *wh*-indefinites. We propose that the basic contribution of this particle remains unchanged — it introduces the presupposition of unlikelihood of the prejacent\(^5\) — but differs in what exactly is its argument in each construction.

To analyze its contribution in correlatives, we follow the proposal in Balusu (2019) for EVEN in related constructions in Dravidian, including unconditionals and free relatives, (32).

(32) **Telugu (Balusu 2019)**

```plaintext
eedi icci-naa tin-Taanu
what give-IF.EVEN eat-will
‘I will eat whatever you give me.’
```

Balusu (2019) claims that EVEN attaches on top of the conditional clause associating with the *wh*-word and brings in the usual scalar presupposition. The combination of IF and EVEN gives rise to the implicature that for all the alternatives distinct from the current one the conditional consequent is also true\(^6\), (33).

(33) **Assertion:**

I will eat whatever you give me.
\[\forall p \in C.\forall w[\text{if you give me } p \text{ in } w \rightarrow \text{I will eat it}]\]

**(Scalar) Presupposition:**

It is less likely that I will eat if you give x to me than if you give me something else.
\[\forall p \in C.\forall w[\text{if you give me } p \text{ in } w \rightarrow \text{I will eat it}] \prec \forall q. q \neq p[ \text{if you give me } q \text{ in } w \rightarrow \text{I will eat it}]\]

**Implicature:**

If you give me something, that is not x, I will eat it.
\[\forall q. q \neq p[ \text{if you give me } q \text{ in } w \rightarrow \text{I will eat it}]\]

---

\(^5\) We leave aside the question of whether the presupposition also contains a separate additive component.

\(^6\) It follows from the universal entailment of conditionals and the monotonic nature of the ordering (Guerzoni & Lim 2007).
We extend this analysis to Balkar and assume that da attaches on top of the correlative clause below the modal operator, (34b). Then (34a) can be informally represented as (35).

(34)  
\begin{align*}
a. & \text{ kim kel-se } \text{ da } \text{ bügün ol } \text{ kitap kelti-riq-di.} \\
& \text{who come-COND even today that book bring-FUT2-3SG} \\
& \text{‘Whoever comes today will bring the book.’}
\end{align*}

b.

(35)  
\begin{align*}
& \text{ Even if Amina comes, she will bring the book } & \\
& \text{ Even if Alim comes, he will bring the book } & \\
& \text{…}
\end{align*}

An additional step to Demirok’s (2017) original approach takes place at the level of CP₄: da brings in the scalar presupposition for every propositional alternative in the denotation of the correlative clause, (36)\(^7\).

(36)  
\begin{align*}
[\text{CP}_4] &= \{\text{Assertion: } [\text{Amina brings the book}] \\
& \quad \text{Presupposition:} [\text{Amina brings the book in}] \leq_{\mu} \forall q. q \neq \text{Amina } [q \text{ brings the book}], \\
& \quad \text{Assertion: } [\text{Alim brings the book}] \\
& \quad \text{Presupposition:} [\text{Alim brings the book}] \leq_{\mu} \forall q. q \neq \text{Alim } [q \text{ brings the book}]\ldots\}
\end{align*}

The scalar presupposition introduced by da is be responsible for the “universal” implicature: if the consequent is true for one of the most unlikely alternatives, it is true for all of the others, (37)\(^8\).

(37)  
\begin{align*}
& \text{Implicature: } \forall q. q \neq p [\text{if } q \text{ comes } \rightarrow (s)\text{he will bring the book}] \\
& \text{We also tentatively propose that the presupposition of } da \text{ might be responsible for why Balkar correlatives, as English ever free relatives, obligatorily convey ignorance or indifference. In this}
\end{align*}

\(^7\) To avoid possible contradiction that would arise if every conditional antecedent is presupposed to be less likely than all its focus alternatives, we depart from Balusu (2019) and assume that the ordering relation is non-strict.

\(^8\) An anonymous reviewer notes that if this implicature is indeed present, it should be possible to cancel it. This prediction is not met in Balkar:

(i)  
\begin{align*}
& \text{ kim kel-se } \text{ da } \text{ bügün ol } \text{ kitap kelti-riq-di.} \\
& \text{who come-COND even today that book bring-FUT2-3SG} \\
& \text{*alai quru alim kitap kelti-riq-di.} \\
& \text{but only Alim book bring-FUT2} \\
& \text{‘Whoever comes tomorrow will bring a book. But Alim will bring a book.’}
\end{align*}

However, we believe that this sentence is illicit because the semantics of universality partly arises due to the conjunction of alternatives, which, in turn, is not an implicature. We thank the reviewer for bringing our attention to this example.
proposal we build on Abenina-Adar (2019), who argues that modal inferences conveyed by ever free relatives in English arise due to the competition with plain definites that are referentially equivalent but carry stronger presuppositions about the identity of the referent. According to Heim’s (1991) principle Maximize Presupposition, choosing a presuppositionally weaker expression implicates that the presupposition of the corresponding stronger expression is not satisfied. Abenina-Adar demonstrates how, depending on the environment, this principle derives inferences that ever free relatives convey. We believe that an explanation along this line is worth pursuing for Balkar. In correlatives, the presupposition introduced by da ensures that the domain of the demonstrative contains alternatives that otherwise are not there. Therefore, according to Maximize Presupposition, the speaker would use a correlative instead of a bare demonstrative only when there is a reason to widen the domain, which can be because of ignorance or indifference with respect to the identity of the referent.

To analyze the contribution of da in wh-indefinites, we propose that it associates with the ese-element introducing the presupposition that the CF it denotes is among the least likely contextually relevant alternative CFs. Informally, a CF is a way of selecting an individual from a set. One can select an individual from a set based on various criteria. The presupposition of da ensures that the utilized criterion is one of the least likely to be utilized. The least likely criterion is the one that provides least clues for the hearer to correctly identify the referent. For example, when selecting an individual from a set of friends, one of the least likely criteria to be utilized is the one that reflects a property of being human since it does not help to narrow down the set in any way and thus is uninformative.

Returning to Balkar wh-indefinites, we claim that the effect of epistemic ignorance arises due to the above formulated presupposition via the following pragmatic reasoning. Why would the speaker select an individual from a set in one of the least informative way? It is because the speaker is not in the position to use more informative ones which in turn is probably because of the ignorance with respect to the identity of the referent9.

4. Conclusion. In this paper we have developed an account of correlatives and wh-indefinites in Balkar. According to our analysis, wh-expressions and the particle da ‘even’ have the same contribution in both constructions. We proposed that the observed semantic and syntactic differences arise due to the nature of the -sa marked element they contain: in correlative clauses it is a true verbal predicate, while in wh-indefinites it is grammaticalized and interpreted as a CF10. We hope that the data and analysis will add to our understanding of possible connections between unconditional-based constructions and indefinites.

---

9 This discussion brings into mind the approach to EIs advocated by Aloni & Port (2015), according to which EIs are sensitive to methods of identification (‘ways of knowing who’) and identify a referent via a method different from the one contextually required for knowledge. If criteria utilized by CFs can be conceived of as such methods, then the unlikelihood presupposition of da in Balkar wh-indefinites would require that the chosen method is not enough to know the identity of the referent.

10 In this paper we do not discuss the other uses of the suffix -sa and the particle -da. The question of whether the semantics we propose for these elements is applicable in other cases of their usage requires further study of their distribution and is left for the future work.
References

Abenina-Adar, Maayan. 2019. Ever free-relative clauses and Maximize Presupposition. Talk presented at North East Linguistics Society (NELS) 50.

Aloni, Maria & Port, Angelika. 2015. Epistemic indefinites and methods of identification. In ed-Luis Alonso-Ovalle & Paula Menéndez-Benito (eds.), Epistemic indefinites: Exploring modality beyond the verbal domain. 117-140. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199665297.003.0006

Alonso-Ovalle, Luis & Menéndez-Benito, Paula. 2010. Modal indefinites. Natural Language Semantics 18. 1–31. https://doi.org/10.1007/s11050-009-9048-4

Balusu, Rahul. 2019. Unifying NPIs, FCIs, and Unconditionals in Dravidian. Poster presented at NELS 50.

Bhatt, Rajesh. 2003. Locality in correlativization. Natural Language and Linguistic Theory 21(3). 485-541. https://doi.org/10.1023/A:1024192606485

Caponigro, Ivano. 2003. Free Not to Ask: On the Semantics of Free Relatives and Wh-Words Crosslinguistically. Los Angeles, CA: UCLA dissertation.

Charlow, Simon. 2014. On the semantics of exceptional scope. New York, NY: New York University dissertation.

Ciardelli, Ivano, Roelofsen, Floris & Nadine, Theiler. 2017. Composing alternatives. Linguist and Philos 40. 1-36. https://doi.org/10.1007/s10988-016-9195-2

Dawson, Virginia. 2018. A new kind of epistemic indefinite. In Uli Sauerland & Stephanie Solt (eds.), Proceedings of Sinn und Bedeutung 22(1). 349-366. Berlin: ZAS.

Dawson, Virginia. to appear. Tiwa indeterminates and NP restriction in a Hamblin semantics. In Sakshi Bhatia & Dustin Chacon (eds.), Proceedings of Formal Approaches to South Asian Languages (FASAL) 7.

Dayal, Veneeta. 1995. Quantification in correlatives. In Emmon Bach, Eloise Jelinek, Angelika Kratzer & Barbara Partee (eds.), Quantification in natural languages. 179-205. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-017-2817-1_8

Demirok, Ömer. 2017. A Compositional Semantics for Turkish Correlatives. Proceedings of West Coast Conference on Formal Linguistics (WCCFL) 34.

Demirok, Ömer. 2019. Does the cross-linguistic distribution of wh-free relatives justify a semantic typology? Talk at Boğaziçi University.

Grosu, Alexander & Landman, Fred. 1998. Strange relatives of the third kind. Natural Language Semantics 6. 125-170. https://doi.org/10.1023/A:1008268401837

Guerzoni, Elena & Lim, Dongsik. 2007. Even if, factivity and focus. Proceedings of Sinn und Bedeutung 11. 276-290. https://doi.org/10.18148/sub/2007.v11i0.645

Hamblin, Charles L. 1973. Questions in Montague grammar. Foundations of Language 10(1). 41-53.

Haspelmath, Martin. 1997. Indefinite Pronouns. Oxford: Oxford University Press.

Heim, Irene. 1990. E-type pronouns and donkey anaphora. Linguistics and Philosophy 13. 137-177. https://doi.org/10.1007/BF00630732

Heim, Irene. 1991. Artikel und Definitheit. In Arnim von Stechow & Dieter Wunderlich (eds.), Semantik: Ein internationales Handbuch der zeitgenössischen Forschung. 487–535. Mouton de Gruyter.

Iatridou, Sabine. 2013. Looking for free relatives in Turkish. In Umut Ozge (ed.), Proceedings of the 8th Workshop on Altaic Formal Linguistics. 129-152.
Jacobson, Pauline. 1995. On the quantificational force of English free relatives. In Emmon Bach, Eloise Jelinek, Angelika Kratzer & Barbara Partee (eds.), Quantification in natural languages. 451-486. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-017-2817-1_15
Kratzer, Angelika & Shimoyama, Junko. 2002. Indeterminate pronouns: The view from Japanese. In Yukio Otsu (ed.), The Proceedings of the Third Tokyo Conference on Psycholinguistics. Tokyo: Hituzi Syobo.
Krifka, Manfred. 2011. Questions. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), Semantics: An international handbook of natural language meaning. 1742-1785. Mouton De Gruyter.
Lipták, Anikó. 2009. The landscape of correlatives: An empirical and analytical survey. In Anikó Lipták (ed.), Correlatives cross-linguistically. 1-48. John Benjamins.
Matthewson, Lisa. 1999. On the interpretation of wide-scope indefinites. Natural Language Semantics 7. 79-134.
Novel, Mark & Maribel, Romero. 2010. Movement, variables and Hamblin alternatives. Proceedings of Sinn und Bedeutung 14. 322–338.
Rawlins, Kyle. 2013. (Un)conditionals. Natural Language Semantics 40. 111-178. https://doi.org/10.1007/s11050-012-9087-0
Reinhart, Tanya. 1997. Quantifier scope: How labor is divided between QR and choice functions. Linguistics and Philosophy 20. 335-397. https://doi.org/10.1023/A:1005349801431
Rooth, Mats. 1992. A Theory of Focus Interpretation. Natural Language Semantics 1. 75-116. https://doi.org/10.1007/BF02342617
Shan, Chung-chieh. 2004. Binding alongside Hamblin alternatives calls for variable-free semantics. Semantics and Linguistic Theory 14. 289-304. https://doi.org/10.3765/salt.v14i0.2901
Srivastav, Veneeta. 1991. The syntax and semantics of correlatives. Natural Language and Linguistic Theory 9. 637-686. https://doi.org/10.1007/BF00134752
Vogel, Ralf. 2001. Case Conflict in German Free-Relative Constructions: An Optimality-Theoretic Treatment. In Gereon Müller & Wolfgang Sternefeld (eds.), Competition in Syntax. 341-375. Mouton de Gruyter.
Winter, Yoad. 1997. Choice functions and the scopal semantics of indefinites. Linguistics and Philosophy 20. 399-467. https://www.jstor.org/stable/25001672
Xiang, Yimei. 2017. Interpreting questions with non-exhaustive answers. Cambridge, MA: Harvard University dissertation.
Yanovich, Igor. 2005. Choice-functional series of indefinite pronouns and Hamblin semantics. Semantics and Linguistic Theory 15. 309-326. https://doi.org/10.3765/salt.v15i0.2921
Yatsushiro, Kazuko. 2009. The distribution of quantificational suffixes in Japanese. Natural Language Semantics 17. 141-173. https://doi.org/10.1007/s11050-009-9044-8