Complementizers are not (demonstrative) pronouns and *viceversa*

Abstract

In this work I will provide direct evidence against the identity of relative pronouns and complementizers/ subordinators - proposed in recent works (Kayne 2010b) within the generative paradigm - with the aid of (diachronic and synchronic) data from Akkadian (an extinct Semitic language of Mesopotamia), Sogdian (an extinct Middle Iranian language), Germanic languages, Eastern and Western Iranian languages and Creoles. I will also show that the *mismatch* of relative (demonstrative) pronoun and complementizers does not weaken a proposal of a unified syntactic structure underlying the two clause-linkage phenomena of complementation and relativization. I will try to demonstrate that subordinate clauses (relative and complement clauses) are headed by light nouns/ pronouns acting as "bridges of features" between matrix and dependent clauses. In particular the simultaneous presence of demonstratives / relative pronouns and complementizers signalling clauses' *edges* in many languages is the primary evidence that (light) nominal elements are possibly required to trigger phenomena of clause linkage. (*155 words*)

Keywords: clause linkage; pronouns; complementizer; morpho-syntax; Lexicon.

1. Complementizers and pronouns: setting the problem·

Clause linkage is often mediated in natural languages by clause-linking markers, which act as sorts of *relators* (den Dikken and Singhapreecha 2004; den Dikken 2006, for relators in syntactic theory), instantiated by morpho-syntactic items properly marking a relation between two clauses. Clausal relation, according to recent

· I would like to thank Maria Rita Manzini, Anna Cardinaletti and two anonymous referees of PSiCL for data, useful comments, and criticism. All errors and deficiencies remain my responsibility.

taxonomy (cf. Idiatov 2010: 832; Dixon 2009) may be classified in three major categories: (a) *complementation*, when a subordinate clause acts as a core argument of a matrix (or higher) clause; (b) *relativization*, when a clause functions as a modifier of a head noun within a higher clause, (see Cinque 2010 for a unified, typologically grounded, analysis of relative clauses); (c) an *heterogeneous set of semantic types* of clause linkage, when clauses are connected through any pattern other than complementation and relativization. The matching linking items can be labelled, respectively, as *complementizers*, *relativizers*, and *clause linkers*.

In recent years, Richard Kayne (2009; 2010a; 2010b), relying on Roberts and Roussou (2003) - who argue that the item *that* in English can be parsed as either a complementizer or a demonstrative pronoun (depending on whether it ranges over individuals or propositions) - claimed, mainly on the basis of Germanic and Romance data, that complementizers are nothing else than demonstrative/relative pronouns (see also Arsenijević 2009 for a similar approach; and Sportiche 2011 for relevant discussion). It is interesting to notice that Kayne's (1975) classical argument is, on the contrary, that French relative pronoun *que* is really the *que* complementizer. At any rate, basically, Kayne (1975; 2009; 2010b) proposes a unification of complementation and relativization, namely clause linkage of the types (a) and (b) introduced above, turns out to be signalled by the same item (e.g. English *that*, French *que*, and Italian *che* are able to introduce both complement and relative clauses). According to Kayne complementizers and relativizers (frequently instantiated by demonstrative/ interrogative pronouns) are different labels for the same grammatical category and complementation and relativization are realized by nothing else than a unique syntactic process/ derivation.

Given the fact that Kayne's (1994) *Antisymmetry* theory states that the hierarchical architecture of human language universally maps onto a unique *core* linearization, namely the *specifier-head-complement* (binary) branching alignment, the proposal sketched above has strong cross-linguistic consequences: if complementizers are nothing else than demonstrative/ interrogative/ relative pronouns, patently, they cannot be independently realized in a given context in order to signal clause edge boundaries, particularly, for relative clauses.

In this work, I will provide direct evidence against the identity of relative pronouns and complementizers/

subordinators, with the aid of empirical data from various languages. At the same time, as will be shown in section 6, the idea that complementation and relativization are essentially two sides of the same coin is not questioned, and on the contrary can be enhanced by the data collected here.

The dispute on the status of *that* in relative clauses[1] started with Jespersen (1924), who was the first scholar to interpret *that* as a conjunction/particle, rather than a pronoun.

In the generative literature (since the work of Bresnan 1970; Emonds 1976; Lightfoot 1979, among many others) the standard way is to consider *that* a complementizer. Thus, Kayne's idea, if right, could lead to an important change of perspective in current theoretical syntax.

The paper is organized as follows: in section 2, I will briefly introduce Kayne's hypothesis and the empirical arguments against it. Section 3 and section 4 illustrate these arguments. The discussion and conclusions follow.

2. Kayne's proposal and an overview of the empirical arguments against it

Kayne (2010b) argues that English *that*, French *que* and Italian *che* are demonstrative pronouns which can act as a relative pronoun. He further argues (see Kayne 2009, Kayne 2010a and Kayne 2010b: 200) that complement clauses are also relative clause structures, with *that* and similar items acting as relative pronouns. Basically, these items would be relative pronouns by virtue of being determiners associated with NPs that are the 'raised' heads of a relative clause (cf. Vergnaud 1974; Kayne 1994; Bianchi 1999). Kayne (2010b: 227)'s claim is the following: "*no determiner-like element that introduces a clause is ever a complementizer in the standard sense of the term. If sentential complements are relatives, Wh-movement is even more pervasive in syntax than Chomsky (1977) thought*". Kayne's idea would have the potential to become seminal, if confirmed on typological grounds.

Unfortunately, there are at least two empirical arguments against his claim: (i) there exist languages in which

[1] See Van der Auwera (1985) for a comprehensive review and for the original proposal of a *gradience* of 'that', interpreted as a 'highly pronominal relativizer'.

relative/demonstrative pronouns are invariantly followed by (attached to) an overt 'real' complementizer in relative clauses. If complementizers are actually demonstrative/ interrogative/ relative pronouns, patently, the prediction of Kayne's view is that they cannot be independently realized in a given context in order to signal clause edge boundaries, particularly, for relative clauses. *De facto*, Kayne's (2010b: 227) claim, in principle, leaves open an interpretation that admits this possibility: elements that are not determiner-like can actually be complementizers in the *standard sense* of the term. But, at the same time Kayne's idea that complement clauses are nothing else than relatives, weakens such an interpretation. In other words, there is no explanation for the presence of a (not determiner-like) complementizer in complement/relative clauses, if both are products of NP raising/Wh-movement (i.e. the complementizer must be pronominal in nature).

(ii) There exist languages in which complement clauses are introduced by elements that are not determiner-like; moreover, there exist languages with two subordinators/ complementizers (both not pronominal in nature), instantiated at the same time in a dependent complement clause and realizing, according to Rizzi (1997), the two poles ([FORCE] and [FINITENESS]) of a layered C field.

3. Pronouns unembedded

In this section I will provide examples of languages in which pronouns and complementizers are joint together (co-occurring) in order to signal clause boundaries. The empirical facts collected here represent the first empirical argument against Kayne's (2010b) claim.

3.1. Data from Akkadian

Akkadian, an extinct SOV Semitic language described in Deutscher (2000; 2001; 2009a; 2009b; see also Buccellati 1997), which was spoken in ancient Mesopotamia, provides a clear example of a language in which

demonstrative pronouns are *detached* from complementizers/ subordinators.

Considering in details its diachronic stages, Akkadian relative clauses clearly show that relative pronouns and (real) subordinators within the extended projection of the dependent verb are independent components and that relative pronouns are actually generated outside of the embedded clause. Akkadian is attested from written sources over ca. two millennia, starting around 2500 BC. The period ranging from 2500 BC to 2000 BC is typically labelled as 'Old Akkadian'. The principal genre of relative clauses in Old Akkadian was marked by an item, which was originally employed as a demonstrative pronoun. Old Akkadian's demonstrative pronouns declined for case, gender and number, as shown in (1) below (adapted from Deutscher 2001: 406):

(1)

	NOM.	ACC.	GEN.
MASC.SG.	šu	ša	ši
MASC.PL.	šūt	šūt	šūti
FEM.	šāt	šāt	šāti

The demonstrative pronoun *šu* agreed in Case with its antecedent, namely with the head NP of the root clause[2]. It follows that *šu* did not encode the role of the relativized NP. See the examples in (2a,b). The first one is from Deutscher (2001: 406) and the second one is from Deutscher (2009a: 208)[3]:

(2)	a.	Šarru-kīn	šar	māt-im	[šu	Enlil	māḫir-a	lā
		Sargon	king.OF	land-GEN	[REL(NOM.M.SG)	Enlil	rival-ACC	not

[2] Notice that there exist languages in which the *opposite* behaviour has been attested. This behaviour is labelled "*inverse Case attraction*" and has been described for Ancient Greek, Latin (see Bianchi 1999) and Old Iranian and Avestan (Seiler 1960; cited in Haig 2011). In these cases, the 'head' NP/External determiner appears with the internal Case. This phenomenon is still attested in contemporary Persian (Aghaei 2006) and generally in (Eastern and Western) Iranian Languages (see the descriptions collected in Windfuhr 2009).

[3] Examples from the literature, in this work, retain original glosses.

iddin-u-šum]

he.gave-$_{SUB}$-to him]

'Sargon, king of the land, that Enlil has not given him a rival, [did so and so]... '

(i.e. Sargon, king of the land, to whom (the god) Enlil has given no rival, [did so ...])

b.	eql-am	[ša …	nītiq-u]	lišqi'ū
	field-ACC	[REL(ACC.M.SG)	we.passed-SUB]	they.should.water

'they should water the field that we passed.'

Crucially, the verbs in the dependent clauses in (2a,b) are suffixed by a subordinator marker, which usually takes the form *-u,* but in Old Akkadian can also take the form *-n(i)*, and signals whether a given clause is a root clause or a dependent clause (Deutscher 2009b: 57-61). This fact is essential from our viewpoint because it demonstrates that we can have an unequivocal complementizer[4] (i.e. an item acting as a marker of subordination), detached from an autonomous demonstrative pronoun.

Now, observing the diachronic development of Akkadian relative clauses, we find out that, in later stages of Akkadian (ca. after 2000 BC), the agreement features on the demonstrative pronouns, which introduce the relative clause were lost, and the item *ša* -in (1), the original singular masculine accusative, emerged as an invariant *relativizer* (see Deutscher 2001 and 2009a for further details), as shown in (3) below:

(3)	awīl-um	[ša	ana	bull-îm	illik-u]
	man-NOM	REL	to	extinguish.INF-GEN	he.went-SUB

'the man that went to extinguish it...' (Deutscher 2001: 409)

[4] See Deutscher (2000: 34), Noonan (1984: 50) and Cristofaro (1998; 2003).

At this point, it is quite clear that we still have two distinct elements, involved in the marking of a dependent clause: (a) the (*grammaticalized*) demonstrative pronoun *ša* and (b) the complementizer/subordinator *–u*, realized as a suffix on the dependent verb.

But there is far more, as we can see following Deutscher (2001). Given the fact that the Akkadian relativizer unambiguously originates from a demonstrative pronoun, Akkadian may seem *prima facie* to merely instantiate a *parataxis* to *hypotaxis* process, which is assumed to be a standard line of diachronic development in natural languages in the literature (see Heine and Kuteva 2002, 2007; Roberts and Roussou 2003; Kayne 2010b; Kiparsky 2008). However, Deutscher (2001) showed that the development of Akkadian relative clauses is clearly unrelated to a parataxis from hypotaxis *shift*, and his way of reasoning can be summarized as follows. Akkadian had both head and dependent marking in the genitival construct - adopting the terminology of Nichols (1986) - where the dependent item is encoded with a genitive Case-marker, and the head-noun is marked by the *construct state*[5]. The construct state is signalled by the lack of an overt Case suffix on a noun as shown in (4).

(4) dīn šarr-im

judgment.OF (CONSTRUCT STATE) king-GEN

'the judgment of the king' (Deutscher 2001: 410)

In the example above, the noun *dīn*, which usually surfaces with a case marker (e.g. NOM: *dīn-um,* ACC: *dīn-am,* GEN: *dīn-im*), simply appears as *dīn* in the construct state. The crucial fact is that Akkadian, apart from the

[5] In present day Semitic languages, head nouns are assumed to be in the construct state (see Borer 1984; Ritter 1991; Siloni 1997; Dobrovie-Sorin 2000; Shlonsky 2004; Ouhalla 2004; Danon 2008, for relevant discussion within the generative paradigm), when they are semantically definite and modified by a noun in a genitive form. Notice that this kind of construction contrasts with the traditional genitive construction of e.g. Germanic languages because in the construct state, it is the head-noun rather than the dependent noun that is morphologically marked.

main productive type of relative clauses introduced by a relative/ demonstrative pronoun, as showed above in (2a,b) and (3), had another kind of (older) relative constructions, namely relatives in which there are no demonstratives as relative markers. The onset of the dependent clause is only signalled with the aid of the construct state of the head noun. See the example (4) below:

(4) tuppi addin-u-šum
tablet.OF (CONSTRUCT STATE) I.gave-SUB-to him
'the tablet that I gave to him' (Deutscher 2001: 410)

Notice that, considering these Akkadian data, there seems to be a strong relationship between the grammar of *genitival* constructions and the grammar of relative clauses (see for relevant discussion Ouhalla 2004; den Dikken 2007). This fact is confirmed on typological grounds, as shown for instance by Gil (2011) in chapter 60 of the World Atlas of Language Structures. Consider the examples below in (5) from Minangkabau (Malayic, Austronesian): all the semantic functions encoding genitives (specifically in this case, an alienable possessor), adjectives and relative clauses are expressed by *bare* modifiers after the head-noun, without any other overt grammatical marker.

(5) a. batiak Kairil
papaya Kairil
'Kairil's papaya'
b. batiak kuniang
papaya yellow
'yellow papaya'
c. batiak Kairil bali

papaya Kairil buy

'papaya that Kairil bought' (Gil 2011: http://wals.info/chapter/60)

Now, as traced by Deutscher (2001: 410-411), it is arguably the case that newer Akkadian relative clauses developed in this way: demonstrative pronouns simply acted as the head (in the construct state) of the relative clause. See the Old Akkadian example in (6).

(6)	šūt	[in	TU.RA	uḫḫirū-n]	līḫuz
	those(ACC.M.PL). OF (CONSTRUCT STATE)	[in	illness	were.delayed-SUB]	he.should.take

'he should take those who were delayed because of illness' (Deutscher 2001: 411)

According to Deutscher (2001; 2009a), the beginning of the relative clause in (6) is signalled by the construct state on the pronoun *šūt*, just as it was signalled by the construct state on the nominal head *tuppi* in (4) above[6]. Complementizers invariantly mark the right edge of Akkadian dependent clauses.

3.2. The case of Sogdian: a Middle Iranian language

The Sogdian language was a Middle Eastern Iranian SOV language spoken in the region of Sogdiana, located between contemporary Uzbekistan and Tajikistan (Benveniste 1929; Gershevitch 1954; Sims-Williams 1989; Yoshida 2009). The Sogdian script developed from the Aramaic. It was first documented around the 4th century AD and it was attested until the 13th century. Sogdian showed a peculiar syntactic feature, namely the presence in every clause (roots and subordinates) of an enclitic complementizer (*əti*, *-ti*), encoded in a

[6] The example in (6) also demonstrates that it is impossible, given the diachronic data made available here, to consider it as a *headless* relative (see Deutscher 2001 for further examples and relevant extended discussion).

Wackernagel-like second position, to which other enclitics can be added (see Heston 1976; Sims-Williams 1989; Yoshida 2009; Yakubovitch 2002; 2005). Consider the example below in (7a,b,c).

(7) a. čan šē satu əfsānx zāy əti āγatim paraw mā0-*əti* wānō patīγōš
from 3 100 mile land COMP I.came because-COMP thus I.heard
'I have come from the place 300 miles far (from here), because 1 heard thus …'
(Yoshida 2009: 320)

b. xa əspiyi-ti kutsār wāčām
the horses-COMP where I.send
'Where shall I send the horses?' (Yoshida 2009: 317)

c. ər-ti sāt wispu ark γərβām
&-COMP whole all work 1.know
'I know every kind of work.' (Yoshida 2009: 308)

In (7a), we find a complementizer after the first syntactic unit (specifically a PP) in the matrix clause and a second one signalling the onset of an adverbial clause expressing cause (in another classic Wackernagel position); in (7b) we find a topicalized DP (*xa əspiyi*) before the complementizer in an interrogative sentence, and unexpectedly in (7c) we see an overt second-position[7] complementizer in a sentence with the default indicative (evidential) mood. This latter fact represents a typological *rarum* (to my knowledge only Somali[8] - as

[7] Heston (1976) shows that the Wackernagel position of complementizer is not a rule without exception in Sogdian. For instance, in Sogdian, purpose clauses are linked to the matrix clause exclusively by the complementizer *əti*, without any other particle/word preceding it. A *quasi* Wackernagel position for clitics, which can optionally float within clauses, seems to be a ubiquitous feature in East Iranian languages (Ershler 2010).

[8] Lecarme (1999) examines the distribution of focus particles (*baa/ waa*) in Somali, showing that their distribution cannot be accounted for in a principled manner only considering their "pragmatic" value. Hence, for Lecarme these items

described in Lecarme 1999 - has comparable overt complementizers in *plain* matrix clauses), which tended to disappear in late (Christian) Sogdian manuscripts (see Yoshida 2009, for detailed discussion).

The crucial fact here is that *əti*, *-ti* complementizers are obligatorily found in Sogdian relative clauses, in which relative pronouns (delimiting clausal edges) are invariantly followed by (attached to) an overt complementizer. The particle *əti*, *-ti* is adverbial in nature and originated from Avestan *ūiti*, *uiti* 'so, thus' (cf. Yakubovitch 2005: 203). Relative pronouns normally combine with the complementizer *əti*, *-ti*, leading to sequences such as *kē əti*, *kē-ti* "who, which" *ču əti*, *ču-ti* "which," *ku əti* "where," *čānō əti* "how" (Sims-Williams 1989; Skjærvø 2007). See the examples below in (8), retrieved from Classical Sogdian (Yoshida 2009: 318).

(8) a. ōnō martī wiru kunāt ke-ti-šī xwati rēžāt
that man husband make.SUBJ.3SG REL-COMP-her herself please.SUBJ.3SG
'she shall make that man her husband who might be pleasing to her.'

b. yunē čakraβart čintāmani dārani ke-ti əzu parβerāt-δārām
this Cakravarti Chintamani spell REL-COMP I explain-PRET.1SG
'this Chakravart Chintamani spell which I explained'.

c. əwən šē ratne əkya-ət-mī sāče xu pāš pāt
the three jewel REL-COMP-me be-fitting.OPT.3SG the honour observe.INF
'three jewels to which it may be fitting for me to pay honour.'

d. xānd āfrītēt ōtākt ke əti-san sāk əti patšmār nēst
those blessed places REL-COMP-their number and number is-not
'those blessed places whose number and counting do not exist.'

e. xānd āfrītēt ōtākt ku-əti waδēδ mēnand xa roxšnda βaγīšt

---

cannot be considered mere discourse markers and she argues that *baa/ waa* items are overt matrix complementizers (in the indicative/ evidential mood).

those blessed places where(REL)-COMP there stay.3PL the light gods

'those blessed places where the light gods are staying.'

The relative clauses above are always signalled by a cataphoric demonstrative pronoun in the initial position of the matrix clause (see also Provasi 1997). It is important to notice that the relative pronoun can be inflected for Case/case, as shown, for instance by the oblique pronoun *əkya* in (8c). Nevertheless *ke* - originally a nominative singular form applied to animate nouns - tended to be generalized, in later stages of Sogdian (i.e. in Christian Sogdian, for which see Sims-Williams 1985) to all the contexts and appears as an invariant relative particle.

Moreover, again we have pronouns and complementizers joint together in order to signal clause boundaries in Sogdian. This empirical fact, together with the Akkadian data given in the previous section, consistently undermines the foundation of the proposal according to which pronouns are complementizers, on a cross-linguistic basis.

3.3 Further diachronic evidence from Germanic languages

Given the fact that Kayne's (2010b) argumentation is mainly supported by data from English, evidence from Germanic languages (retrieved once more from Deutscher 2001) appears to be crucial in order to reject the proposal of an identity of complementizers and pronouns. Old Icelandic, for instance, had an invariable particle, *es*, which "could introduce relative clauses on its own" (Deutscher 2001: 415). See the example in (9) below.

(9)	vóro	þar	þeir	men	[es	Norðmenn	kalla	Papa]
	there-were	there	those	men.$_{\text{HEAD}}$	$_{\text{COMP}}$	Northmen	call	Papa

'there were there those men that Northmen call Papas' (Stong-Jensen 1977: 14)

In Old Icelandic, however, there was a type of relative clause headed by a case-inflected demonstrative pronoun as shown in (10a,b).

(10) a. ok blótaðe hrafna þriá þá [es hánom skylldo leið
and worshipped ravens three.$_{ACC.M.PL}$ those.$_{ACC.M.PL}$ [$_{REL}$ him should way
visa]
show]
'and he worshipped three ravens, those that should show him the way'

(Stong-Jensen 1977: 13)

b. ok fiórer tiger nauta með henne þeirra [es aoll vóro frá
and forty cattle$_{.GEN.N.PL}$ with her those$_{.GEN.N.PL}$ $_{REL}$ all were from
henne komen]
her come
'and forty cattle with her, those that were all come from her' (Stong-Jensen 1977: 13)

Notice that in (10a,b) the pronoun agrees (as in Old Akkadian) in Case with the antecedent in the main clause. Notice also that constructions like those showed for Old Icelandic in (9) and (10a,b) are attested in Old English, with the invariable particle *þe/ðe* roughly corresponding to Icelandic *es* and that such a pattern can also be argued for Gothic, with the invariable particle *ei* (see Suárez-Gómez 2006; Harbert 1992).
In our view, those items were the prototypal complementizers-subordination markers, and subordinate clauses were originally headed by light nouns/ pronouns acting as "bridges of features" between matrix and

dependent clauses.

3.4 Synchronic evidence from West Iranian languages

Synchronic evidence of the disjunction of complementizers and pronouns can be found in West Iranian languages. In these languages there is a sort of *multipurpose* particle in the noun phrase (basically acting as a *linker* to modifiers), called Ezafe, which gives rise to the *Ezafe construction* (see e.g. Ghomeshi 1997; Samvelian 2007; Karimi 2007, among others for detailed descriptions and analyses), quite reminiscent of the Akkadian (Semitic) *construct state* construction described above. See the examples in (11) from Persian and Tajik for a set of (linking/relational) functions accomplished by the Ezafe morpheme (which appears here as the unstressed vowel *e-*; *-i* attached to the head-noun), adapted from Windfuhr and Perry (2009: 473):

(11) PREDICATE = asman-e abi / losmon-i- obi 'blue sky'; *Persian/Tajik*

EVENT = ruz-e enqelabl / ruz-i inqilob 'the day of revolution' – 'revolution day';

POSSESSOR = ketab-e Hasanl / kitob-i Hasan 'the book of Hasan' – Hasan's book';

AGENT = kar-e mardom / kor-i mardum 'the work of people';

PATIENT = qatl-e Hoseyn / qatl-i Husayn 'the murder of Hoseyn';

PURPOSE = daru-ye gerip / daru-yi gripp 'flu medicine';

GOAL = rah-e Tehran / roh-i Dusanbe 'the road of / to Tehran, Dushanbe';

LOCATION TIME = mardom-e inja, emruz / mardum-i injo, imruz 'people of today';

ORIGIN = ahl-e Tehran / ahl-i Dusanbe 'inhabitant of Tehran, Dushanbe';

SOURCE, CAUSE = ab-e cesme / ob-i casma 'water of well' - well-water',

SUBSTANCE = gombad-e tala / gunbad-i-talo 'dome of gold';

ELEMENT → anbuh-e sa 'el-an / anbuh-i so 'ii-on ‘crowd of pilgrims’;

PART → do najar-e an-ha / du nafar-i on-ho ‘two (persons) of them’.

It has been demonstrated that the Ezafe morpheme originates from the Old Iranian demonstrative pronoun *hya* (*tya-*) (see Meillet 1931; Haider and Zwanziger 1984; Bubenik 2009) and it can crucially be used to introduce a relative clause.[9] Notice that in Standard Contemporary Persian, (restrictive) relative clauses are introduced by the morpheme *–i*, which can be considered an allomorph of the Ezafe morpheme *-e* (Kahnemuyipour 2000; Windfuhr and Perry 2009). See the examples below in (12) from the Bahdînî dialect of Kurdish.

(12) a. tišt̕-ē [min day-av hinga]$_{RC}$

thing-EZ.PL 1SG.OBL give.PST-POSTV 2PL-OBL

‘The things I gave to you.’ (Haig 2011: 366)

b. aw ḱas-ē [awwilī b-ē-t]$_{RC}$

DEM person-EZ.M first SUBJ-come-3SG.PRES

‘that person who shall come first.’ (MacKenzie 1961:203)

c. cîrok-a [ku wî ji min re got]$_{RC}$

story-EZ.F COMP 3S.OBL ADP 1SG.OBL ADP say.3SG.PST

‘The story [that he told me].’ (Haig 2011: 366)

The examples in (12a) and (12b) show a relative construction with the head noun linked to the dependent

[9] The Ezafe morpheme in Iranian languages is arguably quite similar to the Amharic affix *yä-* (see e.g. Ouhalla 2004)

clause only by means of the Ezafe morpheme. Nevertheless, in most dialects of Kurdish (Haig 2011: 366) the head noun is marked with the Ezafe (that notably, as shown in the examples above, inflects for gender and number) and additionally, the relative clause is introduced by the complementizer *ku,* as can be seen in (12c). Hence, we can interpret the simultaneous presence of the Ezafe (historically derived, as we have seen, from a demonstrative pronoun) and a complementizer as evidence for a layered structure in which *light* nouns/ pronouns autonomously select lower clauses and as additional clear evidence against the idea that complementizers are pronouns.

Similar facts emerge from the investigation of Zazaki, a West Iranian language, spoken primarily in eastern Turkey. In Zazaki the complementizer is *-k* (Todd 2008: 111) and crucially, introducing relative clauses, it is suffixed to the *distant deictic* demonstrative pronoun (inflected for gender and number), which in turn is attached to the head-noun of the relative clause. Notice that, even interpreting the demonstrative pronouns cliticized to the head noun as *Ezafes* (see Paul 1998; Larson and Yamakido 2006), given the aforementioned diachronic shift {demonstrative ⇒ Ezafe}, the proposed pattern is not significantly altered. See the examples below in (13).

(13) a. o camêrd-o-k pi ci merdo nino
that man.DEM.MASC.SG-COMP father his died not-comes
'The man whose father died is not coming'. (Todd 2008: 111)

b. e camêrd-i-k niyamey cana werd
those man.DEM.PL-COMP not-came place-other ate
'Those who didn't come ate somewhere else' (Todd 2008: 111)

4. Complementizers *on their own*

In this section, I will provide evidence against the idea that complementizer are pronouns on the basis of empirical facts that show that complement clauses may be introduced by items that are not determiner-like elements. Indeed, cross-linguistically (cf. Ranson 1988; Heine and Kuteva 2002 among many others), there are many grammatical sources (e.g. *verba dicendi*, purpose markers, verbs roughly meaning 'resemble', adverbials meaning 'so, thus', etc.) responsible for the origin of complementizers.

What is crucial is the fact that many languages use different markers to signal relative clauses and complement clauses. Just to give an example, we will illustrate here the case of Tukang Besi, an Austronesian language spoken in the Tukangbesi Islands in south-east Sulawesi in Indonesia, described in Donohue (1996) and (1999) (see also Klamer 2000). There are three major types of external[10] relative clauses in Tukang Besi (cf. Donohue 1999: 367): (i) subject relative clauses (14a), which involve the use of a subject infix (SI) -[*um*]- and the dropping of subject prefixes on the verb; (ii) object relative clauses (14b), which involve an object prefix (OP) [*i*-] in place of subject prefixing; (iii) instrumental relative clauses, in which the verb is not affixed in any special way (actually, the lack of subject prefixes signals the subordinate nature of the verb). The examples below are taken from Donohue (1999: 368).

(14) a. Eaka no-koruo [na mia [b[*um*]alu te pandola]$_{RC}$]$_{KP}$ *Subject relative*
not 3R-many NOM person buy.SI CORE[11] eggplant
'not many people by eggplant' (Lit., 'the people who buy eggplants are not many.')

b. O-koruo [na kengke [*i*-hembula di Wanse]$_{RC}$]$_{KP}$ *Object relative*
3R-many NOM cloves OP-plant OBL Wanci
'there are a lot of cloves grown on Wanci' (Lit. 'the cloves that are grown in Wanci are many.')

[10] Tukang Besi also allows internally headed relative clauses, which have a (necessarily) nominative head inside the relative, and the whole construction serves as the nominative (subject or object) construction in both the matrix and the relative clause (cf. Donohue 1999: 367-368).

[11] CORE stands for a case-marking article for a "core argument that is within the clause but not in nominative case" (cf. Donohue 1998).

c. no-moboha [na palu-su [hook-lobu te poda]$_{RC}$]$_{KP}$ *Instrument relative*

3R-heavy NOM hammer.1SG.POSS FACT-straight CORE knife

'my finishing hammer for knives is heavy.'

(Lit. 'the hammer that is used to make knives straight is heavy.')

Schematically the structure of Tukang Besi externally headed relative clauses is given below (cf. Donohue 1999: 368):

(15) *Subject relative*: DET HEAD [verb + *infix*–[um]- (DET CORE NOMINAL)] $_{RC}$

Object relative: DET HEAD [*prefix*-[i] + verb (GEN CORE NOMINAL)] $_{RC}$

Instrumental relative: DET HEAD [verb (DET CORE NOMINAL)] $_{RC}$

On the other hand, complement clauses are introduced by the grammatical element *kua*, which crucially is not of pronominal origin, being derived from a quotative verb (cf. Klamer 2000). See the example below.

(16) a. No-'ita-'e kua no-kanalako te osimpu

3R-see-3OBJ COMP 3R-steal CORE young coconut

'She saw that he had stolen the coconut' (Klamer 2000: 70)

b. No-potae-m(o) kua no-motindo'u na amai

3R-say-PF COMP 3R-thirsty NOM they

'They said that they were thirsty.' (Klamer 2000: 81)

It is clear from the examples above in (14) and (16) that complement clauses and relative clauses in Tukang Besi involve different marking strategies. This fact alone, however, does not radically weaken Kayne's proposal (i.e. it is still possible to hypothesize a silent D-related item in a layered complementizer zone).

Thus, let's turn now to a crucial point of our discussion. Take the example in (17), retrieved again from Akkadian.

(17)	[kīma	še'-am	lā	imur-u]	[atta	tīde]
	COMP	barley-ACC	NEG:DEP	3SG.received-COMP	2M.SG-NOM	2M.SG-know

'You know that he didn't receive the barley'. (Deutscher 2009b: 58)

As fully expected,[12] the verbal complementizer/subordinator *-u* is in clause final position. However, there is another complementizer-like element in (17), the word *kīma*, which, following Deutscher (2000), is composed of a preposition with a very wide (fuzzy) semantic range, *kī-,* and an emphatic particle, *-ma* (thus, not a determiner-like item). It is plausible to assume the item *kīma* and the suffix *–u*, in cartographic terms, as the two poles, namely *Finiteness* and *Force*, of a stretched complementizer field, along the lines of Rizzi's (1997) original proposal.

Notice that it is not difficult to derive, in an antisymmetric fashion (Kayne 1994), the sandwiched structure {FORCE-CLAUSE-FIN} of (3), if we assume that the whole of the clause has moved to a landing [Spec,XP] position in the complementizer field. Notice also that the existence of languages with two subordinators/ complementizers, instantiated at the same time in a dependent clause, is another empirical fact that weakens Kayne's (2010) proposal (but see Kayne 2010: 223-224 for a solution that resort to possible covert *cleft*[13]

[12] The fact that the subordinator *-u* can act as a complementizer is supported by the well-known fact that OV languages in which complement clauses precede the verb normally have clause-final complementizers, rather then clause-initial complementizers.

[13] Kayne (2010b) shows that e.g. non-standard French allows relatives like 'la fille à qui que tu as parlé' (the girl to who what you have spoken). According to Kayne's perspective, such a sentence contains two relative pronouns (namely, there are no complementizers distinct from pronouns). Kayne's idea is that these kinds of relative with a "doubly-filled Comp" are reduced clefts. For instance, the French example given here would be derived from something like: 'c'est à elle que tu as parlé' (it is to here what you have spoken), with the "erosion" of *c'* (it) and *est* ('is'). In my opinion, this idea is quite weak. In particular, it has been reported (cf. Maling 1978) that Middle English allowed doubly-filled appositive (non restrictive) relatives, like, for examples: 'His brother, *which that* seven yeer was of age…', 'Aurelius, *which that* yet despeired is…', I, *which that* am the sorwfulleste man...' (Maling 1978: 721). For me, it is hard to see how an appositive

structures). In particular, here at least one of the two complementizers *must* be pronominal in nature, but neither *kīma* nor *–u* are likely to be determiners/pronouns.

Many other languages realize double complementizers in subordinate clauses. For instance, Paoli (2007) has shown that two north Italian dialects – Turinese and Ligurian – realize the "double *che*" construction. See the examples in (18) and (19).

(18) Gioanin a spera *che* Ghitin *ch'* as në vada
John SCL hope.PRES.3SG that Margaret that SCL+RFL PART go.SUBJ.3SG
tòst
soon
'John hopes that Margaret leaves soon.' *Turinese* (Paoli 2007: 1058)

(19) A Teeja a credda *che* a Maria *ch'* a parta
the Teresa SCL believe.PRES.3SG that the Mary that SCL leave. SUBJ.3SG
'Teresa believes that Mary is leaving.' *Ligurian* (Paoli 2007: 1058)

It is possible to assume, in a cartographic perspective (Cinque and Rizzi 2010), that the first *che* is hosted in *Force*, while the second *che* occupies *Finiteness*. Notice that the second *che* is overt only if the verb in the dependent clause is in subjunctive mood. The explanation given by Paoli (2007) is basically that the lower *che* moves from MoodP, in a stretched IP field (see Pollock 1989; Belletti 1990; Cinque 1999), to FinP to check

relative can be related to a cleft construction. The relation between a cleft and a restrictive relative is surely possible (e.g. English *it-clefts* have been claimed to be derived via extraposition of the restrictive relative clause, see Akmajian 1970 and Percus 1997, among many others). But a relation between clefts and appositive relative is not possible (see e.g. Sornicola 1989: 345-347 for relevant data on English and Romance Languages). Also, contra Kayne (1994) a unified account of restrictive and appositive relatives appears to be hardly possible, namely a promotion/raising analysis for appositive is either blocked (cf. Emonds, 1979) or it can operate only under a &P (coordination phrase), *via* an abstract NP (de Vries 2006; see also Del Gobbo 2007; Cinque 2010).

[+MOOD] features.

The phenomenon of double complementation, as said above, is not uncommon cross-linguistically. It is also attested in a set of East Iranian languages. See the example below in (20) from Shughni, which is a language spoken in West Pamir (Edelman and Dodykhudoeva 2009).

(20) yid-ik-u corik idi vegii-y-um di ar bozor ca wint
this-very-he man COMP yesterday-I him at bazaar COMP saw
'this is a man whom I saw at the bazaar yesterday' (Edelman and Dodykhudoeva 2009: 812).

In particular, in Shughni, (restrictive) clauses have the antecedent marked by pronominal forms with the particle *(y) ik*-, followed by the complementizer *idi* (or *idê*), with an (optional) lower complementizer / subordinator item, *ca*. Notice that in Shughni the complementizer *ca* is clause-internal, and this is a feature extremely rare cross-linguistically, but widespread within East Iranian languages (from Ossetic, spoken in the Central Caucasus to Wakhi, spoken along the Wakhan River in Tajikistan and Afghanistan; see Erschler and Volk 2010).

Further evidence comes from Creole languages. In particular, Veenstra (1996; 2011; see also Damonte 2002; Aboh 2006; Demonte and Fernández Soriano 2009) has shown that Saramaccan, a creole language spoken in Suriname, allows complement clauses with two complementizers. See the example below in (21a) and its possible representation in (21b).

(21) a. I taki tàa fu a naki di daga.
You said that(decl) fu he hits DET dog
'You told/asked him to hit the dog.' (Veenstra 1996: 156)

b. . . . [$_{\text{FORCEP}}$ tàa [$_{\text{TOPP}}$ . . . [$_{\text{FOCP}}$ . . . [$_{\text{FINP}}$ fu [$_{\text{TP}}$ a naki di daga]]]]]

The complementizer *tàa* is equivalent to the verb 'to say' in Saramaccan and the particle *fu* (derived from English *for*, which notably sometimes can act as a complementizer in non finite clauses) can introduce the irrealis mood or have a deontic value[14].

Again, as for the case of Akkadian, we have in (21) two complementizers, *tàa* and *fu* in a complement clause and neither of them is pronominal in nature. Note that similar facts have been described for Guyanese Creole in Gibson (1986), for the Jamaican Creole in Durrleman-Tame (2008) and for Gungbé (a dialect of Gbe spoken in Togo) in Aboh (2006). These empirical data represent a patent weakness of Kayne's hypothesis.

Finally, consider the fact that many scholars working on African American English (see e.g. Frajzyngier 1984; Holm 2003; Spears 2008) have noted the use of the complementizer *say*. A classical example is given below:

(22) They told me *say* they couldn't get it (Rickford 1977: 212, *apud* Frajzyngier 1984: 207).

Furthermore, it seems that in the Gullah dialect (creole), spoken along the coastline of the Southeastern U.S. (cf. Dillard 1972; Mufwene and Gilman 1987) the complementizer *say* occurs very frequently and with a wide variety of matrix verbs (e.g., I hear say-, He think say-, We know say-). Frajzyngier (1984) demonstrated with convincing arguments that the complementizer *say* in African American English is a loan translation from precisely the English verb 'to say'.[15] If Frajzyngier is right and *say* stands for *that* in African American English, it stands to reason that we need to admit a possible non-pronominal origin for this item.

[14] In particular, Aboh (2006) claims that there are two different *fu* particles : the first *fu*, generated as Force° (which is incompatible with the complementizer tàa because possibly they are in competition for the same position) and the second (deontic) *fu*, which is generated in Fin° (as suggested by the fact that it appears to the right of declarative *táa*). See also Demonte and Fernández Soriano (2009: 27) for relevant discussion and examples.

[15] A possible alternative explanation (the one against which Frajzyngier 1984 argued) is that this complementizer derives from the Akan word *se,* 'that' (cf. Bickerton 1975).

6. Discussion

Our investigation shows that an identity of relative/ demonstrative pronouns and complementizers/ subordinators is not tenable on the basis of cross-linguistic data and diachronic facts. Nevertheless we are not arguing here against a syntactic model which tries to derive relative and complement clauses in a similar fashion: what emerges from this study suggests a layered uniform model. It seems that there is a *plethora* of nominal features (i.e. Case markers; number features, etc.) above (or adjoined to) complementizers and this kind of features are likely to be morpho-syntactic exponents of pronouns/ light nouns. It seems specifically that in some languages (we have seen here the case of e.g. Sogdian) pronouns and complementizers *conflate*. The relevant question is now: why is this kinds of features sharing possible? Manzini and Savoia (2003) have given an explanation, claiming that (at least) Romance complementizers are essentially *nominal* elements, taking embedded clauses as their complement. The main trigger for this idea is the empirical fact that Italian word *che* can be employed both as a *wh-item* and as a complementizer, as shown in (23a,b).

(23) a. *Che* giocattolo vuoi per Natale?
what toy want-$_{2SG}$ for Christmas?
'What toy do you want for Christmas?'

b. So *che* vuoi dormire
know$_{-1SG}$ that want-$_{2SG}$ sleep
'I know you want to sleep.'

Roussou (2010: 587) summarizes the aforementioned idea very well:

'Suppose then that there is no categorial distinction between the complementizer and the demonstrative/relative pronoun that or

che. In both cases, we are dealing with a single lexical item which has the option of taking different types of variables as its complement, with no consequences for its categorial status. If this is correct, nominal complementizers of the above kind can project independently in the clause structure, without being the realization of a C position. According to Manzini and Savoia […] the C head(s) is part of the extended projection of the verb, and as such can only be reserved for verbal elements; the nominal complementizer on the other hand is merged outside the embedded clause'.

Manzini and Savoia's (2003) claim has strong empirical grounds. It is based on a huge set of micro-comparative data from Italian dialects and Arbëreshë, collected in Manzini and Savoia (2005). The idea that complementizers are nominal-like elements basically provides support to the following considerations: (a) What we are used to label a complementizer (at least in Romance or Germanic languages) is actually something else and stands out (above) the embedded (real) complementizer. Let's call this once-was-complementizer, λ element for expository purposes; (b) these λ elements are *light* nouns/ pronouns and this fact motivates a set of nominal features above them; (c) λ elements can be instantiated by demonstratives, case particles etc. due to *grammaticalization* pressure: generic λ elements serving as nominal complements are grammaticalized to markers of complement clauses and, eventually, use relevant features in their extended projections as clause boundary markers; (d) real subordinators/ complementizers (those linked to the extended projection of the dependent verb) are invariantly selected by a (possibly covert) λ element.

I give below two examples of the widespread grammaticalization process [THING > COMPLEMENTIZER] both taken from Heine and Kuteva (2002: 295), from Japanese (see Kuno 1973) and the Kuliak language *Ik*, spoken in North-eastern Uganda (see König, 2002; 2008) that motivates the idea expressed above.

(24)	Ano	hito	ga/no	hon-o	kai- ta	koto	ga	yoku	sirarete	iru.
	that	person	NOM/GEN	book-ACC	write-PART	COMP	NOM	well	known	is

'That that person has written a book is well known.' (Kuno 1973); *koto* ≈ thing

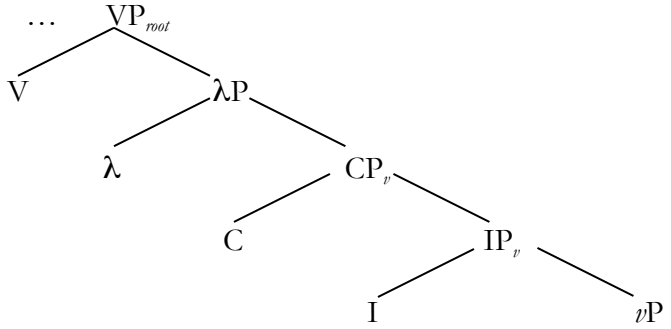
(25) n'tá ye- í- í kɔrɔɓá-a itiyá- id-[a].

NEG know- 1SG NEG what- NOM do- 2SG-a

'I don't know what you do.' (König 2002); *kɔrɔɓá* ≈ thing; matter

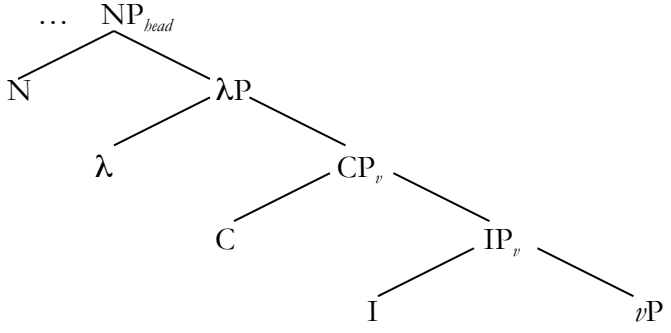
What is crucial for the present discussion is that Akkadian demonstrative pronouns, Sogdian relative pronouns conflated with complementizers, the sequences Ezafe/demonstrative-complementizers in West Iranian languages an so on are assumed to be manifestations of λ elements originally heading (on their own) a subordinate clause, which is in turn independently marked by a complementizer, connected to the inflectional field (the extended projection) of the dependent verb. Now, we may sketch a rough tree-structure as the one in (26a) for a *plain* finite complement clause and, in parallel, (26b) for a *plain* (i.e. restrictive) relative clause.

(26) a.



…

b.



…

As you can easily see from the rough representation above, I argue for a strong parallel between finite complement clauses and relative clauses, just as proposed by Kayne (2009; 2010a,b) and Arsenijević (2009). The crucial difference is that - for both relative clauses and complement clauses - I claim, on the basis of the typological and diachronic data collected here, that a light (unpronounced) noun/ pronoun is always required to license any kind of subordinate (finite) clauses, which in turn have to be independently marked by complementizers (for evidence of a nominal nature of *wh*-operators in English see also Caponigro and Pearl 2009).

Notice that a light nominal object introducing a complement clause is already presupposed by Arsenijević's (2009: 43) analysis, which - following Hale and Kayser (1993; 2002)'s account of unergative verbs - proposes for clauses selecting a subordinate complement such as the one in (27a), an underlying structure of the type in (27b).

(27) a. John claimed that Mary came late;

b. ⇒John [$_{VP}$ made [$_{DP}$ claim [$_{\text{COMPLEMENT CLAUSE}}$ that Mary came late]]]

In other words, in this work, I basically propose to extend to (many instances of) subordination, an underlying process of *nominalization*:[16] the structures roughly depicted above in (26a,b) show that *light* nouns are necessary triggers to subordination/ relativization/ clausal recursion[17] (see for a similar idea Müller and Sternefeld 1995). Evidence that this analysis is on the right track comes, for instance, from Polish and Old Italian. Citko (2004)

[16] I refer to Malchukov (2004) for an exhaustive description of nominalization strategies/ processes in a typological perspective.

[17] It is interesting to note that our proposal goes against Kayne's (2009) proposal that nominals do not take complements (i.e. they do not project).

has shown that Polish allows relative clauses[18] headed by "morphologically light" items, as represented in (26b).

(28) a. Jan czyta *to*, co Maria czyta
Jan reads this what Maria reads
'John reads what Mary reads'.

b. Dam ci *coś*, co ci pomoże
give-1SG you something what you help
'I will give you something that will help you'.

c. Nie wiem *nic*, co by ci mogło pomóc
not know-1SG nothing what COND you could help
'I know nothing that could help you'.

d. *Wszystko*, co mogło się zdarzyć się zdarzyło
everything what could self happen self happened
'Everything that could have happened has happened'. (Citko 2004: 98-99)

As you may see above, in addition to demonstratives (28a), also indefinites (28b), negative indefinites (28c), and universals (28d) can function as *light* nominal heads in Polish.

In Old Italian, complement clauses can be introduced by the light noun *cosa* 'thing', *plus* the complementizer *che* (cf. Benincà and Cinque 2010: 499). In analogous contexts, Contemporary Italian would allow the complementizer only. See the examples below.

[18] Citko (2004: 97) has shown that this syntactic fact is not limited to Polish with examples from German, Dutch, French and Spanish. Also in Italian light-headed relatives are a widespread phenomenon (e.g. 'Gianni legge ciò che gli piace', lit. Gianni reads what that to-him likes, 'Gianni reads what he likes').

(29) a. dà per consiglio *cosa* che le cose grandi si
give-3SG for advice thing that the things big CL.IMP
debbian seguitare
must-3PL.SBJ continue
'(He) advises that big things must go on.'
[Bono Giamboni, *Fiore di Rettorica*, (red. Beta), ch. 78, par. 10-11)]

b. Or addivenne *cosa*, che […] egli si pensò […]
Now happen-3SG.PST thing that he CL-IMP think-3SG.PST
'Now it happens that he thought.'
Lit. 'Now, it happened thing that he (himself) thought…'
[*Tesoro volgarizzato* (ed. Gaiter), vol. 1, book 2, ch. 28, p. 287.]

Thus, the Old Italian examples given in (29) seem to confirm the validity of the model sketched in (26a). Further notice that this proposal could be very appealing on typological grounds. There are various language families (e.g. Tibeto-Burman languages, see Genetti 2011; Watters 2002, or Mongolic languages, for which you may see Janhunan 2003) that have nominalization (and *nominalizers*) as the only available strategy for clausal subordination/ relativization (see also Lehmann 1986; Cristofaro 2003; Aikhenvald 2008).

It is arguable that grammaticalization processes (integration, condensation, exaptation and so on; see Lass 1997; Givon 2009) tend to hide the structures shown in (26a,b). For instance, Akkadian demonstrative pronouns were, at the very beginning, independent case inflected heads of a relative clause and then, became - on the surface - mere markers of the *left edge* of the dependent clause.

Possibly, cross-linguistically there is a strong tendency to *spell-out* with a single word/morpheme *stretches* of adjacent nodes (in a possible nanosyntactic fashion for which see Starke 2009; 2011; Caha, 2009): patterns of *fusion* emerge and λ elements can be (con)fused with verbal complementizers.

At any rate, there appear to be quite clear indications that functional architectures as those depicted in (26a,b) (possibly even far more layered) hold as a Universal Grammar constraint, which in turn forces a universal structure of Merge (in the sense of Cinque 2005, who derives from a unique underlying *stretch*, the possible patterns of noun phrases' order in natural languages; see also Cinque 2009:168-171).

7. Conclusion

In this work I have argued against the view that there is no syntactic (grammatical) difference between complementizers and demonstrative/ relative pronouns. In the discussion, I have shown that the simultaneous presence of demonstratives/ relative pronouns and complementizers signalling clauses' edges in many languages is the primary evidence that (light) nominal elements are possibly required to trigger phenomena of clause linkage.

References

Aboh, E. O. 2006. "Complementation in Saramaccan and Gungbe: The case of C-Type modal Particles". *Natural Language & Linguistic Theory* 24. 1-55.

Aghaei, B. 2006. The syntax of *ke*-clauses and clausal extraposition in Modern Persian. (Doctoral dissertation, University of Michigan).

Akmajian, A. 1970. "On deriving cleft sentences from pseudo-cleft sentences". *Linguistic Inquiry* 1. 149–168.

Aikhenvald, A. Y. 2008. "Versatile cases". *Journal of Linguistics* 44. 565-603.

Arsenijević, B. 2009. "Clausal complementation as relativization". *Lingua* 119, 39-50.

Belletti, A. 1990. *Generalized verb movement*. Torino: Rosenberg & Sellier.

Benincà, P. and G. Cinque. (2010). "La frase relative". In: Renzi, L. and G. Salvi (eds.), *Grammatica dell'italiano antico*. Bologna: il Mulino. 469-507.

Benveniste, É. 1929. *Essai de grammaire sogdienne. Deuxième partie: morphologie, syntaxe et glossaire*. Paris: Geuthner.

Bianchi, V. 1999. *Consequences of Antisymmetry: Headed Relative Clauses*. Berlin: Mouton de Gruyter.

Bickerton, D. 1975. *Dynamics of a Creole System*. Cambridge: Cambridge University Press.

Borer, H. 1984. *Parametric Syntax: Case Studies in Semitic and Romance Languages*. Dordrecht: Foris.

Bresnan, J. W. 1970. "On complementizers: toward a syntactic theory of complement types." *Foundations of Language* 6. 297-321.

Bubenik, V. 2009. "The rise and development of the possessive construction in Middle Iranian with parallels in Albanian". In: Bubenik, V., J. Hewson and S.R. Rose (eds.), *Grammatical change in Indo-European languages*. Amsterdam: John Benjamins. 89-101.

Buccellati, G. 1997. "Akkadian". In: Hetzron, R (ed.), The Semitic Languages. London: Routledge. 69–99.

Caha, P. 2009. The Nanosyntax of Case. (PhD dissertation, University of Tromsø).

Caponigro, I. and L. Pearl. 2009. "The nominal nature of when, where, and how: Evidence from free relatives". *Linguistic Inquiry* 40. 155–175.

Chomsky, N. 1977. "On Wh-Movement." In: Culicover, P. W., T. Wasow and A. Akmajian (eds.), *Formal Syntax*. New York: Academic Press. 71–132.

Cinque, G. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press.

Cinque, G. 2005. "Deriving Greenberg's universal 20 and its exceptions". *Linguistic Inquiry* 36. 315-332.

Cinque, G. 2009. "The fundamental left right asymmetry of Natural Languages". In: Scalise, E. Magni and A. Bisetto (eds.), *Universals of Language Today*. Dordrecht, Springer. 165-184.

Cinque, G. 2010. "Toward a Unified Theory of Relative Clauses". Hand-out of a talk given at the University of Essex, 7-8/07/2010.

Cinque, G. and L. Rizzi. 2010. "The cartography of syntactic structures". In: Heine, B. and H. Narrog (eds.), *The Oxford Handbook of Linguistic Analysis*. Oxford: Oxford University Press. 51-65.

Citko, B. 2004. "On Headed, Headless, and Light-Headed Relatives". *Natural Language & Linguistic Theory* 22. 95-126.

Cristofaro, S. 1998. "Grammaticalization and Clause Linkage Strategies". In: Giacalone Ramat, A. and P. J. Hopper (eds.), *The Limits of Grammaticalization*. Amsterdam: John Benjamins. 59-88.

Cristofaro, S. 2003. *Subordination*. Oxford: Oxford University Press.

Damonte, F. 2002. "The complementizer layer in Saramaccan". In: Leonetti, M., O. Fernández Soriano and V. Escandell (eds.), *Current Issues in Generative Grammar*. Madrid: U. de Alcalá. 31-50.

Danon, G. 2008. "Definiteness spreading in the Hebrew construct state". *Lingua* 118. 872-906.

Del Gobbo, F. 2007. "On the syntax and semantics of appositive relative clauses." In: Dehé, N. and Y. Kavalova (eds.), *Parentheticals*. Amsterdam: John Benjamins. 173-201.

Demonte, V and O. Fernández Soriano. 2009. "Force and finiteness in the Spanish complementizer system". *Probus* 21. 23-49.

den Dikken, M. 2006. *Relators and Linkers*. Cambridge, MA.: MIT Press,

den Dikken, M. 2007. "Amharic Relatives and Possessives: Definiteness, Agreement, and the Linker". Linguistic Inquiry 38. 302–320.

den Dikken, M. and P. Singhapreecha. 2004. "Complex Noun Phrases and linkers". *Syntax* 7. 1–54.

Deutscher, G. 2000. *Syntactic Change in Akkadian: the Evolution of Sentential Complementation*. Oxford: Oxford University Press.

Deutscher, G. 2001. "The rise and fall of a rogue relative construction". *Studies in Language* 25. 405–422.

Deutscher, G. 2009a. "Nominalization and the origin of Subordination". In Givón, T. and M. Shibatani (eds.), *Syntactic Complexity*. Amsterdam: John Benjamins. 199–214.

Deutscher, G. 2009b. "The Semantics of Clause Linking in Akkadian". In: Dixon, R. M. W and A. Y. Aikhenvald (eds.), *The Semantics of Clause Linkage*. Oxford: Oxford University Press. 56-73.

Dillard, J. L. 1972. *Black English*. New York: Random House.

Dixon, R.M.W. 2009. "The semantics of clause linking in typological perspective". In: Dixon, R. M. W. and A. Y. Aikhenvald (eds.), *The Semantics of Clause Linkage*. Oxford: Oxford University Press. 1–55.

Dobrovie-Sorin, C. 2000. "(In)ndefiniteness spread: from Romanian genitives to Hebrew construct state nominal". In: Motapanyane, V. (ed.), *Comparative Studies in Romanian Syntax*. Oxford: Elsevier. 177–226.

Donohue, M. 1999. *A grammar of Tukang Besi*. Berlin: Mouton de Gruyter.

Donohue, M. I996. "Relative clauses in Tukang Besi: Grammatical functions and thematic roles". *Linguistic Analysis* 26. 59-73.

Durrleman-Tame, S. 2008. *The Syntax of Jamaican Creole: A Cartographic Perspective*. Amsterdam: John Benjamins.

Edelman, J. and L. Dodykhudoeva. 2009. "Shughni". In: Windfuhr, G. (ed.). *The Iranian languages*. London: Routledge. 773-786.

Emonds, J. 1976. *A transformational approach to English syntax*. New York: Academic Press.

Emonds, J. 1979. Appositive Relatives Have No Properties. *Linguistic Inquiry* 10. 211-243.

Erschler, D. 2010. "On optionality in grammar: The case of East Iranian almost Wackernagel clitics". Hand-out of a talk given at Syntax of the World's Languages IV, Lyon, 2010.

Erschler, D. and V. Volk. 2010. "On clause-internal complementizers in Ossetic and Pamiri". Hand-out of a talk given at Syntax of the World's Languages IV, Lyon, 2010.

Frajzyngier, Z. 1984. "On the Origin of Say and Se as Complementizers in Black English and English-Based Creoles." *American Speech* 59. 207-210.

Genetti, C. 2011. "Nominalization in Tibeto-Burman Languages of the Himalayan Area: A typological perspective". In: Yap F. H., K. Grunow-Hårsta and J. Wrona (eds.), *Nominalization in Asian Languages: Diachronic and Typological Perspectives*. Amsterdam: John Benjamins. 163–193.

Gershevitch, I. 1954. *A Grammar of Manichean Sogdian*. Oxford: Oxford University Press.

Ghomeshi, G., 1997. "Non-Projecting nouns and the Ezafe construction in Persian". *Natural Language and Linguistic Theory* 15. 729–788.

Gibson, K. 1986. "The ordering of auxiliary notions in Guyanese Creole". *Language* 62. 571-586.

Gil, D. 2011. "Genitives, Adjectives and Relative Clauses". In: Dryer, M. S. and M. Haspelmath (eds.), *The World Atlas of Language Structures Online*. Munich: Max Planck Digital Library, chapter 60. Available online at: http://wals.info/chapter/60. Accessed on 2012-01-21.

Givon, T. 2009. *The Genesis of Syntactic Complexity: Diachrony, Ontogeny, NeuroCognition, Evolution*. Amsterdam: John Benjamins.

Haider, H. and R. Zwanziger. 1984. “Relatively attributive: The "ezafe"-construction from Old Iranian to Modern Persian”. In: Fisiak, J. (ed.), *Historical Syntax*. Berlin: Mouton. 137-172.

Haig, G. 2011. “Linker, relativizer, nominalizer, tense-particle: On the Ezafe in West Iranian”. In: Yap F. H., K. Grunow-Hårsta and J. Wrona (eds.), *Nominalization in Asian Languages: Diachronic and Typological Perspectives*. Amsterdam: John Benjamins. 363–390.

Hale K. and S. J. Keyser. 2002. *Prolegomenon to a theory of argument structure*. Cambridge, MA.: MIT Press.

Hale K., Keyser, S. J. 1993. On argument structure and the lexical expression of grammatical relations. In: Hale, K. and S. J. Keyser (eds.), *The view from Building 20*. Cambridge, MA.: MIT Press. 53-109.

Harbert, W. 1992. “Gothic Relative Clauses and Syntactic Theory”. In: Rauch, I., G. Carr and R. Kyes (eds.), *On Germanic Linguistics: Issues and Methods*. Berlin: Mouton de Gruyter. 109–146.

Heine, B. and T. Kuteva. 2002. World lexicon of grammaticalization. Cambridge: Cambridge University Press.

Heine, B. and T. Kuteva. 2007. *The Genesis of Grammar*. Oxford: Oxford University Press.

Heston, W. L. 1976. Selected Problems in Fifth to Tenth Century Iranian Syntax. (PhD dissertation, University of Pennsylvania).

Holm, J. 2003. *Languages in Contact: The Partial Restructuring of Vernaculars*. Cambridge: Cambridge University Press.

Idiatov, D. 2010. “Person–number agreement on clause linking markers in Mande”. *Studies in Language* 34. 832–868.

Janhunen, J. (ed.). 2003. *The Mongolic languages*. London: Routledge.

Jespersen, O. 1924. *The philosophy of grammar*. London: Allen & Unwin.

Kahnemuyipour, A., 2000. Persian Ezafe construction revisited: evidence for modifier phrase. In: Jensen J. T. and G. van Herk (eds.), *Cahiers Linguistique d'Ottawa, proceedings of the 2000 annual conference of the Canadian Linguistic Association*. 173-185.

Karimi, Y. 2007. “Kurdish Ezafe construction: Implications for DP structure”. *Lingua* 117. 2159–2177.

Kayne, R. 1975. *French Syntax: The Transformational Cycle*. Cambridge, MA.: MIT Press.

Kayne, R. 1994. *The Antisymmetry of Syntax*. Cambridge, MA.: MIT Press.

Kayne, R. 2009. "Antisymmetry and the lexicon". *Linguistic Variation Yearbook* 8. 1-31.

Kayne, R. 2010a. "Some Preliminary Comparative Remarks on French and Italian Definite Articles". In: Kayne, R. (ed.), *Comparison and contrasts*. Oxford: Oxford University Press. 3-28

Kayne, R., 2010b. "Why Isn't This a Complementizer?" In: Kayne, R. (ed.), *Comparison and contrasts*. Oxford: Oxford University Press. 190-227.

Kiparsky, P. 2008. "Universals constrain change, change results in typological generalizations". In: Good, J. (ed.), *Linguistic universals and language change*. Oxford: Oxford University Press. 23-53.

Klamer, M. 2000. How report verbs become quote markers and complementizers. *Lingua* 110. 69–98.

König, C. 2002. *Kasus im Ik. Nilo-Saharan Studies, 16*. Cologne: Köppe.

Kuno, S. 1973. *The structure of the Japanese language*. Cambridge, MA.: MIT Press.

Larson, R. and H. Yamakido. 2006. "Zazaki "double Ezafe" as double Case marking". Paper presented at the Linguistic Society of America annual meeting, Albuquerque, NM. 8/1/2006.

Lass, R., 1997. *Historical Linguistics and Language Change*. Cambridge: Cambridge University Press.

Lecarme, J., 1999. "Focus in Somali". In: Rebuschi G. and L. Tuller (eds.), *The Grammar of Focus*. Amsterdam: John Benjamins. 275–309.

Lightfoot, D. W. 1979. *Principles of diachronic syntax*. Cambridge: Cambridge University Press.

MacKenzie, D. 1961. *Kurdish Dialect Studies, Vol. 1*. Oxford: Oxford University Press.

Malchukov, A. L. 2004. *Nominalization/ Verbalization: Constraining a Typology of Transcategorial Operations*. Munich: LINCOM.

Maling, J. M. 1978. "The Complementizer in Middle English Appositives". *Linguistic Inquiry* 9. 719-725.

Manzini, M. R. and L. M. Savoia. 2003. "The nature of complementizers". *Rivista di Grammatica Generativa* 28. 87–110.

Manzini, M. R. and L. M. Savoia. 2005. *I dialetti italiani e romanci: Morfosintassi generativa, Vol. I, II, III*. Alessandria: Edizioni dell'Orso.

Meillet, A. 1931. *Grammaire du vieux-perse*. Paris: Honoré Champion.

Mufwene, S. and C. Gilman. 1987. "How African is Gullah, and why?" *American Speech* 62. 120-139.

Müller, G. and W. Sternefeld. 1995. "Extraction, Lexical Variation, and the Theory of Barriers". In: Egli, U., P. E. Pause, C. Schwarze and A. von Stechow (eds.), *Lexical Knowledge in the Organization of Language*. Amsterdam: John Benjamins. 35-80.

Nichols, J., 1986. "Head-marking and dependent–marking grammar". *Language* 62. 56–119.

Noonan, M. 1985. "Complementation". In: Shopen, T. (ed.*), Language Typology and Syntactic Description. Vol. II*. Cambridge: Cambridge University Press. 42–140.

Ouhalla, J., 2004. Semitic relatives. *Linguistic Inquiry* 35. 288–300.

Paoli, S. 2007. "The fine structure of the left periphery: COMPs and Subjects. Evidence from Romance". *Lingua* 117. 1057-1079.

Paul, L. 1998. *Zazaki. Grammatik und Versuch einer Dialektologie*. Wiesbaden: Reichert Verlag.

Percus, O. 1997. "Prying open the cleft." In: Kusumoto, K. (ed.), *Proceedings of the 27th Annual Meeting of the North East Linguistics Society*. GLSA. 337–351.

Pollock, J-Y. 1989. "Verb Movement, Universal Grammar, and the Structure of IP". *Linguistic Inquiry* 20. 365–424.

Provasi, E., 1997. "Note sulle costruzioni relative in sogdiano". In: Ambrosini, R., M.P. Bologna, F. Motta and C. Orlandi (eds.), *Scribhtair a ainm n-ogaim. Scritti in memoria di E. Campanile* Pisa: Pacini. 1-25.

Ransom, E. N. 1988. "The grammaticalization of complementizers". *Berkeley Linguistics Society* 14. 364–374.

Rickford, J. R. 1977. "The Question of Prior Creolization in Black English." In: Valdman, A. (ed.), *Pidgin and Creole Linguistics*. Bloomington: Indiana Univ. Press. 190-221. Cited in Frajzyngier 1984.

Ritter, E., 1991. "Two functional categories in noun phrases: Evidence from Modern Hebrew". *Syntax and Semantics* 25. 37–62.

Rizzi, L. 1997. "The fine structure of the left periphery". In: Haegeman, L. (ed.), *Elements of Grammar: A Handbook of Generative Syntax*. Dordrecht: Kluwer. 281-338.

Roberts, I. and A. Roussou. 2003. *Syntactic Change: A Minimalist Approach to Grammaticalization*. Cambridge: Cambridge University Press.

Roussou, A., 2010. "Selecting complementizers". *Lingua* 120. 582-603.

Samvelian, P., 2007. "A (phrasal) affix analysis of the Persian Ezafe". *Journal of Linguistics* 43. 605–645.

Seiler, H-J. 1960. *Relativsatz, Attribut und Apposition*. Wiesbaden: Harrassowitz. Cited in Haig 2011.

Shlonsky, U. 2004. "The form of Semitic noun phrases". *Lingua* 114. 1465–1526.

Siloni, T. 1997. *Noun Phrases and Nominalizations: The Syntax of DPs*. Dordrecht: Kluwer.

Sims-Williams, N. 1985. *The Christian Sogdian Manuscript C2*. Berlin: Akademie-Verlag.

Sims-Williams, N. 1989. "Sogdian". In: Schmitt, R. (ed.), *Compendium Linguarum Iranicarum*. Wiesbaden: Reichert Verlag. 173-192.

Skjærvø, P. O., 2007. "An Introduction To Manichean Sogdian". Ms. Harvard University.

Sornicola, R. 1988. "It-Clefts and Wh-Clefts: Two Awkward Sentence Types". *Journal of Linguistics* 24. 343-79.

Spears, A. K. 2008. "Pidgins/Creoles and African American English". In: Kouwenberg, S. and J. V. Singler (eds), *The Handbook of Pidgin and Creole Studies*. Oxford: Blackwell. 512-542.

Sportiche, D. 2011. "French Relative Qui". *Linguistic Inquiry* 42. 83-124.

Starke, M. 2009. "Nanosyntax: A short primer to a new approach to language". *Nordlyd* 36. 1-6.

Starke, M. 2011. "Towards elegant parameters". Transcipt from a talk at Barcelona Workshop on Linguistic Variation in the Minimalist Framework. Available at http://ling.auf.net/lingBuzz/001183.

Stong-Jensen, M. 1977. "The syntax of es-relatives in Old Icelandic". *Cahiers Linguistiques d'Ottawa* 5. 1–26. Cited in Deutscher 2001.

Suárez-Gómez, C. 2006. *Relativization in Early English (950-1250): The Position of Relative Clauses*. Bern: Peter Lang.

Todd, T. L. 2008. *A grammar of Dimili (also known as Zaza)*. Stockholm: Iremet Förlag [electronic edition].

Van Der Auwera, J. 1985). "'Relative That': A Centennial Dispute". *Journal of Linguistics* 21. 149-179.

Veenstra, T. 2011. "Relexification and clause-embedding predicates". Ms. Zentrum für Allgemeine Sprachwissenschaft. Berlin.

Veenstra, T. 1996. *Serial Verbs in Saramaccan. Predication and Creole Genesis*. The Hague: Holland Academic Graphics.

Vries, M. de .2006. "The syntax of appositive relativization. On specifying coordination, false free relatives and promotion". *Linguistic Inquiry* 37. 229-270.

Watters, D. E. 2002. *A grammar of Kham*. Cambridge: Cambridge University Press.

Windfuhr, G. (ed.). 2009. *The Iranian languages*. London: Routledge.

Windfuhr, G. and J. R. Perry. 2009. "Persian and Tajik". In: Windfuhr, G. (ed.), *The Iranian Languages*. London: Routledge. 416-544.

Yakubovitch, I. 2002. "Mugh.1I revisited". *Studia Iranica* 31. 231-253.

Yakubovitch, I. 2005. "The syntactic evolution of Aramaic ZY in Sogdian". *Studia Iranica* 34. 199-230.

Yoshida, Y. 2009. "Sogdian". In: Windfuhr, G. (ed.), *The Iranian Languages*. London: Routledge. 279-334.