## ON THE DAGUR OBJECT RELATIVE: SOME COMPARATIVE NOTES $\dagger$

## 1. Introduction

In 1987, Ning Chunyan and I were able to spend a few hours doing "field work" on Dagur while I was teaching briefly at Heilongjiang University in Harbin. I was interested in doing work on any language that might be available at that time, and we were fortunate to meet three speakers of a language we came to know by the name of Daur (Dáwò'er). Neither of us had any knowledge of Mongolian, and so during the time we were actually eliciting material in the language, all we knew about it was its Chinese name, though we determined that it was an Altaic language upon hearing the first few sentences. Later, we found Zhong Shu Chun's small but excellent Dawo'er Yu Jian Zhi (Brief Record of the Dagur Language (1963)) in the Hei Da library, and after returning to MIT, I found Samuel Martin's useful Dagur Mongolian Grammar, Texts, and Lexicon (1961). In relation to the matter to be discussed here, the material we elicited departs somewhat from Martin's findings but is in close accord with the material found in Zhong's grammar.

The construction with which I will be concerned here is illustrated by the following sentence (all examples are from field notes unless otherwise noted): ${ }^{1}$

| $[[$ mini | au-sen $]$ | mer $\left.^{y}-\min ^{y}\right]$ | sain. |
| :--- | :--- | :--- | :--- |
| $[[1$ sGEN | buy-PERF] | horse-1sGEN] | good |

'The horse I bought is good.'
The key features of the Dagur object relative construction exemplified in (1) are (a) the subject of the dependent clause is in the genitive case;

[^0]Journal of East Asian Linguistics 11, 109-122, 2002.
© 2002 Kluwer Academic Publishers. Printed in the Netherlands.
(b) the verb is not specially marked with nominalizing morphology; (c) the head of the relative clause follows the clausal constituent, in typical head-final fashion, and is construed with a null argument within the dependent clause, and, crucially; (d) the head is accompanied by a postpounded reduced copy of the genitive subject pronoun. The latter feature mimics the pattern seen in simple possessive constructions, in which the possessum is doubly marked in this manner with genitive pronouns, corresponding in this case to the possessor:
(2) $\left[\operatorname{mini} \quad \operatorname{mer}^{y}-\min ^{y}\right] \quad$ sain
[1sGEN horse-1sGEN] good
'My horse is good.'
The relative clause also mimics, to a degree, the pattern of agreement seen in certain simple verbal clauses, in which the verb can be inflected, by suffix, for person and number in agreement with the subject:
(3) a. bi nek mer ${ }^{\text {y }}$ au-sem. (au-sema<au-sen-bi)

1 sNOM one horse buy-PERF:1sNOM
'I bought a horse.'
b. baa tenek mer-i au-sema. (au-sema<au-sen-ba)

1 pNOM that horse-ACC buy-PERF:1pNOM
'We bought that horse.'
Here, however, the subject is in the nominative, and the verbal agreement morphology is the agreement expected in a simple verbal sentence with a nominative subject (and accordingly glossed 1 sNOM ).

In the relative clause, the verb itself lacks person/number agreement. If, as my exposition implies, the object relative clause involves agreement, then the putative agreement morphology is postponed and realized (as genitive pronominal agreement) on the head noun. Additional examples follow:
(4) a. [[Jini au-sen] $\left.\operatorname{mer}^{y}-\int \mathrm{fin}^{y}\right]$ sain.
[[2sGEN buy-PERF] horse-2sGEN] good
'The horse you bought is good.'
b. [[mini au-sen] biteg-min $\left.{ }^{y}\right]$ adig sain.
[[1sgGEN buy-PERF] book-1sGEN] very good
'The book I bought is very good.'
 [[[1sGEN father-1sGEN] buy-PERF] book-3sGEN] very sain.
good
'The book my father bought is very good.'
d. [[Jinii oiloo-sen] kodiri- $\left.\int \mathrm{fin}^{y}\right]$ os-in ${ }^{y}$ sain-yee? [[2sGEN dig-PERF] well-2sGEN] water-3sGEN good-Q (Zhong, 41)
'Is the water of the well that you dug good?'
This is different from the well known pattern of Turkish, in which the verb of the relative clause is in a participial and the verb thus "nominalized" is itself inflected for agreement with the genitive subject. The following head nominal is unaccompanied by person/number morphology: ${ }^{2}$
(5) $\quad \begin{array}{lll}{[\text { adam-ın }} & \text { ye-di } \gamma-\mathrm{i}] & \text { balk } \\ & {[\text { man-GEN }} & \text { eat-ObjParticiple-3s }]\end{array}$
[man-GEN eat-ObjParticiple-3s] fish
(Turkish, Kornfilt (1997, 59))
'the fish that the man eats/ate'
The two languages are in partial accord in the formation of subject relatives. In these, the head, unmarked for person/number agreement in both languages, is construed with a null subject in the clausal constituent:
(6) $\left[\left[\right.\right.$ tenek pog-i al-sen] ku] mini at $\int a-\min ^{y}$.
[[that deer-ACC kill-PERF] man] 1sGEN father-1sGEN
'The man who killed that deer is my father.'
In Turkish, however, the verb appears in a special subject participial form:
(7) $[$ ball $\gamma-\mathrm{l} \quad$ yi-yen $] \quad$ adam
[fish-ACC eat-SubjParticiple] man
(Turkish, Kornfilt $(1997,58)$ )
'the man who eats/ate the fish'
Standard Modern Mongolian resembles Dagur in relation to the form that the verb takes. The subject is marked genitive in the object relative but in contrast to Dagur, it does not show person/number inflection on the head in that construction, as exemplified in (8a). The subject relative (8b) is essentially the same as in Dagur:

| a. | $[$ miniy üz-sen] oxin | (Mongolian, Binnick $(1979,89)$ ) |
| :--- | :--- | :--- |
|  | $[1$ sGEN | see-VN] girl |
|  | 'a girl whom I saw' |  |
| b. $\left[\begin{array}{lll}\text { [mön tege-j } & \text { xel-sen }] & \text { xün } \\ & {[\text { same do:so-IMPF }} & \text { say-VN] }\end{array}\right.$ person |  |  |
|  |  |  |
|  |  |  |

'the one who said the same thing'
It is probably incorrect to say of Dagur that the verb of the relative clause is not in some sense nominalized. Notice that in the Standard Mongolian examples of (8), the inflection -sen is glossed VN (verbal nominal) by Binnick. This is clearly the same as the Dagur morphology which I have glossed "perfective" (PERF, under the influence of Martin, who glosses it "perfect"). In both languages, this form of the verb can combine directly with the morphology associated with the extended projection of the category N - Martin's grammar), in which a clause marked with -sen (PERF) appears as the accusative complement of the verb uji- 'see':

(9) | $[$ tere | yau-sen-ii $]$ | Jii | uji-sen- jii | yee? |
| :--- | :--- | :--- | :--- | :--- |
|  | $[3 \mathrm{sNOM}$ | go-PERF-ACC $]$ | 2sNOM | see-PERF-2s |

(Martin (1961, 44))
'Did you see him leave?'
Here, in fact, -sen appears both in its putative nominalizing function (in the subordinate clause) and in its finite, tense/aspect function (in the matrix clause). It is not surprising, therefore, that the genitive person/number morphology associated with object relativization can suffix directly to the subordinate verb, as in the following "headless" relative clause:

$$
\begin{array}{lll}
{[\text { mini }} & \text { oo-yig]-min } & \mathrm{ar}^{\mathrm{y}} \mathrm{~g}^{y} .  \tag{10}\\
{[1 \mathrm{sGEN}} & \text { drink-IMPERF]-1sGEN } & \text { wine } \\
\text { 'What I drink is wine.' } &
\end{array}
$$

The element which I have glossed "imperfective" is possibly equivalent to $-j i$, which Martin glosses "gerund" and "retrospective" (Martin (1961, 49)). This ending appears likewise to have a "nominalizing" function.

I should mention at this point that, in the speech of our three consultants, it was not always the case that the subject of an object relative appeared in the genitive case. In apparent free alternation, the accusative was sometimes given for pronominal subjects in the construction. The person/ number appearing on the head nominal was always genitive, however:
(11) a. [[nami al-sen] taul-min] adig ]ig. [[1sACC kill-PERF] rabbit-1sGEN] very big
'The rabbit I killed is very big.'
b. [nami $\left.\begin{array}{ll}\text { id-ig-min }\end{array}\right] \quad$ myag.
[1sACC eat-IMPERF-1sGEN] meat
'What I eat is meat.'
c. [[nami myag kert $\left.\int-\mathrm{ig}\right]$ ont $\left.\int-\mathrm{min}^{y}\right]$ adig sain. [[1sACC meat cut-IMPERF] knife] very good
'The knife that I cut the meat with is good.'
The relative clause in (11c) is not an object relative. The target of relativization there is the oblique (instrumental) expression ont $\int-e r$ 'with a knife'. For the purposes of our discussion, however, oblique relatives show the same genitive person/number accompaniment on the head noun as do object relatives.

The nominative also appears on the subject of an object relative. I will leave these cases for another occasion. ${ }^{3}$

## 2. Some thoughts on analysis

I will rely heavily in this discussion on the recent work of Cornelia Krause (in progress). Following Bhatt (1999), she maintains that the clausal constituent of both subject and object relatives (of the type we are considering here) to be "reduced clauses" in the sense that the upper reaches of the verbal extended projection, specifically C and I are missing, leaving the clause in an aspectual form lacking tense and complementizer. In Dagur relatives, presumably, the verbal extended projection extends to one or the other of two aspectual projections - perfective and imperfective, corresponding to Martin's "perfect" and "gerund," respectively. Henceforth, I will refer to these as perfective and imperfective only on their function in fully inflected root clauses - as in (3), for example. In reference to their functions as participial elements delimiting the verbal projection of a nominalized clause, I will adopt Martin's terms for these elements (glossing them, as he does, PERFECT and GERUND).

The reduced status of these relative constructions accounts for the lack, within the clausal constituent, of complementizers, relative pronouns, and tense. I will follow Krause in maintaining that the nominal property of these clauses is due to their selection by a nominal head, as depicted in (12), abbreviating Krause's diagram somewhat (linear order irrelevant):
(12)


The hypothetical N node of (12) is phonologically null. The surface form of this structure is derived by means of Head Movement (cf. Travis (1984)), in which V is adjoined to Asp and the latter is subsequently adjoined to N , yielding the nominalized verb form, capable of receiving nominal inflection directly - as in (9) and (10) above.

Relativization involves raising the target NP out of the clause and adjoining it to the higher NP node of (12). As shown in (13), subject relativization simply raises the lower $\mathrm{NP}\left(\mathrm{NP}_{2}\right)$ and adjoins it to the higher NP node ( $\mathrm{NP}_{1}$ ). This operation is motivated by the Case Filter, there being no way for $\mathrm{NP}_{2}$ to get case in its d-structure position. In its raised position, this nominal will enter into a D-projection and this will be assigned case in the matrix clause (by V or Tense):


Now consider the object relative. Here, the subject raises to Spec of NP, where it receives genitive case, thus satisfying the Case Filter. This leaves the object free to raise and right-adjoin to NP, giving the full surface form of the head-final relative clause:
(14)


As before, the entire $\mathrm{NP}_{1}$ construction will enter into a D-projection which will be assigned case in the matrix clause. In this manner, the head of the relative clause will satisfy the Case Filter. The raised subject, however, will be assigned case in Spec of $\mathrm{NP}_{1}$, from N , by the same mechanism that assigns genitive case to the possessor DP in nominal constructions of the type exemplified in (2) above. Person/Number agreement on the participial verb form of an object relative is therefore nothing other than Spec-Head agreement, functioning in precisely the same way as in the possessive construction. This leaves the apparent Person/Number agreement on the right-adjoined full DP head of Dagur object relatives a continuing mystery, of course.

The following sentence presents a problem for this analysis, as it stands:

$$
\begin{array}{llllll}
\text { (15) } & {\left[\left[\int\right.\right. \text { ini }} & \text { au-sen }] & \text { tenek } & \text { mer } \left.^{y}-\int \text { in }^{y}\right] & \text { mo. } \\
& {[[2 \text { sGEN }} & \text { buy-PERF }] & \text { that } & \text { horse-2sGEN }] & \text { bad }
\end{array}
$$

'That horse you bought is bad.'
Here the raised and right-adjoined head, tenek $m e r^{y}$, is evidently a DP, not an NP. Since it is an object, it will receive case in situ and therefore is not forced to raise - unlike the subject which cannot receive case in situ, for lack of Tense in the reduced, participial clause. If the raising rightadjoined head were always NP, as Krause assumes, then it would be a predicate, not an argument, and would therefore reject case; this circumstance presumably forces movement to a new position where the NP can enter into an appropriate relationship with D. But if the object is already a DP, then movement would not be motivated.

We are left now with two unanswered questions about the Dagur object
relative: (i) how is it possible for a demonstrative (tenek in (15)) to appear between the clausal constituent and the head noun (mer in (15)), and (ii) how does the head N come to host Person/Number "agreement"? My answer will be extremely tentative.

Suppose that the first branching projection of NP is selected by (merged with) D , linearized on the right-hand side (in fact, all heads will be final in PF):


And suppose the object, a bare noun, raises and right adjoins to D:
(17)


On the face of it, this is in gross violation of the Head Movement constraint (Travis (1984)), but the sequence of events is not exactly as it would seem to be in (17). In reality, of course, head movement would already have raised V to Asp, and the latter to $\mathrm{N}_{1}$, making NP transparent.

Thus the object $\left(\mathrm{N}_{2}\right)$ passes only one head, the complex head dominated by $\mathrm{N}_{1}$. This lesser violation might be overcome by first adjoining $\mathrm{N}_{2}$ to the complex head $\mathrm{N}_{1}$ and then excorporating $\mathrm{N}_{2}$ and adjoining it to D. Alternatively, this might be a purely morphophonological matter. Recall that in the final linearization, $\mathrm{N}_{1}$ will be adjacent to, and to the left of, D . The final positioning of N might be affected by local dislocation (though the details would have to be worked out).

Be this as it may, I will assume that the structure in (17) correctly represents the position of the head noun. What now of the subject DP? Let us suppose that the subject raises to Spec of the superordinate DP, somehow bypassing $\mathrm{NP}_{1}$ (or, perhaps, it raises first to Spec of NP and then to Spec of the superordinate DP), as depicted in (18), abstracting away again from raising of V and Asp:


I will assume now that Spec-Head agreement accounts for the appearance of genitive Person/Number morphology on the head noun.

Why does $\mathrm{DP}_{2}$ raise to Spec of $\mathrm{DP}_{1}$, rather than to Spec of $\mathrm{NP}_{1}$ ? The reason might be that the relevant genitive Person/Number features are located in D , rather than in $\mathrm{N}_{1} . \mathrm{DP}_{2}$ raises to Spec of $\mathrm{DP}_{1}$ in order to check the genitive Person/Number features by means of Spec-Head agreement. If the location of these features is a parameter, then we might expect there to be languages in which it is $\mathrm{N}_{1}$, rather than the superordinate D , that bears the features. In this case, $\mathrm{N}_{1}$ would bear the agreement morphology. This might be the case in languages of the Turkish type.

The object relative construction found in Mountain Pima is possibly
relevant to this hypothesis. Mountain Pima (also called 'Oob No'k and Pima Bajo) is an Uto-Aztecan language (of the Tepiman Branch) spoken in the Chihuahua-Sonora border region in the Sierra Madre mountains of Northern Mexico. The construction is illustrated in (19):

| (19) a. | $[$ kav | $[$ ñ-niar-k] | heg $]$ |
| ---: | :--- | :--- | :--- | ge'ed.

'The horse I bought is big.'
b. ['okïs [ñ-neid $\left.{ }^{\text {y }}-\mathrm{k}\right]$ heg] ni'i-im. [woman [1sGEN-see-PART] D] sing-IMPERF 'The woman I see/saw is singing.'

c. | $\left[\mathrm{kel}^{\mathrm{y}}\right.$ | [tekpaan-im-k] | heg] $]$ |
| :--- | :--- | :--- |
| ñ-'aam. |  |  |
| $[$ man | [work-IMPERF-PART] | D] | 1sGEN-father

'The man who is working is my father.'
I take the determiner, D , to be the structural head of the relative construction, be it the object relative (19a, b) or the subject relative (19c). The verb of the relative clause is explicitly marked by means of the participial ending $-k$ (reflecting an Uto-Aztecan perfective participial ending $*-k a$, now aspectually neutral in Mountain Pima). The verb raises in much the same manner as that assumed for Dagur (adjoining to the participial ending, possibly in Asp, and finally to the hypothetical nominal head). It is the complex nominal head thus derived $\left(\mathrm{N}_{1}\right)$ which bears the genitive Person/Number morphology found in the object relative construction, realized as dependent (prefixal $\tilde{n}$ - in (19a, b)). The nominal constituents corresponding to the traditional "semantic" heads (i.e., the subject of the subject relative, and the object of the object relative) are presumably bare, symbolized $\mathrm{N}_{2}$ (or equivalently $\mathrm{NP}_{2}$ ). In both constructions, these arguments raise from their basic positions to Spec of DP, or they left-adjoin there (it is not possible to tell which at this point). There they enter into a matrix D-projection and satisfy the Case Filter in the manner suggested by Krause. The subject of the object relative presumably raises to Spec of $\mathrm{NP}_{1}$, where it is assigned genitive case, and enters into the Spec-Head agreement relation with $\mathrm{N}_{1}$, accounting for overt agreement morphology there. Where the subject of an object relative is pronominal, it is typically nonovert. However, it is expected, on the basis of comparison with the completely parallel possessive construction (cf. (20)), that this argument could be overt, showing fully and overtly the Spec-Head relation:

| $[\mathrm{n}$ | $[\tilde{n}$-' 'aam $]]$ |
| :--- | :--- |
| $[1 \mathrm{sGEN}$ | $[1 \mathrm{sGEN}$-father $]$ |
| 'my father' |  |

Where the relative subject is a full DP, however, it precedes the object, as in (21a) - a mystery, at this point. Thus, it appears in the same relative order position as does the subject in a subject relative (as in (21b, c)), leaving the bracketing noncommittal as to the internal structure of the subordinate clause:

'The chicken that the man ate tasted very good.'
b. [naksel gogïs ke'e-k heg] 'an mea.
[scorpion dog bite-PART D] 1sNOM kill:PERF
'I killed the scorpion that bit the dog.'
c. [g kel gogïs me'a-k heg]
[ART man dog kill-PART D]
'the man that killed the dog'
It is possible that Mountain Pima resorts to the internally headed relative clause construction in these cases. If so, the objects in the transitive subordinate clauses illustrated here presumably satisfy the Case Filter in situ.

Evidently, Mountain Pima relative clauses vary in the following way: (a) when the relative subject is pronominal, the reduced relative is used; (b) when the relative subject is a full DP with lexical nominal head, the clausal constituent of the relative clause is a fully inflected finite clause. In either case, the dependent clause is complement of $-k$ (the participial formative, glossed PART). This scenario would account, incidentally, for the optional appearance of the default determiner $g$ in (21c), and in the other numbers of (21). This is impossible in the reduced relative, where D functions as the determiner for the fronted head.

Structures for (19a):

| (19) a. | $[\mathrm{kav}[\mathrm{n}-\mathrm{niar}-\mathrm{k}]$ | heg $]$ ge'ed |
| :--- | :--- | :--- |
| [horse $[1$ sGEN-buy-PART] | $\mathrm{D}]$ big |  |
| 'The horse I bought is big.' |  |  |

(19a') [basic structure]:

(19a") [derived structure, abstracting away from V-movement to PART and PART-movement to $\mathrm{N}_{1}$ ]:


## Acknowledgements

I am very grateful to Professor Ning Chunyan, then of Heilongjiang University, who hosted me during my brief stay in Harbin and for his willingness to "go do some field work" with me. We also co-authored a brief note on the Dagur object relative (Hale and Ning (1996)). We are jointly extremely grateful to Duo Wenzhong, Yang Guozhi, and Wang Xuesong, who were attending the Heilongjiang Sheng Min Zu Gan Bu Guan Li Xue Yuan (HLJ Province National Cadres Management College) in Harbin, for their willingness to take time out of a busy schedule to help us with Dagur. We are also grateful to Jin Sanzui, president of the college for help in arranging for us to meet with students there.

## Notes

1 Examples from the field notes are written in an orthography which corresponds closely with what we actually heard. Thus, for example, shortened word-final long vowels are written short, and deleted final short vowels are omitted - though palatalization reflecting deleted final $/ \mathrm{i} /$ is indicated, by superscript $\left\{{ }^{\mathrm{y}}\right\}$. The orthographic symbols have their traditional values, except that $\{e\}$ is used for the central schwa-like vowel. In the matter of vowel length, examples from Zhong and Martin stick faithfully to the transcription in those sources; otherwise, the following changes are made, where necessary: shwa is written $\{\mathrm{e}\}$, the high unrounded glide is written [y], and palatalization is written with the superscript $\left\{{ }^{y}\right\}$. Our transcription departs somewhat from what appears in these two written sources. Thus, for example, in a "normalized" orthography, like that used by Martin, the word $\left\{\right.$ mer $\left.^{y}\right\}$ 'horse' would be written /mori/, but since our practice has been to write approximately what we heard, we write $\left\{\right.$ mer $\left.^{y}\right\}$, reflecting our failure to hear rounding in the tonic vowel. Our actual notes typically omitted the palatalization as well, though we include it here because one of the three speakers clearly had it when pronouncing the word in isolation, and in the speech of another its effect was evident in this pronunciation of the tonic vowel, even in the absence of audible palatalization of the final consonant itself.
${ }_{2}$ In Martin (1961), relative clauses are not discussed separately, but examples occur in the text. Examples of the object relative do not show "agreement" (possessive participles, in his terminology) with the genitive subject. To this extent, they are in accordance with the Turkish pattern:

| (i) | [canduu-in | ale-sen $]$ |
| :--- | :--- | :--- | | hukure |
| :--- |
|  |
|  |
| $[$ bandit-GEN |
| kill-PERF] $]$ |

(Martin 1961, 25)
[bandit GEN kill-PERF] cattle
(ii) [ finii au-sen] mori
(Martin 1961, 28)
[2sGEN buy-PERF] horse
'the horse that you bought'
${ }^{3}$ The known examples of object relatives with nominative subject are built on the Dative construction, as in (i, ii):
(i) $\left[\left[\int \mathrm{i}\right.\right.$ namde uk-sen $] \quad$ biteg- $\left.\int \mathrm{in}^{y}\right] \quad$ adig sain. [[2sNOM 1sDAT give-PERF] book-2sGEN] very good
'The book you gave me is very good.'
(ii) $\quad\left[[\mathrm{bi} \quad\right.$ tende uk-sen $\left.] \quad \operatorname{mer}^{y}-\min ^{y}\right] \quad$ uu-sen. [[1sNOM 3sDAT give-PERF] horse 1sGEN] die-PERF
'The horse that I gave him died.'

## References

Bhatt, R. (1999) Covert Modality in Non-Finite Contexts, PhD dissertation, University of Pennsylvania.
Binnick, Robert I. (1979) Modern Mongolian: A Transformational Syntax, University of Toronto Press, Toronto/Buffalo/London.
Hale, Ken and Chunyan Ning (1996) "Raising in Dagur Relative Clauses," in Brian Agbayani, Kazue Takeda and Sze-Wing Tang (eds.), UCI Working Papers in Linguistics, Volume 1, University of California, Irvine.
Kornfilt, Jaklin (1997) Turkish, Routledge, London/New York.
Krause, Cornelia (in progress) PhD dissertation, MIT, Cambridge, MA.
Martin, Samuel (1961) Dagur Mongolian Grammar, Texts, and Lexicon, Uralic and Altaic Series, Volume 4, Indiana University Publications, Bloomington.
Travis Lisa (1984) Parameters and Effects of Word Order Variation, PhD dissertation, MIT. Zhong, Shu Chun (1963) Dawo'er Yu Jian Zhi [Brief Annals of the Dagur Language].

Received: September 26, 2001
Revised: October 12, 2001

Department of Linguistics
Massachusetts Institute of Technology USA


[^0]:    $\dagger$ Editors' Note: This article by the late Professor Ken Hale is among the papers he worked on during his last few months before passing away on October 8, 2001. Professor Hale had presented a version of this paper at the Workshop on Comparative Altaic held at MIT on May 17, 2001. The current version was marked in his handwriting as the "May 18, 2001 version," reflecting further modification immediately following the workshop. We are pleased to have obtained this paper for publication in JEAL, both for the important material it contains which could stimulate fruitful future research, and as a tribute to Professor Hale, whose love for language and for humanity and whose example as a revered scholar and beloved teacher (as reflected in small portion in this work) will be remembered by all who came to know him either in person or otherwise indirectly.

