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DATA ON THE NOUN PHRASE ACCESSIBILITY HIERARCHY

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The material presented here is intended to illustrate the arguments presented in our article on Noun Phrase Accessibility (Keenan & Comrie [1972] 1977, hereafter NPA); it was originally intended that these data would be published as an appendix to that article. Exemplification is given for each strategy used to form relative clauses (RC's) in each language cited in Table 1 of NPA (pp. 76–9), except where adequate data appear in the body of the text. All information is based on work with native speakers, except where explicitly stated otherwise. Acknowledgments made in NPA (p. 63, fn.) also apply to the present publication.

AOBAN (Northeast) is a Melanesian language spoken on the island of Aoba, New Hebrides. The basic word order is SVO, and the verb optionally presents a preverbal clitic agreeing in person and number with the subject.

RC's present the restricting clause to the right of the head NP; no relativizer is used; and personal pronouns are retained obligatorily in all positions relativized (NP_{rel}) except subject. No nominal morpheme explicitly codes the subject function—this being the 'unmarked' case; hence our classification here, and in many others of the languages considered, distinguishes the strategy used to relativize subjects from that used on other positions.

- (1) *A tubui (u) wehi na toa.*
the woman she killed the chicken
'The woman killed the chicken.'
- (2) *John lehi na tubui (u) wehi na toa.*
John saw the woman she killed the chicken
'John saw the woman who killed the chicken.'
- (3) *John lehi na toa a tubui wehea/*wehi.*
John saw the chicken the woman killed-it
'John saw the chicken that the woman killed.'

ARABIC. The basic word order used by our consultant is SVO; verbs agree with subjects. The only RC-forming strategy considered is the one using a relative 'pronoun' (which does not code the case of the NP_{rel} position); this separates the head from the postnominal restricting clause. Pronouns are obligatorily retained in the NP_{rel} except for subjects.

- (4) *Al- rajul ya'raf al- sayeda allati (*hia) nayma.*
the man knows the woman that she sleeps
'The man knows the woman who is sleeping.'
- (5) *Al- walad ya'raf al- rajul allathi darabat -hu al- sayeda.*
the boy knows the man that hit him the woman
'The boy knows the man whom the woman hit.'

BASQUE is an ergative language with basic word order SOV. Sufficient examples are given in NPA and references cited there (§1.3.3).

BATAK is an Austronesian language, spoken in six major dialects in Sumatra. The Toba dialect is spoken around Lake Toba in Western Sumatra. Sufficient examples are given in NPA (§1.2.2).

CATALAN is a Romance language closely related to Spanish and spoken in north-east Spain. The basic order is SVO. RC's present the head on the left, followed by a relative pronoun, followed by the restricting clause with no personal pronoun in the NP_{rel}. *Que* is used as a relative pronoun for subjects and some DO's (for examples of this, see the Spanish entry). Hence these three functions are not unequivocally coded, and their RC-forming strategies are marked as [-case] in Table 1 of NPA.

However, when the NP_{rel} is an oblique-case NP, the preposition is fronted with the relative pronoun, so the oblique function is unequivocally coded. Genitives are not generally directly relativizable.

- (6) *la dona que està cantant*
the woman who is singing
- (7) *la dona que l' home pegà*
the woman who the man hit
- (8) *el ganivet amb el que l' home matà el pollastre*
the knife with which the man killed the chicken

CHINESE (spoken Pekingese). In this variety of Chinese, the restricting clause appears to the left of the head, from which it is separated by the invariable particle *de*. When the NP_{rel} is the subject, no pronoun may be retained; when the NP_{rel} is the DO, a pronoun may be retained (for details, cf. Harlow 1973); otherwise, a pronoun must be retained.

- (9) *(*Ta) da -le wo de neige nanhaizi lai -le.*
he hit PERF me PART that boy come PERF
'The boy who hit me has come.'
- (10) *Wo da -le (ta) yidun de neige nanhaizi lai -le.*
I hit PERF him once PART that boy come PERF
'The boy whom I hit once has come.'
- (11) *Wo bei {ta/*Ø} da -le yidun de neige nanhaizi lai -le.*
I by him hit PERF once PART that boy come PERF
'The boy by whom I was hit once has come.'

CZECH (colloquial) presents the restricting clause postnominally, obligatorily presenting personal pronouns in the NP_{rel} position except for subject position and non-masculine or inanimate DO's. Modern Czech also uses a declinable relative pronoun which can unequivocally specify that the head NP is subject or object.

Note that here, as with Slovenian and Modern Greek, personal pronouns and peculiarly relative pronouns are both means of coding the grammatical role of the head NP in the restricting clause, and so do not determine different RC-forming strategies.

- (12) *Jan viděl toho muže, co (*on) spí.*
John saw that man that he sleeps
- (13) *Jan viděl toho muže, který spí*
John saw that man who sleeps

(14) *Jan viděl toho muže, co {ho/*0} to děvče uhodilo.*

John saw that man that him that girl hit.

(15) *Jan viděl toho muže, kterého to děvče uhodilo.*

John saw that man whom that girl hit

DUTCH. RC's in Dutch present the head NP to the left, followed by a relative pronoun, followed by the restricting clause—with no pronoun retained in the standard language. However, the subject and DO relative pronouns are identical, so the grammatical role of the head NP in the restricting clause is not unequivocally coded in these cases. But for IO, OBL, and GEN, the relative pronoun has a form which unequivocally codes the grammatical function of the head NP in the restricting clause; this determines, by our classification, a second RC-forming strategy, marked [+case] in NPA Table 1.

(16) *de man die Marie aanviel*

the man who Mary attacked, or: the man who attacked Mary

(17) *de vrouw aan wie ik het boek gaf*

the woman to whom I the book gave

Note that although genitive relatives are possible in Dutch, ordinary speech often prefers to present the NP_{rel} position as an object of a preposition. So 19 is less literary, and more usual, than 18.

(18) *de vrouw wier man in het ziekenhuis ligt*

the woman whose husband in the hospital lies

(19) *de vrouw van wie de man in het ziekenhuis ligt*

the woman of whom the husband in the hospital lies

ENGLISH. Since, in the dialects of English with which we are most familiar, the relativizers used when the head NP functions as subject or DO of the restricting clause (*who, that, which, ?whom*) are never peculiar to either of them, these functions are not unequivocally coded; they are thus expressed by a [–case] strategy. However, as in Dutch, the relativizer for each of the other positions is particular to that position—so the other positions are unequivocally coded, since either the relativizer word itself is particular to a given position (e.g. *whose*), or else the preposition or conjunction is retained in the restricting clause. RC's on these positions are therefore expressed by a [+case] strategy.

FINNISH. The pronominal strategy in Finnish has been discussed in NPA and references cited there (§1.3.2). The postnominal strategy uses fronted relative pronouns which unequivocally case-mark the function of the head in the restricting clause.

(20) *John näki veitsen jo-lla mies tappoi kanan.*

John saw knife which-with man killed chicken

'John saw the knife with which the man killed the chicken.'

FRENCH. Heads of RC's are presented on the left, followed by a relative pronoun, followed by the restricting clause. The form of the relative pronoun is different for each position on the AH, so French has only a [+case] RC-forming strategy.

(21) *l' homme qui regarde la femme*

the man who looks-at the woman

- (22) *la femme que l' homme regarde* (or *que regarde l'homme*)
 the woman who the man looks-at

FRISIAN (Northern). Fering is the dialect of Frisian spoken on the islands of Amrum and Föhr off the northern coast of Germany. Its basic word order is SVO; as in German and Dutch, verbs of subordinate clauses are often placed in clause-final position. RC's present the head to the left, followed by a relative pronoun, followed by the restricting clause. The relative pronoun *wat* is used for SU's, DO's and IO's; hence these positions are not unequivocally coded. Prepositions, however, are normally retained in the restricting clause, as in Swedish. For this position, then, Fering has a [+case] RC-forming strategy. Genitives are not directly relativizable.

- (23) *John käänt di maan wat det wüf sluch.*
 John knows the man who the woman hit (or ... the man who hit the woman).

FULANI (Gombe dialect). In this dialect of Fulani (a Niger-Congo language of the West Atlantic subfamily; data from Arnott 1970), the head appears to the left of the restricting clause. If the NP_{rel} is SU, DO, or IO (the last two positions are not overtly distinguished in Fulani), no pronoun is retained, and the case of the NP_{rel} is thus not unequivocally coded. Otherwise, pronoun retention is obligatory.

- (24) *Ndaa goḍḍo mo sood -aayi nagge.*
 here-is someone who bought NEG cow
 'Here is someone who hasn't bought a cow.'
- (25) *Ndaa deptere nde 'o-ja gata.*
 here-is book which he is reading
 'Here is the book that he is reading.'
- (26) *Walaa suudu ndu mi-ndaar -aayi nder muuḍum.*
 there-is-not hut which I looked NEG in it
 'There is not a hut in which I haven't looked.'

When the NP_{rel} is subject and its verb is positive, the post-head participial construction is usual:

- (27) *Woḍbe hawti 'e wardube hiirna.*
 some joined those having-come by-the-west
 'Some joined those who had come by the west.'

GENOESE (Zeneyze) is an Italian dialect spoken in Genoa by about one million people. Basic word order is SVO (at least with topicalized subject). Heads of RC's are presented on the left, followed by a morphologically constant relativization marker, followed by the restricting clause. Personal pronouns are usually retained in the NP_{rel} positions—except for subjects, where an apparent retained pronoun is in fact normally present in simplex sentences co-occurring with full NP subjects, and so is by our definition a type of verb agreement (see the discussion in NPA, §1.4.2.2). DO pronouns are optional in the NP_{rel} position.

- (28) *U peškow u ve:ñe.*
 the fisherman he comes
 'The fisherman is coming.'

- (29) *u peškow k u ve:ñe*
 the fisherman who he comes
 ‘the fisherman who is coming’
- (30) *u peškow {k ow | ka} kumuše a Maing*
 the fisherman who him who knows the Mary
 ‘the fisherman whom Mary knows’

GERMAN. The prenominal strategy is discussed and exemplified in NPA, §1.1. The post-head RC is introduced by a relative pronoun which codes the case of the NP_{rel}.

- (31) *Ich sehe den Mann, der die Frau schlägt.*
 I see the man who (nom.) the woman beats
 ‘I see the man who is beating the woman.’
- (32) *Ich sehe den Mann, den die Frau schlägt.*
 I see the man who (acc.) the woman beats
 ‘I see the man whom the woman is beating.’

GILBERTESE is a Micronesian language spoken in the Gilbert Islands. The basic word order is VOSX, where X is a major oblique-case NP. Verbs agree with subjects and DO’s. RC’s present the head on the left, followed by a relative particle which has deictic status but does not ‘agree’ with the head NP, and does not code the case of the NP_{rel}. The relative particle is followed by the restricting clause (which is normally postposed around the subject—unless short—if its head functions as the DO of the main verb). Personal pronouns are obligatorily retained in all NP_{rel} positions except the subject position, where normally the preverbal agreement morpheme is dropped regardless of the function of the head NP.

- (33) *E ore-a te mane te aine.*
 3sg. hit-3sg. the man the woman
 ‘The woman hit the man.’
- (34) *te aine are ore-a te mane*
 the woman that hit-3sg. the man
 ‘the woman who hit the man’
- (35) *te mane are oro-ia te aine*
 the man that hit-him the woman
 ‘the man whom the woman hit’

GREEK (Modern). The basic word order is SVO. Heads of RC’s occur to the left of the restricting clause. The two are separated either by a relative pronoun (for IO, OBL, and GEN positions) or by the relativization marker *pu*—itself followed by an appropriate form of the personal pronoun (for all positions on the AH lower than the DO). But for subjects and DO’s, only *pu* is used, no personal form of the pronoun being present. Case is thus not coded in these cases; but there is no ambiguity, even though subjects of restricting clauses are usually put in a post-verbal position, since the full NP’s are case-marked.

- (36) *O Yanis kseri ti yineka pu ine daskala.*
 the John knows the woman that is teacher
 ‘John knows the woman who is a teacher.’

- (37) *Vlepo to peði pu xtipise o andras.*
 I-see the boy that hit the man (nom.)
 'I see the boy whom the man hit.'
- (38) *Ksero ti yineka {stin opia/'pu tis} edose o Yanis to violio.*
 I-know the woman to whom that to-her gave the John the book
 'I know the woman to whom John gave the book.'

HAUSA, a Chadic language of West Africa with basic word order SVO, has the head to the right of the restricting clause. Sufficient data are given in NPA, §1.4.2.2.

HEBREW. The basic word order of modern colloquial Hebrew is SVO. RC's present the head to the left, and introduce the restricting clause with the invariable particle *she*. Normally personal pronouns are retained in the NP_{rel} position, although this is not in general done for subjects (though it sometimes is—see Givón 1973 for some discussion), and only optionally for DO's.

- (39) *Yohanan makir et ha-isha she (?hi) yeshena.*
 John knows DO the woman that she sleeps
 'John knows the woman who is sleeping.'
- (40) *Yohanan makir et ha-ish she ha-isha hikta (oto.)*
 John knows DO the man that the woman hit him
 'John knows the man whom the woman hit.'

HINDI is an Indic language of the Indo-European family. Basic word order is SOV, with grammatical function marked by postposition on the nouns. One RC-forming strategy places the head NP on the left and introduces the restricting clause by a relative pronoun which carries the same postpositions as ordinary NP's; so grammatical function is explicitly marked here, as everywhere else in the language. RC's formed in this way often occur to the right of the matrix verb.

- (41) *Ram ne us caakuu ko dekhaa jis se us aadmii ne murgii ko*
 Ram SU that knife DO saw which INST that man SU chicken DO
maaraa thaa.
 killed
 'Ram saw the knife with which the man killed the chicken.'

A second RC-forming strategy in Hindi may present the head NP in the NP_{rel} position, still marked by the relativization marker, and cross-referenced in the 'matrix' clause which follows the entire restricting clause.

- (42) *Aadmii ne jis caakuu se murgii ko maaraa thaa, us caakuu ko*
 man SU which knife INST chicken DO killed that knife DO
Raam ne dekhaa.
 Ram SU saw
 'Ram saw the knife with which the man killed the chicken.'

IBAN (Sea Dayak) is an Austronesian language spoken in Sarawak (North Borneo). It seems closely related to Malay. Its major RC-forming strategy applies only to subjects; DO's, IO's, and sometimes benefactive NP's can be promoted by Passive to subject position and relativized. The basic word order is SVO.

- (43) a. *Indu malu lelaki.*
 woman hits man

- b. *Lelaki dipalu indu.*
 man hit-by woman
- (44) a. **lelaki ti indu malu*
 man that woman hits
- b. *lelaki ti dipalu indu*
 man that hit-by woman

But no other NP's on the AH are relativizable except for a few oblique-case NP's; in such cases, a preposition or adverb will accompany the invariable relativization marker *ti*, thereby coding the function of the head NP.

- (45) *orang ti enggau Jabu enchuri manok*
 person that together-with Jabu stole chicken
 'the person with whom Jabu stole the chicken'

NB: In all our other data, objects of true prepositions are either absolutely unrelativizable or else somehow presented as subjects (e.g., 'the knife with which John killed the chicken' is given as 'the knife that was used by John to kill the chicken'). In no other case is a preposition retained in the restricting clause; so possibly *enggau* is something other than a 'true' preposition, in which case Iban would be another 'subjects only' language.

ITALIAN. The basic word order is SVO. Heads of RC's occur on the left, separated from the restricting clause by a relative pronoun. As the relative pronoun is the same for SU and DO, the RC-forming strategy is [-case] for those positions. Otherwise, however, the form of the pronoun determines the grammatical function of the head NP in the restricting clause, so RC's formed on those positions are marked [+case].

- (46) *la donna che dorme*
 the woman who sleeps
- (47) *l' uomo che la donna ha colpito*
 the man who the woman has hit

Objects of comparison (OCOMP's) are sometimes presented as a simple oblique-case object of the preposition *di*—in which case the position does not have independent existence in NPA Table 1—and sometimes as a true object of comparison governed by a conjunction *che*, in which case the position is unrelativizable.

JAPANESE is an SOV language. RC's place the head NP to the right. No relativizer is used, and in general no pronoun is retained in the NP_{rel} position.

- (48) *Watasi wa sono otoko ga tataita inu o miru.*
 I TOP that man SU struck dog DO see
 'I see the dog which that man struck.'

Occasionally, however, a pronoun may be retained when the NP_{rel} is genitive—in which case, the grammatical function of the head in the restricting clause is unequivocally marked. This example is from Kuno (1973:248):

- (49) *zibun no gakkoo no sensei ga koobuuziko de sinda kodomo*
 himself GEN school GEN teacher SU accident in died child
 'the child whose school-teacher died in an accident'

JAVANESE is an Austronesian language of Indonesia. The basic word order is SVO. Data are exclusively from Horne 1961. The basic RC-forming strategy places the head to the left, followed by a morphologically invariable relativizer *séng*, followed by the restricting clause. Basically, only subjects can be relativized. DO's can be promoted by Passive to subject position; and locative and causative verb forms, whose use is more general than the names suggest, are used to promote IO's and various oblique-case NP's to subject position. An example from Horne (219):

- (50) *rôti séng di- pangan (dênê(ng)) Tômô*
 cake that PASS eat by Tomo
 'the cake that Tomo ate'
- (51) **rôti séng Tômô mangan*
 cake that Tomo ate (act.)

However, genitives cannot generally be promoted to subject position, and relativization is effected by presenting a pronoun in the NP_{rel} position (i.e. a possessive adjective), as in Malay (Horne, 91):

- (52) *kantaja-ku séng djeneng-é Tômô*
 friend my that name his Tomo
 'my friend whose name is Tomo'

KERA is an Afro-Asiatic language spoken in southern Chad, near Fianga. Basic word order is SVO. Head NP's of RC's occur to the right, followed by a 'relative pronoun'; this shows some agreement in gender and number with the head, but does not code the grammatical case of the NP_{rel} position. The restricting clause follows the relative pronoun, and obligatorily retains a personal pronoun in the NP_{rel} position for all positions except that of subject. OCOMP's are treated basically as DO's, and so do not have independent status.

- (53) *bilgi di minti awang hargang*
 woman who FEM-SG. kill goat
 'the woman who killed the goat'
- (54) *bilgi di minti tam sonin -a*
 woman who FEM-SG. you bewitch her
 'the woman whom you bewitched'

KOREAN has the basic word order SOV, and heads occur to the right of restricting clauses; the verb of the RC takes a relative particle *-(i)n* or *-nin*. In general, no pronoun is left behind in the NP_{rel}—except that, when the NP_{rel} is an adnominal genitive, a pronoun must be retained. (The examples below are adapted from Tagashira 1972.)

- (55) *kwankyecəl -e tãhäyo malha-n ki salam*
 relative-clause about talk REL-PART the man
 'the man who talked about relative clauses'
- (56) *hyänsik -i ki lä -lil ttäli-n maktäki*
 Hyänsik SU the dog DO beat REL-PART stick
 'the stick with which Hyänsik beat the dog'

(In examples without pronouns, there is no unequivocal coding of the NP_{rel}; in 56 it is not possible to retain the postposition *-lo* 'with'.)

- (57) *chaki-ij lä -ka chongmyəŋgha-n ki salam*
 he GEN dog SU smart REL-PART the man
 ‘the man whose dog is smart’

LUGANDA is a Bantu language spoken in Uganda. The basic word order is SVO, and restricting clauses are postnominal. The only positions on which relativization can occur are SU and DO: IO’s are not distinguished overtly from DO’s. Relativization on SU and DO are distinguished by distinct forms of the relative prefix on the verb, so that strategy is [+case].

- (58) *ekikopo e- kigudde*
 cup REL fell
 ‘the cup which fell’
 (59) *ekikopo John ky’ aguze*
 cup John REL bought
 ‘the cup which John bought’

If one wishes to express the meaning of relativizing an OBL, it can only be done by promoting the OBL to DO:

- (60) *John yatta enkoko n’ (=na) ekiso.*
 John killed chicken with knife
 ‘John killed the chicken with a knife’
 (61) *John yattisa ekiso enkoko.*
 John killed-with knife chicken
 (62) **ekiso John kye-yatta enkoko na*
 knife John that killed chicken with
 ‘the knife with which John killed the chicken’
 (63) **ekiso John na kye-yatta enkoko*
 (64) *ekiso John kye-yattisa enkoko*
 (65) *John yattira mukazi enkoko.*
 John killed-for woman chicken
 ‘John killed the chicken for the woman.’
 (66) *mukazi John gwe-yattira enkoko*
 woman John who killed-for chicken
 ‘the woman for whom John killed the chicken’

MALAGASY is an Austronesian language spoken in various dialects throughout Madagascar. The basic word order is VOXS. Only subjects can be relativized, and a developed voice system can promote any major NP to subject position. Sufficient examples are given in NPA, §1.3.1, and references cited there.

MALAY is an Austronesian language spoken in Malaysia and Indonesia. Our two speakers were from Malaysia. The basic word order is SVO. RC’s present the head NP to the left, followed by the constant particle *yang*, followed by the restricting clause. Relativization on the top four positions on the AH is discussed in NPA, §1.3.2. Here we note only that, when the head NP functions as a genitive in the restricting clause, that function is not coded by presenting a genitive interrogative pronoun in the restricting clause, but rather by presenting a personal pronoun (i.e. possessive adjective) in the genitive position.

- (67) *lelaki yang Aminah telah menchuri ayam -nya*
 man that Aminah PERF stole chicken his
 'the man whose chicken Aminah stole'

MAORI is a Polynesian language spoken in New Zealand. Basic word order is verb-first, with quite free order of major NP's, though VSO is the most frequent citation form. RC's present the head to the left of the restricting clause, with no relativization marker and no pronoun present in the NP_{rel} position. Basically, only subjects can be relativized directly. However, a few oblique-case NP's may be relativized by presenting one of the very generalized prepositions in the restricting clause, or else something that appears to be an adverb resembling the corresponding interrogative pronoun. It seems from our data that this case-coding strategy applies principally to relativization on generalized sentential locatives, e.g. 'the village where he lives,' rather than on oblique-case NP's that represent essential arguments of the verb. No natural translations were obtained for RC's like 'the table under which John put the money.' Thus we do not include oblique-case relativization in our study, but illustrate the relevant RC's nonetheless—since further study might warrant adding a second, case-coding strategy to Maori; cf. the somewhat marginal possibilities for these positions in Iban and Malay.

- (68) *te taane i patu-a e te wahine*
 the man PAST hit PASS AGENT the woman
 'the man who was hit by the woman'
- (69) *te teepu kei hea a Hone kua mea-tia te paroa*
 the table at where PERS John PAST put PASS the bread
 'the table where John put the bread'

MINANG-KABAU is an Austronesian language spoken in West Sumatra (Bukittinggi-Padang area). Basic word order is SVO. RC's present the head to the left, followed by an invariable relativizer *nan*, followed by the restricting clause. Characteristically, the basic RC-forming strategy applies only to subjects; and both DO's and IO's can be promoted to subject position by Passive.

- (70) *lakilaki nan di- ampok dek padusi itu*
 man that PASS hit by woman the
 'the man who was hit by the woman'
- (71) **lakilaki nan padusi itu maampok*
 man that woman the hit (act.)
 'the man whom the woman hit'

However, for oblique-case NP's and genitives, a clitic pro-form is presented in the NP_{rel} position.

- (72) *meja nan Amir malatakkkan roti dibawah-nyo*
 table that Amir put bread under it
 'the table under which Amir put the bread'
- (73) *padusi nan ayam -nyo dicilok dek Amir*
 woman that chicken her stolen by Amir
 'the woman whose chicken was stolen by Amir'

PERSIAN is an Iranian language of the Indo-European family. Its basic word order

is SOV; heads occur to the left of restricting clauses, and are separated from them by an invariable marker *ke*. No pronoun is retained if the NP_{rel} is subject, but a pronoun may optionally be retained if the NP_{rel} is DO. For all other positions, a pronoun must be retained in the NP_{rel}.

- (74) *Mard-i ke (*u) bolandqadd bud juje râ košt.*
 man the that he tall was chicken DO killed
 'The man who was tall killed the chicken.'
- (75) *John mard-i râ ke zan (u râ) zad mišenâsad.*
 John man the DO that woman he DO hit knows
 'John knows the man whom the woman hit.'
- (76) *Man zan -i râ ke John be {u/*∅} sibe zamini dâd mišenâsam.*
 I woman the DO that John to her potato gave know
 'I know the woman to whom John gave the potato.'

POLISH. The basic word order is SVO, though there is considerable word-order freedom. Restricting clauses occur to the right of their heads, and are introduced by a relative pronoun which explicitly codes the function of the NP_{rel}; there is no pronoun retention in the NP_{rel}.

- (77) *Jan zobaczył kobietę, która kocha Piotra.*
 John saw woman who (subj.) loves Peter
- (78) *Jan zobaczył kobietę, którą Piotr kocha.*
 John saw woman who(DO) Peter loves

The OCOMP may be expressed by the conjunction *niż* 'than'—in which case it is not relativizable—or by the preposition *od* 'from', in which case it is relativizable like any prepositional phrase.

ROVIANA is an Austronesian language spoken in New Georgia, Solomon Islands. Basic word order is VSO, though SVO also occurs. Heads of RC's occur to the left of the restricting clause. Sufficient examples are given in NPA, §1.3.3. Here we note only that, in the [+case] strategy for genitives, a pronominal element is present in the restricting clause, whereas case-coding for oblique NP's is done by a variable relativizer, or by the occurrence of an adverbial element in the restricting clause.

- (79) *sa barikalege sapu mate nana kokorako*
 the woman that die her chicken
 'the woman whose chicken died'

RUMANIAN. Basic word order is SVO. Heads of RC's are presented on the left, followed by a relative pronoun, followed by the restricting clause. The forms of the relative pronouns are specific to the function of the head in the restricting clause, so the major RC-forming strategy (and the only one we consider) is marked [+case] in NPA Table 1. When relativizing on SU, OBL, and GEN, no pronoun is retained:

- (80) *bărbat-ul care a venit*
 man the who has come
 'the man who has come'
- (81) *bărbat-ul cu care mergi la bibliotecă*
 man the with who you-go to library
 'the man with whom you are going to the library'

- (82) *bărbat-ul al căruia frate vine*
 man the the whose brother comes
 'the man whose brother is coming'

When relativizing on DO and IO, however, there is a pronoun in the RC; this is apparently an exception to the account of pronoun retention given in NPA, §2.2.2. However, such pronouns are also found with full NP DO's and IO's in simplex sentences, and are obligatory where the DO or IO is preverbal. Thus, by the discussion of NPA §1.4.2.2, these pronouns are to be treated as instances of verb agreement rather than pronoun retention.

- (83) *bărbat-ul căruia i- ai dat o carte*
 man the to-whom to-him you-have given a book
 'the man to whom you have given a book'
- (84) *Bărbat-ului i- ai dat o carte.*
 man to-the to-him you-have given a book
 'To the man you have given a book.'
- (85) *bărbat-ul pe care l- am văzut*
 man the DO who him I-have seen
 'the man whom I have seen'
- (86) *Pe bărbat-ul l- am văzut.*
 DO man the him I-have seen
 'The man I have seen.'

RUSSIAN. The RC construction is essentially as in Polish, the relative pronoun being *kotoryj*.

- (87) *Ivan videl devušku, kotoraja ljuvit Petra.*
 Ivan saw the girl who (SU) loves Peter.
- (88) *Ivan videl devušku, kotoruju Petr ljuvit.*
 Ivan saw the girl who (DO) Peter loves.

SHONA (Zezuru dialect) is a Bantu language spoken in Zimbabwe (Rhodesia). Basic word order is SVO. RC's present the head to the left, followed by the restricting clause. If the NP_{rel} is subject, a relativizer may or may not separate the head from the restricting clause.

- (89) *mukadzi nyo akarara*
 woman who sleeps
- (90) *mukadzi anodzidzisa*
 woman (who) teaches

If the NP_{rel} is a DO or IO, the preference is to passivize the underlying sentence, so that the head NP functions as a subject.

- (91) *dima rakaphi-wa Mary na John*
 potato give PASS Mary by John
 'the potato that was given to Mary by John'
- (92) *mukadzi akaphi-wa dima na John*
 woman give PASS potato by John
 'the woman who was given a potato by John'

However, it appears possible to relativize DO's and IO's directly, in which case a relative pronoun separates the head from the restricting clause. But as they appear

to be the same, or at least overlap (our data are incomplete in this regard) with those used when the NP_{rel} is subject, these 'relative pronouns' do not unequivocally code case.

- (93) *murumu uyo mukadzi akarova*
 man who woman hit
 'the man whom the woman hit'
- (94) *mukadzi uyo John akapa dima*
 woman who John gave potato
 'the woman to whom John gave the potato'

So relativization on the first three positions on the AH uses a [–case] RC-forming strategy. Further, as in the discussion of Luganda above, many oblique NP's are relativized by first promoting them to DO status, then passivizing, and actually relativizing them as subjects. But in many of these cases it is possible both to promote the NP and to leave behind a pronominal trace of its original function. Hence oblique NP's can be relativized by a case-coding strategy.

- (95) *banga rakaura-is -wa huku (na- ro)*
 knife killed with PASS chicken with it
 'the knife with which the chicken was killed'

Finally, the details of relativization on genitives are not clear to us; but some sort of possessive particle appears to be present on the possessed NP, clearly marking its function in the restricting clause.

- (96) *mukadzi we- huku idzo John akaba*
 woman POSS chicken that John stole
 'the woman whose chicken John stole'

SINHALA (Sinhalese) is an Indo-European language, Indic sub-branch, spoken in Sri Lanka (Ceylon). Basic word order is SOV. Heads of RC's occur on the right, no relativization marker is used, and the main verb of the restricting clause is in a non-finite (participial) form. NP's in the direct case (no postposition) are easily relativizable.

- (97) *Gæ:ni sindu kijənə -va.*
 woman song say PRES
 'The woman is singing.'
- (98) *sindu kijənə gæ:ni*
 song saying woman
 'the woman who is singing'

NP's which express a goal or target of an action, and thus ones which generally correspond to IO's and certain types of DO's (as of verbs like *hit*) can also be relativized by the basic strategy, but there is a clear drop in acceptability. Our consultant generally preferred passivizing such clauses, so that the relativized NP would be a subject.

- (99) *Miniha gæ:niṭə gæhuva*
 man woman hit
 'The man hit the woman.'
- (100) *Miniha gahapu gæ:ni ænduwa.*
 man hit (ptc.) woman cried
 'The man whom the woman hit cried.'

- (101) *minihageng pa:rak kx: gæ:ni*
 man (agent) blow eaten (ptc.) woman
 'the woman who received a blow by the man'

In general, oblique-case NP's are not relativizable (paraphrases like 'the knife used to kill the chicken' translate 'the knife with which the chicken was killed'). In a few cases, however, oblique NP's seem relativizable, though no postposition indicating the function is present in the restricting clause, e.g. for locatives.

- (102) *ra:dza: pa:n tibbə me:se*
 Raja bread put table
 'the table on which Raja put the bread'

It appears here that 'on' is the unmarked interpretation; the sentence is not used to mean 'the table under which Raja put the bread'.

SLOVENIAN is a Slavic language spoken in Yugoslavia. Basic word order is SVO. As in Modern Greek, RC's present the head on the left, and have the restricting clause introduced either by a relative pronoun, in all positions—or, for all positions except subject, a personal pronoun introduced by the invariable *ki*.

- (103) *Janez je videl žensko {ki jo | katero} je mož udaril.*
 John AUX saw woman that her whom AUX man hit
 'John saw the woman whom the man hit.'

SPANISH. Basic word order is SVO. RC's present the head to the left, separated from the restricting clause by one of the relativizers *que*, *quien*, *el cual*. These relativizers do not in themselves code case, but may be preceded by a preposition giving unequivocal coding of the other oblique cases. The relativizer without a preposition may be subject or DO, while with the preposition *a* it may be DO or IO, so there is not unequivocal coding of these functions. For GEN's there is a distinct relativizer *cuyo* 'whose'. OCOMP's are introduced by the conjunction *que* 'than', and cannot be relativized.

- (104) *Los labriegos que han venido son españoles.*
 the farm-workers who have come are Spanish
 (105) *Los labriegos que he visto son españoles.*
 the farm-workers that I-have seen are Spanish
 (106) *El campo tras el cual van los labriegos es muy grande.*
 the field through which go the farm-workers is very big
 (107) *No conozco al abogado cuyo hijo es médico.*
 not I-know the lawyer whose son is doctor
 'I don't know the lawyer whose son is a doctor.'

SWEDISH. Basic word order is SVO. RC's present the head on the left. The restricting clause is introduced by the invariable *som*. Prepositions, including *åt* which introduces IO's, are present in the restricting clause (at the end); so in those instances, case is coded. Similarly, case is coded in genitives, which have a special form of the relativizer—*vars* (or *vilkens*; see further NPA, §2.2.1). For subjects and DO's, however, no preposition will be stranded in the restricting clause, and *som* will not discriminate the functions; in that case, the RC-forming strategy does not code case. Our work with Swedish speakers was supplemented by McClean 1969.

- (108) *Jag har en bror, som talar tyska.*
I have a brother who speaks German
- (109) *Han är en man, som jag kan lita på.*
He is a man that I can rely on

TAGALOG is an Austronesian language spoken in the Philippines. Basic word order is verb-first, with largely free order of full NP's after it. A major way of forming RC's presents the head on the left and introduces the restricting clause by the invariable particle *ng* (= /naŋ/). This strategy applies only to subjects (but see NPA, §1.4.1.1). It should be noted, however, that restricting clauses can sometimes, especially when short, be presented to the left of the head, with the same relativizer separating the restricting clause from the head. By our classification this alternative must count as a second RC-forming strategy (which, like the first, is restricted in application to subjects only). Examples are from Schachter & Otnes (1972:123):

- (110) *babae -ng nagbabasa ng diyaryo*
woman that reads DO paper
- (111) *nagbabasa ng diyaryo-ng babae*
reads DO paper that woman

Non-subjects cannot be relativized directly, but Tagalog possesses a rich system of verb voices which enable DO, IO, and basically all OBL's to be promoted to subject, where they can be relativized.

- (112) *Sumampal ng babae ang lalake.*
slapped (act.) DO woman SU man
'The man slapped a woman.'
- (113) **babae -ng sumampal ang lalake*
woman REL slapped SU man
'the woman whom the man slapped'
- (114) *Sinampal ng lalake ang babae.*
slapped (pass.) AGENT man SU woman
'The woman was slapped by the man.'
- (115) *babae-ng sinampal ng lalake*
'the woman who was slapped by the man'

GEN and OCOMP cannot be systematically subjectivized, nor can they be relativized directly using another strategy. The only way to say 'the man whose dog is sick' in Tagalog is to express the genitive relation with an explicit verb of possession, of which 'man' is the subject.

- (116) *lalake-ng mayari sa aso -ng maysakit*
man REL have dog REL be-sick
'the man who has a dog that is sick'

TAMIL is a Dravidian language spoken in southern India and Sri Lanka (Ceylon). Basic word order is SOV. One type of RC presents the head to the right, while the verb of the RC is in a non-finite (participial) form, and the function of the NP_{rel} is not coded overtly; this construction may be used only when the NP_{rel} is subject, DO, or IO. Another strategy, which works on all positions (including those that

can be relativized using the first strategy), is similar to that of Hindi discussed in NPA, §1.4.1.2 (for examples, see §1.3.3).

TONGAN is a Polynesian language. It is VSO and ergative. RC's present the head NP to the left of the restricting clause, with no intervening relativizer. Personal pronouns are obligatorily retained if the NP_{rel} position follows a preposition, e.g. IO's and OBL's, or if it follows objects of prepositions (i.e. IO's and OBL's) and GEN's. Pronouns may not be retained in DO position (cf. NPA, p. 86), but may optionally be present in subject position. Examples 39 and 50–52 in NPA sufficiently illustrate RC's in Tongan.

TURKISH. The basic word order is SOV. RC's present their heads to the right; the verb of the RC is in a non-finite (partipial) form, and its subject is in the genitive. For SU through OBL, no pronoun is retained in the NP_{rel}. If the NP_{rel} is an adnominal genitive, then a suffix must be retained on its head noun; this is true in simplex sentences even when the head noun is present. For OCOMP's, a stressed pronominal form must be retained in the NP_{rel}, although the result is not too natural.

- (117) *John uyuy -an kadın -i tanıyor.*
 John sleep PART woman DO knows
 'John knows the woman who is sleeping.'
- (118) *John-'un Mary-ye ver -diğ -i patates- i yedim.*
 John of Mary IO give VERB-NOUN his potato DO I-ate
 'I ate the potato that John gave to Mary' (lit. 'I ate the potato of John's giving to Mary.')
- (119) *Fred-'in tavuğ -u -nu çal -diğ -i kadın -i*
 Fred of chicken her DO steal VERB-NOUN his woman her
görüyorum.
 I-see
 'I see the woman whose chicken Fred stole' (lit. 'I see the woman of Fred's stealing her chicken.')
- (120) *Iste Mary-nin kendisin{-den/*Ø} daha büyük ol- duğ -u adam*
 here Mary of him from more big be VERB-NOUN her man
geliyor
 comes
 'Here comes the man that Mary is bigger than.'

URHOB0 (Sobo) is a Kwa language spoken in the delta region of Nigeria. Basic word order is SVO. The basic RC-forming strategy presents the head NP to the left, and introduces the restricting clause with invariable *l-*. Personal pronouns appear to be present in all NP positions which are relativized, although their form is usually somewhat different from the form of pronoun occurring in independent clauses. Further, the tone system of Urhobo has not been investigated enough for us to know whether the apparently unusual subject pronouns in RC's merely represent a more substantive expression of verb agreement, as in Yoruba, or whether they represent genuine pronouns. In the absence of evidence to the contrary, we must assume the latter. By the same token, we cannot be sure that OCOMP's are not

really DO's in serial verb constructions (though if they are, it is not obvious from our data).

- (121) *Ø vberē.*
 she is-sleeping
- (122) *John mle aye l- {ø/*Ø} vberē.*
 John saw woman that she is-sleeping
 'John saw the woman who is sleeping.'
- (123) *Aye na teyø lø.*
 woman the hit him
 'The woman hit him.'
- (124) *John lie oshale na l- aye na teye {ø/*Ø}.*
 John know man the that woman the hit him
 'John knows the man whom the woman hit.'

WELSH is a Celtic language with the basic word order VSO. RC's present the head to the left. For IO's through OCOMP's, the restricting clause is introduced by *y*, and a personal pronoun is retained in the NP_{rel} position. For subjects and DO's, the restricting clause is introduced by *a* and no pronoun is retained; such RC's are basically ambiguous, according to whether the head is understood to be SU or DO. Sufficient examples illustrate these two strategies in NPA, §1.3.2.

YORUBA is a Kwa language spoken in Nigeria. The basic word order is SVO. RC's present the head to the left, and introduce the restricting clause by the invariable particle *ti* (*t'* before vowels). Work with speakers is here supplemented by data from Rowlands 1969. If the NP_{rel} is a DO, no pronoun is retained.

- (125) *işu ti mo ra (*a) lana naa*
 yam REL I buy it yesterday that
 'that yam which I bought yesterday'

For IO's and other oblique cases, Yoruba has a serial verb construction; this means that these positions are treated essentially as DO's of one of the serial verbs, and are not therefore given separate entries in NPA Table 1. The same applies to OCOMP's. For adnominal genitives, however, a pronoun must be retained in the NP_{rel}:

- (126) *okunrin ti mo wø si ile {re/*Ø}*
 man REL I lodge at house his
 'the man at whose house I lodge'

If the NP_{rel} is subject, then a pronoun must obligatorily be retained:

- (127) *obinrin t' o maa ra a*
 woman REL she FUT buy it
 'the woman who will buy it'

This apparent exception to the claim that pronouns are retained in positions lower on the AH suggests an analysis for Yoruba along the lines of NPA §1.4.2.2, i.e. that the pronoun *o* is an instance of verb agreement. In the simple sentence, however, there is apparently no pronoun as verb agreement:

- (128) *Èja (*o) pø loni.*
 fish it plentiful today
 'Fish is plentiful today.'

But if we take into account the tone system of Yoruba, then it becomes clear that such sentences contain a trace of a 3rd person pronoun. The word *ẹja* 'fish' has a mid tone on both syllables (the other main tones are high, marked \acute{V} , and low, marked \grave{V}); the pronoun *ó* has a high tone; when the subject immediately precedes the verb, if the subject does not end in a high tone, then there is a shift to high tone on the last vowel of the subject—which we may symbolize by a postposed accent, i.e. *ẹja' pò lóní*. Following a suggestion by Rowlands (35), we argue that this shifted tone is the reflex of a 3rd person pronoun, i.e. that Yoruba has such 3rd person pronominal forms as verb agreement in simplex sentences. Thus the appearance of the subject pronoun in the RC is equally an instance of verb agreement.

ZÜRICH GERMAN (Züritütsch) is a variety of German spoken in Switzerland. Basic word order is SVO. RC's present the head to the left, and introduce the restricting clause by the invariable particle *wo*. Since pronouns are not generally retained when the NP_{rel} is subject or DO, these functions are not unequivocally coded. (Several examples below are from Riemsdijk 1975.)

- (129) *də lööli wo (*εεr)mər əjz uv də grind kεε hət γunt z tsruk ybər.*
 the idiot PART he me one on the head given has gets it back
 'I will take revenge on the idiot who hit me on the head.'
- (130) *də geltə wo iy (*zi) uv əm pukəl khaa han iz abəkkhejt.*
 the tub PART I it on the back had have is down-fallen
 'The tub that I had on my back has fallen down.'

But for positions lower on the AH, pronominal traces of the NP_{rel} are present in the restricting clause; hence case is unequivocally coded. (OCOMP's, even so, are marginal.)

- (131) *iy han də theekx wo mər hənd myjze z zuəltzyyg drin iə tuə*
 I have the satchel PART we have must the schoolthings in-it put
immər uv də latə khaa
 always on the plank had
 'I have always hated the satchel in which we had to put our school-
 things.'

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