Chapter 10

THE NATURE OF RELATIVE CLAUSES:
VARIATIONS

1. Introduction
The intrusion of VOICE into the discussion of relative clauses provides the basis for the hierarchy suggested by Keenan and Comrie (1977)

Subject > DirectObject > NondirectObject > Possessor

Accessibility Hierarchy

What is called the ‘Subject’ is the most frequently the unmarked or default focussed VOICE in a language. Whatever it is that makes a ‘subject’ the unmarked VOICE decreases through some scale of ROLES (not necessarily the one cited above), and languages will arbitrarily (?) prohibit a ROLE at some point on the scale from being perceived as the highlighted VOICE, hence also prohibiting that ROLE from functioning as the head of the relative clause. Navajo illustrates the possibility of possessors functioning as ‘heads’ (Platero 1974.213):

(1) hastiin bi-gaan k'ee'éltq'yéé naalnish
    [man his-arm perf:3:break-REL imp:3:work]
    ‘The man whose arm broke is working’

Recalling the Navajo sensitivity to order (SO or OS), the essential element here may be occurrence in initial position.1 The scale of Figure 1 provides a way of understanding why “the encoding of the ROLE [i.e., the remarked-upon noun, PWD] in the embedded sentence is, cross-linguistically, one of the most significant parameters” (Comrie 1989.147. Cf. also p. 155.).

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1 Cf. (10) below.
The four ‘major types’ in the identification of the amplified element are:

(2) **Nonreduction**, e.g. Diegueño (Gorbet 1974.62).

\[
\text{i:pac } a:k-\emptyset \text{ wi:-m } tuc-pu \ a:k-pu-\emptyset \\
\text{[man bone-OBJ rock-COMIT hit-DEM bone-DEM-OBJ} \\
\text{si:n\-c wyaw} \\
\text{woman-SUBJ found]}
\]

‘The woman found the bone that the man hit with the rock’

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<tr>
<th>UNITY</th>
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DIVERSITY

Figure 1: *The functional matrix containing relative clauses.*

(3) **Pronoun Retention**, e.g. Farsi (Comrie 1981.140-41).

(a) Mard-i ke $\emptyset$ bolandqadd bud juje-ra kost

\[
\text{[man-a tall was chicken killed]}
\]

‘The man that was tall killed the chicken’

(b) Hasan mard-i-ra ke zan u-ra zad mi-\text{\text{s}en\text{\text{-}ad}

\[
\text{[Hasan man-a- woman he hit IMPF-know-he]}
\]

‘Hasan knows the man that the woman hit’

(c) Man zan-i-ra ke Hasan be-\text{\text{u}} sibe zamini dad

\[
\text{[I woman-a- Hasan to-her potato gave}
\text{mi-\text{\text{s}en\text{\text{-}am}
\text{IMPF-know-I]}
\]

‘I know the woman to whom Hasan gave the potato’
A pronominal presence is required for all ROLE functions except the Patient, where it is optional, and the Agent, where it is prohibited (cf. [3d]).

(4) **Relative pronouns**, e.g. English: “instead of being in the usual position, in terms of linear order, for a pronoun expressing the grammatical relation, it is moved to clause-initial position ...” (Comrie 1989.149).

(a) The man who Mike fired ___ made a face at him.
(b) A further bit of evidence for the correctness of this rule, which I am grateful to Samuel E. Martin for bringing ___ to my attention, is the fact ... (Ross 1977.272)

(5) **Gap type**, e.g. Amharic: “... simply does not provide any overt indication of the role of the head within the relative clause” (Comrie 1989.151).

(a) filip Ø yə-mêt'-a-w-u-n mašina
[Philip car YE-bring-3M-3M-DEF-PAT car
ayc-əw-al-oh
see-3M-PROX-1SG]‘I saw the car that Philip brought’

(b) Ø maštawat-u-n yə-səbəra-Ø-w səw
[man window-DEF-PAT YE-break-3M-3M man
əni-n ay-t-o-ŋ-al
I-PAT see-PST-3M-1SG-PROX]‘The man who broke the window saw me’

The example of Nonreduction above in (2) is taken from Diegueño and the sort of relative cited there is the externally headed one. But the internally headed, or headless, relative clauses also must fall into this category. Navajo has the following (Platero 1974.2235-36):

(d) "Mard-i ke u bolandqadd bud juje-ra kost
[man-a he tall was chicken killed]"

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2 Comrie (1989.147) says that usages such as (3d) are “unusual, though examples are attested”.
(6) ashkii hastin yi-ztał-ęę at'éeđ yi-zts'os
‘The boy who kicked the man kissed the girl’
‘The man whom the boy kicked kissed the girl’
*‘The boy kissed the girl who kicked the man’

in which the relative clause qualifies the subject. Navajo also has analogous clauses qualifying the object (Platero 1974.235):

(7) ashkii at'éeđ hastin yi-ztał-ęę yi-zts'os
[boy girl man -3:perf:3:kick-REL -3:perf:3:kiss]
‘The boy kissed the girl who kicked the man’

which is “acceptable, though somewhat difficult to process due to the center embedding” (Platero 1974.235). And (8) combines two relative clause modifications (Platero 1974.220):

(8) hastin Ɂééchaa'í bi-shxash-ęę be'eldqoŋ
[man dog -3:perf:3:bite- REL gun
nédiiitá-(n)ęę deesdqoŋ
3:perf:3:pick:up-REL perf:3:fire]
‘The gun that the man who was bitten by the dog picked up went off (fired)’

The first, ‘the man who was bitten by the dog’, combines with ‘the gun he picked up’ to qualify ‘gun’.3 Sentence (9) shows that the object ‘dog’ is not a possible head:

(9) Ɂhastiin Ɂééchaa'í bi-shxash-ęę be'eldqoŋ
[man dog -3:perf:3:bite-REL gun
nédiiitá-(n)ęę naḥaλ'īn
3:perf:3:pick:up-REL imp:3:bark]
‘The dog that bit the man was bitten by picked up the gun is barking’

In (10) (Platero 1974.205),

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3 ‘The gun that was picked up by the man who was bitten by the dog went off’. 
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(10) (a)  
ashkii  at′eeéd  yi-yiihtsá-(n)ée  yáłti'
[boy  girl  -3.3.Perf.see-REL  3.speak]

‘The girl who the boy saw is speaking’
‘The boy who saw the girl is speaking’

(b)  
ashkii  at′eeéd  bi-yiihtsá-(n)ée  yáłti'
[boy  girl  -3.3.Perf.see-REL  3.speak]

‘The boy who was seen by the girl is speaking’

The (b)-sentence is the marked structure and also the more constrained, having only the gloss provided, while (10a) has two possible senses (Platero 1982.294): “… relative clauses formed on inverted sentences (with equal ranking subject and object) are unambiguous”.

In the appropriate context, as in Diegueño, the distinction between relative clause and complement clause disappears:

(11)  
ashkii  ałhosh-ígíí  ałqąq'
[boy  sleep-REL  snore]

‘The boy who is sleeping is snoring’

(12)  
shízhéé  yi-yiiyá'-ígíí  shił  béhéózin
[1.father  -3.3.P.eat-COMP  1.with  3.be known]

‘I know that my father ate’

Platero (1974.202-03) comments on the use of -ígíí:

... the element /-ígíí/, glossed REL, is a relative complementizer. In fact, it is a generalized nominalizer appearing on any sentence dominated by the NP node ... /-ígíí/ is used if the tense is nonpast ... and /-yéé/ ... is used if the sentence is past.4

2. The character of linkage

The relevant remark with respect to Figure 1 is now this. Where a language falls with respect to UNITY — DIVERSITY will affect how it implements the second [horizontal] dimension. We have claimed that the primary content of the second aspect is the ‘prominence’, the degree to which a language connects the content of PROPOSITIONS through shared PARTICIPANTS; and in the context of the expressions that approach UNITY that prominence’ is VOICE. But as the expression approaches DIVERSITY, that

4 Sentence (12) is from Schauber (1979.88), who glosses -ígíí as COMP.
‘prominence’ may be achieved by a semantics that is more appropriate to the integration of two distinct utterances, i.e., TOPIC. At the top of Figure 1, the need for TOPIC has been passed; ‘relative clauses’ are already unitary, and they are components of ‘phrases.’ And at the bottom, TOPIC is present. The content which functions as a ‘relative clause’ is more diffusely represented; ‘relative clauses’ are still two distinct assertions, and not a ‘clause within a ‘phrase’. Diegueño provides a contrast between its two equivalents of relative clauses. The first, internally headed relative clause is not distinct from complement clauses and is placed in Figure 1 where maximum unity and minimum prominence of participants converge. The second expression of the content of a relative clause (e.g. [2]) more likely exploits the notion of TOPIC. Notice that the sequence which is taken to be the relative clause

... a:k-pu-Ø si:ny-c wyaw
[... bone-DEM-OBJ woman-SUBJ found]

has inverted the SOV order to OSV. This in turn recalls the CAY pattern in which the SOV order is similarly inverted to OSV (Woodbury 1985.70):

... Taivqaralria=gga Nuka-m qetunra-a
[... Taivqaralria-EXCLAM Nukaq-REL son-3s:s]
‘Taivqaralria, [who is] Nukaq’s son’
[Lit. ‘Taivqaralria Nukaq has as a son’]

Keenan (1985.149) remarks that “relative pronouns are limited to postnominal RCS”. Generally, we must assume that if the notion of a comment upon some TOPIC is the origin of ‘relative clause,’ then the TOPIC/head should linearly precede. This follows from the assumption that temporally what is

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5 Lehmann (1986) says this in two ways: “... nominalization correlates with achievement on the accessibility hierarchy” (Lehmann 1986.672) and “the more strongly nominalized a RC is, the less it will allow of pronominal representation of the head in the relativized position” (Lehmann 1986.675). Both the degree of accessibility (subject, direct object, etc.) and the expression (elision, pronoun, etc.) are aspects of the common presence of voice.

6 We may expect then a TOPIC prominent language to exhibit special behavior in this area of its grammar; however, of the well described TOPIC prominent languages, only Mandarin appears to invoke the diverse end of the scale with its serial verb construction. Japanese, Korean, and Lisu have constructed this portion of their grammars about an expression which belongs to the top portion of Figure 1.

7 Lehmann (1986.666) places two sorts of ‘adjoined’ relative clauses in complementary distribution. The internally headed are preposed to the main clause, and the externally headed
known (and that to which a remark is to be added) exists in memory; and that
cognition proceeds by integrating new experience with old. In some real sense,
what is present in memory and what-is-TOPIC is prior to what-is-not-in-
memory and that-is-not-TOPIC. The more compacted that content is, the less
distributed it is in time, and the less the semantics of TOPIC is appropriate. The
distribution of TOPIC in real time is directly reflected in the invocation of
initial position in TOPIC prominent languages. None of them, e.g. Mandarin,
Japanese, Lisu are TOPIC final. There is no TOPIC prominent language that will
order the remark on the TOPIC before the identification of the TOPIC itself.8
‘Afterthought’ TOPICS (Cowper 1979 and Chafe 1976) are just that and do not
contradict this claim. The matching of a TOPIC and some comment upon it
with cognitive presence — non-presence, and the resulting temporal sequence
of TOPIC first, preceding its remark is also mirrored in relative clauses,
namely, in the “general tendency across languages to favor postnominal as
opposed to prenominal RCS” (Keenan 1985.143-44).

There is a second property of relative clauses that this iconic sequence
accounts for; that is, wherever a language uses a relative pronoun, we find that
“instead of being in the usual position, in terms of linear word order, for a
pronoun expressing that grammatical relation, ... it is moved to clause-initial
position” (Comrie 1989.149). And the RPRO almost [?, PWD] almost always occurs
leftmost in S_rel’ (Keenan 1985.151). This also suggests that postnominal
relative clauses should be more DIVERSE on the scale of Figure 1 than are
prenominal ones, and the following relationship should appear:9

UNITARY — Headless — Prenominal — Postnominal — Adjoined — DIVERSITY

Figure 2: A functional scale of formal relative clause types.

Because of the ‘prominence’ that is exploited by relative clauses (broadly
construed) may be achieved by VOICE or TOPIC, corresponding to UNITY and
DIVERSITY, some languages will use both forms. Navajo may invoke its SO-
inverson with the result that the bi-inverted form, i.e., the marked choice,
appears as an alternative expression. In (10) above, the (b)-sentence is the

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8 But cf. Ojibwa (Tomlin & Rhodes 1979).

marked structure and also the more constrained, having only the gloss provided, while (10a) is vague:

However, it should be mentioned that where the embedded clause has a subject and object of equal rank and head deletion has applied [i.e., the clause is headless, PWD], there is a strong tendency to give the sentence the interpretation according to which the first lower NP is the one that bears the relative connection with the head (Platero 1974.210-11, fn. 7).

Thus, ‘The boy who saw the girl is speaking’ is the preferred gloss in (10a); and the gloss which begins ‘The girl who ...’ is achieved by exploiting the bi-construction. The indeterminacy of (10a) can be avoided in another way:

\[(13) \quad \text{at'ééd yi-yii\text-hs\~g-(n)\text-ɛɛ ashkii yá\text-hi'}\]
\[
\begin{array}{lll}
\text{girl} & -3:\text{perf;3:see-REL} & \text{boy} & \text{imp;3:speak} \\
\end{array}
\]

‘The boy who saw the girl is speaking’

*‘The boy who the girl saw is speaking’

Sentence (13) introduces a formal alternative to the headless expressions of relativization (Platero 1974.230 & 203):

... sentence [(13)] is not ambiguous in Navajo ... [(10)] is the preferred process in Navajo. The preference for forward deletion [the headless relative clause of (10), PWD] over the backward deletion is so strong that Brame, in his excellent study of Navajo relative clauses, was not aware of the derived structure of the type represented by ... [(13)].

The lack of ambiguity in (13) is supported by the pattern of Navajo that forces a single gloss upon a sentence like (Platero 1982.287):

\[(14) (a) \quad \text{ashkii yi-yii\text-hs\~g} \]
\[
\begin{array}{ll}
\text{boy} & -3:\text{perf;3:see} \\
\end{array}
\]

‘S/He saw the boy’

*‘The boy saw him/her’

\[(b) \quad \text{yi-yii\text-hs\~g} \]

‘S/He saw him/her’

which can only mean ‘S/He saw the boy’ and not ‘The boy saw him/her’.
Only sentence initial position is sufficient to sustain an elision in the presence of another noun; therefore, (13) can have only the gloss provided it there. Of course, the verb of (14) is possible by itself, meaning ‘S/He saw him/her’ (Platero 1982.289). Sentence initial position is identified by Platero (1974.210) as the

... ‘topic’ position ... [that] brings a noun phrase into ‘aboutness focus’.

Selection of the marked alternative is what gives rise to relative pronouns. In this type of language, reliance upon the ‘neutral’ VOICE hierarchy (that associates the content of focussed VOICE with decreasing ease according to some language specific scale of ROLE or animacy) is decreased, and the assignment of prominence is signalled explicitly and unambiguously by the relative pronoun. Navajo, as we know lies at the top in Figure 1, but in a language which lies at the bottom and employ the DIVERSE semantics of complexity, Figure 1 implies that relative pronouns will not appear in TOPIC prominent languages. Since such languages always track the TOPIC, not just changes in TOPIC, there will be no marked grammar opposed to unmarked to serve as the semantic base of a developing relative pronoun.

3. **Exploiting the system**

The process of marking a new TOPIC — as opposed to depending upon the TOPIC worthiness associated with ROLE — adds another dimension to Figure 1, one that is represented separately in Figure 3. A relative pronoun, marking a

![Diagram](https://example.com/diagram.png)

**Figure 3: A functional scale of formal relative clause types.**

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10 This would require an SVO or VSO TOPIC prominent language since SOV languages typically have prenominal relative clauses, and by Figure 2 they have passed the point at which relative pronouns may appear. Thus, Chinese and the Bantu languages which stack nouns sentence initially (e.g. Kinyarwanda) may qualify as examples.
new **changed** TOPIC, restricts those relative clauses to a shallow level of embedding. Correspondingly, “more positions [specifically more positions that derive from multiple embeddings, **not** more positions that derive from greater exploitation of the ROLE hierarchy, PWD] can be relativized if personal pro-nouns are present in the NP_rel position than if they are not” (Keenan 1985. 155).

Comrie (1989.156) observes that “it is nearly always the case that the pronoun retention type is lower down the accessibility hierarchy (or, more generally, in positions that are, cross-linguistically, less accessible), while the gap strategy is used higher up”. Note that as one moves down this hierarchy, the less apt a PARTICIPANT is to bear focussed VOICE, so that TOPIC — not VOICE — increasingly becomes the means to implement the prominence required for a relative pronoun. The Farsi examples in (3) illustrate this. The term that is more likely the TOPIC on the basis of its ROLE requires no indexing pronoun, whereas a switch, an expectation unmet, must be signalled. This is the same principle as in

(15) (a) Ladybird wanted Nancy to resign.
(b) Ladybird wanted her to resign.
(c) Ladybird wanted Ø to resign.

To indicate a continuing (same referent) TOPIC Ø must be used in (15c) — and equally in (3a) and (3d). Choice of an overt form — pronoun in (15b) or noun in (15a) — forces an interpretation with changed TOPIC. And this switch in (3d) produces semantic garbage. This intertwining of VOICE with TOPIC can also be observed in Alabama, which with its DIVERSE expression of relativization, relies upon the TOPIC-like semantics of switch-reference (-k or -n) between clauses, but grafts this to the VOICE semantics of ‘subject’ (-k or ‘non-subject’ (-n) within a clause.

The correlation in Figure 3 will explain then **why** headless relative clauses are ambiguous. Precisely in them, we find ‘old’ TOPIC semantics and grammar; and in a non-TOPIC prominent language there may be a default TOPIC, but not a fixed one. Hence, the ambiguity in Navajo, Quechua, and Diegueño. Cp. (10) above.

The lower righthand corner of Figure 3 represents — in some sense — the ‘minimum’ expression of ‘relative clause’ as it is found in the ‘conjoining’ syntax of Warlpiri, CAY Eskimo, Mandarin, and the languages cited by Mithun (1984). It is from this point as basis that we have founded **three elaborative paths**, beginning with the semantics of DIVERSITY, but ending in
different syntaxes, and different kinds of semantic unity: (i) the complement sentence, (ii) the more-or-less typical headed relative clause, and (iii) the headless relative clause.

We turn now to reexamine briefly the headless relative alternative in the context of the type of adjoined relative clause that exists in Warlpiri, in which a dependent clause has a relative clause gloss only when a shared constituent is present. Without that shared member, only a backgrounding ‘when’ reading is possible. The presence of TOPIC as an accidental overlay to other semantics and other grammar is clear here in the nonspecialization of the relative clause. It seems that this type of relative clause expression is the source of headless relative clauses. Hale (1976.98-104) also described a relative clause formation in the Australian language Kaititj, which like Warlpiri, has the adjoined type as in (Hale 1976.99):

(16) agir atj aɾi-ŋk, aɾui-l-ar wi-nh
    [kangaroo 1:erg see-pres man-erg-COMP shoot-past] ‘I see the kangaroo that the man shot’

(17) agir-w ayiŋ uNthu-ran, aɾui-l-ar
    [kangaroo-dat 1:nom seek-prog, man-erg-COMP wi-ngi-w
     shoot-past-dat] ‘I am looking for the kangaroo that the man shot’

Kaititj differs grammatically from Warlpiri in two ways: the complementizer -ar is affixed “to the first constituent of the subordinate clause” (Hale 1976.98) and the “finite relative clauses are inflected for case agreement with the main-clause phrase with which they are construed” (Hale 1976.99). In examples (16) - (17), nonrepetition (or gapping) of the TOPIC in the adjoined clause serves to fix the coreference (as in Warlpiri), but it is also possible to prepose the complementary clause (Hale 1976.100):

(18) aɾui anh-ar aNti-yani-l, anhi-l-aɾ atjiŋ
    [man that-COMP stand-prog-erg, that-erg-emph me-obj wi-nhiri shoot-past] ‘That man who is standing (there), that one shot me’

Now the subordinate clause expressly names the TOPIC, and “its main-clause
partner is represented by a determiner or the anaphoric element /ɾivent/” (Hale 1976.100). This alternative is consistent with the free word order of these clauses, but otherwise resembles the corelative relative clauses cited by Keenan (1985.163-68). There exists a third possibility for the subordinate clause “to replace the main-clause noun phrase with which it is construed” (Hale 1976.100). That is, there is no reflection of the TOPIC in the main clause, and it is this that gives the impression of ‘replacement.’ For example, (Hale 1976.101)

(19) aŋuy-ar aNti-yani-wa] ayiŋ api-nk
[man-COMP stand-prog-dir I:nom go-pres]
‘I am going up to the man who is standing (there)’

“... the position of the complementizer /-ar/ ... indicates that the noun phrase ... [aŋuy/] is a surface constituent of the subordinating clause, not the main clause — the main-clause coreferent is entirely absent from [(19)]” (Hale 1976.101). Although Hale (1976.103) equates the relative clause of (19) with the headless relative clauses in Navajo, there are two differences which show that the transition from the DIVERSITY of PROPOSITIONS to the UNITY of NAMING is incomplete. First, unlike Navajo, the semantics of TOPIC is still relevant. Sentence (19) is not potentially ambiguous, so that either PARTICIPANT [‘man’ or ‘I’] is candidate for TOPIC, and hence, ‘head’. Only the initial PARTICIPANT may be so interpreted, and if a non-subject is required, “it is apparently fronted” (Hale 1976.101):

(20) aŋuy-w, ŋ-ar uNthu-yayni-thiy
[man-dat you:nom-COMP seek-past:imperf-elative
ayiŋ api-ni-ŋiŋ
I:nom walk-past-hither]
‘I have come from the man whom you are seeking’

Recall again CAY Eskimo. Even though the omission of the PARTICIPANT in the main-clause gives the impression of an “embedded relative clause” (Hale 1976.103), all the examples of this have the dependent clause initial, i.e., no PARTICIPANT of the main clause precedes the dependent one. Recall the typical final placement of the equivalent clauses in CAY Eskimo. There is no SOV example in Kaititj such that O is embedded with S to the left of the ‘relative clause’ O and the V is to the right. This is the second divergence from Navajo. The headless relative clauses of Kaititj are still a step or two
from the extremes represented by Navajo, Diegueño, etc., but they are instructive in their incompleteness. The progressive conversion from ‘adjoined’ status to ‘headless’ status requires a language that permits some freedom in word order and accounts for Keenan’s (1985.163 & 164) observation that both headless relative clauses and corelatives are confined to the same language type, i.e., verb final. It simultaneously accounts for why “many of the languages cited ... for internal [i.e., headless] RCS also present prenominal RCS” (Keenan 1985.163).

4. **Headless relative clauses as the third path: Japanese, Quechua & Navajo**

The thesis is that headless relative clauses represent a third extension of the basic impetus towards the Unity of relative clause formation, but one that culminates in a complex form of Naming. To support this further, we may note a variety of things. **First,** as already noted, the more Unity that is present, the more the system will rely on Voice and its accompanying grammar. This relation is represented in Figure 3 by the upward leftward slope from ‘Nonreduction’ to ‘Gapping’. This constitutes an Encoding Hierarchy, that supplements the Accessibility Hierarchy above:

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Gapping  >  Pronoun Retention  >  Nonreduction
Encoding Hierarchy
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The semantics of Topic declines as the beginning is left, and the head is present more to designate a prototype Name, which is shifted somewhat from that status by its participation in the Proposition. This is complemented by increasingly fixed word order, e.g. HgQuechua, and by decreased reliance upon the nominal case marking (where present), e.g. in Imbabura Quechua where “the accusative case marker -ta is optional inside relative clauses” (Cole, Harbert & Hermon 1982.117). Subjects already “receive zero case marking”, and this leaves the heads unmarked. **Second,** the tense-aspect system may become limited so that the variety present in main clauses is reduced. Cole, Harbert & Hermon (1982.115-16) identify two suffixes *shca* ‘Past Nominalizer’ and *j* ‘Present Nominalizer’ that appear unrestricted in externally headed relative clauses, but in internally headed, headless ones, *j* ‘Present Nominalizer’ forces an interpretation that takes the subject as head (Cole, Harbert & Hermon 1982.119), but *shca* ‘Past Nominalizer’ has no such restraint (Cole, Harbert & Hermon 1982.121).
The presence of headless relative clauses in Japanese also provides some amplification of the proposed pattern of Figure 3. In this language, headless relative clauses occur with the following general shape (Kuroda 1976.274):

\[(21) \text{Taroo ga Hanako ga ringo o kat-te} \\
\text{[Taroo Hanako apple bring-Ger} \\
\text{oi-ta no o tabe-te shimat-ta} \\
\text{purpose-Past eat-Ger complete-Past]} \\
\text{‘Taroo ate up the apple which Hanako had brought for some purpose’}\]

The formation of these is not unrestrained and they are subject to the Relevancy Condition (Kuroda 1976.270):

**THE RELEVANCY CONDITION:** For a headless relative clause to be acceptable, it is necessary that it be interpreted pragmatically in such a way as to be directly relevant to the pragmatic content of its matrix clause.

Each of the Japanese examples has an externally headed pair (of the prenominal sort) in which the Relevancy Condition is absent. Relevancy may be satisfied by *simultaneity*, e.g. (Kuroda 1976.268-69):

\[(22) \text{Taroo wa ringo ga sara no ue ni at-ta no o} \\
\text{[Taroo apple table be-Past} \\
\text{tot-te, poketto ni ire-ta} \\
\text{take-Ger, pocket put.in-Past]} \\
\text{‘Taroo picked up an apple which was on the plate and put it in a pocket’}\]

Relevancy can also be satisfied by the use of *oita*, that means ‘do something with later usefulness, convenience, etc. in mind’. This link is what enables (21), and with it, temporal juxtaposition may not be required. Thus in (Kuroda 1976.272):

\[(23) \text{Taroo wa Hanako ga kinoo ringo o sara no ue ni} \\
\text{[Taroo Hanako yesterday apple table} \\
\text{]}\]
oi-te oi-ta no o tot-ta
put.in-Ger Purpose-Past pick.up-Past ...

‘Taroo picked up an apple which Hanako had put on a plate yesterday with some later usefulness in mind which would result from her doing so’

The word *kinoo* ‘yesterday’ separates the two acts in time, but still “requires co-positional interpretation ... [in which] the two events represented by the constituent and the matrix clause involve the same physical location” (Kuroda 1976.273). Lacking this context, some “natural motivation” to connect the two is required (Kuroda 1976.273):

(24) Taroo wa Hanako ga osoikakat-te ki-ta
[Taroo Hanako approach.to.attack-Ger come-Past
no o nejihuse-ta
floor.and.hold.down-Past]

‘Taroo floored and held down Hanako, who had approached him to attack’

(25) Taroo wa Hanako ga harubaru tazune-te ki-ta
[Taroo Hanako a.long.way visit-Ger come-Past
no o nejihuse-ta
floor.and.hold.down-Past]
#‘Taroo floored and held down Hanako, who had come a long way to visit him’

In (25), a visit by Hanako is no cause for mistreatment by Taroo. There is no motivation for the two clauses being related, and (25) is not acceptable, but in (24) in which Hanako begins by attacking Taroo, there is a relevancy between the contents and the whole is acceptable. Kuroda (1976.274-75) notes that (21) and (24), and those like them:

... constitute, so to speak, a superordinate event either in the physical world, thanks to simultaneity or colocationality, or in the consciousness of a protagonist in the sentence, thanks to purposiveness, motivation etc. But the two events may only be related by the speaker/hearer from outside the world described by the sentence ... The relevancy condition requires a headless clause to be interpreted as related to the matrix sentence with, one may say, some adverbial relation. A headless relative clause may hence be said to function at the same time as a noun phrase and as an
adverbial clause of some sort.

Kuroda’s final remark allows us to connect the existence of headless relative clauses with that incipient structure in Kaitij. In both languages, the semantics of ‘adverbiality’ is present, and we may expect a similar semantic contrast in those languages for which only the form of headless relative clauses has been described.

Like Japanese and Diegueño, Huallaga Quechua (Weber 1983.17-19) is an SOV language:

HgQuechua strongly demonstrates the properties of a language in which the order of major elements is SUBJECT < OBJECT < VERB. Thus, HgQuechua is an SOV language. However, of the properties characteristic of an SOV Language, the one which HgQ least demonstrates is that of having SUBJECT < OBJECT < VERB order. HgQ has fairly free word order, particularly in nonsubordinate clauses ... The tendency toward rigid SOV word order is much greater in subordinate clauses.

The order of independent clauses is illustrated in (18):

(26) (a) runa sha-yka:-mu-n
       [man come-impfv-afar-3]
       ‘A/The man is coming’

(b)   ?an qam-ta maqa-shka-shu-nki
       [he you-OBJ hit-perf=>2-2]
       ‘He hit you’

(c)   runa maqa-shu-q sha-yka:-mu-n
       [man hit=>2-sub come-impfv-afar-3]
       ‘The man who hit you is coming’

(d)   runa maqa-sha-yki sha-yka:-mu-n
       [man hit-sub-2P come-impfv-afar-3]
       ‘The man whom you hit is coming’

The fixed SOV order in subordinate clauses is illustrated in (27) (Weber 1983.19):
(27) (a) muna-: pay Tumas-Pabluta maqa-shan-ta
   [want-1 he Tom Paul-OBJ hit-SUB-OBJ]
   musya-nan-ta
   know-NOM-OBJ]
   ‘I want him to know that Tom hit Paul’

(b) *muna-: pay Pabluta Tumas maqa-shan-ta
   [want-1 he Paul-OBJ Tom hit-SUB-OBJ]
   musya-nan-ta
   know-NOM-OBJ]

HgQuechua has a variety of case markers, some of which mark ROLE. The EXECUTOR ROLE is marked by -Ø as runa ‘man’ in (26a) and Tumas in (27). The EXPERIENCER is marked by -ta, e.g. gam-ta ‘you’ in (26b) and Pabluta in (27). The EXPERIENCER -ta also includes the Recipient relation (Weber 1983.14):

(28) Juan-ta kuchi-ta rantikusha
    [John-OBJ pig-OBJ he:sold]
    ‘He sold a pig to John’

Additional postpositions are -chaw ‘Locative’, -man ‘Goal’, -pita ‘Ablative’, -wan ‘Comitative’, -paq ‘Purpose’, and -yaq ‘Limitative.’ “Since case markers in Quechua are attached to a whole substantive phrase, when a modified substantive and the modifying sentence are juxtaposed, the case marker does not go along with the modified substantive” (Weber 1983.263). Adjectives work differently; they “generally precede the nouns they modify ... [and] do not agree in any way with the nouns they modify” (Weber 1983.20). Compare (Weber 1983.36 & 234):

(29) (a) taqay hatun ka-yka-n
    [that big be-IMPFV-3]
    ‘That one is big/a big one’

(b) hatun waaka-ta rika-:
    [big cow-OBJ see-1]
    ‘I see the big cow’
As in Navajo, the choice of suffix applied to the relative clause simultaneously marks some value for TIME, STATUS, or ASPECT (Weber 1983.262):

- *na*  Irrealis
- *sha*  Prior/contemporaneous
- *q*    Past/present/future/habitual

These seem to be paired with three suffixes that create Participles, “deverbal substantives which characterize an object as persisting in some state” (Weber 1983.264):

- *ni*  ‘without’ forms NEGATIVE PARTICIPLES: the event/action indicated by the verb to which *ni* is suffixed is indicated as not having happened and consequently not having changed the state of the object characterized by the participle …
- *shi*  ‘part’ forms PAST PARTICIPLES: the object characterized by the participle persists in a state brought about by a prior event/action (as indicated by the verb to which *sha* is suffixed …
- *q*    ‘Subordinator’ forms ACTIVE PARTICIPLES: the object characterized the participle persists in the state indicated by the verb from which the participle is formed’

The clauses and phrases of (30) - (33) give some idea of their usage:

(30) **runa wañu-sha-ta**
    [man die-prtc-OBJ]
    ‘dead man’

(31) **qanyan ayya-sha-yki-ta musya:-**
    [yesterday go-SUB-2P-OBJ know-1]
    ‘I know that you went yesterday’
(32) millu-na-n pishi-n
[wind-SUB-3P need-3]
‘It needs to be wound’

(33) chaya-mu-sha-n-pita
[arrive-afar-SUB-3P-ABL]
‘since he arrived’

The similarity between Quechua and Navajo is clear. One difference is the elaboration of the semantic domain of Navajo -ígíí into HgQuechua -na, -sha, and -q. The similarity between HgQuechua and Navajo extends to the presence of alternative shapes of the relative clause (Weber 1983.262 & 234):

(34) (a) maqa-shu-q runa sha-yka:-mu-n
[hit—>2-sub man come-impfv-afar-3]
‘The man who hit you is coming’

(b) qam maqa-sha-yki runa sha-yka:-mu-n
[you hit-sub-2P man come-impfv-afar-3]
‘The man whom you hit is coming’

Compare (34) with the Navajo in (13), and finally this Navajo-HgQuechua pair (Platero 1974.206 & Weber 1983.235):

(35) (a) ashkii yádoo hitter tl'ééddág ááhhą-é
[boy future:3:speak last:night imp:3:snore-REL]
‘The boy who was snoring last night will speak’

(b) runa-ta rika:- maqa-sha-n-ta
[man-OBJ see-1 hit-sub-3P-OBJ]
‘I see the man who hit you’

5. **Conclusion**

Seeing the semantics of UNITY/NAMING — DIVERSITY/PROPOSITION and VOICE — TOPIC as basic to the notion of relative clause suggests explanations for the following typological generalizations about relative clauses:

(i) Why there is **no coherent syntactic characterization** of relative clauses.
Because multiple parameters are involved, and certain values from each must coincide to yield a canonical relative clause. Divergence from one or more will create a non-canonical, strange looking candidate for a ‘relative clause’. The parameters are **UNITY — DIVERSITY** and ‘prominent’ **PARTICIPANT** — ‘no prominent’ **PARTICIPANT**. And within the latter, a third factor, **VOICE** — **TOPIC** is relevant.

(ii) Why ‘relative clauses’ **blend with complement clauses** (in two ways).

Warlpiri (*kutja*), Farsi (*ke*), English (*that*), Armenian (*vor*), etc. function to mark both ‘relative clause’ and ‘complement clause’, but none of these is a ‘relative pronoun’. Consider:

(36) Grice claims that there exist four conversational maxims that are responsible for the shape of discourse. (RK 3-16-86)

Where there is a **PARTICIPANT** to serve as **TOPIC** for a *that*-clause, it is more relative clause-like, e.g. *that*₂. Where there is none, e.g. *that*₁, it is more complement-like. But the ‘restrictiveness’ of *that*₂ is so attenuated that it must stand midway between relative-*that* and complement-*that*. The **second blend** is that in headless relative clause languages, e.g. Navajo (*-ígíí*), HgQuechua (*-sha-*) , and Diegueño (*-pu-*). Figure 1 shows that both ‘relative clause’ and ‘complement sentences’ share the **UNITY — DIVERSITY** parameter, and it is this common semantic property that is reflected in the shared grammar. The point of contact is made at different points for these languages and (ignoring their differences) their relative positions are indicated in Figure 1.

(iii) **Accessibility hierarchy** and why it is of varying importance.

The hierarchy is based on the existence of **ROLE** systems that begin with a **ROLE** that is **<CENTRAL, MOTILE>** and then may differ in the semantic organization of ‘object’ **ROLES**:

<table>
<thead>
<tr>
<th>Language</th>
<th>ROLE Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bella Coola</td>
<td><strong>&lt;CENTRAL, MOTILE&gt;</strong></td>
</tr>
<tr>
<td>Japanese</td>
<td><strong>&lt;CENTRAL, MOTILE&gt;</strong></td>
</tr>
</tbody>
</table>
In non-TOPIc prominent languages, an asymmetrical preference may exist in how a person allocates attention to these ROLES, so that the leftmost is more likely — mutatis mutandis — to carry focussed VOICE of the PROPOSITION. Thus, ‘relative clause’, that invokes VOICE will — in the absence of other, more elaborate structuring — minimally exploit this. However, a non-TOPIc prominent language may alternatively exploit its changed-TOPIc syntax, e.g. English. This effectively neutralizes the hierarchy.

(iv) **Why the Encoding Hierarchy exists.**

The hierarchy is a reflection of the degree to which a ROLE is constituted as CENTRAL to its PROPOSITION, and as an alternative to relative pronouns and seems to emerge as the language is further from DIVERSITY on the UNITY — DIVERSITY scale.

(v) **Why postnominal relative clauses predominate.**

The calque of experience: remembered experience, that implements understanding, is prior to incoming experience, which is subsequent. This follows from the sequence of TOPIc plus comment and the basis of relative clauses in that semantics.

(vi) **Why prenominal ‘relative clauses’ blend restrictive and nonrestrictive types** (e.g. Japanese), or allow no non-restrictive modification (e.g. Navajo), or allow no relative pronouns, and use gapping.

“... we should note that gapping is the overwhelmingly dominant mode of RC in prenominals, which, as we have seen never use relative pronouns and only sporadically present NP_{rel} as a personal pronoun or (even more rarely) as a full NP” (Keenan 1985.154). It is the presence of VOICE in these prenominal ‘relative clause’ types and their reliance upon the default VOICE of the ACCESSIBILITY HIERARCHY that removes the possibility of contrasting restrictive versus nonrestrictive in this type. The same absence explains (i.e., is) the absence of relative pronouns. The greater unity of prenominal ‘relative clauses’ — accompanies lessened prominence of TOPIc — accords with the greater use of gapping as well.
(vii) Why no pure headless relative clause languages exist.

This is true of Diegueño, Quechua, and Navajo. Compare these two from Imbabura Quechua (Cole, Harbert & Hermon 1982:117-18):

(37) (a) wambra wagra-ta randi-shca ali
    [boy cow-acc buy-past.nom good
       wagra-mi
cow-validator]
    ‘The cow which the boy bought is a good cow’

(b) wambra randi-shca wagra ali
    boy buy-past.nom cow good
    wagra-mi
cow-validator]
    ‘The cow the boy bought is a good cow’

(c) wambra wagra-ta randi-shca ali wambra-mi
    boy cow-acc buy-past.nom good boy-validator]
    ‘The boy who bought a cow is a good boy’

Figure 1 does not require restrictive relative clauses to be distinguished from nonrestrictive ones, but where they do differ, the restrictive ones seem to be more to the top on the UNITY — DIVERSITY scale. This provides a rationale for Bache & Jakobsen’s (1980) description of the English contrast between the restrictive and nonrestrictive relative clauses in terms of one or two ‘information units’, respectively. This suggests then that headless relative clauses may not function in a nonrestrictive way, forcing the use of some other strategy; and this may underly the observation that there seem to be no pure headless relative clause languages. PARTICIPANTS that are unique and known, i.e., Proper Nouns, may not be easily susceptible to alternative NAMES incorporating nonce PROPOSITIONAL content, and following the schema outlined above, we may expect these to manifest a grammar from the DIVERSE end of Figure 1.

Among the things which this does not explain is why headless relative clauses appear to associate with V-final languages. By the description above, any language with sufficient freedom in order should at some point have the potential for developing them. Nor does it explain why prenominal relative
clauses should be associated with the same V-final property. This is probably an indication that we do not understand the semantics of the V-final configuration.