THE CHICAGO WHICH HUNT

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father went hunting"), object of postposition ("the house in which we live"), etc. This is just a
guess, but such constructions could be easily
accomodated within the framework illustrated by (1),
and there would seem to be no other obvious way to
express these notions.

Perhaps the most notable aspect of RC's such as
(1) is that there is no relative pronoun as such.
However, interrogative pronouns and adverbs can be
used in RC's without specific nominal heads. We
may compare the interrogative and relative uses of
the inanimate tita in (2) and (3):

(2) tita ti-yi-ka-ne ?uma
what? moves there
"What is moving over there?"

(3) tita [ ne-e-aine ne ] pa-takumi
what I say I true
"What I am saying is true."

Notice that there is some similarity between
Huichol and English here, in that both tita and what
can be either interrogative or relative. In Huichol,
however, tita is formally the head of a perfectly
ordinary RC in a sentence like (3): to bring this out,
we might twist the translation to "What which I am
saying (it) is true." Incidentally, ne-e-aine lacks
a third singular object prefix due to the same rules
mentioned earlier in connection with (1).

Besides tita, there is a whole series of
interrogative-relative words which have similar
syntactic ramifications. A sample of these might be
translated by "who(m)," "which," "when," "where," etc.
I have referred to -e(-i) as a complementizing
prefix rather than as a relativizer because it occurs
in some subordinated clauses other than RC's. These
clauses are generally describable as purpose clauses
or as complements to verbs such as "be able." I know
relatively little about the details, but these clauses
seem formally similar to that-clauses in English, and
like them these Huichol constructions compete with
infinitive forms.

In the nonrelative -a(-i)-clauses which I have
come across, the verb is generally followed by a
sufffix (or encilitic?) -ka. This seems to be the only
formal difference between relative and nonrelative
clauses with -e(-i)-, except for the absence of head
nouns in the nonrelative type. Examples:

(4) [ye{-}kama me{-}pa-yanene] [yu{-}mama -tie
bad they be
kwi{ni}-wa me{-}@e{-}selya{-}k] their hands in
"They (flies) are bad because they have
disease in their hands."

(5) [hecauwa] pa{-}ke{-}re{-}ti - ma - ni
[eb{-}ti{-}te{r}a{-}ni{-}ki ta{-}ti{-}ki{-}ut{a}ki{-}ni{-}ki]
never not know future
read fut.
"He will never know how to read or write."

Notice that by deleting the -ki, we could take
either of the bracketed clauses and put them after
a noun in another sentence as RC's ("which have
disease in their hands," "who will read and write").

Contrasting with -m(-)-clauses, and the
syntactically similar infinitive forms, we find one
other major type of subordinated clause. This type
has one of seven subordinating suffixes on the verb,
and is used most commonly in adversative clauses. The
following sentence has -ti, which indicates that the
activity is simultaneous with that of the main clause,
and that the subjects of the two clauses are the same:

(6) [ku - yeika{-}ti] pa{-}nec{-}i -pu{-}kei
[around walk ing me saw]
"Walking around, he saw me."

A major problem in the formal study of Huichol
syntax is the question, what is the underlying
difference between -m(-)-clauses and those with
subordinating suffixes. It is not simply a question
of temporal clause versus other clauses, since we can
have temporal clauses with -m(-)- in connection with the
interrogative-relative kepauwa, "when:

(7) kepauwa [te{-}en{-}ti{-}ta], kepauwa [ata{-}kei{-}me
when we big when [ata{-}kei{-}me
riya{-}te{-}@e{-}selya] ... year(s) we have
"When we are big, when we are six years old, ..."

The semantic distinction between clauses with
kepauwa and those with an adverbial subordinator is
probably no more than that between English "Walking
around, he saw me," and "As he was walking around,
he saw me." The distinction in Huichol is probably
a matter of formal structure at an intermediate
level of derivation.

Basically, we can say that -m(-)-clauses are
those which, in some sense, are sharply subordinated
to a higher element. In the case of RC's this element
is the head noun or adverb, while in complements such
as that of (5) it is the commanding verb. How we
can extend this to cover purpose or "because"
clauses as in (4) is unclear, but the fundamental
notion seems to be on the right track.

Clauses with subordinating suffixes are, then,
especially those which are not dominated by a head
element, and are only loosely attached to the main
clause.

RC's in Tarahumara (northwest Mexico) are similar
in some respects to those of Huichol. There is a
clause-introducing particle ma- functioning much like
Huichol's verbal prefix -m(-)-. This particle is
usually followed by a pronoun indicating the subject of
the clause, less often the object or other
category. In the first and second persons, the
pronoun is identical to the most common form found
in main clauses, but the third person has a special
relative form -pu.3

(8) anaka ena{-}ro rex{t}i [ma{-}pu jurapko mi
here comes man he yesterday you
farigia{-}te at{a} sell past bow
"Here comes the man who sold you the bow
yesterday.

The possessive construction in Tarahumara
consists of the possessor, the independent particle
niwara, and the possessed noun, frequently but not
always in that order. The possessed noun is in
whatever case is required by the context, but the
possessor is always subjective in those forms (including
pronouns) which distinguish subjective from objective.
Therefore a possessive RC is very similar to a
subjective one like (8):

(9) ner{t}e ber{t}e kama [ma{-}pu kab{t}e niwara
indeed be he while ago poss.
wasi mi higo{-}te cow you steal past
"I am he whose cow you stole a while ago,"
As I mentioned before, the pronominal slot after ma- is occasionally occupied by a pronoun not indicating the subject of the clause. Here is a sentence in which the pronominal object of a postposition follows ma-:

(10) takiti itë [ma-ne use kimaa]
not be I with go
"There is no-one who will go with me."

It should be noted that once -ne occupies the slot after ma-, there is no overt third person anaphoric pronoun referring to the subject of the clause.

Now consider this superficially similar example:

(11) ke itë wia [ma-ne gite ca?pi - mea]
not be rope I with catch future
"There is no rope with which I will catch (him)."
(i.e., "... no rope for me to catch him with."

Here the -ne really is the subject of the RC, while the instrumental postposition gite is stranded without an overt object inside the RC. As in (10) we find no overt anaphoric pronoun referring to the head noun. My tentative explanation, based on only a few examples such as these, is that a) -pu is the only anaphoric third person pronoun possible in a RC, no matter what its case, and b) -pu can only occur directly after ma-. If these observations are correct, we can easily understand why no third person pronoun occurs in the RC's of (10) and (11), since the slot has been filled by another pronoun. But more data on this point is needed.

Tarahumara avoids using interrogative words as relatives. In (10), for example, there is no head at all, unless we take ma- itself as the head. There is no difference between a RC following a head and a headless one.

Even "where" and "where" clauses manage to get along without interrogatives. "When" is often expressed by a headless RC with -ari (related to the independent form a?ri, "then") following ma- and the initial pronoun; thus ma-ne-ari, "when I...". "Where" frequently has no locative marker at all:

(12) Q: kambi shimí Ai [ma-mu shimí muré go]
where? go you go you too
"Where are (you) going?"
"Wherever you are going."

In general, ma- is specifically relative and is not used in verbal complements and the like. These complements tend to use subordinating suffixes, some of which can also be used in adverbial clauses. There is thus a different basic division of subordinated clauses than in Huichol. However, Brambilla says that some Tarahumara use ma- in some complements, apparently under Spanish influence (the relative pronoun que is identical to the complementizing clause-introducer que). Example:

(13) ta?i naki [ca-ta cibi nefika ?ena-bo]
not want we things say go future
"He doesn't want us to go saying things."

While Brambilla's attribution of this clause-type to Spanish influence is undoubtedly correct, I would not extend this to Huichol. That language also uses similar constructions for both relative and complement clauses, but this would seem to be much more deeply-rooted than in Tarahumara, where it is sporadic and obviously a recent development.

Yaqui (northwest Mexico, Arizona) is sometimes considered part of the same subgroup as Tarahumara. However, the structural similarity between them is not overwhelming, and RC-formation is especially different in them.4

A typical RC modifying a head noun is usually a participle. The suffix -me (which may indicate lengthening of a preceding vowel) forms active participles. Passive participles can be formed by adding -me to a verb with passive suffix -ma-, or perhaps in some cases by semiproduc tive passive participial suffixes. An example with -me is holda-me, lit. "the souls who come."

Headless RC's ("the one who came," "what I saw," etc.) may be identical to the corresponding RC's used as modifiers ("who came," "that I saw"). This is certainly true of participles with -me, which can be used as agents. There is, however, a special suffix -tu (misinterpreted as -nu by Johnson) which forms expressions like ?etu-tu, "what was stolen." It is apparently not possible to use this as a modifying RC after a head noun.

RC's with "when," "where," and so forth use interrogative relative adverbs as heads. The clauses which follow these heads seem to be just like independent sentences: hámuní hfi?-bo?-tu, "where drink-eat-causative" ("where he made him drink and
eat"). This completes our discussion of the rather uninteresting RC's of Yaqui.

Papago (Arizona-Mexico border) has a clause-introducer m- in RC's and several other types of subordinated clause. This particle is followed by a structure which looks very much like an independent sentence, beginning with an “auxiliary” complex containing a pronominal subject-marker. Examples:

(14) hagalwisslo [wa-o soi-ge3 Gaai-li-ge3 g pango] that calf he have child his P.
    “the calf that the child of Pancho has”

(15) hagal wo?isodham [wa-t o oikpana d man he ruf. work ruf. dur.]
    “the man who works”

In (14), if my analysis is correct, the subject-marker -o refers to the following NP Gaai-li-ge3 g pango, which is the subject of the RC. Apparently a third singular object-marker of some sort is deleted in the RC. In (15), the subject-marker -o (a conditioned variant of -a) is usually adjoins to the head noun. The basic structure is fairly similar to that of Tarahumara, and the correlation of Papago m- with Tarahumara ma- is easy to make. However, we need more examples from Papago to fill in the many gaps in our knowledge about its RC-formation.

Besides RC’s, Papago m- is found in many verbal complements, with “because,” and in purpose clauses. One example of the latter type will suffice here:

(16) oam wa-t bi3 g pango [wa-t o oai g host] there he go P. he ruf. see J.
    “Pancho went there to see José.”

I have not been able to determine under what conditions m- occurs in adverbial clauses, although I can say that there are interrogative-relative adverbs (and pronouns), such as hikid, “when.” The available evidence does not clearly show the syntactic structures involved.

Papago (and Pima) belongs in the Teplman (or Piman) subgroup along with Lower Pima, Northern Tepehuan, and Southern Tepehuan. Of these, I have data bearing on RC's only from Tepehuan, a dialect of Southern Tepehuan. This language forms RC's in a way very much like Papago, but instead of m- the clause-introducer is na- (perhaps analyzable as m- plus third person -a-).

This ma- may occur sporadically in main clauses as well, but is obligatory in RC's. Two examples:

(17) [wa-o a-y ar 18-takot] if 5s blue
    “…which is blue”

(18) kida-dam [pl (wa- am pup tu niok] town in where they thus indef, obj. speak
    “in a town where they speak thus”

A possible cognate of Tepehuan ma- is a Papago element of the same form used to introduce yes-no interrogatives. It seems likely that both m- and ma- are of Proto-Tepiman origin, and that the latter replaced the former in Tepehuan in its relative function. The precise function of ma- in Proto-Tepiman is unclear: it may have been an interrogative as in Papago, or it may have been somewhat more general (e.g. a dubitative).

There was a time when discussing were considered to form a “Sonoran” subgroup of Proto-Azteco group, the basic structure is similar to that of Tarahumara, and the correlation of Papago ma- with Tarahumara ma- is easy to make. However, we need more examples from Papago to fill in the many gaps in our knowledge about its RC-formation.

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period in its subsequent development it replaced these constructions with participial forms.

In the Shoshonean languages (Hopi, Tubatulabal, and the Takic and Numic groups), we find few or no clear traces of the type of RC which must underlie historically those which we find in the modern Sonoran languages. Most sentences which we would translate with RC's in English have participles, or sometimes adverbial subordinating suffixes, in Shoshonean.

Hopi shows a rather interesting situation in which the notion of "RC" is of somewhat doubtful usefulness. A variety of sharply distinct formations occur in sentences translatable with RC's. The simplest type is formed by adding the active participial or agentive suffix -qa (or -ga) to the verb of the RC. This form can be used independently, as in mif-qa, "he who shot it," or as a modifier:

(19) maina [vayam kii - ve qat-qa] yeqq wa-ri-kii-wta
girl [there house in live] thence run
"The girl who lived in yonder house came running."

(20) ni? ta-la tahtak - tì - y [yaht-a-g-qa] - mà - y
I see men pl. obj. run pl. obj.
"I saw the men who ran."

Since this participle is a nominal form morphologically, it can take a number marker and a case suffix, as in (20), to agree with its head noun. Passive and resultative participles are formed by simply adding the active participial suffix to a passive or resultative verb. A resultative example is soma-wta-qa, "tied," from the verb root soma. A passive example:

(21) ?i? [vay tayf - lit - qa]
this [here put pass.
"This is what was put here."

There are two other participial suffixes which are used in passive or mediopassive contexts. The punctual suffix is -p, and the distributive -v, as in lana-k-p, "pulled," and poro-m-v, "pierced with holes." I believe that these are normally used as simple adjectives; in a full RC including adverbs, instrumentals, and other elements I would expect to

find -qa. I hasten to add that I have not seen enough examples to be sure of this.

So much for the participles. The other major type of what we would translate with a RC is formally an adverbial clause, with a subordinating suffix added to the verb. There is a major division between subordinating suffixes used when the subjects of the main and subordinate clauses are identical, and the suffix used when the subjects are distinct. In the former case, there is a subdivision into a conditional suffix, an anterior-event suffix, a simultaneous-event suffix, and several others. In the latter case there is a single, all-purpose suffix used in all types of clause. We will call this the "obviative" suffix as opposed to the "same-subject" suffixes.

This opposition also affects RC formation. Here the difference between obviative and same-subject forms depends on whether the subject of the RC is identical to that of the main clause, but rather on whether the subject of the RC is identical to the head of the RC. If the two are identical, we normally get a participle in -qa, as in (19)-(21). Note that in the case of the passive example in (21), the (covert) head of the RC functions as the derived, not underlying, subject of the RC.

When the head noun is not the subject of the RC, the obviative suffix is used, and the resulting clause is not clearly distinguishable from an adverbial clause, except perhaps by its position in the sentence and other incidents. Unlike the participles, a verb followed by the obviative suffix is not formally a noun, and therefore cannot take a plural suffix or a case suffix, as -qa does in (20).

The head noun of an obviative RC fluctuates to some extent in its case-marking. It may take the case required by its position in the main clause, or that required by its role in the RC (most often the objective case). We can think of this in terms of setting up two underlying occurrences of the noun, with some sentences deleting the occurrence at the head of the RC, others deleting the occurrence within the RC. I am unsure how far this analysis can be pushed. Examples:

(22) [wikpen wa-t ?am som -g] tåk - i
[rope obj, you tie obj] break stative
"The rope which you tied is broken."
Constructions which would be RC's in English or Huichol tend to appear in Tubatulabal as adverbial clauses with subordinating suffixes:

(26) a'adawik uma-1 - a [maa'í-giina - 4] saw bear obj. [run come oblique] "(I) saw a bear running."

This corresponds formally to English "I saw a bear as he ran," but in practice also to "I saw a bear who was running." Whenever convenient, Tubatulabal uses this type of construction. However, in (25) this would produce a rather odd sentence ("Being white, the rock is hot"), since its whiteness is permanent, so a modifying participle is used.

The verbal noun in -1 can be used after a noun as a sort of RC. In the couple of examples I have found, the verbal noun is transitive, with the head noun the grammatical object of the RC, while the subject is expressed by a possessive marker:

(27) haryi pa-1 avamuc [kin - 1 - 3] water. (?) bring our. "(There is) no water brought by us."

The difficulty I have had in fully analyzing this and the other examples has prevented me from fully understanding the syntax involved. There is some question as to whether the head noun is always marked for case on the basis of its function in the main clause, or whether the embedded clause can affect it.

Luiseño, the T Kingston subgroup (Southern California), is generally similar to Tubatulabal in RC-formation. There are several agentive-permanent, sporadic, past, etc. The verbal noun in -1 is not often used as a passive participle, but the infinitive -gal (possessed form -gala) can sometimes be translated as a noun denoting the object or product of the verbal action. When we come to modifying RC's, the situation is less clear. The infinitive -gal occurs, often without other subordinating morphemes, in conditional, complements, and adverbial clauses. In the latter case it can be interpreted as an RC:

(28) l71 - p [no-saima-s-gala] dit-s-g huluki-nuk this it [my buy] break fall -ing "This that I bought broke as it fell."
Here the sense is passive; the demonstrative pronoun beginning the sentence is the head of the RC, and the grammatical object of the nominalized verb. The underlying subject shows up as a possessive prefix no- before the verb root (hence -gal takes the possessed form -gala).

The construction does not have to be passive, and there are examples of transitive verbs where the nominalization can be transformed by an active RC. Unfortunately, my examples are from conditional or other non-relative clauses. The point is simply that -gal is not inherently passive, nor even participial; it is an ablitative or infinitive used in a variety of constructions.

We will briefly discuss Shoshone as spoken in Fort Hall, Idaho, as a representative of the important Numic group. Shoshone has two or three agentive suffixes, of which the most important is -wapi (tewa-wapi, "talker"). These are apparently not used as modifiers. 10

The productive participial suffices are active -tán and passive -pís. Both can be used independently as nouns (gágú-tan, "growing thing, plant"); tţka-pís, "eaten thing, food"); or as modifiers of head nouns. Most modifying RC’s are of this type.

Like most UA languages, Shoshone has a series of subordinating suffixes, used in adverbial and some complement clauses. The examples I have seen do not indicate that this construction is frequently used in RC’s, although we may infer from what we know about other northern UA languages that there are some syntactic gaps where participles do not work and where subordinate adverbial clauses might be used.

The data we have presented on the Shoshonean languages have been somewhat scattered and spotty, but they do give us a general idea of RC-formation. The most important observation is that RC’s are not a well-defined syntactic unit, with one or two consistently recurring elements (as in Huichol, for example). Instead, we find participial phrases in most cases (especially when the head noun is the grammatical subject of the RC, or the object when no subject is expressed), and adverbial clauses or infinitives in other cases. Each language has its own particular rules for choosing among these constructions, although we have been unable to discover more than a few details here.

It would certainly be premature to make any conclusions on genetic subgrouping of UA languages merely on the basis of RC-formation. Nevertheless, we have found some evidence for a historical prototype underlying the RC’s in the modern Sonoran languages (Huichol, Tarahumara, Yaqui, the Tezalan group, and others not mentioned in this paper). This type is characterized by a morpheme m(y)- added to a simple sentence (with perhaps a few extra changes, as in the Tarahumara subject pronouns), without affecting the tense and mode affixes of the verb. The verb is not nominalized in any sense; instead, the entire clause is relativized by the addition of m(y)-.

This construction seems to be entirely missing from the Shoshonean languages examined (Hopi, Tubatulabal, the Takic group, the Numic group). It is quite possible that we may find a cognate of Sonoran m(y)- in some of these languages, perhaps as a conjunction or particle of some sort. However, it does not occur in any kind of RC.

We can be fairly confident that the combination of participials, adverbial subordinators, and an occasional infinitive in Shoshonean is an old pattern. Although the actual participial, adverbial, and infinitival morphemes have undergone near-complete turnovers in the development of some Shoshonean languages, we have every reason to believe that the basic syntactic structures have not changed greatly.

It is not possible to guess what the patterns of RC-formation were in Proto-UA, especially since we have not discussed Aztec. There certainly were participles of various sorts, subordinating suffixes forming adverbial clauses, and infinitives or verbal nouns, and I am hopeful that many of these can be reconstructed. However, it is impossible to determine whether these were productively used in RC’s, including complex ones, or whether there was also a general relativizer such as Sonoran m(y)- which could productively form all types of RC.

Footnotes
1. The Huichol data come from Grimes (1564), plus a Huichol version of the Gospel according to John and a Huichol-Spanish picture book with captions. In some cases I have had to analyze the sentences
myself on the basis of translations. Morpheme breaks are my own, and the transcription omits some features such as vowel-length.

2. Grimes: "The third singular non-reflexive inflection in either form is automatically omitted if an external object precedes the verb directly." I assume that this rule applies to sentence (1).

3. Tarahumara data from Brambilla (1953), a long and informative grammar by a missionary—unfortunately little known due to its scarcity. The syntax of RC's is one of the few aspects of the language not fully covered, so I have had to extrapolate from a few examples. The transcription is slightly modified; I write r for f, and ṭ for j.

4. My Yaqui materials are from Johnson (1962).

5. Papago data are mostly from the grammatical section of Saxton and Saxton (1969). The transcription is theirs, with some modifications—j for f; ç for ch; ç for ñ; etc.

6. Tepacano forms from Mason (1916). My analysis and morpheme-breaks are perhaps inaccurate in some respects. I have not attempted to alter Mason's orthography, though some changes might have been advisable.

7. Most of the Hopi data are from Whorf's incomplete manuscript grammar (1935), now available on microfilm. This grammar has more details on RC's than does Whorf's sketch in Holjer's Linguistic Structures of Native America, although this sketch does mention most of the constructions. The transcription is basically Whorf's, with a substituted for his e, and e for his g.

8. Data from Voegelin (1935).


References


