A Survey of Coordination Strategies in the World's Languages

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This is to certify that I have examined this copy of a master's thesis by

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and have found that it is complete and satisfactory in all respects, and that any and all
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1   INTRODUCTION

This thesis is a research project on coordination strategies in the world's languages. It was inspired by the observation that Japanese does not have a single, general-purpose word for *and*. Instead, in situations where an English sentence would have *and*, Japanese has a number of different structures, each of which is used with a particular subset of phrase types. This suggests some questions about the distribution of different types of coordination in the world's languages. Are languages with a general-purpose *and* the exception or the rule? In languages without one, is there any pattern as to how different kinds of phrase are coordinated? This thesis represents an attempt to more clearly define these rather informal questions, and then to answer them by surveying strategies of coordination across a genetically diverse sample of languages.

This thesis consists of five major sections. The first section is a discussion of terminology and the history of the study of coordination, as well as a review of relevant literature. The second section discusses in detail two surveys that address questions similar to those addressed in this study. The third states the hypotheses to be tested by this survey, defines the language phenomena to be surveyed, and describes the methodology of the survey. The fourth reports the data collected. The fifth tabulates and analyzes the data in light of the hypotheses.

2   BACKGROUND

2.1   *Terminology*

Haspelmath (2000:1) defines *coordination* as "syntactic constructions in which two or more units of the same type are combined into a larger unit and still have the same semantic relations with other surrounding elements." Bloomfield's similar definition of coordination contrasts it with *subordination*:

> Endocentric constructions are of two kinds, *co-ordinative* (or *serial*) and *subordinative* (or *attributive*). In the former type the resultant phrase belongs to the same form-class as two or more of the constituents...In subordinative endocentric constructions, the resultant phrase belongs to the same form-class as one of the constituents, which we call the *head*. (1933:195)

Both of these definitions are syntactic, and emphasize the balanced syntactic relationship between coordinated items. In addition, both definitions state that the structure resulting from coordination is of the same type (semantic in Haspelmath's definition, syntactic in Bloomfield's) as the coordinated items. For the purposes of this thesis, these definitions are a good starting point, but they are not sufficient to capture all the phenomena that are referred to as coordination.

First, the requirement that the syntactic structure resulting from coordination is of the same syntactic type as the coordinands is too restrictive. Consider the following two sentences:

(1)   *John* and *Mary* will arrive tomorrow
(2)   *John* will arrive with *Mary* tomorrow

In sentence (1), the structure *John and Mary* meets the above definitions of coordination. However, in sentence (2), the syntactic relationship between the italicized elements does not meet the traditional definition of conjunction: the relationship between them in imbalanced, with *Mary* in a prepositional phrase adjunct to the verb, and they do not even form a constituent. However, the semantic relationship between the italicized elements is quite close: in both sentences both John and Mary will be arriving, although John is more emphatically the agent in (2). As we will see later, there are languages that have no structures like that in (1), using instead a structure like in (2), yet it would seem strange to claim that such languages lack coordination. Performing a cross-linguistic survey of coordination, therefore, crucially requires a definition of coordination broad enough to include all the syntactic structures used for coordination, but not so broad as to include other non-coordinative structures. The precise formulation of this survey's working definition can be found in section 4.1.

For now, note that this thesis generally uses the terms *coordination* and *coordinand* rather than the similar *conjunction* and *conjunct*, because *conjunction* is ambiguous in two important ways. First, *conjunction* is used in traditional grammar to refer both to syntactically balanced (*coordinating conjunction*) and imbalanced

(*subordinating conjunction*) structures, whereas this thesis addresses only the more balanced constructions. Second, *conjunction* is also used to refer to the semantic relationship between elements coordinated with a coordinator such as English *and*, in contrast with the *disjunction* relationship between elements coordinated with *or*, the *adversative* relationship between elements coordinated with *but*, and the *causal* relationship between elements coordinated with *for* (Haspelmath 2000:2). Therefore, this thesis will use *coordination*, and the related term *coordinator*, defined by Haspelmath (2000:2) as "[t]he particle or affix that serves to link the units of a coordinate construction".

In addition to the above terms used to describe different syntactic and semantic relationships among items in endocentric constructions, this thesis will also use terms that describe the number of coordinators in the construction. They include *asyndeton*, in which there are no coordinators (also referred to as *juxtaposition*); *monosyndeton*, in which there is one coordinator; and *polysyndeton*, in which more than one coordinator is used (Haspelmath 2000:6). These terms will be used as necessary in describing the coordination strategies found during the survey (see section 5 below).

2.2   History

In syntax research in the last few decades, much of the attention given to coordination has focused on the relationship between the conjuncts in traditional coordination: for example, how sentences containing coordination structures are derived, whether the conjuncts exist in balanced or imbalanced structures, and whether coordination structures require the existence of ternary (or n-ary) branching. Although this thesis is not primarily concerned with the syntactic theory underlying coordination, ideas from prior syntactic research will form the basis for the definition of coordination used in the survey. What follows is a brief introduction to the treatment of coordination within generative syntax. For a more complete picture, see van Oirsouw (1987).

The earliest approach to coordination in generative syntax can be found in Chomsky (1957). There, he states:

> One of the most productive processes for forming new sentences is the process of conjunction. If we have two sentences $Z+X+W$ and $Z+Y+W$, and if X and Y are actually constituents of these sentences, then we can generally form a new sentence $Z–X+and+Y-W$…If X and Y are, however, not constituents, we can generally not do this. (Chomsky 1957:35)

There are several important points to note about this definition. First, it deals only with the coordination of constituents. Second, the definition describes coordination in terms of the combination of two independent (and presumably grammatical) sentences. It therefore places the theoretical machinery of coordination in the transformational component rather than the phrase structure rules. Third, it can be applied to surface strings, which is important for a survey like this one, in which the coordination strategies in various languages must be gleaned from written sources, without reference to native

speakers or detailed syntactic analyses. It is also slightly too broad, because it would admit some ungrammatical sentences in which *X* and *Y* are not compatible coordinands:

(3)   Mary wanted to eat dinner
(4)   Mary wanted more dinner
(5)   * Mary wanted to eat and more dinner

Chomsky (1965) addressed this shortcoming by requiring the coordinands and the resulting coordinate structure all to be of the same category.

> [I]f *XZY* and *XZ'Y* are two strings such that for some category *A*, *Z* is an *A* and *Z'* is an *A*, then we may form the string *X⌢Z⌢and⌢Z'⌢Y*, where *Z⌢and⌢Z'* is an *A*. (Chomsky 1965:212)

This principle avoids the ungrammatical (5), while still including all coordination in which the coordinands are constituents of the same category. It covers simple coordination in languages with a coordinator like the English *and*, although some more complex phenomena, such as gapping and pro-forms, are not covered. With some extension, this definition forms the basis of this survey's working definition of coordination.

The "fullest elaboration" (van Oirsouw 1987:6) of this initial approach was Gleitman (1965). In Gleitman's analysis, repeated material in coordinated sentences could be replaced by pro-forms or deleted altogether (1965:268-269). In a transformational account, this is accomplished by first combining two grammatical sentences and then, via further transformations, optionally deleting the repeated material. This notion of *coordination deletion*, also called *coordination reduction*, will be crucial to the formulation of this survey's working definition of coordination.

3   TWO SURVEYS OF COORDINATION

This section will summarize two previous surveys of coordination strategies that informed the methodology and hypotheses of this survey. As mentioned above, this thesis is not primarily concerned with syntactic theory; therefore, ideas from prior syntax researchers were useful in defining the domain of the survey, but their syntax-theoretic claims will not be otherwise addressed here. Two papers that are directly relevant to the present survey are Stassen (2000, summarized in 2001) and Payne (1985).

3.1   Stassen's Survey

Stassen performed a survey of noun phrase coordination in a genetically diverse sample of 270 of the world's languages, attempting to formulate cross-linguistic parameters which govern the encoding of such coordination (2000:1). He used a semantic definition of coordination:

A sentence contains a case of NP-conjunction if:

(a)   it describes a single occurrence of an event (action, state, process, etc.), and if

(b)   this event is predicated simultaneously of two (and no more) participant referents, which are conceived of as separate individuals." (Stassen 2000:4)

By defining coordination this way, he includes sentences like both (1) and (2) above (repeated here as (6) and (7)), even in English, where (7) would not ordinarily be treated as an example of coordination.

(6)   *John* and *Mary* will arrive tomorrow
(7)   *John* will arrive with *Mary* tomorrow

He also tightly focuses the domain of the study, excluding any coordination structures of more than two items (e.g. "John and Mary and Bill…"), and including only structures with an "additive"—that is, conjunctive, as opposed to disjunctive or adversative—meaning (i.e. "John and Mary", not "John or Mary"). This allows him to avoid some unnecessary complications in the survey, such as the question of how to classify multiple-item coordination in languages where more than one item can have a coordinator ("John and Mary and George") but where sometimes only one item (often the last) has a coordinator ("John, Mary, and George").

In his survey, Stassen found two major strategies and several minor strategies. He refers to the first of the two major strategies as the *Coordinate Strategy*, and to languages that use it as *AND-languages*. This is the strategy that includes the familiar English conjunction *and* and its cognates in other Indo-European languages.

A fundamental formal characteristic of this strategy is that it encodes the two participants in the construction by way of NPs with equal structural rank. Thus, the two NPs involved are not differentiated as to syntactic function; they have the same thematic role, and in languages in which such NPs receive case marking they will both have the same case. Typically, although not necessarily, the two NPs in such constructions can be seen to form a constituent, viz., a coordinate (plural or dual) NP. As a result of this, they typically govern dual or plural number on predicates, if they have grammatical function for which the dual is defined. Furthermore, the two NPs are commonly subject to the Coordinate Structure Constraint…which forbids NP-extraction from such constructions…" (Stassen 2000:7)

Stassen refers to the other major strategy as the *Comitative Strategy*, and to languages that use it as *WITH-languages*. He contrasts this strategy with the Coordinate Strategy:

In its essential features, this strategy is diametrically opposed to the Coordinate Strategy. Thus, under the Comitative Strategy the two participants in the event are morphosyntatically encoded as NPs of unequal structural rank. While one of the NPs can take any case role, the other NP is invariably encoded as the head of an oblique NP. A prototypical characteristic of comitative structures is that the two NPs involved are not part of the same constituent. As a result, they typically do not force dual or plural agreement on predicates, and neither of the two NPs is subject to restrictions on extraction rules by the Coordinate Structure Constraint. (Stassen 2000:18)

Unlike the Coordinate Strategy, it is not possible to define a subset of languages that use the Comitative Strategy, because "with only a few exceptions, all languages in the sample appear to have the possibility of employing the Comitative Strategy" (Stassen 2000:21). Because of this, Stassen defines WITH-languages as those that have no other way to coordinate NPs. This negative definition means that, in his typology, all languages will be classified as having a coordination strategy, with the Comitative Strategy serving as a kind of strategy of last resort.

In addition to the widespread monosyndetic variants of the Coordinate Strategy, Stassen mentions several minor syntactic variants that occur in relatively few languages. These include simple juxtaposition without an overt coordinator, which is often optional but rarely required, as in Andoke (Macro-Carib, Witotoan):

(8) ñe   niyo'jɵ   nipita   ni'ɵ
     be.PST   her.brother her.aunt her.sister
     'It was her aunt, her brother, and her sister.' (Stassen 2000:5)

...polysyndeton coordination, in which both coordinated NPs are marked, as in Maranungku (Australian, Daly):

(9) mereni   kalani ŋeni kili-nya awa
     brother uncle   my   eat-3PL   meat
     'My brother and uncle ate the meat.' (Stassen 2000:8)

…a "numeral" strategy in which the coordinator is a numeral or quantifier, as in Arrernte (Australian, Pama-Nyungan):

(10) Augustine   therre Duncan   therre
      Augustine   two   Duncan   two
      'Augustine and Duncan' (Stassen 2000:16)

…a "pronominal" strategy in which the coordinator is a dual (DU) or plural pronoun, as in Sedang (Mon-Khmer):

(11) préi klá préi koa
      3DU tiger 3DU turtle
      'the tiger and the turtle' (Stassen 2000:17)

…a strategy in which the coordinator is a non-finite form of the verb "to be" or "to exist", as in Choctaw (Muskogean)[1]:

(12) ano micha sashki
      1SG and   my.mother
      'my mother and I' (Stassen 2000:17)

…and a strategy where NPs are marked with the focus-marking particle, as in Manam (Austronesian, Melanesian)[2]:

(13) moáne-be   áine   di-púra
      man-and   woman   3PL-arrive
      'The men and the women arrived.' (Stassen 2000:17)

(14) wabubu-ló-be i-púra
      night-at-FOC 3SG-come
      'It was at night that he came.' (Stassen 2000:17)

As for the WITH-strategy, the vast majority of languages encode it using an adposition or affix meaning *with*. In addition to this usual pattern, Stassen also found a "head-marking" strategy in which the predicate includes the comitative marking, as in Abkhaz (North-West Caucasian):

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[1] Note that this non-finite verb is glossed as *and* in (12).
[2] In (13), in which the focus particle is used as a coordinator, it is glossed as *and*.

(15) à-č'k°'ən sə-yə̀-c-ce-yt'
      the-boy   1SG-3SG-with-go-AOR
      'I went with the boy.' (Stassen 2000:19)

     Stassen (2000:26) also discusses the grammaticalization of coordination, referring to Mithun (1988), which describes several cases of languages without generalized coordination strategies, perhaps using only juxtaposition or just the comitative strategy on noun phrases, undergoing a process of grammaticalization that results in the use of nonzero coordination strategies that no longer have a comitative meaning. Mithun suggests that this process can be triggered when languages are exposed either to borrowing from other languages having the AND-strategy or to writing, which does not record the intonational cues that usually accompany juxtaposition. She states, "Exposure to language with written traditions, or, even more, exposure to literacy itself, may provide a stimulus for the overt marking of grammatical structures, and, eventually, the grammaticalization of coordination conjunctions." (1988:357) This idea informs the second hypothesis tested by the survey in this thesis, and may also affect the bias in the survey, as described below.

3.2 Payne's Survey

     Payne's survey of coordination strategies is rather different from Stassen's. Instead of a survey of languages, Payne's is a survey of the various coordination structures. That is, the languages he discusses were not selected for genetic diversity, but rather to exemplify all varieties of coordination strategies. Payne's survey includes strategies for the coordination of sentences, verb phrases, adjective phrases, and prepositional phrases, as well as noun phrases. Much of his survey concerns the typology of the semantics of coordination, and includes more kinds of coordination than the simple conjunctive (*and*-like) coordination surveyed here. However, two sections of Payne's survey are particularly relevant to this survey. In his section titled "Unmarked conjunction", he describes various coordination strategies and provides examples. The strategies he describes include: the zero strategy, where the coordinands are simply juxtaposed (in which he includes structures where all but one of the coordinands are marked with some kind of continuative form) (1985:25-27); the familiar And strategy (1985:28-29); the comitative or With strategy (1985:29-34); the Pronoun strategy, which corresponds to Stassen's "pronominal" strategy above; and the "Dual" strategy, "[a] rare strategy available to the Samoyed languages Nenets…and Enets, side by side with the standard zero strategy, [that] appears to allow two NPs to be conjoined by marking each with the ending of the dual number…" (1985:36-37) This dual strategy is illustrated with an example from Nenets:

(16) [NP ńakasxa′   papasxa′]
      older brother(DU)   younger brother(DU)
      'the older brother and the younger brother' (1985:36)

Payne also proposes a hierarchy of phrase types that constrains the available coordination strategies in human languages:

> In general, the phrasal categories appear to form a hierarchy, **S - VP - AP - PP - NP**. Individual strategies are used to cover contiguous categories, so that for instance Fijian *ka* covers the categories S to PP, and *kei* solely the category NP. It is claimed therefore that a language will not use one strategy for S and NP alone unless the intervening categories also permit the same strategies. Numerous examples of the operation of the hierarchy are given throughout the chapter. (1985:5-6)

He did not find any definite counterexamples to this hierarchy in his survey, but included examples of strategies that conform to it in English (1985:14, 20, 23), Japanese (1985:15), Fijian (1985:15, 22, 23, 28, 29), Russian (1985:15), Latin (1985:19), Turkish (1985:21, 27), Pacoh (1985:26), Vietnamese (1985:26), Yagnobi (1985:27), Persian (1985:28), Finnish (1985:28), Hungarian (1985:28), Georgian (1985:28), Tagalog (1985:28), and Welsh (1985:33). Payne does mention (1985:33) two possible counterexamples to the hierarchy: the comitative strategy in Margi, which can be used with NPs and APs, and the comitative strategy in Shuswap, which can be used with NPs and VPs. In both cases, his sources did not mention whether the strategy could be used with the intervening phrase types (PPs in Margi, PPs and APs in Shuswap), leaving open the question of whether they violate the hierarchy. Because of these possible counterexamples, and because Payne did not conduct any later research to further test the universality of the hierarchy (personal communication, April 27, 2004), the phrasal hierarchy constraining the usage of coordination strategies will be one of the hypotheses tested by this survey.

4 SURVEY METHODOLOGY

4.1 Goals of the Survey

In light of the previous surveys described above, this survey will test two hypotheses. The first hypothesis is:

1. Payne's Hierarchy: There is a hierarchy of phrase types, S - VP - AP - PP - NP, such that any coordination strategy in any language will apply only to a contiguous range of phrase types.

In order to test this hypothesis, the coordination strategies available in each language for the phrase types in the hierarchy will be collected and tabulated. Since the depth of description of coordination structures is far from exhaustive in many sources, any example of the coordination of phrase heads such as verbs, adjectives, and nouns will be treated as an example of coordination of the corresponding phrase type unless the source specifically notes that the strategy does not apply to larger units. Note also that while the phrase types in the hierarchy match the natural phrasal categories in many languages, there do exist languages that lack one or more of the phrasal categories.

The second hypothesis is:

2. Number of Strategies: Languages that have only the Comitative Strategy for noun phrases will tend to have a larger total number of coordination strategies than languages that have any other strategy for noun phrases.

This is suggested by the ideas in Mithun (1988), which imply that some WITH-languages should be in the process of becoming AND-languages through the grammaticalization of the comitative, in which the meaning of the noun phrase comitative marker is generalized over time to apply to all phrase types. If this process exists but does not happen all at once, then we would expect to find WITH-languages in which the Comitative Strategy, which presumably starts as a strategy only for NPs, has not yet spread to all phrase types, leaving multiple coordination strategies. In contrast, we would expect to find that AND-languages tend to have a fewer strategies (perhaps only one) that cover larger ranges in the phrase hierarchy.

4.2 Definition of Coordination

This survey attempts to describe and compare coordination strategies in a genetically diverse sample of the world's languages. Such a survey begs two questions: what are coordination *strategies* (as opposed to coordination syntax or morphemes), and how can they be defined in a language independent way? A language-independent definition is crucial to a proper survey; without one, the survey would be biased towards methods of coordination that resemble the strategies in some prototype language. For example, the question to be answered could be phrased informally as, "How would *and* be translated into various languages"—but this formulation is clearly biased towards

English and an English-like medial monosyndetic *and*. As we have seen in Stassen and Payne's surveys above, coordination takes place in some languages without a separate lexical item, with differing structural relationships between the coordinands, with subtly varying semantics, and sometimes with no overt marking at all. A syntactic definition of coordination may therefore exclude some of the coordination phenomena. A semantic definition avoids the problem, but it must be broad enough to include all kinds of coordination. Stassen's semantic definition, for example, relies on a single event predicated on two referents that are conceived of as separate individuals. Such a definition suffices for noun phrases, but it needs substantial revision and expansion to also account for adjective phrase, verb phrase, prepositional phrase, and sentence coordination. Payne, on the other hand, does not offer an explicit definition of coordination, relying on the traditional meaning of the word in the first sentence of his chapter: "All languages, seemingly without exception, possess strategies which permit various types of co-ordination to occur at the phrasal as well as the sentential level, thereby forming complex phrases of various grammatical categories." (Payne 1985:3) For this reason, the domain of this survey is not coordination structures or coordinators, but rather coordination *strategies*, which seem to serve to reduce repetition in speech. Gleitman (1965:268) says, "conjunction is one of many syntactic processes that serve the purpose of indicating contrast or reducing repetition; a conjoined sentence that does not indicate contrast or reduce repetition has not served any purpose." A coordination strategy may be realized as additional syntactic structures, lexical items, or morphological marking, but is not restricted to any of those, and may involve none of them (zero marking).

Accordingly, the working definition used to identify coordination strategies in this survey is as follows:

(17) **Coordination** is the process whereby multiple grammatical sentences may be expressed as a single sentence, with the optional omission of some material that would have been repeated. In the resulting combined sentence, the non-identical material in the two original sentences, called the **coordinands**, must be constituents and adjacent, with the possible exception of the additional lexical items, syntactic structures, morphology, or phonology introduced to mark their connection. This additional material, possibly null, makes up the **coordination strategy**. In addition, the following restrictions are placed on the combined sentence: (a) the meaning of the combined sentence entails the meaning of the two original sentences with as little additional semantic content as possible, (b) the coordinands should not have any material deleted (as occurs in gapping), and (c) the strategy should not be restricted to only a small set of lexical items (as occurs in reduplication and some other structures).

Note that this definition is based on coordination deletion; however, it departs from this idea in an important way: it does not insist that the two original sentences are separate underlying sentences that are combined in some way during the derivation of the combined sentence. This is a particularly necessary in order to include comitative

coordination strategies, because while many researchers have proposed to account for AND-coordination structures by the combination of underlying sentences, few researchers would claim it is necessary for prepositional adjuncts to be accounted for using such a mechanism. This definition is intended to be independent of any particular theory of sentence derivation, serving only as a working definition of the domain of the survey in a language-independent way that can be applied to the surface strings presented as examples in descriptive grammars.

There are some additional features of this definition worth noting. It is broad enough to cover the coordination of two sentences, because the deletion of repeated material is optional—if no material is deleted, we are left with two complete sentences, along with any additional material that comprises the sentential coordination strategy. In addition, this definition, like Stassen's, is restricted to two-way coordination in order to reduce the complexity of the possible coordination strategies to be surveyed. The restriction that the coordinated sentence must entail the meanings of both of the combined sentences but add no more semantic content is intended to restrict the domain of the survey only to coordination strategies that are "Coordinate" in Stassen's terminology, "conjunctive" or "unmarked" in Payne's. Consider the following examples:

(18)   John is tall
(19)   John is thin
(20)   John is tall and thin
(21)   John is either tall or thin

The coordinated sentence (20) just encompasses the meaning of its two component sentences (18) and (19), while the meaning of (21) also includes the exclusive disjunctive meaning of the "either…or" strategy. The "and" strategy in (20) would therefore be included in this survey, while the "either…or" strategy in (21) would not. These various restrictions focus the survey on the simplest possible case of coordination for each phrase type in order to prevent the total list of strategies from ballooning to an unmanageable size.

4.3   Sampling and Sources

In order for the results of a cross-linguistic survey to be valid, the languages to be included in the survey ought to be selected in a principled way. The surveys of coordination strategies by Stassen and Payne both include data from a large number of languages, but neither author makes clear what selection criteria were used. As mentioned above, Payne's survey seems to be intended to show as much of the variety of coordination strategies as possible, so genetic diversity is not a key criterion. Stassen's survey does make some statistical claims about the distribution of AND- and WITH-languages and about their correlation with some other language features (Stassen 2000:43-47), and so a sample of languages that reflects the genetic diversity of the world's languages is necessary. Stassen (2000:1) does say that his 260 languages were

"selected from all major linguistic groupings and areas", but he does not describe his selection criteria in detail.

Because the second hypothesis above makes a statistical claim about the number of coordination strategies in a language, it is desirable that the languages included in the sample be genetically diverse, so that any correlations found are not the result of a genetic relationship between some languages in the sample. Achieving this requires two tasks: first, a genetically based taxonomy of the world's languages must be selected, and second, from within that taxonomy a representative and diverse sample of languages must be chosen. Rijkhoff and Bakker (1998) discuss the merits of three different taxonomies and describe procedures for selecting languages. Based in part on their description of the Ethnologue taxonomy as conservative about genetic groupings (and therefore less prone to lump questionably-related languages together), but primarily due to the easy availability of a recent edition (Grimes 2000) in electronic form, that taxonomy has been used in selecting languages for this survey. Because the number of languages surveyed (30) is relatively small compared with the number of top-level phyla in the Ethnologue (about 88), Rijkhoff and Bakker's complex language-sampling procedure reduces to a very simple procedure: pick one language from 30 of the top-level phyla. An attempt was made to include the 30 Ethnologue phyla with the largest number of distinct languages; however, some of these phyla were either exceptional in some way that argued for their exclusion (including deaf sign languages, unclassified languages, creoles, and isolates) or else sufficiently detailed data were not available (including the Torricelli, Geelvink Bay, Hmong-Mien, Macro-Ge, Panoan, and Carib phyla). No languages were included from these phyla, and so languages from less-populated phyla were included to make a total of 30.

When selecting references for each of the languages sampled, more detailed sources with a broader set of coordination examples were clearly more helpful for the survey described here. In order to get data of this kind, the following types of sources, presented in order of desirability, were sought: first, a source specifically about the coordination strategies in the target language (which should be most likely to discuss coordination strategies in fine detail); second, a detailed descriptive grammar of the target language; third and finally, a teaching grammar or language textbook. Sources in this last category are perhaps the easiest to find examples of, but their treatment of coordination is often very limited; in fact, although many teaching grammars were evaluated during the survey, none of them proved satisfactory. Even in detailed descriptive grammars, the treatment of coordination is often quite sketchy, which can be troublesome—if a source simply states that a particular word is the translation of the English word *and* (as often occurred in grammars of Indo-European languages), that might be an indication that the language has the same medial monosyndeton coordination strategy for all phrase types as English, but it might also indicate that the author did not focus very carefully on the description of coordination strategies. The data in this survey were never based on broad statements of this kind; instead, an example of the coordination of each phrase type was sought for each language; failing this, a statement by the author that a particular strategy could coordinate a particular phrase type would suffice. If no example or statement was found, the coordination strategies for the corresponding phrase type are deemed unknown

for the purposes of this survey. The particular details of difficulties along these lines are discussed below in the sections for the various languages.

An ideal coordination example would be a sentence where two coordinands of the appropriate phrase type are coordinated, along with a gloss that coordinates the translations of the coordinands using the English word *and*. In some cases, such examples were not available, and less-than-ideal examples were substituted when available. For example, some references included only three- (or more) way coordination of particular phrase types. Other references discussed conjunctive (AND) and disjunctive (OR) coordination together and provided only a disjunctive example for one or more phrase types; in such cases, disjunctive examples were included if the text implied that both types of coordination had the same distribution. Some clausal (S and VP) coordination strategies found could have either a conjunctive or a sequential ("and then…") meaning, and such strategies were included in the survey; however, strategies that had *only* a sequential meaning were not.

Quite often, difficulties arose in finding examples for each of the levels in Payne's proposed phrasal hierarchy (S, VP, AP, PP, and NP). Some flexibility was allowed; for example, pronouns and names were considered examples of noun phrases when necessary. In some languages, however, one or more of the phrase types seemed not to exist, or to be difficult to distinguish from another. In many languages, overt subject optionality conspired with basic sentence order to make sentences and VPs hard to distinguish. Consider a hypothetical language that allows null subjects and has SOV word order. Suppose we find an example such as:

(22)   S O V and O V

This could be analyzed in two ways:

(23)   S [[O V] and [O V]]
(24)   [S O V] and [(S) O V]

That is, the second OV could be a verb phrase with the same subject, or a separate sentence with a null subject. Unless the author of a reference made clear whether the coordinands are sentences or VPs (perhaps by reference to intonation), it was not possible to determine from the surface string what type of phrase was coordinated. In some languages, the meanings usually associated with adjectives are expressed using a subclass of verbs, and so VPs and APs are difficult or impossible to distinguish. Similarly, sometimes adjectives and nouns form a single word class. In addition, while prefix and postfix adpositional phrases were treated as PPs, in some languages the meanings associated with PPs are carried by case-marked nouns. All such cases of missing or merged phrase types are discussed below in more detail as they occur.

The coordination of adjective phrases involves an additional wrinkle. In most languages adjectives can be used attributively, as in the following English example:

(25)   The [big [red [dog]]] barked.
(26)   The [[big red] [dog]] barked.

A common analysis of the structure of such APs is shown in (25): a nested series of adjuncts to the NP. As it happens, a sentence like (25) also matches this survey's definition of coordination (with juxtaposition), with an analysis like that shown in (26): a pair of coordinated APs. It would not be desirable to attempt to exclude such structures, because in some languages adjectives, even predicative adjectives, can in fact be coordinated by juxtaposition. Unfortunately, many of the language references used for this survey included only examples of attributive or of predicative uses of adjectives. In such cases, either kind of example was deemed acceptable for the purposes of this survey, but it may be that a consistent difference exists cross-linguistically between the coordination of attributive and predicative adjective phrases, and that would argue that a single AP category in Payne's hierarchy is an oversimplification.

   The existence of a juxtaposition strategy at the sentence level also presented a difficulty. If sentences are more-or-less syntactically independent utterances, then we would expect to find that they can be juxtaposed in all languages, and in fact that was the case in all languages included in this survey. However, such juxtaposition seems qualitatively different from the juxtaposition of two constituents within a single sentence. In general, the grammaticality of sentence juxtaposition is not taken as evidence of the existence of a juxtaposition strategy in a language unless the language also allows the juxtaposition of other phrase types.

   Finally, it is worth mentioning the sources of bias in this survey, since bias can never be entirely avoided unless one is willing to include every natural language in the sample. This survey's sample is biased in several ways. Some languages have been better studied than others, and the data for those languages are more detailed and more easily available. More widely spoken languages also have more—and more detailed—data available. The native languages of European researchers (which are predominantly AND-languages) may have influenced their analysis of their target languages. And, as always, dead and unrecorded languages tell no tales, and cannot be included in the sample.

5 DATA

Each of the sections below contains data from a single language. The heading contains the name of the language and the Ethnologue phylum to which it belongs. Within each section, examples are given of each coordination strategy being applied to various phrases in Payne's hierarchy. Each example consists of a sentence or phrase (in transliteration for non-Latin scripts) with the material making up the coordination strategy underlined, followed by a morpheme-by-morpheme gloss if available, followed by a free translation. In cases where glosses were not available, an attempt has been made to choose examples that include cognates and proper names so that identifying the structure of the sentences is easier.

5.1 ABELAM (Sepik-Ramu)

S, VP (medial verbs):

(27)   wnə rə.tʌy̱ kʌ.kwʌ
         'I sit down and eat' (Laylock 1965:71)

Verbs can be coordinated by adding one of a set of suffixes to one of the coordinands, usually the prior one. These suffixes have slightly different distributions (e.g. one is usually used when the two clauses have the same subject), but they all seem to have the same meaning with respect to coordination, so they are treated here as a single medial verb form.

The subject of an Abelam sentence may be a noun, free pronoun, a clitic pronoun, or any combination of these (Laylock 1965:46); because it may be only a clitic pronoun attached to the verb, it is not possible to distinguish the coordination of VPs from that of sentences.

AP (no phrase):

Adjectival meanings are carried by substantives (nouns) in Abelam, so there is no separate class of adjectives or adjective phrases.

PP (no phrase?):

It is not clear from Laylock's brief grammar whether there is a class of adpositions in Abelam. There are a few suffixes that can be added to nouns that add possessive, locative, or comitative meanings. These could conceivably be analyzed as either case endings or adpositions, but Laylock asserts neither position. If there are adpositional phrases in Abelam, then given the lack of overt coordination except on verbs, it seems likely that these constructions are coordinated by juxtaposition like other substantives, but no example sentences are provided.

NP (juxtaposition):

(28)   wʌny balə wʌny acʌ waryʌ.bər
        'that dog and that pig fight' (Laylock 1965:56)

5.2   ABUN (West Papuan)

S (polysyndeton *e*):

Abun has an *and* strategy in which both coordinands are marked by postfix *e*. Berry and Berry (1999) state, "There is no distinction in meaning between this particle and simple juxtaposition. Therefore, examples are found in sentences, prepositional phrases and noun phrases similar to those examples given above. In all cases *e* may be added between the noun phrases, but may not be added for verb phrases." (Berry and Berry 1999:95) Accordingly, this coordination strategy is listed here for sentences, PPs, and NPs, which are the other levels in Payne's hierarchy for which Berry and Berry provide examples of juxtaposition.

VP (juxtaposition):

(29)   An   kas mu sem   mo   nden
        3SG run go sleep LOC   bush
        'He ran and went and slept in the bush.' (Berry and Berry 1999:95)

AP (no strategy):

Berry and Berry do not include adjective phrases in the list of phrase types (1999:94) that can be coordinated. In fact, in the section on noun phrase structure, they point out that sentences such as (30) are ungrammatical and must instead be paraphrased with a relative clause, as in (31).

(30)   *ndar kwo sye   ge   we
        dog   big white CL   two
        'two big white dogs'

(31)   ndar   kwo   ge   we gato   sye
        dog   white CL   two REL   big
        'two white dogs that are big' (Berry and Berry 1999:70)

This implies not only that adjective phrases cannot be coordinated with an overt strategy, but also that they cannot be juxtaposed.

PP (juxtaposition):

(32)   Ye   ma   kagit Pef kagit Bamogwem   kagit Bikar
        people come from Pef from Bamogwem   from Bikar
        'They came from Pef, Bamogwem and Bikar.' (Berry and Berry 1999:94)

PP (polysyndeton *e*):

See the quote and discussion in the sentence section above.

NP (juxtaposition):

(33) An bi   nggon   nggon   yi   dom an rot   nde
3SG POSS woman   woman   other   also 3SG touch   NEG
'His wife and other women also he must not touch.' (Berry and Berry 1999:94)

NP (polysyndeton *e*):

(34) Mbos <u>e</u> ndabu <u>e</u>   ndam gas ye ne   <u>e</u>   an fowa   sino
pigeon and dove and bird   REL big DET   and 3PL forbidden all
'Pigeons, doves and birds that are big, they are all forbidden (for women to eat).'
(Berry and Berry 1999:96)

NP (comitative monosyndeton *si*):

(35) Apner, Fredik <u>si</u>   Musa   git   sugit
Apner Fredik with Musa   eat   food
'Apner, Fredik and Musa ate food (together).' (Berry and Berry 1999:96)

5.3   ALAWA (Australian)

S, VP, AP, PP, NP (juxtaposition):

"Alawa has no conjunction corresponding to the English 'and'; simple
juxtaposition of noun phrases, clauses, or sentences, with certain concomitant intonation
patterns, signals conjunction of the type signalled by 'and' in English." (Sharpe
1972:118)

5.4   AMHARIC (Afro-Asiatic)

S (monosyndeton -*(ə)nna*):

(36) käbbädä yəhedall-<u>ənna</u>   sattanägaggər-äw   səra
Käbbädä is-leaving-so-consequently without-that-you-discuss-[it]-with-him job
attəğämmər
do-not-start
 'Käbbädä is leaving, so (consequently) don't start the job without discussing (it)
with him.' (Leslau 2000:177)

Although the gloss for this example makes use of an additional meaning of the coordinator *-(ə)nna* (i.e. 'so, consequently'), it is included here to show that clauses coordinated with it may have different subjects.

VP (juxtaposition):

(37)   ṣähay   bästä-məsraq   wäṭṭa   bästä-me'rab   təṭälqalläčč
       sun   in-the-east   she-rising   in-the-west   she-sets
       'The sun rises in the east and sets in the west.' (Leslau 2000:131)

VP (monosyndeton -*(ə)nna* or -*(ə)mm*):

(38)   mäshaf-očč-u-n   yəyəz-<u>ənna</u>   kä-leločč-u tämari-wočč-gar   wädä
       his-books   he-holds-and   with-the-other-students-[with]   to
       təmhərt-bet yəhedall
       school   he-goes
        'He takes his books and goes to school with the other students.' (Leslau 2000:155)

(39)   qän-un   mulu   yəbälall-<u>əmm</u> yəṭäṭṭall-<u>əm</u>
       day   full   he-eats-and   he-drinks-and
       'He eats and drinks all day long.' (Leslau 2000:155)

AP (monosyndeton -*(ə)nna*):

(40)   qonğo-wa-<u>nna</u> astäway-wa ləğ mäṭṭačč
       (no gloss provided)
       'The pretty and intelligent girl came.' (Leslau 2000:49)

PP (no examples)

NP (juxtaposition):

(41)   kä-gäbäya   čäw bärbärre amäṭṭaʷh
       from-market   salt pepper   I-brought
       'I brought salt and pepper from the market.' (Leslau 2000:154)

NP (monosyndeton -*(ə)nna* or -*(ə)mm*):

(42)   kä-gäbäya   čäw-<u>ənna</u>   bärbärre amäṭṭaʷh
(43)   kä-gäbäya   čäw-<u>əmm</u>   bärbärre amäṭṭaʷh
       from-market   salt-and   pepper   I-brought
       'I brought salt and pepper from the market.' (Leslau 2000:154)

5.5   BILUA (East Papuan)

Obata (2003) sometimes included brackets to delineate the coordinands in coordination examples. These have been retained for clarity.

S (monosyndeton *ni*):

(44)   …vo   ta   [o   ol = a   ju   kale sukulu ju]   <u>ni</u>
       3SG.M   TOP   3SG.M   go=PRES   water   in   stream water   and
       [o = vaili = k = a   ko   niuniu]
       3SG.M=look.for=3SG.F.O=PRES 3SG.F fish
       '…as for him, he went to the big water, the stream (water), and he looked for
       fish.' (Obata 2003:234)

VP (no strategy):

Obata is aware of the possibility of VP coordination, mentioning (2003:230) that it is possible with the intensifying coordinator *ti*, and describing "non-verbal predicates" as coordinated by *ni*. This implies that it is impossible to coordinate verbal predicates (i.e. VPs) with *ni*.

AP (no strategy):

Because of the status of adjective phrases in Bilua, there appears to be no strategy for coordinating them. Adjectives do not modify nouns directly, instead forming modifier phrases that include an enclitic pronoun (Obata 2003:41). Obata does not include modifier phrases in the list of phrase types that can be coordinated (2003:230), and even if they could be, the required enclitic pronouns would make their status as APs questionable.

PP (monosyndeton *ni*):

(45)   Vella La Vella   udu   kale = a = mu se   ta   ke = ke = ve
       Vella La Vella   island in=LIG=3PL 3PL TOP   3PL=go=RMP
       [edo-edolo = a = ma   zae poso kale]   <u>ni</u>
       REDUP-different=LIG=3SG.F area PL   in   and
       [edo-edolo = a = ma   tou-tou   kale]
       REDUP-various=LIG=3SG.F   REDUP-tribe in
       'Vella La Vella people went to different areas and to various tribes.' (Obata
       2003:233-4)

NP (monosyndeton *ni*):

(46) Omuqa kidi inio qo ibat = ou omuqa rana
two COLL.DU FOC.NONF 3DU push=FUT two side
[ko = a rekorusu] ni [vo = a lasiverusu] = ko to
3SG.F=LIG girl and 3SG.M=LIG boy 3SG.F IRR
qo = tibae-kini = ou
3DU=stick-RECP=FUT
'Two people push both sides of the girl and the boy so that they will stick with
each other.' (Obata 2003:233)

5.6 CAMBODIAN (Austro-Asiatic)

S (monosyndeton *haəy-niŋ*):

(47) kñom ceə kruu↑, <u>haəy-niŋ</u> bɔɔŋ ceə kruu-peet↓
I be teacher, and elder be doctor
'I'm a teacher, and [my] elder [brother] is a doctor.' (Huffman 1967:229)

VP (juxtaposition):

(48) (kee) maok pnum-piñ, roek kaa twəə↓
(they) come Phnom-Penh, hunt-for work do
'They come to Phnom Penh and find work.' (Huffman 1967:228)

VP (monosyndeton *haəy*):

(49) (kñom trəw) tiñ robɔh pseeŋ↑, <u>haəy</u> kat sɔq↓
(I must) buy things various, and cut hair
'I have to buy several things and get a hair cut.' (Huffman 1967:228)

AP (juxtaposition):

(50) (proh nuh ceh-tae dae leeŋ) hɨɨ-haa, caeŋ-maeŋ (neh!)
(man that always walk play) self-important, proud F
'That man always goes around in a self-important and flamboyant manner.'
(Huffman 1967:229)

PP (no examples)

NP (monosyndeton *haəy-niŋ*):

(51) kñom, <u>haəy-niŋ</u> look (tow caə-muəy-kneə sen↓)
I, and you (go together polite-imperative)
'Let's you and I go together.' (Huffman 1967:227)

5.7   CATALAN (Indo-European)

S, VP, AP, PP, NP (monosyndeton *i*):

Hualde gives this example of the coordination of clauses:

(52)   la   Maria estudia   matemàtiques i   en   Joan   cornea   cereals
        art   Mary   study.3s Mathematics   but art John   cultivate.3s cereals
        'Mary studies Mathematics and John grows cereals.'   (Hualde 1992:134)

In addition, he states, "Constituents of the same type (e.g. clauses, noun phrases, verbal phrases, adjectival phrases, adverbials) can be coordinated without structural parallelism being required." The following examples include coordination of adjectives with participles, nouns with nominalized verbs, adverbs with prepositional phrases, and so forth. Although this section includes no straightforward examples of VP-VP, AP-AP, or PP-PP coordination, it seems clear that he means structurally unmatched coordination is allowed *in addition to* such straightforward kinds of coordination, and so *i* is listed here as a coordinator for all phrasal levels.

5.8   CUBEO (Tucanoan)

S and VP (monosyndeton *aru*):

(53)   eda-Rĩ   ˈkɨ-te-karã   aru wɨ-i-kũ-RE
        arrive-GER exist-DYN-N/H^1pexe   and fly-STV-CLS:hump-OBJ
        kore-karã   tres ˈora   baxu
        wait^for-N/H^1pexe three hour   exact
        'Arriving, we were there and (then) we waited for the plane for exactly three hours.' (Morse and Maxwell 1999:138)

AP (no strategy?):

In Morse and Maxwell's section on noun phrase structure, they state, "In over 100 texts we have examined, the maximum number of modifiers found with a single noun is three…when the speaker wishes to use multiple adjectives, a common strategy is to use two noun phrases in apposition, apportioning the adjective modifiers between the two noun phrases." (Morse and Maxwell 1999:91) In their terminology, "modifiers" include "possessive noun phrases, adjectival and quantifier modifiers, relative clauses, and other noun phrases in apposition." (Morse and Maxwell 1999:90) These two statements, taken together, imply that Cubeo does not allow adjectives to be coordinated even by juxtaposition when they modify the same noun, and no examples of adjective coordination are included in the section describing this phenomenon. However, the statements above do not categorically rule out AP coordination for attributive adjectives, and do not apply to predicative adjectives.

PP (no examples):

Cubeo does have a class of postpositions, but Morse and Maxwell include no examples of coordination of PPs.

NP (monosyndeton *aru*):

(54) bũxã-joka-wA   pɨka-Rã <u>aru</u> kõbĩˈõwãĩ-wA pɨka-Rã boa-ˈwɬ   jɨ
      palometa-CLS:left-PL two-PL   and   sardine-PL   two-PL   kill-NON3 1s
      'I caught two *palometas* and two sardines.' (Morse and Maxwell 1999:92)

5.9   DIUXI-TILANTONGO MIXTEC (Oto-Manguean)

S (monosyndeton *te*):

(55) káˈá úˈshí shtashéhé moró   <u>té</u> kwéˈhé ñáˈyíu n-kíshí
      metal ten   CON:dance moro:dancers and   many   people COM-come
      'At ten o'clock the Moors were dancing, and many people came.' (Kuiper and Oram 1991:359)

VP (monosyndeton *te*):

(56) ndââ <u>te</u> nanī   yútnú
      true   and   long:PL tree
      'The poles are long and straight.' (Kuiper and Oram 1991:265)

Kuiper and Oram give this example of the coordination of stative verbs, a subclass of Diuxi-Tilantongo Mixtec verbs that have meanings that approximate the meanings usually associated with adjectives. There is no adjective word class and there are no examples given of the coordination of verbs from other classes; therefore, this example is treated as an example of VP coordination, and no AP coordination strategy is listed.

AP:

See VP.

PP (comitative monosyndeton *shíhín*):

(57) yáhá <u>shíhín</u> ndé   núndúa
      here   with   until Oaxaca:City
      'from here to Oaxaca City' (Kuiper and Oram 1991:309)

This example actually shows the coordination of a nominal adverb and a prepositional phrase; no PP-PP coordination example is given. However, Kuiper and

Oram state that "two noncoreferential adverbs, adverb phrases, adverbial noun phrases, or prepositional phrases with *ndé* 'until' are linked by *shíhín* 'with'." (1991:309)

NP (comitative monosyndeton *shíhín*):

(58) xahân   te   nuu nshúâ shihin mariâ
      CON:speak he:ws   face John   with   Mary
      'He is talking to John and Mary.' (Kuiper and Oram 1991:288)

NP (monosyndeton *te*):

(59) xahán   té   orá   n-tá'shí   té   xúhún   ndátníú-ń
      CON:speak he:ws   when   COM-give   he:ws   IMP:take possession-your:RES
      yá   ó'hón   vasú   té   îîn   tndó'hó
      this   five   glass   and   one   pitcher
      'He was saying when he gave (it to me), "Take the prize of yours, five glasses and
      a pitcher."' (Kuiper and Oram 1991:388)

5.10 EWE (Niger-Kordofanian)

S (monosyndeton *eye*):

(60) Kɔku   vu   vɔ-a   eye Kɔmi ge   ɖe   xɔ-a   me
      Kɔku   open   door-the and Kɔmi drop PREP room-the in
      'Kɔku opened the door and Kɔmi entered.' (Dzameshie 1998:73)

VPs cannot be coordinated with *eye*. Dzameshie (1998:80) states "while verbs can be covertly conjoined by juxtaposing them…they cannot be overtly conjoined."

VP (juxtaposition):

(61) Akɔfa fɔ   vu   vɔ-a   kaba
      Akɔfa wake   open   door-the quickly
      'Akɔfa got up and opened the door quickly.' (Dzameshie 1998:77)

AP (juxtaposition):

No example of AP coordination is provided, but Dzameshie (1998:74) states that "verbs and adjectives cannot be overtly conjoined." Since Ewe verbs can be juxtaposed, it is reasonable to conclude that this means the same is true of adjectives.

PP (no examples):

Ewe has prepositions, but Dzameshie includes no examples of PP coordination.

NP (monosyndeton *kple*):

(62) míe kpɔ Adzo <u>kple</u> Afi
      we see Adzo   and Afi
      'We saw Adzo and Afi.' (Dzameshie 1998:72)

5.11 GUARANI (Tupi)

S, VP (monosyndeton *ha*):

(63) hwán niŋkò h-asɨ   <u>ha</u> upéva re   šé a-há a-visitá i-šupé
      John certainly he=is-sick and that because I I=go I=visit his=to
      'John is sick, and (for that reason) I'm going to visit him.' (Gregores and Suárez
      1967:187)

      Because Guarani verbs include clitic subjects and the non-clitic subjects may be
omitted, it is not possible to distinguish VP coordination from S coordination.

AP (no phrase):

      Guarani adjectives are a subclass of the verbs: "A sub-class of quality
verbs…may also occur uninflected as attributes to a noun; we will call them *attributive
quality verbs*…they are color terms and several pairs of antonyms referring to physical
properties." (Gregores and Suárez 1967:138) No examples are given of the coordination
of verbs used in this attributive manner.

PP (no examples):

      Gregores and Suárez include no examples of PP coordination.

NP (monosyndeton *ha*):

(64) yai-peʔá   la i-kɨʔá   va <u>ha</u> la i-potĩ   va
      we=separate the it=is-dirty Nm and the it=is-clean Nm
      'we separate the dirty ones and the clean ones.' (Gregores and Suárez 1967:160)

5.12 HUÁNUCO QUECHUA (Quechuan)

S (monosyndeton *y*):

(65) Qam binsi-ma-r   noqa-ta miku-ma:-nki <u>y</u> noqa binsi-shpa-:
      you beat-=>1-adv me-OBJ eat-=>1-2   and I   beat-adv-1P
      qam-ta-pis   usha-shayki
      you-OBJ-also finish-1=>2FUT

'If you beat me, you will eat me, and if I beat you, I will finish you.' (Weber 1989:299)

VP (juxtaposition):

(66) Chawra-qa llapan kasta-n-kuna-wan alli   parla-n   upya-n   chaqcha-n
      so-TOP   all   clan-3P-plur-COM good speak-3 drink-3 chew:coca-3
      'Then with all her relatives they converse nicely, drink, and chew coca.' (Weber 1989:352)

VP (monosyndeton *y*):

(67) Ni-yka-pti-lla-n-na   oora   chaya-mu-n   y̲   paasa-n-na
      say-impfv-adv-just-3P-now   time   arrive-afar-3   and pass-3-now
      'As they are so doing, time comes and goes.' (Weber 1989:352)

Weber believes, based on intonation, that an example like (67) is "a single sentence with conjoined verb rather than two sentences." (1989:352)

AP (no phrase):

Huánuco Quechua has a class of "substantives" that includes what would be distinguished as nouns and adjectives in many other languages (Weber 1989:35). The strategies listed for NPs below are actually strategies for substantives, and presumably operate equally well on adjective-like and noun-like words.

PP (no phrase):

The meanings associated with adpositional phrases are usually expressed in Huánuco Quechua using case-marked substantives. Therefore, all the strategies that are listed below for NPs can also be used to coordinate them, neutralizing the distinction between NPs and PPs for the purposes of this survey.

NP (juxtaposition):

(68) …allqay wiskul   miku-na-n-paq
      hawk   buzzard   eat-sub-3P-PUR
      '…for the hawks and buzzards to eat.' (Weber 1989:347)

NP (monosyndeton *y*):

(69) Listu-ku-nki huk kullu-ta   y̲   kuh haacha-ta   sumaq fiinu-ta
      ready-refl-2 one block-OBJ and one axe-OBJ   very fine-OBJ
      'Prepare a cutting block and a very sharp axe.' (Weber 1989:348)

NP (comitative monosyndeton -*wan*):

(70)   Chay   chura-sha-n qellay-ta   shunta-n ahenti-<u>wan</u> tininti
         that   put-sub-3P money-OBJ   gather-3 agent-COM lieutenant
         'The agent and the lieutenant receive the money which is put in.' (Weber
         1989:349)

NP (comitative monosyndeton -*ntin*):

(71)   Kay-chaw   ka-yka-n   kuka   isku-<u>ntin</u>
         here-LOC   be-impfv-3 coca   lime-tog
         'Here is (some) coca and lime.' (Weber 1989:48)

NP (number strategy):

(72)   Rihidur-pa   kampu-pa   <u>ishka-n-pa</u>   ka-n   baara-n-kuna…
         rigidor-GEN   kampu-GEN   two-3P-GEN be-3   staff-3P-plur
         'The rigidor and the *kampu* both have their staff of office…' (Weber 1989:351)

5.13 HUNGARIAN (Uralic)

S (monosyndeton *és*):

(73)   A lány a labdával játszott, <u>és</u> a fiú átugrott a kerítésen
         'The girl played with the ball and the boy jumped over the fence.' (Hell 1980:351)

VP (monosyndeton *és*):

(74)   Péter levelet ír, <u>és</u> elmegy a városba
         'Peter writes a letter and goes to the city.' (Hell 1980:368)

AP (monosyndeton *és*):

(75)   De egy esoportban sok kedvetlen, <u>és</u> durva-öltözetű embert és asszonyt is láttunk
         But one group-in many cheerless and coarse-clothing-possessing man-(acc.) and
woman-(acc.) also saw-we
         'But in one group we also saw many men and women, cheerless and roughly
         clad.' (Hall 1938:102)

PP (no examples):

        In Hall's analysis of Hungarian, the language does have postpositions, but neither
Hall (1938) nor Hell (1980) includes an example of PP coordination. However, given
Hall's (1938:95) statement that *és* and the other coordinating conjunctions are "used

between parts of the sentence (words, phrases, clauses) of like function," it seems unlikely that PPs are an exception.

NP (monosyndeton *és*):

See AP example (75), above—the second *és* coordinates two nouns.

5.14 JACALTEC (Mayan)

S (juxtaposition, w/ intransitive second clause):

(76)   xto   ix   maxatic'a xul   ix
        went   cl/she never   came cl/she
        'she went and never came back' (Craig 1977:34)

S, VP (monosyndeton *-ni*, w/ transitive second clause):

(77)   speba ix   te'   pulta sah-<u>ni</u>   ix   te'   wentana
        closed cl/she cl/the door   open-suff   cl/she cl/the window
        'she closed the door and opened the window' (Craig 1977:35)

Craig's (1977) clausal coordination examples include pronominal subjects even in cases like (77), in which the subject of both clauses is identical. Therefore, sentence and VP coordination are not easily distinguishable, so both are treated here as coordinated by the same strategies.

AP (monosyndeton *boj*):

(78)   ay   hin cheh   saj'in <u>boj</u> c'ej'iň an
        exist   my horse   white   and black 1p
        'I have a white and black horse' (Craig 1977:30)

PP (monosyndeton *boj*):

(79)   xal naj   hun tu' tet naj   <u>boj</u> tet   ix
        said cl/he one that to   cl/him and to   cl/her
        'he said that to him and to her' (Craig 1977:30)

NP (monosyndeton *boj*):

(80)   xtzotel naj   <u>boj</u> ix
        talked cl/he   and cl/her
        'he and she talked together' (Craig 1977:32)

5.15 KANURI (Nilo-Saharan)

S (conjunctive verb):

(81)   Kàsúwùrò <u>lènyê</u> Álìyè kànyî káiwò.
        'We went to the market and Ali bought a goat.' (Hutchison 1981:322)

S (polysyndeton *yé*):

(82)   Kádí <u>yé</u> kârò rízə́nà, kâ <u>yé</u> kádírò rízə́nà
        'Both the snake is afraid of the stick and the stick is afraid of the snake.'
        (Hutchison 1981:314)

VP (conjunctive form):

"The conjunctive is often used to conjoin a series of verb phrases describing actions in the same aspect, and the order of the conjoined verb phrases reflects the order or sequence in which the events occurred. In many of its uses the same subject is carried by each of the verbs in the conjoined series, though this is not required, as will be shown." (Hutchison 1981:321)

(83)   <u>Kə̀ràzə̂</u> málə̀mrò wálwònò.
        'He studied and became a malam.' (Hutchison 1981:322)

VP (polysyndeton *yé*):

(84)   Kánòn də̀gánà <u>yé</u> cìdàzə́nà <u>yé</u>
        'He lived and worked in Kano.' (Hutchison 1981:314)

AP (no phrase):

"Given the fact that all lexical and derived nouns may occur as modifiers to head nouns in both simple and complex noun phrases, plus the fact that words translating as adjectives in other languages may also function independently as nominals, there seems to be no reason to make a distinction between the adjectives and the nouns of Kanuri."
(Hutchison 1981:36)

PP (comitative polysyndeton -*à*):

(85)   kàiyàwá Àfùnòwábè-<u>à</u> Màngàwábè-<u>à</u>
        'the songs of the Hausas and the Mangas' (Hutchison 1981:198)

Hutchison characterizes a noun with the *-bè* suffix as a genitive PP, and so (85) is included here as an example of PP coordination. He provides no examples of

coordination of PPs with *yé*, but neither does he state that such constructions are ungrammatical.

NP (polysyndeton -*sò*):

(86)   Béjìsò kəmòsò kàsúwùlàn rúkə́nà
'I saw mats and calabashes in the market.' (Hutchison 1981:313)

NP (polysyndeton *yé*):

(87)   Sáwànyí yé ámànnyí yé Tìjánìrò sàlâm
'Greetings to my friend and confidant Tijani.' (Hutchison 1981:314)

NP (comitative polysyndeton -*à*):

(88)   Módù-à Kàshîm-à kàsúwùrò lèyádà.
'Modu and Kashim went to the market.' (Hutchison 1981:201)

5.16 KORANA (Khoisan)

S (monosyndeton *e-/i-*):

(89)   ...e ña ǁnati !kã !koe tsĩ nã !xoweba
...and so is run-back and is caught (Maingard 1962:35)

S (monosyndeton *tsĩ/tĩ*):

(90)   ...ti !kumku xu-r-nĩ dip
...and what hard things I must do (Maingard 1962:35)

VP (monosyndeton *tsĩ/tĩ*):

(91)   ǁo tsĩ ǁo !kũ
die and die together (Maingard 1962:35)

AP (no examples):

In Maingard's analysis, Korana does have a separate class of adjectives (1962:16), but he mentions no coordination strategy for them. He says in reference to the other coordination strategies listed here that they "can connect (a) noun [pronoun] + noun [pronoun], or (b) verb + verb, or (c) sentence + sentence." (1962:35)

PP (no phrase):

Maingard does not describe any adpositions in Korana.

NP (polysyndeton *tsĩ/tĩ* + pronominal enclitic):

(92)   swep kx'eīp-<u>tsĩ-khara</u>
        lung and liver and both (Maingard 1962:35)

(93)   ‖na ǂxip <u>tsĩ</u> ǂnup <u>tsĩ-ka</u>
        what shines and what is black and both (Maingard 1962:35)

        Note that the first *tsĩ* may be omitted.

5.17   LAHU (Sino-Tibetan)

S, VP, and AP (monosyndeton *lɛ*):

(94)   ɔ̄ câ mâ jâ <u>lɛ</u> yǐʔ-mɨ tā aq ve yò
        'Having eaten a great deal, he began to sleep soundly.' (Matisoff 1972:418)

        Matisoff describes this particle as suspensive, marking clauses as non-final, and that it "indicate[s] either that the preceding verbal event has taken place *before* the one(s) in the subsequent clause(s), or simply that it is *not the last* in a series of events that is being considered." (1972:417) Matisoff also distinguishes the postfix particle *lɛ* from a homophonous conjunction that can be used to join sentences, in which case the pause in intonation precedes the conjunction instead of following it (1972:397). For the purposes of this survey, both of these strategies will be treated as one.
        Note also that APs are also covered by this strategy because, in Matisoff's analysis, Lahu adjectives are a subclass of verbs (1972:193).
        Lahu allows verbs to be juxtaposed in a construction that Matisoff refers to as "concatenated" (1972:192); however, only certain verbs can come before or come after main verbs in such structures, and so concatenation does not constitute a coordination strategy as defined here.

PP (monosyndeton *lɛ*):

(95)   nô kàʔ <u>lɛ</u> mô kàʔ
        'up there and down there' (Matisoff 1972:181)

        Matisoff describes this example as possible, but "quite infelicitous", with juxtaposition the preferred strategy.

PP (juxtaposition):

(96)   nô kàʔ mô kàʔ
        'up there and down there' (Matisoff 1972:181)

NP (monosyndeton *lɛ*):

(97)   ahâʔ-šɛ <u>lɛ</u> qhâʔ-yâ tê phā qay tù ve yò
         'The headman and all the villagers will go.' (Matisoff 1972:176)

5.18 LEZGIAN (North Caucasian)

S (monosyndeton -*ni*):

(98)   Zi   pab azarlu ja,   ajal-r.i-z-<u>ni</u>   kilig-da-j   kas
         I:GEN wife sick   COP   [child-PL-DAT-and   look-FUT-PTP] person
         awa-č
         be-NEG
         'My wife is sick and there is no one to look after the children.' (Haspelmath
         1993:335)

S (monosyndeton *wa*):

(99)   Lëša.di   i   kar.da-l   tažubwal iji-zwa-j   <u>wa</u>   am
         Lëša(ERG) this thing-SRESS surprise do-IMPF-PST   and he:ABS
         weq'.e-laj   žigǧir.da-l   eq̃eč'   qʰiji-zwa-j
         grass-SREL path-SRESS   go.out(PER)   REPET-IMPF-PST
         'Lëša was surprised at this and he returned to the path from the grass.'
         (Haspelmath 1993:337)

VP (monosyndeton -*ni*):

(100)   Abur   ča-laj   wik'eh   ja,   pačah.di-kaj-<u>ni</u> kič'e tuš
         they   we-SREL   brace   COP   czar-SBEL-and   afraid COP:NEG
         'They are braver than we, and they are not afraid of the czar.' (Haspelmath
         1993:335)

VP (monosyndeton *wa*):

(101)   Sadlahana Il'ič.a   ada-n   q̃ün   q'u-na   <u>wa</u> ada-z   Šuš'
         suddenly   Il'ič(ERG) he-GEN shoulder hold-AOR   and he-DAT Šuš'
         wac'   q̃alur-na
         river   show-AOR
         'Suddenly, Il'ič touched his shoulder and showed him the Šuš' river.'
         (Haspelmath 1993:337)

AP (monosyndeton -*ni*):

(102)   Dax bürq'ü-<u>ni</u>   x̂a-nwa,   biši-<u>ni</u>
         dad blind-and   become-PRF   deaf-and
         'Dad has become both blind and deaf.' (Haspelmath 1993:328)

There are two things to note about this example. First, it is actually an example of emphatic polysyndeton coordination with *-ni*, which is only included here because Haspelmath has no monosyndeton example for adjectives, although it is clear that *-ni* can be used to coordinate them. Also, in this example the coordinands are not adjacent, which ought to put it outside of this survey's definition of coordination; this occurs because this example also illustrates an optional extraposition that occurs with emphatic coordination: "[i]n such cases of emphatic coordination, the last conjunct is often extraposed to the end of the sentence after the finite verb." (Haspelmath 1993:328)

AP (monosyndeton *wa*):

(103) güzel   <u>wa</u> č'exi   šeher
       beautiful and big   city
       'a beautiful and big city' (Haspelmath 1993:330)

PP (monosyndeton *-ni*):

(104) Ali.di-n-<u>ni</u>   Weli.di-n   buba
       Ali-GEN-and Weli-GEN   father
       'Ali's and Weli's father' (Haspelmath 1993:327)

PP (monosyndeton *wa*):

(105) šeher-r.i-n   <u>wa</u> xür-er.i-n   zehmetči-jar
       town-PL-GEN   and village-PL-GEN worker-PL
       'the working people of towns and villages' (Haspelmath 1993:330)

NP (monosyndeton *-ni*):

(106) Isa.di-<u>ni</u>   Ali.di   sada=sada-w   ǧil-er   wuga-na
       Isa(ERG)-and Ali(ERG)   one(ERG)=one-ADESS hand-PL give-AOR
       'Isa and Ali shook hands (lit. gave hands to each other).' (Haspelmath 1993:327)

NP (monosyndeton *wa*):

(107) güzel   jajlax-ar, q̃aji bulax-ar,   q'aq'an dağ-lar   <u>wa</u> zi
       beautiful pasture-PL cold spring-PL   high   mountain-PL   and I:GEN
       watanʔehli-jar
       countryman-PL
       'the beautiful mountain pastures, the cold springs, the high mountains, and my countrymen' (Haspelmath 1993:330)

5.19 MOJAVE (Hokan)

S, VP (juxtaposition):

Mojave subjects can be omitted and the verbs are marked for person and number, so the coordination of VPs cannot be distinguished from the coordination of sentences.

AP (juxtaposition):

(108) ʔ-shvay-nʸ-č   havasuː-k   nʸəməsav-k   v + iduː-k-e
        1-dress-dem-subj   green-same=subj   white-same=subj   aux+be-tns-aug
        'My dress is green and white' (Munro 1976:166)

PP (no phrase):

Munro discusses no adpositions in Mojave, and her index of grammatical morphemes (1976:326-330) lists only noun and pronoun affixes with the meanings usually associated with adpositions.

NP (juxtaposition):

(109) intay   nakut-nʸ-č   ʔahuːt-k   iduː-m
        mother   father-dem-subj   good=pl-same=subj   be-tns
        'His mother and father are good.' (Munro 1976:162)

5.20 MULAO (Tai-Kadai)

S (juxtaposition only)

VP (juxtaposition):

(110) mɛ²   ljem⁴   mɛ²   tsui²
        have   sickle   have   hammer
        'There are sickles and hammers.' (Jun and Guoqiao 1993:75)

Mulao also has what Jun and Guoqiao describe as serial verb phrases, in which several verbs and their arguments are strung together; however, these constructions do not involve any extra morphemes or lexical items, and so they also fall under the juxtaposition strategy.

AP (juxtaposition):

(111) n̥aːu³   tɔ²   ŋwa¹   ŋan³   lo⁴   naːi⁶
        one   CLF   dog   yellow big   this
        'this big yellow dog' (Jun and Guoqiao 1993:66)

PP (no examples):

Mulao does have prepositions, but Jun and Guoqiao include no examples in which they are coordinated.

NP (juxtaposition):

(112) ho^3 se^4 kɔ   tən^2 cwa^2 kai^5 yɣuŋ^2
       inside commune PTC   ox   sheep very   many
       'There are a lot of oxen and sheep in the commune.' (Jun and Guoqiao 1993:58)

NP (monosyndeton *wən^4*):

(113) mɛ^2 ljem^4 <u>wən^4</u>   tsui^2
       have   sickle   and   hammer
       'There are sickles and hammers.' (Jun and Guoqiao 1993:58)

Jun and Guoqiao state that "*wən^4* is generally not used with verbs or adjectives, nor with clauses in a compound sentence." (1993:59)

5.21 OJIBWA (Algic)

The glosses provided in Valentine (2001) are long and complex, and would require significant explanation, and so they have been omitted.

S, VP (monosyndeton *ge/gye*):

(114) Gaawaanh dash ngii-debnig <u>gye</u> gii-gwaabiignid
       'With difficulty she got hold of me and drew me out of the water.' (Valentine 2001:998)

S, VP (monosyndeton *miinwaa*):

(115) Mii odi gii-mkamaang iw zaaghigan, <u>miinwaa</u> baatiindoon miinan, giigoonyag ge yaawag maa zaaghigning
       'And there we found this lake, <u>and</u> there were lots of berries, and there were also fish there at the lake.' (Valentine 2001:999)

S, VP (conjunctive form):

Inflected Ojibwa verbs very often include a morpheme marking the person and number of the subject, and the separate subject may be omitted, making it difficult to distinguish sentences from VPs. Ojibwa has two ways to inflect a verb, each of which involves different morphemes and morpheme orders. One of these is the conjunctive

form, which marks the clause as coordinated with another clause. It can be marked on one or all of the coordinated verbs.

(116) Mii dash gii-giiwebtooyaan, <u>gii-wiindmawag</u> aw ngashi
'Then I ran home and told my grandmother about it.' (Valentine 2001:999)

AP (no phrase):

There is no class of adjectives in Ojibwa, with most adjectival meanings "expressed by means of intransitive verbs" (Valentine 2001:342).

PP (no phrase):

There is no class of words in Ojibwa corresponding to adpositions. The meanings associated with adpositional phrases are variously incorporated into verbs, for example *zhitmaw* 'make s.t. for [animate]' (Valentine 2001:281) or expressed via adverbs such as *biinish* 'until, as far as' (2001:139).

NP (monosyndeton *ge/gye*):

(117) Ngii-zaaghaa nookmis <u>gye</u> go aw nmishoomis
'I loved my grandmother and my grandfather.' (Valentine 2001:568)

NP (monosyndeton *miinwa*):

(118) bezhig baashkzigan <u>miinwaa</u> bezhgwaatig wiishkii <u>miinwaa</u> dash iw bagoowyaan ngoding dbaakshkaag
'one gun and one bottle of whiskey and a bolt of cloth' (Valentine 2001:569)

No example with *miinwaa* coordinating two NPs was given, so this multiple-coordination example will have to suffice. Note that it actually appears in a longer example sentence involving S coordination, from which is has been extracted for brevity.

5.22 ONO (Trans-New Guinea)

S (medial verb):

(119) ŋara   mir-<u>e</u>   nin-om   ne-we
      food   cook-SS   give me-2sDS   eat-1sJussive
      'Cook food and give it to me to eat.' (Phinnemore 1988:112)

S (monosyndeton *so*):

(120) paki medep ea   eŋe urata-o   mari-ki   <u>so</u>   eŋe arok-maŋ-ge
      then child   that she work-to take-3sDS   and   he cry-rep.-3sfp.FV

'Then she took that child to work and he cried and cried.' (Phinnemore 1988:111)

VP (medial verbs and *so*):

(121) mat-ine <u>gelig-e</u> taun-go <u>ari</u> more zoma ka-ki <u>so</u> ea
village-his leave-SS town-to goSS then sickness see him-3sDS and there
seu-ke
die-fp.-3s
'He left his village, went to town, and got sick and died there.' (Phinnemore 1988:109)

AP (no examples)

PP (monosyndeton *so*):

(122) Asu-ŋo ŋine-rop <u>so</u> ŋene-rop okora-ki
Holy Spirit-erg. you(pl)-with and us(pl)-with stand-3sDS
'The Holy Spirit stand [sic] with you(pl) and with us(pl) and…' (Phinnemore 1988:100)

NP (monosyndeton *so*):

(123) koya <u>so</u> kezoŋ-no numa len-gi
rain and clouds-erg. way block-3sDS
'Rain and clouds block the way…' (Phinnemore 1988:100)

NP (names) (ergative marker):

(124) Tom-<u>ŋo</u> Peni ere weti Ukarumpa gemamit.
Tom-erg. Penny they(d) on top Ukarumpa are living.
'Tom and Penny are living up at Ukarumpa.' (Phinnemore 1988:101)

5.23 SAHAPTIN (Penutian)

S (monosyndeton *ku*):

(125) Íkuuk i-láam-sha shápɨnchaash <u>ku</u> maxáx-nan
now 3sg.nom-disappear-impf ochre/make-up and white clay-obj
páshtɨn-ma pa-xnɨ́m'at-sha
white-hum.pl 3pl.nom-dig up-impf
'Now ochre is scarce, and the white people are mining white clay [for
toothpaste].' (Hargus 2004)

VP (monosyndeton *ku*):

(126) Cháw-k'a   shin tíin-ma   pa-tkwáynp-xa   ku
neg-intensifier who person-hum.pl   3pl.nom-capture-habitual   and
pa-'aní-xa   ashwaníya
3pl.nom-make-habitual   slave
'People don't capture and hold slaves any more.' (Hargus 2004)

AP (monosyndeton *ku*):

(127) Małáa ku   kayak = nam naknúwi-ta íníit,   ku   = mash   chaw   payúwi-ta
clean   and neat 2sg   care.for-fut house   and 2sg.psr   neg   be sick-fut
myánash-ma
child-hum.pl
'Keep your house clean and neat, and then your children won't get sick.' (Hargus
2004)

PP (no phrase):

Hargus states that there are "no convincing cases of adpositions in Sahaptin."
(personal communication, September 21, 2004)

NP (monosyndeton *ku*):

(128) Talá-yi   tl'álk   ku   yáamash   i-txána-xa   ínín-yi
penis-adj elk   and deer   have   antlers
'The male elk and deer have antlers.' (Hargus 2004)

NP (comitative monosyndeton *-in*):

(129) Na-'iła-s   tl'áks-in   pa-súx-sha
my-mother-my   female friend-comitative   3pl.nom-sip-imperfective
tl'alk-mí   twíixt
elk-genitive broth
'My mother and her female friend are sipping elk broth.' (Hargus 2004)

5.24 SLAVE (Na-Dene)

Rice (1989) describes several dialects of the Slave language; only the strategies
from the Slavey dialect are listed below. Rice distinguishes between sentential and
phrasal (or "nonverbal") coordination, with the latter category apparently including PP
and NP, although PP coordination examples are not given for all strategies.

S, VP (monosyndeton *gots'ęh*):

(130) Jim dzęwé   lą́hdı̨ het'ı̨ gots'ę̄ John lifótǫ het'ı̨
          muskrat skin   seven 3 has and   nine   3 has
      'Jim got seven rats and John got nine.' (Rice 1989:1049)

    Because Slave subjects may be omitted, it is not possible to distinguish S and VP coordination; Rice refers to them both as sentential or clause coordination.

AP (no examples):

    In some cases, the meanings usually associated with adjectives are carried by intransitive verbs, as in:

(131) tlı̨   nechá
      dog 3 is big
      'the dog is big' (Rice 1989:21)

There is also a class of true adjectives that can only occur as complements of the verbs meaning 'be' and 'want', which are described as "uninflected verblike words." (1989:389) No examples of the coordination of true adjectives is included in the chapter on coordination, and so it is not clear whether they are coordinated like clauses or like phrases.

PP (comitative mono/polysyndeton *chu*):

(132) mecheekué héh chu dene łǫ   héh chu ʔeyi kǫ́é   góla
      3.disciple   with and person many with and that house area are located
      deghágogedéhthe   tl'ą́ą̨ha…
      3pl. went through   after
      'after he and his disciples and many people passed through that town…' (Rick 1989:1066)

NP (comitative mono/polysyndeton *chu*):

(133) ʔetl'ége   chu honey chu ghǫh shétı̨
      grasshopper and   and of   3 eats
      'he ate locusts and wild honey' (Rice 1989:1066)

    When coordinating phrases, *chu* may be placed "after each of the phrases or after just the second of the phrases" (Rice 1989:1065), so it is optionally monosyndetic or polysyndetic. It may also occur marking only a single phrase, in which case it means 'too' and functions as an adverb (1989:1067)—because of this, it is here treated as a comitative strategy.

NP (comitative mono/polysyndeton *hé*):

(134) Carol (hé) George (hé) gokǫ́e tu báa góʔǫ
      (and) (and) 3pl.house water edge area is located
'Carol and George's house is by the water' (Rice 1989:1073)

This is the usual coordinator (and the equivalent of *chu*) in the Hare and Bearlake dialects, and "[i]t also occurs occasionally in Slavey." It may mark both coordinands, only the first, only the second, or none of them (1989:1067)—this last possibility being equivalent to juxtaposition, which will therefore be listed as a strategy in the survey. Although Rice describes it as "clearly a conjunction" (1989:1073) not a postposition, there is a homophonous postposition *hé* that Rice glosses as 'because' and also as 'with', as in:

(135) dene hé
       man with
       'with the man' (Rice 1989:19)

This argues that *hé* is comitative, and that Slave is an example in progress of the grammaticalization process described in Mithun (1988).
NP (monosyndeton *gots'ę̀h*):

(136) ʔamá gots'ę̀h ʔabá
       mother and father
       'mother and father' (Rice 1989:1072)

5.25 SQUAMISH (Salishan)

Squamish predicates cover both verbal and adjectival meanings, and because they may include clitic subjects it is not possible to distinguish VP/APs from sentences, so the same coordination strategies apply to all three levels in the hierarchy.

S, VP, AP (monosyndeton *u̯əλ*):

(137) na̠q°əλqciˈmʔ k°əˈci, u̯əλ naˈʔ-x° č-n̠u̯a̠_ʔəsx̌iˈc(-x°)
       'someone knocked while (or: and) I was still lying down'

Note that this coordinator is "translatable as 'and, while, so that, for, until, but', depending on the context." (Kuipers 1967:214)

S, VP, AP (monosyndeton, pair of clitics *ʔi* and *kʼ*):

(138) č-n̠tx°cqaˈlačn ʔi̠_kʼ°̠ č-n̠nx̌°uˈcʼč
       'I fell backward and now my back is bruised' (Kuipers 1967:212)

S, VP, AP (juxtaposition):

(139) na_mʔi_ʔuˈi̥s … čmčmʔaˈʔstas
       'she came in … she carried on her back' (Kuipers 1967:214)

PP (monosyndeton *ʔiˈ* or *ʔiˈkʷi*):

(140) tx°.naˈmʔ   t-k°i_šmaˈn   ʔiˈk°i   tx°.naˈmʔ t-k°i_s-u̯i-s_iəlx̌-λaˈlm
       against   enemies   and   for   his_finding_food
       'against enemies and for finding food' (Kuipers 1967:215, 233)

NP (monosyndeton *ʔiˈ* or *ʔiˈkʷi*):

(141) ta_X°əˈč'taˈlʔ   ʔiˈ   ʔaλi_čuaˈšs
       X°   and   his_wife
       'X° and his wife' (Kuipers 1967:215, 230)

5.26 TAGALOG (Austronesian)

S (monosyndeton *at*):

(142) Huhugasan ko ang mga pinggan, <u>at</u> pupunasan mo.
       'I'll wash the dishes, and you'll dry them.' (Schachter and Otanes 1972:541)

VP (monosyndeton *at*):

(143) Huhugasa'<u>t</u> pupunasan namin ang mga pinggan.
       'We'll wash and dry the dishes.' (Schachter and Otanes 1972:540)

       This example includes a clitic form of the coordinator *at*, which occurs after /'/, the glottal stop (Schnachter and Otanes 1972:541).

AP (monosyndeton *at*):

(144) Maganda <u>at</u> mayaman si Rosa
       'Rosa is beautiful and rich.' (Schachter and Otanes 1972:540)

PP (no examples):

       Tagalog does have adpositional phrases such as:

(145) sa harap ng teatro
       '(at) in-front-of the theatre' (Schachter and Otanes 1972:451)

       However, there is no example given in Schachter and Otanes (1972) of the coordination of such phrases.

NP (monosyndeton *at*):

(146)   Nakita ko ang babae <u>at</u> ang lalaki.
            'I saw the woman and the man.' (Schachter and Otanes 1972:114)

NP (monosyndeton actor particle *ng*):

(147)   Nakita ko sila <u>ni</u> Juan
            'I saw him and Juan.' (Schachter and Otanes 1972:116)

    This strategy can only be used to connect a personal pronoun (such as *sila* in the above example) with a noun (such as *Juan* in the above example) in the "*ng* form". *Ng* phrases generally mark the actor complement (i.e. the agent) of verbs (Schachter and Otanes 1972:74).

5.27   TARIANA (Arawakan)

S (only juxtaposition)

VP (serial verb):

(148)   <u>nhalitu</u>   <u>na-inu</u>-pidana   nana
            3pl+fish 3pl-kill-REM.P.REP madi.fish
            'They caught (fish-kill) madi-fish.' (Aikhenvald 2003:440)

AP (juxtaposition):

(149)   pani-si   paːʃ-dapana   nawiki alia-ni-dapana
            house-NPOSS   one-CL:HAB   person EXIST-TOP.ADV-CL:HAB
            matʃa-dapana   wali-dapana
            good-CL:HAB   new-CL:HAB
            'A good new house where people are.' (Aikhenvald 2003:478)

PP (juxtaposition):

(150)   [diha   hinipuki i-thiɾikuna   maña] [pa-musi-ɾi   maña-ka]
            ART   garden   INDF-at.edge amidst IMP-go.out-REL   amidst-SUB
            kao-kuthe   di-swa-ka
            ?-CL:MANIOC.BREAD   3sgnf-lie-REC.P.VIS
            'There is manioc bread in the middle of the edge of the garden, in the middle of the exit.' (Aikhenvald 2003:230)

NP (juxtaposition):

(151) nihyã-nipe   alia-mha   kuheni   ñamu   ñha-ka-si
       3sgnf+eat-NOM EXIST-PRES.VIS crab   evil.spirit food-TH-NOM
       alia-mha   kuheni   kaːsiɾi   maːnapi tawaɾi   uɾu
       EXIST-PRES.VIS crab   crocodile little.fish traira.type.fish bodó.fish
       dawaki   yaka
       jandiá.fish shrimp
       'There is his (evil spirit's food), there is crab, evil spirit's food, (there are) crab,
       crocodile, little fish, traira fish, bodó fish, jandiá fish, shrimp.' (Aikhenvald
       2003:484)

NP (direct objects) (monosyndeton *kaika*):

(152) ñamu   keɾu-ka   di-wana-ka   iya   <u>kaika</u> kale   di-pumi
       evil.spirit be.angry-SUB 3sgnf-call-SUB rain and   wind   3sgnf-after
       di-wana-na-pita   hĩ   enu
       3sgnf-call-REM.P.VIS-AGAIN DEM:ANIM   thunder
       'The evil spirit being angry, after he called rain and wind, he called thunder.'
       (Aikhenvald 2003:484)

NP (animate subjects) (comitative monosyndeton *-ne/-ine*):

(153) naːka   ney   naː   di-we-ɾi
       3pl+come 3pl+climb 3pl+go 3sgnf-younger.sibling-MASC
       di-phe-ɾi-<u>ne</u>
       3sgnf-elder.sibling-MASC-COM
       'They came up, the younger and the elder brother.' (Aikhenvald 2003:151)

5.28 TELUGU (Dravidian)

S (verb in first S becomes perfective participle):

(154) <u>pod(u)ekki</u>, nidra leecEEDu
       'The sun having risen, he got up from sleep.' (Krishnamurti and Gwynn
       1985:188)

VP (first verb becomes perfective participle):

(155) raamu iDLiilu <u>tini</u>, kaafii taagEEDu.
       'Ramu ate idlies and drank coffee.' (Krishnamurti and Gwynn 1985:329)

AP (polysyndeton final vowel lengthening):

(156) kamala teliwaynad<u>ii</u> andamaynad<u>ii</u>.
       'Kamala is intelligent and beautiful.' (Krishnamurti and Gwynn 1985:324)

PP (polysyndeton final vowel lengthening):

(157) raamu iNTik<u>ii</u>, kamala bajaaruk<u>uu</u> weLLEEru
       'Ramu went home and Kamala to the bazaar.' (Krishnamurti and Gwynn
       1985:329)

     The affix *-ki/-ku* marks the dative case. Note that his example does not meet this
survey's definition of coordination because the coordinands are not adjacent. It is
included here because it demonstrates that the vowel lengthening strategy can apply to
case-marked nouns that have PP-like meaning.

NP (polysyndeton final vowel lengthening):

(158) kamal<u>aa</u> wimal<u>aa</u> poDugu.
       'Kamala and Vimala are tall.' (Krishnamurti and Gwynn 1985:325)

5.29 UZBEK (Altaic)

S (monosyndeton *wa*):

(159) karimǰɔn kasal boldi <u>wa</u> yuda yɔtti
       'Karim was sick and stayed (in bed) at home.' (Sjoberg 1963:156)

VP (monosyndeton *wa*):

(160) maktabda oquwčilar oqiydilar <u>wa</u> yɔzadilar
       'In school the students read and write.' (Sjoberg 1963:156)

AP (monosyndeton *wa*):

(161) dewɔr baland <u>wa</u> ɔq
       'the fence is high and white' (Sjoberg 1963:137)

PP (monosyndeton *wa*):

(162) hɔwlida <u>yɔki</u> bɔğda oynayman
       'I play in the courtyard or in the garden' (Sjoberg 1963:137)

     This example obviously does not include the coordinator meaning *and*, but rather
the coordinator meaning *or*. However, the two are described together and examples of
their use are presented together, so it is reasonable to assume that *wa* can also be used to
coordinate PPs.

NP (monosyndeton *ham*):

(163) bCğda | sabzi <u>ham</u> piyCz <u>ham</u> | qCwun <u>ham</u> gullaydi
       'in the garden, carrots, onions, and melons are growing' (Sjoberg 1963:63-64)

Although *ham* is used polysyndetically here, this is optional.

NP (comitative monosyndeton *bilan*):

(164) ɔtam <u>bilan</u> ɔnam esa šaxmat oynadilar
       'My father and my mother played chess' (Sjoberg 1963:137)

The difference between *wa* and *bilan/ham* is interesting. Sjoberg says that *wa* belongs to a class of conjunctions that can be used to connect "words, phrases, or two independent (sometimes two dependent) clauses" (1963:64), while *bilan* belongs to a class of conjunctions that can "connect two words or non-verbal phrases" (1963:63). If this is correct, then coordination with *wa* can be done for all levels of the hierarchy, while coordination with *bilan* can only be done for NP, PP, and AP; however, PP and AP examples with *bilan* are not provided. There are also clitic version of the conjunctions *wa* and *ham* (1963:64).

NP (juxtaposition):

(165) taškeŋga | har xil zawɔt teatr maktap kutupxɔnalar | kop
       'Tashkent has numerous (all kinds of) factories, theaters, schools, and libraries.'
       (Sjoberg 1963:138)

5.30 YAQUI (Uto-Aztecan)

S (juxtaposition):

(166) húu'u čibá'ato henó-m-po   'áe-t   mamma-ka 'a'a té'ebʷa-táite-k
       that   goat   shoulder-PL-on him-on   hand-PPL him lick-begin-PRF
       pusí-m-po yéka-po tén-po
       eye-PL-on nose-in mouth-in
       'The goat put its forelegs on the man's shoulders and began to lick him in his eyes,
       his nose and his mouth.' (Dedrick and Casad 1999:361)

S (monosyndeton *'íntok*):

(167) néhpo=ne káa   'áa yé'ee <u>'íntok</u> ne káa   'áa 'etého kía né
       I=I   NEG   able dance CNJ   I   NEG   able converse only I
       tiwé-ka   'áma kík-nee
       shame-PPL there stand:SF-FUT
       'I can't dance and I can't tell stories; I just stand there embarrassed.' (Dedrick
       and Casad 1999:359)

VP (juxtaposition):

(168) moró béha 'áman yépsa-k   kó'oko'i-m-mewi   páhko-m-mewi
Moor well   there arrive-PRF chile-PL-to:PL   feast-NZR-to:PL
lútu'uria-m nénka-k
truth-PL   deliver-PRF
'The Moor got back to the ones in Chile Peppers who were giving the fiesta and
gave them his report.' (Dedrick and Casad 1999:360)

VP (monosyndeton *'íntok*):

(169) tú-si   káa   'áa yé'ee 'íntok káa   'áa 'etého   kía tené-ka
good-AVR NEG   able dance CNJ   NEG   able converse only mouth-having
kík-nee
stand-FUT
'He was not able to dance well, and he was not able to tell stories very well; he
would just stand there with his tongue in his mouth.' (Dedrick and Casad
1999:359)

AP (no strategy):

(170) húu'u pahkó'olaa 'íntok 'á'a 'átbʷa-táite-k   káa   'awá-k-am-ta
that   festival:man CNJ him laugh-begin-PRF   NEG   horn-have-NZR-ACC
bíča-ka roóbo kóba-k-am-ta   bíča-ka-i   'íntok tánala   a'a
see-PPL round head-have-NZR-ACC   see-PPL-PPL CNJ   curved   his
bʷásia-ka-'a-betči'ibo
tail-having-EV-for
'And that Pascal dancer began to laugh at it, just seeing the hornless, round head,
and seeing the way it had its tail curved up over the back.' (Dedrick and Casad
1999:236)

Although Yaqui has a class of words corresponding to adjectives, it appears to
have no coordination strategy for them. According to Dedrick and Casad, Yaqui instead
"…distribute[s] a string of attributive adjectives throughout a sequence of conjoined
clauses…" (1999:236)

PP (juxtaposition):

Sentence coordination example (166) above also contains coordination of PPs via
juxtaposition.

PP (monosyndeton *'íntok*):

(171) sí'ime-ku-t   napé-kónila   hiká-t-tána   'íntok   betúk-tána
      all-in-at   close-around   up-on-side   and   under-side
      'everywhere, all around, above and below' (Dedrick and Casad 1999:360)

NP (monosyndeton *'íntok* and juxtaposition):

(172) héewi núhmea hunáa'a   baákot 'íntok   wáa'a bʷé'u pá'aria-tu-k-a'u
      yes   relative that   snake and   that   big   plain-VR-PRF-GND
      wáa'a híak   yá'u-raa-tú-k-a'u   'ée-béah yéhte-k-a'u   sí'ime
      that   Yaqui chief-ABS-VR-PRF-GND   you-near sit-PRF-GND   all
      hunáa'a   bakót   yá'u-raa
      that   snake   chief-ABS
      'Well, young friend, that snake, and all that big clearing, and the village and the
      Yaqui authorities that appeared there before you, all of that was a snake tribunal.'
      (Dedrick and Casad 1999:406)

NP (comitative monosyndeton *-mak*):

(173) húnen = su tesó-po   lú'te-k   húu'u labén híawa-i   'áapa
      thus=EMP   cave-to   end-VR-PRF   that   violin sound-PPL   harp
      čiba'áto-mak   nau   lu'u-te-k
      goat-with   together   end-VR-PRF
      'The violin music in the cave thus ended and the harp music and the goat all
      ended together right there.' (Dedrick and Casad 1999:363)

5.31 Table of Coordination Strategies

        Below is a table containing all the coordination strategies collected in the survey,
grouped by language, and marked to show which phrases in Payne's hierarchy they can
be used to coordinate. If a language lacks a phrasal category, then that phrase type is not
listed in the right column. If a strategy can be used with a phrase type, that phrase type is
marked in the right column, and contiguous ranges of marks are connected by lines, so
that potential violations of the hierarchy can be easily seen. If the source for a language
lacked any examples for a particular phrasal category, then the table contains a question
mark; such cases are assumed not to be violations of Payne's hierarchy, and so the lines
marking ranges of phrase types sometimes pass through question marks.

Table 1: Coordination Strategies

ABELAM	S	VP	NP
medial verb	■—	—■	
juxtaposition			■

ABUN	S	VP	AP	PP	NP
polysyndeton *e*	■			■	■
comitative monosyndeton *si*					■
juxtaposition	■	■		■	■

ALAWA	S	VP	AP	PP	NP
juxtaposition	■	■	■	■	■

AMHARIC	S	VP	AP	PP	NP
monosyndeton *-(ə)nna*	■		■	?	
monosyndeton *-(ə)nna/-(ə)mm*		■		?	■
juxtaposition	■	■		?	■

BILUA	S	VP	AP	PP	NP
monosyndeton *ni*	■			■	■

CAMBODIAN	S	VP	AP	PP	NP
monosyndeton *haəy-niŋ*	■			?	■
monosyndeton *haəy*		■		?	
juxtaposition		■	■	?	

CATALAN	S	VP	AP	PP	NP
monosyndeton *i*	■	■	■	■	■

CUBEO	S	VP	AP	PP	NP
monosyndeton *aru*	■	■		?	■

DIUXI-TILANTONGO MIXTEC	S	VP		PP	NP
monosyndeton *te*	■	■			■
comitative monosyndeton *shíhín*				■	■

EWE	S	VP	AP	PP	NP
monosyndeton *eye*	■			?	
monosyndeton *kple*				?	■
juxtaposition		■	■	?	

GUARANI	S	VP		PP	NP
monosyndeton *ha*	■	■		?	■

SLAVE	S	VP	AP	PP	NP
monosyndeton *gots'ęh*	■	■	?	?	■
comitative mono/polysyndeton *chu*			?	■	■
comitative mono/polysyndeton *hé*			?	?	■
juxtaposition	■	■	?	?	■

HUÁNUCO QUECHUA	S	VP			NP
monosyndeton *y*	■	■			■
comitative monosyndeton *-wan*					■
comitative monosyndeton *-ntin*					■
number strategy					■
juxtaposition	■	■			■

HUNGARIAN	S	VP	AP	PP	NP
monosyndeton *és*	■	■	■	■	■

JACALTEC	S	VP	AP	PP	NP
monosyndeton *-ni*	■——	■			
monosyndeton *boj*			■——	■——	■
juxtaposition	■				

KANURI	S	VP		PP	NP
conjunctive verb	■——	■			
polysyndeton *yé*	■——	■——		? —	■
comitative polysyndeton *-à*				■——	■
polysyndeton *–sò*					■

KORANA	S	VP	AP		NP
monosyndeton *e-/i-*	■				
monosyndeton *tsĩ/tĩ*	■——	■			
polysyndeton *tsĩ/tĩ* + pronominal enclitic					■

LAHU	S	VP	AP	PP	NP
monosyndeton *lɛ*	■——	■——	■——	■——	■
juxtaposition	■			■	

LEZGIAN	S	VP	AP	PP	NP
monosyndeton *-ni*	■——	■——	■——	■——	■
monosyndeton *wa*	■——	■——	■——	■——	■

MOJAVE	S	VP	AP		NP
juxtaposition	■——	■——	■——		■

MULAO	S	VP	AP	PP	NP
monosyndeton *wən⁴*				?	■
juxtaposition	■——	■——	■——	?	■

OJIBWA	S	VP			NP
conjunctive form	■——	■			
monosyndeton *ge/gye*	■——	■——			■
monosyndeton *miinwaa*	■——	■——			■

ONO	S	VP	AP	PP	NP
medial verb	■——	■			
monosyndeton *so*	■——	■——	? —	■——	■
ergative marker					■

SAHAPTIN	S	VP	AP		NP
monosyndeton *ku*	■——	■——	■——		■
comitative monosyndeton *-in*					■

SQUAMISH	S	VP	AP	PP	NP
monosyndeton *y̨əλ*	■——	■——	■		
monosyndeton, pair of clitics *ʔi* and *k°*	■——	■——	■		
monosyndeton *ʔi'* or *ʔi'k°i*				■——	■
juxtaposition	■——	■——	■		

TAGALOG	S	VP	AP	PP	NP
monosyndeton *at*	■——	■——	■——	? —	■
monosyndeton actor particle *ng*					■

TARIANA	S	VP	AP	PP	NP
serial verb		■			
monosyndeton *kaika*					■
comitative monosyndeton *-ne/-ine*					■
juxtaposition	■	?	■	■	■

TELUGU	S	VP	AP	PP	NP
monosyndeton perfective participle	■	■			
polysyndeton final vowel lengthening			■	■	■

UZBEK	S	VP	AP	PP	NP
monosyndeton *wa*	■	■	■	■	
monosyndeton *ham*					■
comitative monosyndeton *bilan*					■
juxtaposition					■

YAQUI	S	VP	AP	PP	NP
monosyndeton *'íntok*	■	■		■	■
comitative monosyndeton *-mak*					■
juxtaposition	■	■		■	

6 ANALYSIS

6.1 *Violations of Payne's Hierarchy*

The first hypothesis was that no coordination strategy would apply to a non-contiguous range of phrase types in Payne's proposed hierarchy (**S - VP - AP - PP - NP**). Ideally, a violation of this hierarchy should be supported not only by the lack of an example for that combination of strategy and phrase type, but also by a statement to the effect that such a combination is impossible; otherwise, its omission may merely be a lacuna in the data. Of the possible violations noted below, only a few rest on such a statement.

ABUN: Neither the *e* nor the juxtaposition strategies may be used to coordinate APs, a violation of Payne's phrasal hierarchy, although the data supporting this for the juxtaposition strategy may only affect attributive APs and not predicative APs.

AMHARIC: The *-(ə)nna* and *-(ə)nna/-(ə)mm* strategies both appear to be violations, but based on the near-identity of the coordinating morpheme, it would probably be more reasonable to consider them a single strategy, in which case there is no violation. Juxtaposition also appears to be a violation in the chart, only because Leslau gives no juxtaposition example for APs—he does not state that such juxtaposition is impossible.

BILUA: The *ni* strategy appears to be a true violation of Payne's hierarchy. Although it is hard to say whether APs ought to be considered covered by this strategy because of the apparent requirement that they occur in modifier phrases, Obata makes it clear that VPs may not be coordinated with *ni*.

CAMBODIAN: The *haəy-niŋ and haəy* strategies appear to violate Payne's hierarchy if we consider them to be separate strategies, but as in Amharic the suspicious near identity of the coordinator implies that they actually constitute a single strategy. If this is the case, then there is only a gap at AP due to the lack of an example, in which case there is no violation of the hierarchy.

CUBEO: The gap at AP for the *aru* strategy is a good candidate for a hierarchy violation, because Morse and Maxwell's description of APs does imply that they cannot be coordinated, even by juxtaposition. It is worth noting, however, that this discussion applies to attributive APs and not predicative ones, and so whether APs are entirely unable to be coordinated is not clear.

DIUXI-TILANTONGO MIXTEC: The *te* strategy is a possible candidate for a hierarchy violation. No example of PP coordination with *te* is included, although PPs are shown coordinated by the *shíhín* strategy.

LAHU: Matisoff provides an example of coordination by juxtaposition only for PPs, and sentences are assumed to be juxtaposable in all languages. The result is that the juxtaposition strategy in Lahu is an apparent violation of Payne's hierarchy; however, the status of PP coordination by juxtaposition as a true strategy is questionable, considering that such PPs, like juxtaposed attributive APs, might be in a nested adjunct structure rather than a more balanced coordination structure.

YAQUI: This language, like Cubeo, appears not to allow the coordination of APs, even by juxtaposition. If this is so, it constitutes a violation of Payne's hierarchy; however, also like Cubeo, the discussion of juxtaposed adjectives concerns attributive APs and not predicative APs, leaving open the possibility that predicative APs can actually be coordinated.

This survey has uncovered only a few clear violations of Payne's hierarchy: the *e* strategy in Abun, as well as and the *ni* strategy in Bilua, although this violation rests on the interpretation of several different statements by Obata rather than on a single clear statement that VPs cannot be coordinated with *-ni*. The *te* strategy in Diuxi-Tilantongo Mixtec may also violate the hierarchy, but this may simply be the result of an omitted PP example. The languages Abun, Cubeo, and Yaqui share the interesting feature that attributive APs may not be coordinated even by juxtaposition; this is a violation of Payne's hierarchy if it also holds true for predicative APs, but the respective language references do not make clear whether predicative APs can be coordinated. In summary, Payne's hierarchy is violated in this survey's language sample, but only rarely.

The notion underlying Payne's hierarchy seems to be that phrase types that are adjacent in the hierarchy are somehow more similar to each other than to non-neighbors. This is supported by the delineation of phrase types in several of the languages surveyed, where sometimes two phrasal categories collapse into a single category. For example, Guarani adjectives are actually a subclass of verbs, merging AP and VP. In nearly all such cases, the merged phrase types are adjacent in Payne's hierarchy. The only exceptions are adjectives in Abelam, Huánuco Quechua, and Kanuri, which are subclasses of nouns or substantives rather than verbs or PPs; however, in Huánuco Quechua there seem to be no PPs, and the existence of PPs is questionable in Abelam, so in those two languages the NP category actually includes AP, PP, and NP. Only in Kanuri are non-adjacent phrase types merged. These facts lend additional credence to the existence of a phrasal hierarchy for coordination, while casting additional doubt on the inclusion of AP as a member of that hierarchy. If the hierarchy were restated to apply only to S, VP, PP, and NP, that would do away with all the possible violations except for two: the *e* strategy in Abun and the *ni* strategy in Bilua, both of which cannot be used with VPs.

6.2 *Number of Strategies in Languages with Comitative Coordination*

The second hypothesis was that languages with a comitative strategy would tend to have more coordination strategies than languages without. Of the 30 languages in the sample, eight (Diuxi-Tilantongo Mixtec, Huánuco Quechua, Kanuri, Sahaptin, Slave, Tariana, Uzbek, and Yaqui) have comitative strategies, while the other 22 do not. The mean number of coordination strategies in the comitative languages is 3.5, while the mean number of strategies in the others is approximately 1.86, so the comitative languages tend to have about twice as many strategies on average as the non-comitative languages. This tendency is quite robust: all the comitative languages have at least two strategies; the only language with five strategies (Huánuco Quechua) has a comitative strategy; and of the five languages with four strategies (Slave, Squamish, Kanuri, Tariana,

and Uzbek), only one (Squamish) does not have a comitative strategy. This confirms the second hypothesis, at least with respect to this sample of languages.

7   CONCLUSION

Of the two hypotheses tested in this survey, the both were generally confirmed, although there were a few exceptions and possible exceptions to Payne's phrasal hierarchy. The hypotheses, as well as the survey itself, were quite narrowly focused in order to limit the size of the survey, and there are obvious avenues of additional research that could be pursued. For example, Payne's hierarchy contains five phrasal categories, but does not include adverb phrases (data for which appeared quite often in the sources consulted), and does not distinguish between the coordination of full phrases and the heads of those phrases, as might occur in a hypothetical language that allows verb juxtaposition (serial verbs) but not VP juxtaposition, or allows PPs coordination ("to the store and from the store") but not preposition coordination ("to and from the store"). Instead of surveying a genetically diverse sample of languages, a survey similar to this one could be conducted on groups of genetically closely-related languages and groups of unrelated but geographically adjacent languages, in order to determine how often coordinators are borrowed—a phenomenon Mithun (1988) claims is quite common. However, any following surveys will be constrained, as was this survey, by the availability of data. For each of the written sources consulted, perhaps another three were examined and found to lack sufficient detail. Typological research requires both adequately detailed data about the world's languages and a theoretical framework for evaluating these data; hopefully, this survey represents progress in both areas.

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