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Specification and English tenses

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The adverbials,¹ as far as I am aware, have never been systematically considered in relation to English verbal description and definition, most traditional text-books resolving the relationship in terms of a vaguely-defined notional 'modification'. Scholars have of course noted the existence of regular formal co-occurrences between temporal adverbials and tense-forms, but this has been only for the most obvious cases, and there has been no general, empirical study of all the mutual restrictions and formally definable correlations in English. For example, Jespersen (1933) introduces adverbials into some sections of his description of English tenses (e.g. 23.43) but omits them from others (e.g. 23.41 or 23.54) where one could suggest a comparable relevance, and in many sections (e.g. 23.63-23.67) gives only a partial picture of the total number of possible relationships. Again, Ward (1954:44) notes the frequency of adverbials with 'past ordinary' tenses, but gives only a few examples, and then lists 'exceptions' with no apparent order. Adverbials with other tense-forms are given little mention, and are in any case given a different orientation, which makes it difficult to compare the sets of information. This approach seems typical of that found in most teaching handbooks on the subject: one could instance Zandvoort (1957: 58-63), who gives adverbials only incidental mention in his description of present, past and perfect tenses, despite the fact that the majority of his examples involve their obligatory use. However, Ota (1963) has studied in more detail correlations between verb

[1] The term 'adverbials' is used in this paper to refer to all of what would be traditionally called adverbs, adverb phrases and adverb clauses. Adverbials with clause structure (introduced by a temporal conjunction, in this case) enter into more complex co-occurrence relationships; they have only been partially dealt with in this introductory paper.

forms and certain adverbs of particular semantic classes in English; and Osman (1964: 28-106) has recently given adverb-tense relationship a great deal of prominence in his exposition of English tenses; but the scope of his handbook does not allow a sufficiently detailed treatment to show the full range and complexity of the situation. (Cf. also Hornby, 1954: Part 2.)

Such co-occurrences have been given rather more detailed study in connection with other languages. For example, there is Klum (1961), who has carried out an analysis of the verb-adverbial temporal relationship in a corpus of French prose. Also, adverbial determination similar to that described in this paper is built into a study of Brazilian Portuguese tenses (Kahane & Hutter, 1953). They give the temporal adverb a fundamental role in determining the semantic reference of the tense-form. This is clearly indicated by the following quotations, which may serve to characterize their approach: 'The verbal archcategory TIME is the linguistic expression of the relationship between the action and certain (expressed or unexpressed) adverbial action modifiers. . . . The category time . . . expresses a relation between a meaning (the adverb) and a form (the inflectional element). . . . The relationship between adverb and action constitutes a system based on the correspondence between the meaning contrasts expressed in the adverbs and the form contrasts expressed in the verbs' (17). They discuss this systematically in relation to tense and aspect (17-28), and distinguish a ternary system of tense in Portuguese, the three classes (absolute, relative, contingent) being determined structurally by two factors: '(1) by the type of their relation, immediate or non-immediate, with the adverbial modifier; (2) by the degree of their grammatical autonomy, which in turn is demonstrated by the presence or absence of a timebase, i.e. another (expressed or unexpressed) element belonging to the linguistic environment and establishing the temporal frame' (18). Out of a large number of examples, one must suffice to show the kind of descriptive statement made: 'The non-past appears in two different environments: either it is in relation with an adverbial modifier meaning non-past, in which case it contrasts with the absolute tense past, as in *canta hoje* ['he is singing today'] vs. *cantou ontem* ['he sang yesterday']; or it is not in relation with an adverbial modifier, in which case it does not contrast with other verb forms, as in *os pássaros cantem* ['birds sing']. This latter pattern is interpreted as a neutralization of the category tense' (19). (Cf. also Kahane & Saporta, 1953; Kahane, H. & R., 1954, 1957).

While such work suggests that a similar situation may well be of relevance for the related language English, the thesis is supported by sporadic theoretical statements on the issue. Firth has given adverbials brief but explicit recognition as one factor among many constituting the relevant linguistic context for a verbal form (1962: 18-19): 'it will usually be found that verbal features are distributed over a good deal of the sentence. The statement of a verbal

system and the order of its relevant categories leads to the statement of tenses, aspects, operators, auxiliaries, pronouns, negatives, interrogatives and other particles, person, number and, gender, to mention only a few. Aspectival auxiliaries and particles necessarily lead to colligation with relevant adverbials and particles suitably grouped and classified, since they correlate with the various verbal aspects and will have been noticed at the situational and collocational levels. . . . Such sentences or verbal pieces as *He might have kept on popping in and out all the afternoon . . .* must be analysed with reference to periphrastic polynomial verbs, and the characteristic categories of tense, aspect, operators, particles, adverbials, state grammatical features abstracted from the whole piece. There can be little profit in any grammatical analysis which deals with the relations of the individual words as such with one another one by one'. Also, at this level, there has been discussion of related problems concerning the kinds of determination relation that exists between determiner and headword (cf. Frei, 1956), one category of which Ivič has called non-omissible determiners (1962). These she considers at a grammatical, not a lexical level, and is careful to distinguish them from Bally's 'syntagme bloqué'. She exemplifies them in the Serbo-Croatian verb system, where the present is the 'unmarked category'. 'This means that, in principle, the present form may be used for denoting the time being as well as the past or future. In the standard SC (Serbo-Croatian) grammars, which are traditional rather than structural in method, the reference to the actual event is called the "basic meaning" of the present tense, while the uses for past or future situations are proclaimed secondary and explained by means of an "indirect relation" to the speech moment. But it has not been realized that the verbal form appears free only if it refers to the actual event, while in other instances it is always bound to the obligatory use of an accessory grammatical element: the non-omissible determiner' (201). Ivič exemplifies with reference to Serbo-Croatian adverbs, and also nominal cases (cf. also de Groot, 1957: 117, 'a special kind of modifier . . . is a noun in a certain case with an adjective, in the sense that the noun 'requires' an adjective (or equivalent)'; and Worth, 1958: 267 ff., who refers to omissible and non-omissible determiners as a criterion of certain transformations). It is suggested in this paper that any discussion of the 'meanings' of English verb forms must also envisage the temporal adverbial (and, in particular, certain kinds of temporal adverbial) as falling within the category of non-omissible determiner.

But whether one calls the phenomenon 'non-omissible determination' or 'specification', it is clearly the case that there are restrictions and (from the positive point of view) possibilities of co-occurrence between the tense system of English and temporal adverbials which, when stated explicitly and systematically, are of such an order as to suggest the need for rethinking the general approach to the study of English time-relationships. The practising teacher has,

in many cases, already assumed these co-occurrences and introduced them sporadically into his exposition; indeed, one could go so far as to say that it was essential he supply them if he was to meet the deficiencies and unrealities present in the majority of recommended methods of teaching tenses. But, as already suggested, there has been no attempt at an ordered survey of the principles behind or the extent of the interrelationship. On the whole, scholars have been quite satisfied with the underlying assumptions that have guided past treatments of English tenses – probably a further and as yet unnoticed influence of Classical models of categorization. Labels such as ‘subjunctive’ and ‘future’ have of course often been instanced as terms which are inapplicable without much redefinition to a language like English. But it could be argued that the divergence goes deeper than this, and that in describing English tenses the whole basis of the traditional framework is inadequate because it leaves out highly relevant information about the adverbial-tense relationship (here called specification) that is an essential part of an adequate description of time-relationships in English.

The fact remains, that much of English tense analysis and description has been unduly complicated by an uncertainty as to the extent of the relationship exercised by adverbials on tense-forms (adverbials like ‘as a rule’ or ‘usually’ tone down otherwise useful descriptive generalizations about co-occurrence, e.g. Zandvoort, 1957: 58–9), and also by an implicit half-recognition of the relevance of adverbials, which conflicts with a desire to keep the study of time-relationships within the verbal group. A clear example of this may be found in discussion of the different functions of a particular tense-form, taken in isolation. If *I live in London* were listed as an example of the use of the present tense simple to refer to statements of fact seen as timeless (or some such formulation), then *I often live in London* would frequently be taken as a ‘different’ or ‘exceptional’ use of the present tense, and be labelled ‘habitual’. Again, *I live in London as from next week* would also be seen as an exception: here the present tense would be being used as a future! But the differentiating factor in each case is to do with the presence or absence of a particular kind of adverbial being used in conjunction with the tense-form, as will be discussed in more detail below: here it suffices to say that any account of the relationship between these sentences which makes no reference to the adverbials involved is inadequate.

The vague and ambiguous nature of many of the descriptive labels traditionally used in this connection is a major problem. Terms such as ‘habitual’, ‘progressive’, ‘historic present’, ‘general truth’, and so on, which often seem to have been chosen solely on account of their neatness, pithiness or memorability, are in many respects highly misleading, and express half-truths or over-general implications. Thus one frequently finds ‘habitual’ defined as if it had something to do with personal habit, although (as will be argued below) the

only useful definition would be in terms of specified frequency, and this produces confusing results: *I usually go* would qualify in terms of personal habit as habitual, but *I rarely go* or *I went once* would not. Similarly, 'simple' and 'progressive' labels are often confused with some kind of simple or progressive activity, a correlation which is usually difficult to define or demonstrate. And again, the concentration on 'historic present' has obscured the fact that there is a structurally comparable use that could equally well be labelled 'future present', e.g. *Here's what you have to do tomorrow morning, You walk to the station, and get on the first train . . .* Criticisms like these are easily multiplied. At the same time, descriptive labels of some transparency and memorability are of value in linguistic analysis, and the important and justified demands of English language pedagogy for correctly orientated and up-to-date information are not met if the data are hidden behind too unmotivated a terminology. In this paper, therefore, the redefinition of familiar terms rather than complete innovation has been the policy. One hopes that the difficulties presented by the now unwelcome state of popularized transparency which many of these terms possess, may be offset by a more overt reliance on formal characteristics of co-occurrence.

While this concern over labels is important, it arises out of a consideration of more fundamental issues to do with the expression of time-relationships. As an introductory example, we need only consider the muddle which arises in making statements which aim to correlate uses of the same tense-form, as in the example above, *I live in London as from next week*. 'Here the present tense is being used as a future' is theoretically doubtful to defend as well as being pedagogically confusing. But even a more carefully phrased statement like 'Here the present tense is being used to refer to future time' can and should be argued against. The crucial point is that it is NOT the present tense on its own which is causing the change in temporal emphasis which is then given a new label, but the present tense in collaboration with, colligating with, or (to introduce a term for the occasion) being SPECIFIED by an adverbial word, phrase or clause of time, BOTH of which work together to produce a definable time-relationship which may then be referred to with a new label. It is not a question of tense-form alone giving the relevant distinguishing indication of time, as has been traditionally assumed, but of tense-form with or without adverbial specification which gives unambiguous indication. One interprets a given tense-form in a particular way either because the key to the interpretation is given in the form of an adverbial specifier, or because the absence of such a key is itself equally clear as a pointer to which time is being referred to. The normal conception of a verbal group, when used with the emphasis on temporality (such examples would suggest) must therefore be expanded to include this extra and essential information. Labels such as 'future' or 'habitual', then, should not be given to the verb form alone, but to

the combination of the two forms, verb and adverbial, the adverbial reinforcing the verb's potential for referring in the general direction of a particular temporal aspect, and specifying this aspect further. In Ivič's terms, to obtain a meaning of future using the present tense-form, there must be a non-omissible determiner present, which in this case is a temporal adverbial with future reference.

The evidence for this hypothesis will be reviewed below. If it is convincing, it will then no longer be a case of studying and teaching tense-forms and correlating these with time as they stand, in isolation from the rest of the sentence, as is usually done, to produce a functional load for certain tenses which is often so heavy as to obscure their uses; rather there would be a more even distribution of the meaning over the adverbial element as well, and a clearer picture of the time-relationships involved. An example of this is the present tense, which has no necessary correlation with present time, but can refer to recent or removed past time, contemporaneous or simultaneous present time, immediate or removed future time, habitual, durative, and timeless activity, and so on, with no further inflectional modification (cf. the classification made below). By emphasizing the adverbial specification, and incorporating it into one's description of the English verbal system right from the beginning, in a systematic way, one has a method of handling these confusing cross-relations in a one-to-one way (rather than a one-to-many). This, it is argued, produces more comprehensible results.

The conclusions presented in this paper are based on evidence derived from a number of sources. To obtain an adequate sample of temporal adverbials, and some information about their co-occurrence with tenses, a corpus of spoken and written English of some 250,000 words in length was examined (adequate for present purposes, and readily analysable in view of the easily determinable field of the research). This was supplemented by information from already available material, in particular the Tokyo Department of Education Report on English Collocations (1933), which provided long lists of verb/adverbial collocations, an important recent survey by Jacobson (1964), and the occasional data in the major grammatical handbooks (e.g. Jespersen, 1933; Zandvoort, 1957; Scheurweghs, 1959). The material represents educated British, not American, standard English – an important point, as there are numerous points at which the co-occurrence restrictions differ. The classifications presented below are the product of a systematic comparison of the whole range of temporal adverbials in respect of their co-occurrence with selected tense-forms, for which the co-occurrences noted in the data were supplemented by intuitively derived information verified by native-speaking informants. But before proceeding to a discussion of these, three further points should be mentioned.

First, it is not the main concern of this research to distinguish adverbial

specifiers positionally (as, for example, in Jacobson, 1964). The fact that there are three main types of position distinguishable for temporal adverbials in relation to tenses does not affect their basic classification (though a few subclasses might usefully be set up on this basis). (One exception to this lies in certain 'anomalous' adverbials which have an inherently placed position next to the verb, and a corresponding unique range of co-occurrence possibilities, as described below.) The three types are: (i) adverbial in the same clause, (Adverbial)-Subject-Verb-Complement-(Adverbial), e.g. (*Yesterday*) *the boy went home (yesterday)*; (ii) adverbial in a subordinate clause (excluding temporal conjunctions, which form a class of their own), (A)SVC(A), SVC (main clause), (A)SVC(A), e.g. *He was tired because he had been working all day*; (iii) an adverbial in removed context, governing the temporal specification of later clauses until further adverbial specification is used, (A)SVC(A). SVC. SVC. . . . (A)SVC(A), e.g. *At two o'clock I walked into the room. I sat down and picked up a paper. Then . . .* To these three cases may be added the fourth case of temporal conjunctions (*After he left, he went home*, etc.), which need to be taken separately because of their twofold tense co-occurrence (verb in main clause AND in subordinate clause); they are briefly discussed below.

Secondly, it is interesting to see the unexpectedly high frequency with which clauses in English are overtly connected with temporal adverbials. 25% of all clauses in the material examined involved an adverbial in positions (i) or (ii) above, while a further 40% of clauses were governed by specification of type (iii). The remaining clauses were instances of tense forms which typically do not require adverbials ('zero-specification') or of ambiguous tense-forms due to inadequate specification. These figures are given incidentally: it is not the purpose of this paper to list the statistics of occurrence of individual adverbials and tense-forms examined in any further detail, as information about frequency at any degree of generality is not relevant for a classification of the total range of co-occurrence. I give these percentages merely to indicate that the problem is sufficiently common to require more detailed and systematic examination than has traditionally been allotted to it – a decision already reached on other grounds, referred to above. The figures are clearly reflected in the breakdown of verbal uses given below, where of 48 definably distinct time-situations, 34 of them (i.e. 70%) require explicit adverbial specification of some kind. Such general impressions of frequency again reinforce the hypothesis that time-relations in English are handled more by the careful use of adverbials (their presence AND absence) than by other means. The absence of adverbial specifiers is, of course, equally significant – a fact which the percentages do not reflect. However, the number of uses of tense forms where an adverbial is unnecessary or required to be absent is in fact relatively few, and centred either on the 'timeless fact' idea of unspecified generality (such as one finds in the expository narrative of

text-books), or they are made redundant due to the relevance of perceivable context in actual conversation. In practice, it is normal to have an adverbial specifier as an explicit indicator of time in most situations; and their omission may lead to temporal vagueness and hence ambiguity. The uncertainty about the meaning of *I've been to the Old Vic*, for example, when there is no obvious context and no clear prosodic clue to suggest an interpretation,² is due to the fact that the range of potential adverbial specification is large, comprehending such disparate items as *just, never, once, often, always, today*, etc.

Thirdly, it is worth noting that the data did not exclude stylistically restricted (or 'marked') co-occurrences, as long as a usage went beyond that of one individual to a number of authors. Idiosyncratic tense usages would clearly have overcomplicated the classifications, and co-occurrences were therefore only included when they were verifiable from more than one source. Stylistically marked co-occurrences are distinguished where necessary in the analysis, and not omitted on grounds of infrequency or oddness.

As a preliminary to describing the co-occurrence relationships existing between adverbials and tenses, it is necessary to make some kind of classification of the raw material constituting the former. The definition of a temporal adverbial is, in the first place, quite straightforward; the obviously practical working criterion is to include as temporal all adverbials which could be elicited as possible answers to the question 'when?'. This would also cover adverbials of frequency and duration, which may be more precisely determined by such questions as 'how often?' and 'how long?' respectively, but for which the question 'when?' is still applicable. The total range of English adverbials that one might wish to consider temporal, in the widest sense, is thus clearly defined. Only one uncertain boundary-area exists – namely, between unambiguously temporal adverbials and what we might call partially temporal adverbials of manner or place. There is clearly only a small difference between adverbials like *immediately, regularly* and *instantly*, and those like *gradually, rhythmically* and *quickly*. Some adverbials, e.g. *quick as a flash, by/in fits and starts, in the sequel, gradually*, are often ambiguous in this respect: they would normally be used to relate to such questions as 'how?' or 'where?', but there are many instances of their being used in answer to 'when?' (particularly when they are at some distance from the question-word, with an unambiguously temporal adverbial in between). These peripheral cases have been excluded from the primary data in this paper, which otherwise comprehends almost all temporal adverbials and adverbial types in English – 'almost' all, because of the difficulty of ascertaining the total number of

[2] Most utterances are prosodically ambiguous in this respect; however, one should note the probability that *|I've been to the Old Vic|* refers to an occasion in the more distant past, whereas *|I've been to the Old !Vic|* refers to very recent past, and so on. For the transcription conventions here, as elsewhere in this paper, see Crystal & Quirk, 1964.

relevant lexical items (though the following list is clearly an adequate sample for the purposes of this paper), and because certain idiomatic expressions (e.g. *in the twinkling of an eye*) have been omitted (though possibly covered by the general heading *in+* SPECIFIED TIME). 'Adverbial types' refers to such cases as (. . .) *ago*, where the 'openness' of the first part of the adverbial is not relevant to its classification.

This adverbial information is used in three main ways in this paper: first, a notional classification is made of them; then, taking the adverbials as a base, the formal restrictions on co-occurrence with certain tense-forms in British English are plotted; finally, taking the tense-forms as the base, and correlating the adverbial classes with each in turn, the range of verbal temporal reference is determined, and the different 'meanings' of English tense-forms distinguished. A number of important 'applied' considerations then arise, which are discussed in some detail; theoretical and procedural issues are referred to as they arise in the course of the description.

A notional classification is useful and justifiable for both theoretical and procedural reasons. Procedurally, it displays the whole range of temporal adverbials in a more organized form than if they had been merely alphabetically listed, or classified in terms of some simple formal criterion, e.g. morphological/syntactic structure. The more 'open' end of the class is indicated by labels in small capitals (e.g. POSSESSIVE; S. T. for SPECIFIED TIME; etc.) At the theoretical level, there is no need these days to defend as such a notional classification of a range of linguistic items, particularly when the items concerned fall readily into fairly obvious notional categories (cf. Jacobson, 1964: 76-9). In any case the classification is not wholly arbitrary. As already mentioned, the main sub-divisions (groups A, B and C-F) have been correlated with distinct question-forms.³ Within each group, also, there is at the semantic level a referential cohesion which could be more precisely formulated, e.g. by a categorization of time-relationships in terms of semantic distinctive features; at the formal level, the integrity of the groups is reinforced by their homogeneity in respect of patterns of co-occurrence with tenses (cf. below); and one could also determine degrees of synonymy for the items involved in respect of their time reference. In groups B, C and D-E-F, it has been found useful to isolate a hypothetical, fixed, unambiguous point in time by definition, and define the speaker's selected focus of attention in relation to it, in terms of X being simultaneous with Y, preceding Y, etc.

[3] The adverbials marked for frequency and duration have been distinguished as major sub-types because of the importance traditionally attributed to them in past treatments of the English verb (often with confusing results), and because they are of practical relevance for foreign language teaching, as their translation equivalents frequently involve quite dissimilar structures in the L2.

(cf. Close, 1962: Chapter 7; Diver, 1963: 155). While there is a certain arbitrariness in this, it is worth noting that many recent views on tense adopt an approach which sees tense less as a positive marker of time and as having more to do with the way events are ordered in relation to specific reference points, in particular the time of speaking (cf. 'the point of present concern', etc.). This procedure does not of course imply the existence of a referential temporal norm of any kind: it is simply a convenience for the purposes of analysis.

Other formal criteria have not been incorporated into this paper (and into this classification in particular) because the focus of attention is not primarily on adverbials as such, but on the type and range of mutual restrictions which affect these adverbials and tense-forms. Information about the morphological or syntactic structure of the adverbials would consequently not be relevant, on the grounds that a typology of this nature would add nothing to our determination of the co-occurrence relationships. Similarly, such matters as restrictions on word-order (e.g. inversion of subject and verb after group A1); a typology of 'open-ended' adverbials; distinguishing those which may act as utterance-openers from those which may not (e.g. **a day earlier . . .*, **afterwards . . .*); determining which can function as Subject or Complement (e.g. *over a week passed, it seems a long time ago*, etc.) or can premodify other adverbials (e.g. *immediately, long, shortly, etc.*): such have not been introduced into the present discussion. Some reference is made to syntactic positioning where it affects co-occurrence (viz. the 'anomalous' cases mentioned above, where a different position produces a different range of co-occurrence for an adverbial), and also to accentual pattern, where this distinguished two adverbials (from the point of view of their classification), e.g. *this afternoon|this afternoon* (E/C4), *the other day|the other day* (C5/C3a), *once more|once more* (A2/A3), etc. In this way, the semantic divisions have at times (e.g. A8, B1, C5) been left fairly broad. It would of course be possible to continue the process of subclassification further, making more precise semantic distinctions, but this would not affect the co-occurrence possibilities.

In the following classification, a number of abbreviations have been used: () enclose optional elements; / separates alternative lexical items substitutable within an adverbial frame: SMALL CAPS indicate notional or grammatical category labels; s. t. refers to a specified time, e.g. time of day, number of occasions, date; ˈ indicates contrastive stress; . . . indicates an 'open-ended' class of adverbials, i.e. other items of the same form-class and within the same associative field may be substituted; (()) enclose anomalies, which must be described separately, but which have some connection with a particular group. Category labels used as headings are each numbered (A1-F5 inclusive) for ease of reference later in the paper. Within the groups, alphabetical order is followed, optional elements being discounted. Negatives of the type *not infrequently* are excluded.

CLASSIFICATION

A: HOW OFTEN? FREQUENCY OF OCCURRENCE

- A1: NON-OCCURRENCE: *at no/not-any time/period . . . (of the day . . .), never/not-ever (at all), never again/before/yet/since/after, never (in all my life/born days . . .), nevermore, not-any/no longer/more, not once, not at all, on no/not-any occasion*
- A2: SINGLE OCCURRENCE: *(for) once, once before, once more/again, on one occasion (only), on the sole/the only/a single . . . occasion, the one/only/one and only time . . ., (just) this once*
- A3: FRESH OCCURRENCE: *afresh, again, anew, freshly, newly, over (again), once more/again*
- A4: RARE OCCURRENCE: *almost never (at all), hardly/scarcely/barely ever/at all, (very) infrequently, once in a blue moon, rarely, seldom*
- A5: OCCASIONAL OCCURRENCE: *a few times, at various times/periods . . ., at times/intervals, at random, (every) now and then/again, from time to time, intermittently, irregularly, not (very)/less often, once or twice, once in a while, occasionally, off and on, sometimes, spasmodically*
- A6: FREQUENT OCCURRENCE: *again and again, at all hours (of the day/night), a (large . . .) number of times, as many/much/often as this/that/S.T., (very) frequently, many a time/moment . . ., many . . . times (over), more often, often, one after the other, on several . . . occasions, over and over (again), repeatedly, time and (time) again, time after time, times out of number, with (great) frequency*
- A7: USUAL OCCURRENCE: *almost/nearly always, almost each/every day . . ., as a rule, as usual, as is POSSESSIVE wont, commonly, for the large/most part, generally, more often than not, mostly, normally, ordinarily, most often, (on) most occasions/mornings/Mondays . . ., usually*
- A8: REGULAR OCCURRENCE: *according to custom/routine, annually, at regular/periodic intervals/stages . . ., at fixed/stated intervals/times . . . (of S. T.), alternately, at nights . . ., by regular stages . . ., customarily, cyclically, daily, day and night . . ., day . . . by day . . ., each/every S. T., every other S. T., fortnightly, habitually, hourly, in cycles . . ., in NAME OF MONTH PLURAL, in season, in turns/rotation, in (quick) succession, NUMERAL days . . . at a time, NUMERAL times a day . . ., monthly, once or twice a day . . ., on DAY OF WEEK PLURAL, on the minute . . ., periodically, quarterly, recurrently, regular as clockwork, regularly, S. T. after S. T., weekly, yearly*
- A9: HOW OFTEN? HOW LONG? CONTINUOUS OCCURRENCE/DURATION (either permanent, or the whole of a previously specified period): *ad infinitum, all the time, all POSSESSIVE life, always, ceaselessly, continually, continuously, constantly, endlessly, eternally, everlastingly, for ever (more) (and a day), every minute . . . of the day . . ., for good, incessantly,*

interminably, invariably, morning noon and night, permanently, perpetually, the whole time, to the end of time, till doomsday . . . , unceasingly, unendingly, uninterruptedly, without|with no end|interruption . . . , year . . . in year . . . out

B: HOW LONG? RESTRICTED DURATION

- B1:** LIMITS OF DURATION EXPLICIT OR KNOWN: *all DEMONSTRATIVE day(s), (for) a day . . . or so|two, all (the) day. . . long, all (the) year round, all this|that time, (for) a moment . . . , (for) as much|long as S. T., during S. T., during the|this|that time|interval . . . , during the same time, for (= during) S. T., for the duration of S. T., for a|the space of S. T., from S. T. (to S. T.), from the first|beginning, from this|that time|moment (on), (with)in this|that time|S. T., in the interim, (S. T.) longer (than X), (in the) meantime|meanwhile, momentarily, most of the day . . . , most of Monday . . . |tomorrow . . . , over a|the S. T., overnight, pending S. T./S. T. pending, NUMERAL days . . . running, (ever) since (S. T.), (for) the best part of S. T., (all) through (the day . . .), throughout (the night . . .), till|until S. T.*
- B2:** END-POINT OF DURATION KNOWN: *heretofore, hitherto, so far, up till now, up till then, (as) yet*
- B3:** CONTEMPORANEOUS PRESENT: *for the moment, for now, for the present|time being*
- B4:** BEGINNING-POINT OF DURATION KNOWN: *for the future, from now on, henceforwards, henceforth, hereafter, in (the) future*
- B5:** LIMITS OF DURATION NOT KNOWN: *(for) ages|an age, all along, (for) a (long . . .) while, awhile, briefly, en passant, for many a day . . . , (for) (as long as) weeks . . . , from time immemorial, indefinitely, (for) a short . . . (space of) time, in (= for) years . . . , long enough, most of . . . POSSESSIVE life, much|most of the time, (for) (ever) so long, (for) some time, temporarily*

C: WHEN? TIME REFERENCE EXPLICIT

- C1:** IN FUTURE: *any moment . . . now, a week|fortnight . . . tomorrow, a week . . . next Monday . . . , in days . . . to come, later this week . . . , next time, (any|some day . . .) next week . . . , one of these days . . . , some day, the day after tomorrow, the week . . . after next, tomorrow (morning . . . |week|fortnight), DAY OF WEEK/MONTH OF YEAR next*
- C2:** IN PRESENT: (a) CONTEMPORANEOUS: *at present, at the moment, at the|this present time, currently, nowadays, (in) these ADJECTIVE times, these days, today (= these days), ((now))*
- (b) SIMULTANEOUS: *right now, this moment|instant|second*

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- C₃: IN PAST: (a) REMOVED: s. T. *ago/back, earlier this week . . . , a week/fortnight . . . yesterday, a week . . . ago tomorrow, a week . . . last Monday . . . , in (the) days of old, (any/some day . . .) last week . . . , last time, once upon a time, originally, the day before yesterday, the week . . . before last, the other day . . . , time was, yesterday (week/fortnight/morning . . .), DAY OF WEEK/MONTH OF YEAR last*
 (b) RECENT: *just/only now, lately, latterly, recently, ((just)), ((now))*
- C₄: IN DAYTIME PERIOD: *this morning, this afternoon, this evening, tonight, today*
- C₅: UNSPECIFIED AS TO PAST, PRESENT OR FUTURE: *all in good time, (on) another occasion, (at) any moment . . . , around s. T., at a moment's/short notice, at the age of NUMERAL, at dawn/daybreak . . . , at first, at s. T., at sight, at the (very) beginning, at the end of a/the day . . . , at the outset, before s. T., (long) before the time of NOMINAL, between s. T. and s. T., by day/night, by s. T., by (the) morning, (very) early (on) (in the day . . .), s. T. early, early one morning . . . , first(ly), first and foremost, (the) first thing (in the morning . . .), for (= in time for) s. T., in (the) daytime . . . , initially, in NUMERAL days . . . time, in MONTH/YEAR/CENTURY, in NAME OF PLACE (= when in), in POSSESSIVE infancy . . . , in POSSESSIVE own/good time, in (the) spring . . . , in the (very) beginning, in the early . . . stages/hours (of X) . . . , in the first place, in the nick of time, in the time of NOMINAL, (just) in time (for s. T.), in time of need, (all) (too) late, late one evening/night, s. T. late, not before time, now or never, (on) DAY OF WEEK (night . . .), one day . . . , on s. T., (on) one occasion, on the dot, on time, (on) (some) other occasions/days . . . , (at) other times, primarily, punctually, (in) (=while) PRESENT PARTICIPLE, (at) some occasions/days . . . , some time (or (an)other), (at) some times, sooner or later, (on) the first/last/second . . . day . . . , (in) the first/last . . . month, then or never, the other day . . . , the ORDINAL NUMBER time, (at) the turn of the century, to begin . . . with, (s. T.) too soon/early/late, this week . . . , to the/a day*

D, E, F: WHEN? REQUIRE PREVIOUSLY EXPLICIT TIME REFERENCE (from A, B or C)

D: TIME REFERRED TO PRECEDES EXPLICIT TIME REFERENCE

- D₁ NON-SPECIFIC OVERALL: *already, (long . . .) before (hand), (long . . .) before this/that, (very much . . .) earlier (on) (in the s. T.) (than X), in advance, precipitately, prematurely, previously, previous to this/that . . . , (very much . . .) sooner (than X), ((formerly, in former times))*
- D₂ IMMEDIATE: *almost (s. T.), close (up)on (s. T.), nearly (s. T.), not quite (s. T.), not yet (s. T.), on the eve/point of s. T., ((about to))*

- D3: END-POINT KNOWN: *by now, by then, by this|that time*
- D4: SPECIFIC: *a day . . . earlier, in the month . . . before (x)|previous(ly) (to x)|preceding . . . , on the day . . . before (x) . . . , (in) the previous|preceding month . . . , (on) the previous|preceding day . . . , the day|month . . . before|previously, years . . . |s. T. earlier|sooner|before . . .*
- E: TIME REFERRED TO IS SIMULTANEOUS WITH EXPLICIT TIME REFERENCE
as a x (= when a x), at such a time, at that age, at the (same) time, (just) at this|that juncture|period|point, concurrently, in that event, in those days, just then, on the present occasion, on the|this|that occasion|s. T., right then, (only) then (= at that time), (at) that time|moment|instant, (at) this time|moment, this|that afternoon . . . , simultaneously
- F: TIME REFERRED TO FOLLOWS EXPLICIT TIME REFERENCE
- F1: IMMEDIATE NON-SPECIFIC: *all of a sudden, (all) at once, at the first opportunity, directly, forthwith, hardly, having PAST PARTICIPLE, hereupon, immediately (after(wards)), in a trice, in (next to) no time (at all), in less than no time, in the same breath, instantaneously, instantly, next, scarcely, straight away, soon(er) (than x), (all) (too) soon, suddenly, then (= next), thereupon, upon which, whereupon*
- F2: REMOVED NON-SPECIFIC: *a short . . . while after(wards)|later, by and by, (with)in a short . . . while, (with)in a short . . . (space of) time, just|soon|shortly after(wards), later (on) (in the week . . .), presently, shortly*
- F3: END-POINT KNOWN: *at last, eventually, finally, in the end|long run, last (of all), lastly, ultimately*
- F4: OVERALL PERIOD: *after (this|that), after a time|while, afterwards, a long . . . time after(wards), at a later|subsequent time|period|cate . . . , duly, in (the) course of time, in due course|time, (ever) since (then|when), sometime after(wards), subsequently, thereafter, with the passing of time*
- F5: SPECIFIC: *a day . . . later|after(wards), after a few days . . . , (with) in a day . . . (or two), (with)in a matter of days . . . |s. T., (with)in s. T., (with)in the space|course . . . of s. T., (in) the following month . . . , (in) the week . . . after(wards)|following, (on) the next|following day . . . , (on) the day . . . after(wards)|following, the next|last (time), years . . . |s. T. later . . .*

(In groups D4 and F5 in particular, but also sporadically elsewhere, there is an additional complication to do with specific time references involving such nouns of time as *afternoon, night . . . , spring, summer . . . , hour, minute,*

second . . . , month, week, fortnight . . . , lifetime, daytime . . . (including months of the year and days of the week): namely, that there are few such nouns that have any close similarity of distribution. Even with such a question as whether a noun takes *in* or *on* in certain adverbial structures (*in the previous month, on the previous day*, etc.), one finds that different grammatical environments may produce different possibilities of co-occurrence, and that technical, humorous and other considerations enter in (e.g. *on mornings* is possible in the sense *morning-shifts*). As this paper does not purport to be exhaustive, however, a study of these differences must be left for another occasion.)

Having established the range of adverbials considered relevant to the present enquiry, the next stage is to determine the extent and type of co-occurrence which exists between these and tense-forms in English. Six tense-forms were selected as the basis of discussion (the term 'tense' being used in a broad sense, to include any combination of auxiliaries, 'main' or lexical verb (LV) and inflection). Distinctions between affirmative-interrogative-negative, voice, person and number were considered irrelevant in a discussion on temporality, and examples are used interchangeably (cf. Diver, 1963: 153). The distinction between simple and progressive aspect may also, on the whole, be ignored, although with certain co-occurrences there is a definite tendency for one or the other to be used, and in one case ('timeless' use of present) the simple form is obligatory: e.g., in hypothetical future usage (cf. below), *I came tomorrow* is rare by comparison with *I was coming tomorrow*; the simple present rather than the progressive tends to be used to refer to recently completed action: *he tells me* (i.e., *has just told me*) *I'm wrong*; also one would have to account for such examples as *I was cutting the lawn all morning* (as opposed to *I cut*, which is more unlikely), **I travelled to London all day*, and so on. Certain 'habitual' meanings (cf. below) tend to select simple rather than progressive (e.g. *Very often, I would go round to see my mother on a Saturday*); and past descriptive narrative ('historic present') usually begins with a progressive, with a later switch to simple. For the present, this issue has been left as a 'loose end', which obviously needs further study. It would appear that there are verb classes which have a certain time-relationship 'built-in', which in the context of adverbial specification forces co-occurrence with progressive rather than simple, or vice versa. (Specification does not of course affect the restrictions on verb classes in isolation, e.g. verbs of perception taking simple aspect, and so on.) Most of the time, however, the aspectual distinction does not seem to be important, and from the co-occurrence point of view, examples may be used interchangeably, e.g. *I read/was reading all morning* (cf. Hill, 1958: 208).

The six verb forms are numbered, and given *ad hoc* labels, which will be defined more precisely as necessary later: 1 present (LV—*be* LV-*ing*); 2 preterite (LV-*ed*—*was* LV-*ing*); 3 perfect (*have* LV-*ed*—*have been* LV-*ing*);

4 pluperfect (*had LV-ed — had been LV-ing*); 5 conditional (*would LV—would be LV-ing*); 6 'future' (*will LV — will be LV-ing*).⁴ Other auxiliary combinations could have been introduced (to include passives, other modals, etc.), but the increased factual detail (e.g. unaccented *can* plus the relevant specification produces a 'future' meaning; without specification, *can* only signals ability) would have overcomplicated what is, after all, only a pilot survey.

Tense usage is first of all related to individual adverbials, the determination of individual co-occurrences being a prerequisite for defining adverbial classes of any kind. The adverbial is taken as the base form, and the tense the compared item (rather than vice versa) as there is greater determination existing in this direction than in the other: an adverbial requires an accompanying tense-form, whereas a tense-form does not in theory require an adverbial. (Later, this procedure is reversed, and the tense-form taken as base, to ascertain the total range of meanings each tense-form contributes towards.) The range of grammatically permissible co-occurrences is then plotted for each adverbial — which adverbials may colligate with all six tense-forms, which with five, etc. By itself, of course, this is not very useful information, as most adverbials colligate with all tense-forms (only groups B₃, B₄, C₁, C₂ and C₃ above have absolute restrictions of this kind). Reference must therefore be made from the beginning to the range of meanings which are the product of the co-occurrences. It is the type and number of definably distinct meanings produced by the co-occurrence of each adverbial class with the six tense-forms which is the important factor in grading verb-adverbial restrictions in English. A systematic comparison indicates different potentialities in the adverbials for co-occurrence, and suggests that the ascription of certain meanings to tense-forms alone is misleading.

The mutual restrictions between tense and temporal adverbial may be outlined, then, by reference to two variables: the number of tense-forms which colligate with an adverbial, and the number and type of meanings ascribable to each individual colligation. Thus the simplest co-occurrence would be an adverbial which could combine with one tense-form only to express one time-relationship. At the other extreme, one could envisage adverbials which have the potentiality of co-occurrence with all tense-forms, EACH co-occurrence allowing a number of different meanings, depending on verbal and/or situational context. English has no instance of either extreme, all co-occurrence relationships falling within these two poles. Even such a clear instance as

[4] *Will*, in its unaccented form, is being used here with the label future, as is usual with traditional treatments of the verb, but it is not on a par with other tense-forms, because of its modal status (cf. also *would*). It is, however, the nearest we can get to 'pure futurity' in English, being, when unaccented, the least marked auxiliary for modality. On the status of the future in English, cf. Palmer, 1965: 62-3, 108 ff.

(. . .) *ago* is by no means maximally restricted, though text-books frequently suggest that it may co-occur with tense-form 2 only: it may also co-occur with 1 (past descriptive narrative⁵: *Three weeks ago, I'm walking along this road when . . .*). 4 ('pluperfect': *Three weeks ago there had seemed no chance . . .*), and 5 (past frequency of occurrence, or 'habitual': *Three weeks ago, they would let themselves be seen at the Casino. Now . . .*), as well as 2 (past activity seen as removed from the present (henceforth 'removed past'): *Three weeks ago, I arrived in Wales*). Other examples would show an even wider range of (sometimes unexpected?) co-occurrence, e.g. *at that moment*, exemplified for convenience in initial position each time (with the phrase *at that moment* abbreviated as *a. t. m.*):

- +1 { past descriptive narrative: *a.t.m. I walk in, you see . . .*
 { future activity: *a.t.m. I walk in – you try and stop me!*
 { past frequency of occurrence: *a.t.m. I walk in* (i.e. each time it happens)
- +2 removed past (unmarked): *a.t.m. I walked in*
- +3 past frequency of occurrence: *a.t.m. I've walked in* (i.e. each time something's been happening)
- +4 'pluperfect' activity: *a.t.m. I'd walked in*
- +5 { 'conditional' activity: *a.t.m. I'd walk in, if I were you*
 { past frequency of occurrence: *a.t.m. I'd walk in* (i.e. each time something was happening)
- +6 { future activity: *a.t.m. I'll walk in – you try and stop me!*
 { past frequency of occurrence: *a.t.m. I'll walk in* (i.e. at a particular moment each time something happens)

This might then be summarized as: *at that moment* 1-past descriptive narrative; 2-removed past (unmarked); 4-'pluperfect'; 5-'conditional'; 16-future; 1356-past frequency of occurrence.

Before going on to consider the other adverbials in this way, we must briefly discuss the question of status in relation to these co-occurrences. Clearly all the co-occurrences are not of equal status, e.g. 1 is restricted stylistically, 'habitual' uses add information about ('are semantically marked for') frequency as well as time alone, and one co-occurrence (2 in each case) can be labelled 'unmarked'. The postulation of an unmarked co-occurrence is a useful procedure, in view of the fact that there is multiple co-occurrence for each adverbial in English. It seems but realistic to reflect in the description the fact that many adverbials have a tendency to be used with one tense-form,

[5] These labels have been chosen to be as conveniently self-explanatory as possible.

'Pluperfect' activity (i.e. activity anterior to a known point in past time seen as removed from the present) and 'conditional' activity (in future) have inverted commas to indicate that here the meanings are being referred to, and not the verbal forms, as above. Any attempt to replace these shorthand labels with a fuller description of the meaning involved (which is usually quite unambiguous) would have led to a substantial reduction in brevity later on.

co-occurrence with others being relatively infrequent, semantically more specific, and often stylistically more restricted. When there is a choice between two co-occurrences to refer to the same general area of temporal reference (e.g. past activity), it is often the case that the adverbial would be automatically assigned to one tense-form and not another, unless the user deliberately wanted to break this expectation for some reason (usually stylistic). It is in fact the high degree of expectancy that the occurrence of one (adverbial) form will produce the occurrence of another (tense) form in any situation which is the basis of the term 'unmarked' here. The unmarked member of a number of alternative possibilities is therefore the norm, being the intuitively expected co-occurrence for the adverbial (as would also be indicated by a statistical survey of its occurrence), and the more neutral term as far as generality of reference is concerned. Where there are co-occurrences, then, which could be distinguished by reference to an unmarked norm (e.g. 3 in C₃b, 2 in C₅), this has been noted.

While the determination of the unmarked co-occurrence for any combination of adverbial and tense-form is usually intuitively obvious, if one exists, intuition may be supported by statistical information, based on the analysis of responses made by native speakers of English. This is particularly useful when the greater catholicity of the linguist's judgement makes him uncertain as to the state of a case. As an example, 175 adverbials were selected, and 40 informants were asked to put these in sentences. The informants were in small groups, and the order of presentation of adverbials varied, to minimize the tendency to form sequences of tenses through informants imagining a context which extended over a series of sentences. A few examples of the results are listed below to show that predictability of co-occurrence can vary substantially, but that at the upper end of the scale there is very clear evidence for unmarked co-occurrence:

% of co- occurrence	tense- form	adverbials
100	2	<i>before s. t. (in past), at the time, a week ago, in days of old, last week, on/in s. t. (in past), on that day, then (= at that time), the other day, yesterday</i>
	3	<i>since then</i>
91-99	2	<i>at that moment, in those days, on that afternoon, right then, the last night</i>
	3	<i>ever since</i>
	1	<i>at the moment, at present, at the present time, these days</i>
	6	<i>in future, one of these days, some day</i>
81-90	1	<i>at this present time, nowadays</i>
	2	<i>on that occasion, on this afternoon, years ago</i>
	3	<i>lately, so far</i>

71-80	6	<i>for some time to come, in s. T. (future)</i>
	1	<i>right now</i>
	2	<i>formerly, on the day</i>
	4	<i>previously</i>
	6	<i>sooner or later, hereafter, from now on, henceforwards, in that event.</i>

This procedure may be continued, until one finds such co-occurrences as the following, at which time the postulation of an unmarked co-occurrence in statistical terms becomes so tenuous as to be of little value: *the second time* (1-58%; 2-31%), *latterly* (2-57%; 3-36%); *hitherto* (2-26.5%; 3-43.5%; 4-30%); *by now* (1-36%; 2-12%; 3-16%; 6-32%); *already* (1-12%; 2-42%; 4-31%; 3-15%). (A few adverbials (e.g. *by now*, tend to have a strong co-occurrence with tense-forms not being dealt with here, e.g. *should/would have*; but as all adverbials seem to function similarly with respect to these forms, they have not been brought into this study.) Adverbials with no clearly unmarked co-occurrence as opposed to those which have could be a further criterion for sub-classification – a distinction which would be particularly useful within a teaching context.

After examining each adverbial individually, we may now group the patterns of co-occurrence (cf. *at that moment* above) according to their identity of pattern. It would also be possible to list co-occurrence restrictions, in negative terms, e.g. **on/in s. T. (in past) 6*; **(...) ago 3*; **tomorrow 3*,⁶ but the range of restrictions of this nature is small (involving groups B₃, B₄, C₁, C₂, and C₃ only) and there would be only a very general classification in consequence. More important and interesting, though more difficult to define, are the positive correlations, which are listed below. The potential meanings of most co-occurrences should be immediately obvious, but where necessary examples are given of the type of meaning and usage referred to. Forms within the context of indirect speech have not been included (e.g. *He said the bomb would go off at seven* is not given as a co-occurrence for tense 5, etc.). Also, it should be noted that complex specification within groups B-F may take place simply by adding an adverbial from A1-8; and while this would add a feature of frequency to the overall meaning, this possibility has been ignored for the sake of simplicity. (A similar situation exists if a feature of duration is added to other verb-adverbial combinations (C-F).) The number of each group of adverbials follows the scheme used above, with which the following information should be correlated.

[6] But cf. *When I've finished this book tomorrow . . .*, where the *when*-construction 'outranks' *tomorrow*. (Cf. Hill, 1958: 208.) This is similar to an afterthought embodying a normally impermissible adverbial (e.g. *I have given it to her - yesterday*), and such a sentence as *I've lived in a very similar house in Ghana a few years ago*, where the *ago*-phrase is more immediately connected with the specificity of *in Ghana* and not with the verb. Contrast **I've lived a few years ago in a very similar house in Ghana*.

Adv.	Tense
Gp.	Co-occurrence
A1-9	1-contemporaneous present frequency; 2-removed past frequency; 3-recent past frequency; 4-'pluperfect' frequency; 5-'conditional' frequency; 6-future frequency.
B1	1-past descriptive narrative duration; 2-removed past duration; 3-recent past duration; 4-'pluperfect' duration; 5-'conditional' duration; 16-future duration; 1356-past frequency of duration.
B2	3-recent past duration (unmarked); 24-past desc. narr. duration (e.g. <i>so far, nothing was/had been happening</i>); 16-future duration; 1356-past frequency of duration.
B3	1-contemporaneous present duration; 6-future duration; 16-past frequency of duration.
B4	2-past desc. narr. duration; 24-hypothetical future duration (e.g. <i>from now on I was hoping/had hoped to see you here</i>); 5-'conditional' duration; 16-future duration (6 unmarked).
B5	1-past desc. narr. duration; 2-removed past duration; 3-recent past duration; 4-'pluperfect' duration; 5-'conditional' duration; 16-future duration; 1356-past frequency of duration.
C1	5-'conditional'; 16-future (6 unmarked); 24-hypothetical future.
C2a	1-contemporaneous present activity; 5-'conditional'; 136-past frequency of occurrence.
C2b	1-simultaneous present activity (unmarked); 2-hypothetical future; 3-(very) recent action; 5-'conditional'; 16-future (1 unmarked).
C3a	1-past desc. narr.; 2-removed past (unmarked); 4-'pluperfect'; 5-past frequency of occurrence.
C3b	1-past desc. narr.; 2-removed past; 3-recent past (unmarked); 4-'pluperfect'; 35-past frequency of occurrence.
C4	1-contemporaneous present activity; 1-past desc. narr.; 2-removed past; 3-recent past; 4-'pluperfect'; 5-'conditional'; 16-future; 24-hypothetical future; 35-past frequency of occurrence.
C5	1-past desc. narr.; 2-removed past (unmarked); 3-(very) recent past; 4-'pluperfect'; 5-'conditional'; 16-future; 24-hypothetical future; 1356-past frequency of occurrence.
D1	1-past desc. narr.; 2-removed past; 3-recent past; 4-'pluperfect' (unmarked); 16-future; 24-hypothetical future; 1356-past frequency of occurrence.
D2	1-past desc. narr.; 2-removed past; 4-'pluperfect'; 5-'conditional'; 13-simultaneous perceivable activity; 1356-past frequency of occurrence.
D3	1-past desc. narr.; 2-removed past; 2-hypothetical future; 4-'pluperfect'; 5-'conditional'; 16-future; 1356-past frequency of occurrence.

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- D4 1-past desc. narr.; 2-removed past; 4-'pluperfect'; 5-'conditional'; 16-future; 24-hypothetical future; 1356-past frequency of occurrence.
- E 1-past desc. narr.; 2-removed past (unmarked); 2-hypothetical future; 4-'pluperfect'; 5-'conditional'; 16-future; 1356-past frequency of occurrence.
- F1 1-past desc. narr.; 2-removed past (unmarked); 4-'pluperfect'; 5-'conditional'; 13-recent action (e.g. *straight away he comes/he's come here*); 16-future; 24-hypothetical future; 1356-past frequency of occurrence.
- F2 1-past desc. narr.; 2-removed past (unmarked); 4-'pluperfect'; 5-'conditional'; 13-recent action; 16-future; 24-hypothetical future; 1356-past frequency of occurrence.
- F3 1-past desc. narr.; 1-perceivable simultaneous activity; 2-removed past (unmarked); 4-'pluperfect'; 5-'conditional'; 13-recent action; 16-future; 24-hypothetical future; 1356-past frequency of occurrence.
- F4 1-past desc. narr.; 2-removed past (unmarked); 4-'pluperfect'; 5-'conditional'; 13-recent action; 16-future; 24-hypothetical future; 1356-past frequency of occurrence.
- F5 1-past desc. narr.; 2-removed past (unmarked); 4-'pluperfect'; 5-'conditional'; 16-future; 24-hypothetical future; 1356-past frequency of occurrence.

The only identical groupings are B1 and B5; F2 and F4; and possibly D4 and F5: all others have a different potentiality of co-occurrence. The only items omitted, because of their anomalous patterning, are:

(i) *formerly, in former times*: 2-removed past (unmarked); 4-'pluperfect'; 5-past frequency of occurrence. (Possibly the simplest pattern for English.)

(ii) *just*: 1-past desc. narr.; 1-perceivable simultaneous activity; 1-immediate future activity (e.g. *I'm just asking*, i.e. *about to ask*); 2-removed past (narrative); 3-recent past (unmarked); 4-'pluperfect'; 1356-past frequency of occurrence.

(iii) *now*: 1-simultaneous present (i.e. *at this moment*); 1-contemporaneous present (i.e. *these days*); 1-immediate future (e.g. *I'm going now* before activity commences); 2-removed past; 3-recent past (= *just now*); 3-overall past (e.g. *I've been now to three meetings*, i.e. *up to now*); 4-'pluperfect' (= *by then*); 5-'conditional'; 6-future; 56-past frequency of occurrence.

(iv) *about to* might be justifiably ignored from the point of view of adverbial function. In D2, however, two items (*close (up)on* s. r. and *'on the eve|point* of s. r.) may also function initially in the sentence (the other items are restricted to a medial position). In initial position, these have a different range of co-occurrence, namely: 1-past desc. narr.; 2-removed past; 4-'pluperfect'; 5-'conditional'; 16-future; 24-hypothetical future; 1356-past frequency of occurrence.

This information throws some interesting light on the way scholars and teachers have defined and labelled the meanings of tenses, seen in isolation – a situation which, as mentioned above, was a main stimulus for the present study. To take some well-known instances, the two labels ‘general truth’ and ‘habitual’ action both appear frequently in the literature on the subject. On the basis of the old definition, the two are very easily confusable: one need only consider the possible range of meaning of the terms ‘general’, ‘truth’ and ‘habit’, for example. ‘Truth’ in particular suggests that this particular use is outside of linguistic verification. The pedagogical confusion has normally arisen from trying to make these labels coincide without further definition to aspects of human experience. The former, for example, would cover an utterance like *two plus two makes four*, which is indeed a ‘general truth’; the latter might be *I like cooking*, which must be habitual because the limitations of human beings forbid it being general. Similarly, *Russia has a large population* or *The Phil plays very well in concert* would also be barred from being ‘general truth’ uses of the verb on the same grounds, the human or temporal limitations involved. They are certainly not of the kind *two plus two makes four*, where, it would be argued, the generality and the truth seem to be unqualified. On the other hand, can one take *I like cooking* and the others as genuinely habitual? They again seem different from *I cook every day*, which has a clearly habitual emphasis. And one can continue arguing in this way for some time.

Now it is clear that when one lapses so deeply into semantic classification of this kind, with little or no reference to formal criteria, one is doomed to a hyperdelicate debate about the limits of experience and related issues, and one will try to find dichotomies where none linguistically exist. But at the same time, one would like to build into one’s description the ability to account for the intuitively supported central difference between statements seen as facts regardless of time, and those which do specify a particular time (especially in view of problems of translation equivalence, and the concern to preserve some continuity in English language pedagogy); to see *two plus two makes four* as well as *I like cooking*, *Russia has a large population* and *the Phil plays well in concert* as on a par at this level, because they are all statements of fact SEEN as timeless by the speaker – there is no specific temporal context expressed. The action is seen as a general fact by the speaker, despite the fact that the state of affairs may later change or has already changed. As such, it will rarely have a temporal indication in an adverbial specifier.

On similar reasoning, habituality is best regarded as the frequency with which an action is repeated, the emphasis being on specific instances (cf. Zandvoort’s, ‘iterative present’, etc.: 57: 1959). It can therefore be defined by its answering the question ‘how often?’. Habit does not enter into its definition, this being an extra-linguistic judgement. However, being specific in its

indication of frequency (which is rarely catered for in the tense form⁷) it demands an adverbial specifier as a result. On this basis, the distinction between 'timeless' and present 'habitual', for example, may be clearly and formally drawn and defined by the presence or absence of a type of temporal adverbial. A 'habitual' use of the present tense-form is one where the simple or progressive form is used in conjunction with an adverbial specifier from groups A1-9 inclusive (i.e. a non-omissible determiner); the temporally non-specific or 'timeless' use is when the simple present form is used to refer to an unperceivable context and can only be accompanied by an adverbial specifier from group A9. The overlap is minimal and clear.

This is just one example of the kind of clarification of old labels and notional criteria which is a direct result of the present attitude. In like manner, this technique of approaching the verb indicates the narrow classificatory method traditionally imposed on the study of English time-relationships, so that some of the verb's legitimate uses are hardly ever given in the handbooks. Out of the co-occurrences listed above, one could mention the following: the use of the simple present (in particular) to refer to recently completed action (e.g. *He tells* (i.e. *has just told*) *me I'm wrong*); the use of future 'direction', comparable in many respects to the 'historic present' (e.g. *Then you meet* (i.e. *you will meet*) *me at the station at six, don't you*); the preterite used in connection with future activity, particularly with a falling-rising intonation pattern (e.g. *I [wǎs talking|| to|mòrrow||]*); the different co-occurrences that produce 'habitual' action, with tense-forms 1, 3, 5 and 6; the alternative forms that may be used in past descriptive narrative; and so on. As has already been suggested, then, combinations of tense-form plus adverbial specifier should be the basis of a temporal descriptive label, not just the former. Labels become more realistically and consistently applied when used in reference to this combination, especially in relation to such concepts as 'habitual', 'future' or 'durative'. It also makes one think more precisely about the distinctions within the usage of a tense, which become better pointed, e.g. the difference between recent and removed activity and its bearing on current relevance (cf. Twaddell, 1960), and the importance of differentiating between activity which is perceivable or not perceivable (cf. Joos's 'public and private verbs'; also Hill, 1958: 207 ff.)

We may now use the above information about adverbial co-occurrence to determine more precisely the range of meanings of the different tense-forms, to see how far the data examined so far show adverbials to be a relevant part of any description of time-relationships in English. The temporally specified verbal group now has the form LV \pm Adverbial, and usage can be distinguished by the presence of particular formal markers of specification or their absence

[7] Verbs like *flash*, where the frequency is 'built in', can of course stand without specification and indicate a non-timeless situation; but such verbs are few, and can in any case be qualified by adverbials of time if the activity is repeated.

(a further significant use of a linguistic zero, e.g. in the 'timeless' use for tense 1, where the important point is that an adverbial must NOT be present unless from group A₉). Each tense-form will be taken in turn, and the 'meanings' which are the product of the correlation are numbered and exemplified (further examples of specified usage can be easily deduced by reference to the relevant adverbial groups). The adverbials which are obligatory to the formation of a 'meaning' are listed on the right of the page; bracketed symbols indicate that adverbial usage is optional, and normally does not exist, but that adverbials from the groups named could be used for example in cases of emphasis, or stylistic effect, or to provide a redundant extra clarity or precision, as long as one does not contravene the collocational restrictions existing between verbs and adverbs taken singly. It is interesting to note two things: that out of 48 temporal meanings distinguished in this paper (most being quite familiar in the literature, though often under a different terminology), 34 require an adverbial of some kind, i.e. just over 70%; and that the co-occurrence of adverbials is particularly relevant for an understanding of the complex usage in tense 1, also of 2, 3 and 4, but it produces few distinctions in 5 and 6. These points will be discussed further below.

1. ~LV~ /am... LV-ing

OPTIONAL OR NO SPECIFICATION

- (i) specific perceivable activity taking place: (C_{2a}, C_{2b}, C₄) e.g. *A kicks the ball; I cut the apple so . . . ; I name this ship x; She's playing well; The cup contains sugar; I see that shares are up; I find that hard to believe; It's all coming back to me; This shoe hurts my foot; We're moving!; I'm enjoying this; To think we're hearing his voice; I'm feeling warm; You're thinking the same thing, aren't you; What's he wanting now?; Oxford are rowing well; etc.*
- (ii) specific non-perceivable activity, contemporaneous removed: (C_{2a}, C_{2b}, C₄) e.g. *John thinks so, you know; George is ill; The team feel they've done enough; Mary's having her lesson; We're living in London; What are you doing in school?; Jack's holidaying in France, etc.*
- (iii) specific non-perceivable activity, in recent past: (VERY occasionally, C_{3b}) e.g. *John says you want to see me; I'm told you want . . . ; Sir A dies (news headline); Mrs. x is telling me you're . . . ; Frank asks after you; etc.*
- (iv) statement of fact seen as timeless, simple form (~LV~) only: (A₉; but usually with stylistic restrictions) e.g. *Twice three is six; God works in strange ways; We call him x; The Phil plays well in concert; King Henry VII is dead; Some prefer y; It says in Chapter 2 . . . ; Bread contains . . . ; Russia has a large population; I find rugby hard to watch; Either all x are y or none are; I like walking; etc.*

past reference

- (v)⁸ past descriptive narrative: C_{3a}, C_{3b}, C₄, C₅, D₁-D₄, F₁-F₅
 e.g. *Three weeks ago, I'm walking along this street, when . . .*
- (vi)⁸ past descriptive narrative duration: B₁, B₅
 e.g. *Well we stay there for a while, but no-one comes, so . . .*
- (vii) past frequency of occurrence ('habitual'): A₁-9, C₅, D₁-4, F₁-5
 e.g. *Around January 1st (i.e. each year) I (usually) travel up to the Lake District.*
- (viii) past frequency of duration ('habitual'): A₁-A₉, B₁, B₂, B₃, B₅
 e.g. *We go for three weeks (i.e. each time we've gone).*
- (ix) recent action: F₁-F₄
 e.g. *Straight away he comes here (i.e. has just come here).*

present reference

- (x) simultaneous present activity: C_{2b}, D₂, F₁, F₃
 e.g. *I'm coming right now.*
- (xi) contemporaneous present activity: C_{2a}, C₄
 e.g. *I'm staying here these days.*
- (xii) contemporaneous present duration: B₃
 e.g. *I'm staying here for the time being.*
- (xiii) contemporaneous present frequency of occurrence ('habitual'):
 A₁-9, C_{2a}
 e.g. *We go regularly these days.*

future reference

- (xiv)⁸ future activity: C₁, C_{2b}, C₄, C₅, D₁-4, F₁-5
 e.g. *I'm going tomorrow.*
- (xv)⁸ future duration: B₁, B₂, B₄, B₅
 e.g. *I'm staying in France from now on.*

[8] In these meanings, the status of adverbials which are not specific as to past or future (e.g. *afterwards, at 3 o'clock*) is resolved by an earlier, obligatory, explicit indication of past or future time.

2. ~LV-ed|was . . . LV-ing.

OBLIGATORY SPECIFICATION TO PRODUCE MEANINGS STATED

OPTIONAL OR NO SPECIFICATION

- (i) action seen as removed from present, time unspecified:
 - (a) non-continuous, e.g. *x did y*; *We enjoyed our stay*; *Did you see her?*; *He wrote a letter, had breakfast . . .*; *John looked at x* (introductory narrative); *Where were you born?*; *Newton believed in God*; etc.
 - (b) continuous (begins before x, a known point in time, and finishes after), e.g. *I was listening to the radio*; *It was raining*; *John was walking along the road*; etc.
- (ii) 'tentative' (usually 2nd person): (F₁, F₂, C₁, C_{2a}, C_{2b}, C₄) e.g. *Did you want to see me?* Cf. verbal context determination, e.g. *I wish I knew*; *It's time we went*; etc. which allow C_{2a}, B₃.
- (iii) action seen as removed from present, time specified (non-continuous and continuous): C_{3a}, C_{3b}, C₄, C₅, D₁₋₄, E, F₁₋₅ e.g. *In January last year I stopped smoking, I was feeling very poorly at the time*; etc.
- (iv) action seen as removed from present, frequency specified: A₁₋₉ e.g. *I wrote to her twice a week, I was working every weekend*.
- (v) action seen as removed from present, duration specified: B₁, B₅ e.g. *He stayed there for a week*.
- (vi) past descriptive narrative duration: B₂, B₄ e.g. *So far, nothing was happening*.
- (vii) hypothetical future activity: B₄, C₁, C_{2b}, C₄, C₅, D₁₋₄, E, F₁₋₅ e.g. *I was going out tomorrow*; *I did start at six*; *We were coming back on January 5th next*; *Jack was carrying on for the time being*; etc.

3. have LV-ed|have been LV-ing.

OPTIONAL OR NO SPECIFICATION

- action seen as recently completed, in unspecified past, removed from present
- (i) duration not emphasized: (A₁₋₉) e.g. *I've written three books*; *He's visited Rome*; *x has been ill*; *I've run 100 yards in 10 seconds*; *I've forgotten*; etc.
- (ii) duration emphasized: (B₅, C_{3a}, C₄) e.g. *They've been building everywhere*; *It's been raining*; *Someone's been moving my papers*; *Who's been lighting matches*; etc.
 - action seen as very recently completed, in unspecified past, results usually perceivable
- (iii) duration not emphasized: (*just*) e.g. *I've had a bath*; *You've been to town*; *He's given me this*; *I've cut my finger*; etc.
- (iv) duration emphasized: (*just*) e.g. *We've been having a lesson*; *I've been finishing off our letters*; etc.

- OBLIGATORY SPECIFICATION TO PRODUCE MEANINGS STATED
- (v) past action, seen as recent, in specified time: C2b, C3b, C4, C5, D1, F1-4
e.g. *Lately, I've been living in France.*
 - (vi) past duration, seen as recent (including periods of time inclusive of present): B1, B2, B5
e.g. *I've lived here since . . . ; You've been reading about x for an hour; etc.*
 - (vii) past frequency of occurrence ('habitual'): A1-9, C2a, C3b, C4, C5, D1-4, E, F1-5
e.g. *In due course, he's walked into the house (i.e. as we've expected).*
 - (viii) simultaneous perceivable activity: D2
e.g. *He's almost reached the goal (in commentaries, etc.).*

4. had LV-ed/had been LV-ing.

- OBLIGATORY SPECIFICATION TO PRODUCE NO SPECIFICATION MEANINGS STATED
- (i) anterior to known point in past, time unspecified
e.g. *I had wanted to see him; They'd tried to get in; He'd asked them about x; etc.*
 - (ii) anterior to known point in past, time specified: C3a, C3b, C4, C5, D, E, F
e.g. *Earlier, I'd asked him about x.*
 - (iii) anterior to known point in past, duration specified: B1, B5
e.g. *He'd been standing about all day long.*
 - (iv) anterior to known point in past, frequency specified: A1-9
e.g. *He'd frequently called in . . .*
 - (v) anterior to known point in past, descriptive narrative duration: B2
e.g. *So far, nothing had been happening.*
 - (vi) hypothetical future duration: B4
e.g. *From now on, I'd hoped to see you here.*
 - (vii) hypothetical future activity: C1, C4, C5, D1, D4, F1-5
e.g. *I had been going to the pictures next week until that happened (i.e. had intended to go).*

5. *would* LV/ *would be* LV-*ing*.

OBLIGATORY SPECIFICATION NO SPECIFICATION
TO PRODUCE MEANINGS STATED

- (i) 'conditional' activity, time in future unspecified
e.g. *I would go if I had the chance.*
- (ii) 'conditional' activity, time in future specified: C₁, C_{2a}, C_{2b}, C₄, C₅, D₃, D₄, E, F₁₋₅
e.g. *I would leave tomorrow, if . . .*
- (iii) 'conditional' activity, frequency specified: A₁₋₉ e.g. *I would often go, if . . .*
- (iv) 'conditional' activity, duration specified: B₁, B₄, B₅
e.g. *They would stay for a week or two.*
- (v) past frequency of occurrence ('habitual'): A₁₋₉, B₁, B₂, B₅, C_{3a}, C_{3b}, C₄, C₅, D, E, F
e.g. *We would go there on Tuesdays* (i.e. used to go).

6. *will* LV/ *will be* LV-*ing*

OBLIGATORY SPECIFICATION NO SPECIFICATION
TO PRODUCE MEANINGS STATED

- (i) future activity (+modal overtones), time unspecified
e.g. *I will stop smoking.*
- (ii) statement of fact seen as timeless: (A₉)
e.g. *Oil will float on water.*
- (iii) future activity (\pm modal overtones), time specified: C₁, C_{2b}, C₄, C₅, E, F
e.g. *I will come next week.*
- (iv) future duration (\pm modal overtones): B₁₋₅
e.g. *We are coming for a few days.*
- (v) future frequency (\pm modal overtones): A₁₋₉
e.g. *We'll call in every now and then.*
- (vi) past frequency of occurrence ('habitual'): B₁, B₂, B₃, B₅, C_{2a}, C₅, D, E, F
e.g. *John will come in at 6 o'clock* (i.e. has come in on each occasion at . . .).

Having studied these correlations which exist for the expression of English temporal relationships, some mention might now be made of three fields in which this information might be of value - foreign language teaching, stylistics and translation. From the pedagogical viewpoint, it should be the case that the replacement of intuitive and sporadic incorporation of specification by a more systematic approach will result in greater realism and better grading in teaching the English verb. It could be argued that this information is prerequisite for constructing a descriptive framework capable of handling ALL temporal relationships in English, in which the tenses are put on a readily

comparable descriptive par with each other – an important consideration when one is translating into languages where temporal relationships are not so widely distributed over the sentence (cf. below). Again, the frequency of obligatory co-occurrence (70%) suggests that the verb-adverbial relationship in English, at least from the temporal point of view, should be introduced very early on in a course. As this figure does not necessarily imply any overall greater frequency of occurrence in English as a whole, however, it is important to note that it ignores ‘zero-specification’, and that much of the remaining 30% is potentially specifiable. While it can be taken as part of their definition that progressive forms, for instance, have a time reference which usually overlaps another point in time, the teacher also finds it relevant to see that this point in time is often optionally explicitly specified. Pedagogically, of course, it would be perfectly permissible to introduce this partial redundancy here and elsewhere for the sake of stressing the structural patterns involved. From the psychological angle, also, grammatical specification is liable to instil a psychological reinforcement, two distinct forms consolidating a reference to a single time referent. Finally, at the methodological level, the great complexity of tense 1 might be an additional argument in support of those who say that this would be a bad place to start teaching the English verb: the present tense, on the above account, is clearly very complex (15 distinct meanings, at least), and other forms would be freer from exceptions in the initial stages of learning.

Again, an appreciation of the function of adverbial specification can help to foster greater awareness of sequences of tenses in English, and hence greater fluency. It may be a truism to say that we do not speak one tense at a time, though this would not be immediately apparent from studying the usual examples in text-books. We speak in groups of phrases, clauses and sentences (cf. Crystal, 1966), and the sequential relationship of one structure to another, their general temporal coherence, is made by a balance between adverbial specification and tense-form. The full role played by adverbials as sentence-connectors has as yet been little studied, but it is fairly normal speech practice to introduce a temporal adverbial when switching to a new time-relationship, and not to rely on tense alone. One is readily familiar with the result of using too many tense-forms without specification for variation – temporal vagueness, monotony, even jerkiness because of the unaccustomed brevity. It produces a kind of style very reminiscent of the primitive essays of children, and there may be a case for saying that an important kind of stylistic sophistication is the result of being able to vary one’s temporal reference along the two scales, verbal and adverbial.

The practical use of adverbial specification for composition of graded exercises for foreigners should also now be clear. Two examples dealing with sequence of temporal relationships must suffice. Firstly, one could frame more systematic exercises on paragraph construction than have hitherto been

available, of the type *At first* LV . . . *then* LV . . . *After a while* LV . . . The point here would be to match adverbials, not only with tense-forms, but with each other in realistic sequences, and, of course, with any relevant prosodic features, e.g. the tendency for initial sentence-adverbials to be accompanied by a falling-rising nuclear tone, or the improbability of their being spoken with any kind of falling tone (cf. Quirk, *et al.*, 1964: 686). Secondly, one could construct drills of specifier plus adverbial: the temporal conjunctions (not dealt with in this paper, but classifiable on similar lines) would provide particularly useful material as to range of potential sequences here (once one has examined the extent of this range descriptively). What are the possible colligations with each conjunction, and how far can they be said to constitute a single, homogeneous class? Two examples show the complexity of the situation, and cast doubt on traditional rules in this connection. The basic pattern is: Temporal Conjunction + Tense-Form A (constituting the subordinate clause), then Tense-Form B (constituting the main clause):

(i) *as soon as* -

(ii) *whenever* -

T.F.A	T.F.B
1	1, 6
2	2, 5
3	1, 3, 6
4	2, 4, 5
5	5
6	6*

T.F.A	T.F.B
1	1†, 6
2	2, 5
3	3
4	4
5	5
6	1, 6

Someone has yet to ascertain the full extent of these co-occurrences for the following: (*just/soon/shortly/long . . .*) *after*-; *all the time (that)*-; (*just as*-; *as long as*-; *as often as*-; *as soon as*-; (*just/soon/shortly/long . . .*) *before*-; *during the time (that)*-; *each/every time (that)*-; (*the first/last/next . . . time (that)*-; *from the time (that)*- (*to the time (that)*-); *no sooner*-; *now (that)*-; *once*-; *since (the time (that), -*; *the moment (that)*-; *the sooner*- (*throughout*) *the (whole) time (that)*-; *until/till (the time that)*-, *up to the time*

*As in *As/soon as John will :gõ// we'll/get it !finished//*, though the alternative form with tense 1 is much more frequent.

†Cf. stylistic marking potential here, e.g. *when/ÿðhn góes// |ÿ've// |lèft//*, and similarly elsewhere.

(*that*)-; *when*-; *whenever*-; *while* -(≠*although*); *whilst*-. Once this has been done, exercises eliciting permissible sequences in the correct context would be most useful, judging by the frequency of students' mistakes in this matter.

On a related subject, it is important to be aware of the stylistic implications of studying adverbial specification. Attention can be more systematically focused on significant differences between texts, e.g. the contrast which exists between some styles of text-book writing (abstract, general, timeless) and newspaper reporting (explicit, factual, timeful) in respect of temporal relationships. Also, if the explanation of stylistic effects requires that one should be aware of a contextually related norm of some kind, then specification can provide a solution for a number of interesting cases, e.g. the partial characterization of a register of lecturing using the relevant marked co-occurrences (e.g. *In the eighteenth century, we see . . .* ; *In this period, we have seen . . .*); or the essential role of the adverbial in dramatic narrative in either past or future, and its role in producing literary effect, e.g. on the basis of the fact that some adverbials may act as utterance-openers while others may not, one now has an explanation for such an arresting beginning to a novel as *Afterwards, we settled down very well*. A similar technique is used in humour, which is well-served by adverbial equivocation, e.g. the juxtaposition of adverbials from A1-8 with the 'timeless' present usage - '*Twice three is usually six, you know!*', or the interplay which is the source of the following effect: (Speaker A) *I've had a bath* (Speaker B) *Yes - once!* (Here adverbial specification was not expected, cf. 3(iii) above, but the utterance has been taken as if it were 3(i), which allows an optional specifier from group A2).

Finally, there is a possible use for this approach in the field of translation. With a language with few tense-forms there is a tendency for more complex temporal situations to be built up out of prefixes, infixes, and adverbial clusters. Now suffixes are normally incorporated with the root of the verb, and taken as a single unit. As a result, when translating from such languages into a language like English, there has been difficulty in finding one-to-one equivalences between the verb forms, especially when, instead of aiming for a complete translation-equivalence at sentence-level, one is trying to equate verb with verb at word or group level - as in some kinds of dictionary, for example. In many cases, the equivalent of the suffix in English is an adverbial of some kind, so that when the suffix in the foreign language is a temporal indicator, a theory of specification should be able to point more clearly to types of equivalence between the tenses, and one would be able to pin down the temporal range of the foreign verb with the same precision, but with greater systematicity, and with a greater awareness of the range of possible substitute forms every time the suffixes appear.

Many languages exemplify this situation clearly, e.g. Finnish, with such infixes as *-ahta/-ähtä-* 'momentaneous', producing *horjahtaa*, 'sway for a

moment' from root *horjua*, 'sway'; frequentative infix *-sk-*, and so on (cf. Hakulinen, 1961: 174 ff., 364 ff.) Russian also produces some clear examples. Here most verbs have only two tense-forms, and great emphasis is placed on adverbials and prefixation. For example, *я сидел там* ('I was sitting/sat there') and *я посидел там* ('I sat there for a moment'). *по-* 'for a short time', 'for a while' (the adverb not usually being specified in Russian) is very frequent, and requires an English adverbial specifier on most occasions. Of course a corresponding English verbal idiom, if one exists, would also indicate the length of the action (e.g. *говорил* 'I was speaking to ...' v. *поговорил* 'I had a chat with ...'), but in the imperfective one can still see the need for systematic specification (e.g. *поговаривал* 'I had a chat from time to time', and cf. such colloquial uses as *посиживать* 'to sit for a little while from time to time', which are fairly typical), and in any case, this does not deny the possibility of providing a more 'basic English' kind of translation using a LV+Adv. combination. The total range of adverbials usable in the case of *по-* would clearly be from groups B1 and B5 (relative shortness of action could be a further criterion of notional sub-classification), e.g. *постоять* 'to spend a certain time standing' (perfective); *постаявать* 'to stand for a short while at a time' (imperfective); *полёживать* 'to lie for a little while', and so on. There are other prefixes of a similar kind to *по-*, e.g. *за-* (denoting beginning of an action, though frequently requiring a verbal idiom like 'burst out' or 'begin to' in English), *до-* ('as far as', 'up to the end', which is usually accompanied by a prepositional phrase which repeats the *до-* and specifies the limit), or *про-* which expresses a time longer than *по-*, cf. *просидеть* 'to sit for a certain period of time', often accompanied by an adverbial in Russian, though this is not obligatory). Finally, there are of course verbs without prefixes which require adverbial specifier expansion, e.g. *мелькать* 'to appear for a short time' (then disappear), 'flash'; *мелькнуть* 'to flicker once'. The possibility of there being a systematic correlation between aspect in general in Slavic languages and adverbial specification of some kind has been suggested (e.g. by Ivič, 1962: 201-2), and in fact the Russian grammarian Spagis (1961) links aspect with the adverb for teaching purposes in Russian. If this is legitimate and useful, then it could be related in turn to the importance English gives to the adverb, and problems of translation equivalence between the two languages might well be eased – but only as long as the English situation is appreciated first.

The purpose of this paper was to describe a hitherto largely ignored set of co-occurrence relations in English. In so doing, a number of points of a more theoretical nature have been raised – in particular, how any theory might best handle these relationships (whether as grammatical, lexical or semantic) – but discussion of such issues has been left for future occasions, question of status, and the like, not really affecting the presentation of the descriptive information

itself. This information is not intended to be in any sense a final word on temporal relationships in English: there are too many loose ends which need to be tied. But while the paper does not claim to be exhaustive, it does display the degree of complexity inherent in the expression of these relationships. It thus hopes to provide a warning against careless generalization about tense usage and undefined, vague labelling (such as Adv.temp. without further qualification) as well as an incentive to further study of this phenomenon.⁹

REFERENCES

- Close, R. A. (1962). *English as a Foreign Language*. London: Allen & Unwin.
- Crystal, D. (1966). On a unit higher than the sentence in English (forthcoming).
- Crystal, D. & Quirk, R. (1964). *Systems of Prosodic and Paralinguistic Features in English*. (Janua Linguarum, Series Minor, 39.) The Hague: Mouton.
- De Groot, A. W. (1957). Classification of word groups. *Lingua* 6. 113-57.
- Diver, W. (1963). The chronological system of the English verb. *Word* 19. 141-81.
- Firth, J. R. (1962). A synopsis of linguistic theory, 1930-55. *Studies in Linguistic Analysis*. Oxford: Philological Society.
- Frei, H. (1956). Caractérisation, Indication, Spécification. In *For Roman Jakobson*. The Hague: Mouton.
- Hakulinen, L. (trans. J. Atkinson). (1961). *The Structure and Development of the Finnish Language*. The Hague: Mouton & Bloomington: Indiana University.
- Hill, A. A. (1958). *Introduction to Linguistic Structures*. New York: Harcourt, Brace & Co.
- Hornby, A. S. (1954). *A Guide to Patterns and Usage in English*. London: Oxford University Press.
- Ivič, M. (1962). The grammatical category of non-omissible determiners. *Lingua* 11. 199-204.
- Institute for research in English teaching. (1933). *Second Interim Report on English Collocations*. Tokyo: Dept. of Education.
- Jacobson, S. (1964). *Adverbial Positions in English*. Uppsala: Ab Studentbok.
- Jespersen, O. (1933). *Essentials of English Grammar*. London: Allen & Unwin.
- Kahane, H. R. & Hutter, H. S. (1953). The verbal categories of colloquial Brazilian Portuguese. *Word* 9 16-44.
- Kahane, H. R., & Saporta, S. (1953). The verbal categories of Judaeo-Spanish. *Hispanic Review* 21. 193-214, 322-36.
- Kahane, H. & Kahane, R. (1954). Review of *L'aspect et le temps dans le verbe néo-grec*, H. Seiler. *Lg.* 30. 115-23.
- Kahane, H. and Kahane, R. (1957). The system of the verb in the Western Languages. In *Syntactica und Stylistica*. Tübingen: Niemeyer Verlag.
- Klum, A. (1961). *Verbe et adverbe. Étude sur le système verbal indicatif et sur le système de certains adverbes de temps à la lumière des relations verbo-adverbiales dans la prose du français contemporain*. Stockholm: Almqvist & Wiksell.
- Osman, N. (1964). *Modern English*. London: Oxford University Press.
- Ota, A. (1963). *Tense and aspect of present-day American English*. Tokyo: Kenkyusha.
- Palmer, F. R. (1965). *A Linguistic Study of the English Verb*. London: Longmans.
- Quirk, R. et al. (1964). Studies in the correspondence of prosodic to grammatical features in English. *Proceedings of the Ninth International Congress of Linguists, 1962*, 679-91. The Hague: Mouton.

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JOURNAL OF LINGUISTICS

- Scheurweghs, G. (1959). *Present-day English syntax*. London: Longmans.
- Spagis, A. A. (1961). *Obrazovanie i Upotreblenie Vidov Glagola v Russkom Jazyke*. Moskva: Učpedgiz.
- Twaddell, W. F. (1960). *The English Verb Auxiliaries*. Providence: Brown University Press.
- Ward, J. M. (1954). *The Use of Tenses in English*. London: Longmans.
- Worth, D. S. (1958). Transform analysis of Russian Instrumental constructions. *Word* 14. 247-90.
- Zandvoort, R. W. (1957). *A Handbook of English grammar*. London: Longmans.