

AN ANALYSIS OF SOME VERBS OF MOTION IN ENGLISH

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I. Introduction

Harry Hoijer, in describing Navajo verbs of motion, adopted a system which has puzzled many people ever since. His gloss of the Navajo word /ninda:h/ for example, is 'he moves to a sitting position' (Hoijer 1964:142).

While this may be, in fact, a very adequate translation, one can not help but wonder why Hoijer did not see fit to translate the form as 'he sits down'.

A possible explanation for Hoijer's decision to use somewhat descriptive glosses is that he is attempting to abstract (or feels that he has abstracted) some component or components of meaning from the Navajo forms. Hoijer may have felt that it was better to give some of the component features of the Navajo verb, rather than an English equivalent, since component features of English verbs of motion have never been extrapolated and described.

Kinship terminology, which was one of the first systems of terms to be subjected to this type of analysis, will give an analogy which shows the dangers of using a gloss over giving a list of components. If a set of kinship terms is examined in a non-English speaking society, it will become obvious rapidly, that the ways in which various peoples group their relatives is in no way fixed by some extra cultural feature. Various cultures will specify different terms for people who are biologically identically related. In restricted Chinese (I use the term "restricted" here as it is used in linguistic problems where certain features are deleted which are not relevant to the problem at hand, but whose presence would only serve to complicate matters unnecessarily for the point which is being made), for example, all male members of the same generation refer to each other as /gə/ (哥) or /hiŋ/ (兄), /daidai/ (弟弟) or /səylo/ (兄弟), depending on the age of the person referred to relative to the speaker. The first pair may be translated roughly as senior (or elder) brother or cousin, while the second pair may roughly be translated as either junior (or younger) brother or cousin. The forms /daidai/ and /hiŋ/ differ from /səylo/ and /gə/ in that

the former forms are formal forms and the latter are informal forms. They also differ in the way that they enter into morphological combinations. These distinctions are irrelevant to the example since for a given "ego", /go/ and /hŋ/ will have the same person as referent.

It becomes obvious that these two sets of terms (I will use G-H and S-D, in the future to refer to elder and young respectively) do not map isomorphically onto the English forms *brother* and *cousin* (see chart I, pages 128-129). The components of the two Chinese forms may be stated to be:

G-H: male, same generation, older than Ego

S-D: male, same generation, younger than Ego

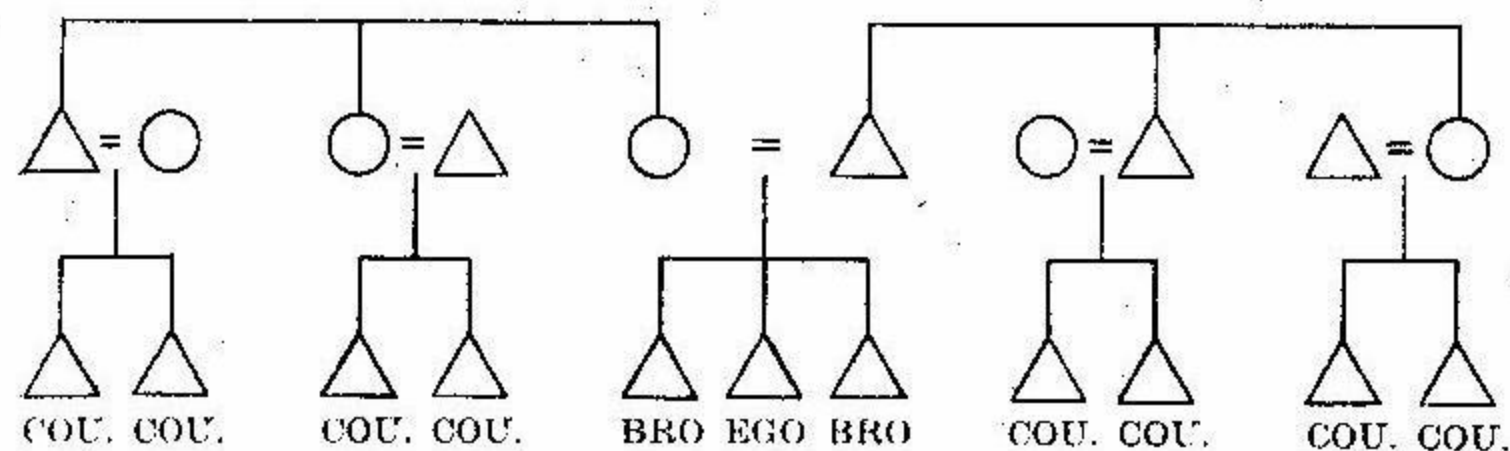
In English, the components of *brother* and *cousin* are quite different, and may be described as:

Brother: male, same generation, lineal

Cousin: child of a collateral, who is sibling to a lineal.

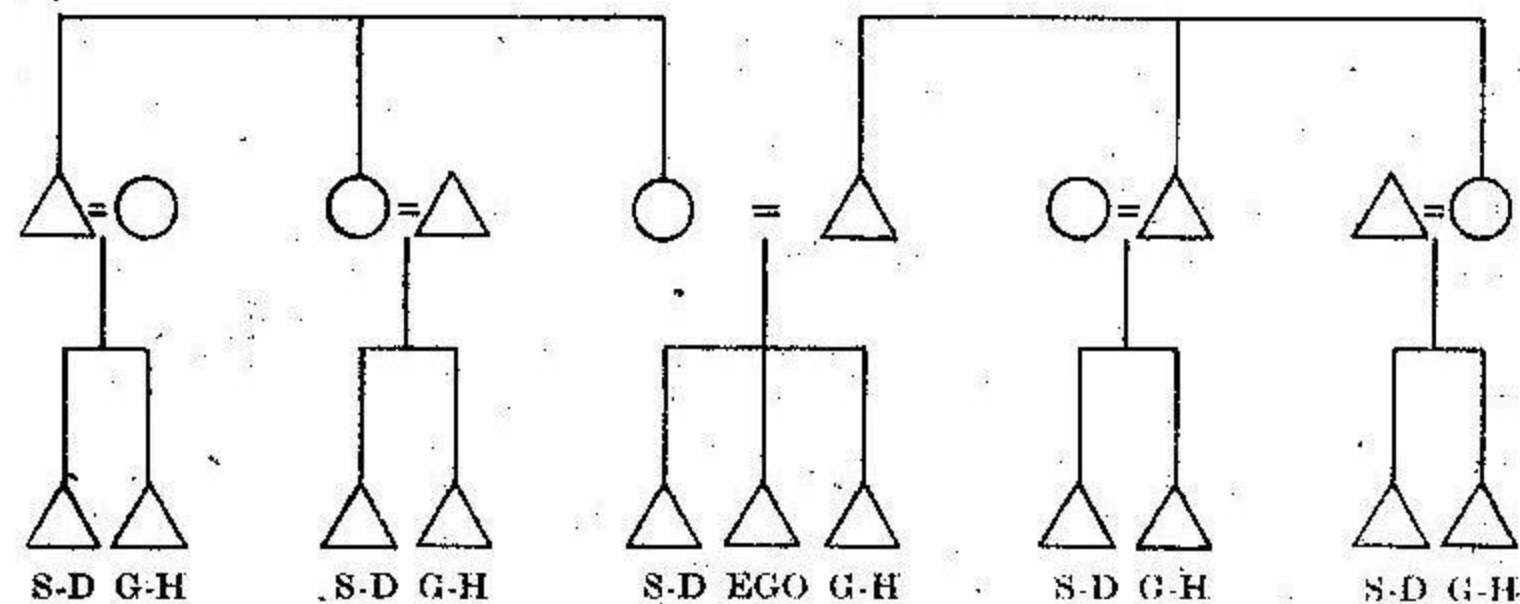
It is apparent, then, from the above discussion, that only in one case can G-H or S-D be translated as 'brother'. In all other cases, 'cousin' is the proper term. It is therefore advantageous to give a list of components of the term, rather than a gloss which is only occasionally appropriate.

For this reason, Hoijer may have been wary of giving glosses, and his use of giving components is easily justifiable. There seems to be no reason, however, to give components when a second language has a form which is equal in translation by virtue of the fact that the terms in both languages have identical components. Hoijer could not, then, have attempted to give translations (i.e. match Navajo words to English words having identical components) without first having a componential analysis of English verbs of motion. The major purpose of this paper is to start such an analysis so that more rigorous comparative work can be done. The verbs analyzed here are not meant to be an exhaustive list, but merely a few which seem to show certain tendencies and trends in English.



1a. ENGLISH KINSHIP SYSTEM

BRO: Brother
COU: Cousin



1b. CHINESE KINSHIP SYSTEM

G-H: go or hŋ
S-D: seylo or daidai

II. Problems

Several problems, some semantic, some taxonomic, complicate all componential analyses to various degrees. This analysis is no exception. Three types of problems occurred: (a) metaphorical extensions, (b) grammatical problems, and (c) problems of presentation.

Metaphorical extensions: In gathering data for a componential analysis, it is necessary to collect as many tokens of the forms as possible. Invariably, forms arise which appear to be metaphorical extensions of some basic semantic form. On occasion it is useful to examine these metaphors and the imagery created by them to gain insight into the possible components of the base forms. The verb *to fly* will serve as an example. *To fly* can be analyzed as 'an object is buoyed up by and propelled through air'. In the structure *He flew out of the room*, there appears to be a metaphoric extension based on the fact that the flight of objects which do not fly naturally, or without outside help (i.e. planes as opposed to birds) is associated with speed. The metaphoric extension means that the person in question left the room with great speed (i.e. sufficient speed to be capable (metaphorically) of flying). The same is true in the statement *He flew through the water*, where the idea of speed is carried over as the object moves through a different medium.

Grammatical problems: Certain grammatical problems also complicate the analysis in that some verbs of motion may be used either intransitively or transitively, while others can occur only in an intransitive form. For example, *to move* can be either transitive or intransitive. In its intransitive form, it may be

analyzed to mean to undergo motion' (i.e. *I move*). In its transitive form (*He moves it*) it has the meaning 'to cause something to undergo motion'. Transitive verbs of motion is, in fact, generally equivalent to a causative aspect. Not all verbs of motion can undergo this transitive, while others can, but with somewhat different results. Consider *I caused it to squirm* which is possible, but not *I squirmed it*. Examples of forms which do occur as transitives, but with different meanings than causation are *to jump* and *to fly*. The verb *to fly* on the other hand, exhibits several problems. The form *I fly a Boeing 707 to Chicago every week* can mean that the speaker is the pilot who causes the plane to fly, or the speaker may be a passenger on the plane who is flown to Chicago by the plane. The verb *to fly* is difficult since it is also involved in the metaphoric forms noted previously, and some sentences become ambiguous as to whether a metaphoric interpretation is wanted or not. *She flew in here* may be interpreted, for example, metaphorically as *She came in a hurry* or realistically as *She came in a plane* (notice the similarity in the structure of the paraphrased forms).

Problems of presentation: In most componential analyses, one of two forms is generally used. A third form is possible. The merits and drawbacks of all three forms will be discussed before the actual analysis, in hopes of arriving at the most efficient and economical presentation which accurately reflects the data.

The first method of presentation will be called herein the "taxonomic method". In this method, a chart is used to indicate the relationship between the terms under examination. Forms of lower levels are contained within those at higher levels, but contrast with those at the same level.

In an analysis of dogs, for example, the three terms, *dog*, *collie* and *spaniel* might appear thus:

dog	
collie	spaniel

In addition to the above chart, the criteria for the division of the three terms need to be given. This format makes certain relationships easily identifiable, but has several drawbacks. One problem arises when a set of terms is not complete, i.e. where there are taxonomic gaps. Consider the following:

x	
y	?

In this chart, *y* is a kind of *x*, but there are no specific terms for those *x*'s which are not *y*'s (this is the case for example with sets such as *duck*, *drake* and "female duck"). The missing term may either be non-existent, or expressed

generally through a poly-morphemic or poly-lexemic structure, or the cover term "x" may be used, making *x* a subclass of *x*.

Another problem arises with this type of presentation when a single term occurs in different places in the taxonomy:

a			
b		c	
d	e	d	f

In this last chart, "d" is a "b", and also a "c". The criteria used in arriving at the "d" which is a "b" must necessarily be different than the "d" which is a "c" (since one contains the component "b" while the other, the component "c"). This type of problem occurs, for example, with the verb *to fly*, which contains components which refer to object moving through air, while the second can be used when the motion has an aspect of speed. These two are illustrated by *The bird flew out of the room*, and *The boy flew out of the room*. The first sentence is generally understood to mean (in isolation), that the bird, flapping its wings, propelled itself through the air, and with this manner of motion departed from the room. The second is understood to mean (also in isolation) that some boy left the room in a great hurry.

A similar problem arises with certain verbs of motion in English which may be made transitive or intransitive. Since there seems to be no single class of verbs to which the rule is applicable, a presentation of a taxonomic type is relatively awkward.

A second type of presentation is one in which the components are symbolized by letters, or a series of pluses and minuses, matched to criteria which are conceived of in binary oppositions. This is equivalent to the distinctive feature approach postulated by Jakobson, Fant and Halle (1951:44).

This format is effective when the criteria are applicable to all forms. For example, the distinctive features of /p/ and /f/ are:

	/p/	/f/
vocalic/consonantal	—	—
compact/diffuse	—	—
grave/acute	+	+
nasal/oral	—	—
tense/lax	—	—
optimal constrictive/optimal stop	—	+

The usefulness of this approach diminishes, however, when the criteria for separations of classes on lower orders are different in various cases. If this format is followed, one is forced into the position of asking irrelevant questions.

Assume that one of the criteria for verbs of motion is whether the object in motion is moving on the land, or if it is buoyed up (movement on solid/non solid). If the object in question moves on the land, one needs to decide if the movement is done pedally, or non-pedally (pedally/non-ped.). If the movement is pedally, is at least one foot always on the ground, or is there a moment when all feet are clear of the ground? (one foot clear/all feet clear). These last two features are not applicable if the answer to the first question was a minus (i.e. the movement is on or in a non-solid). In other words, several of the questions are dependent on a previous question. In a distinctive feature approach, all possible components would have to be listed, but in a large number of cases, such features would be irrelevant. From the previous discussion, the following distinctive features would have to be included, and the following results would be obtained for *walk* and *swim*.

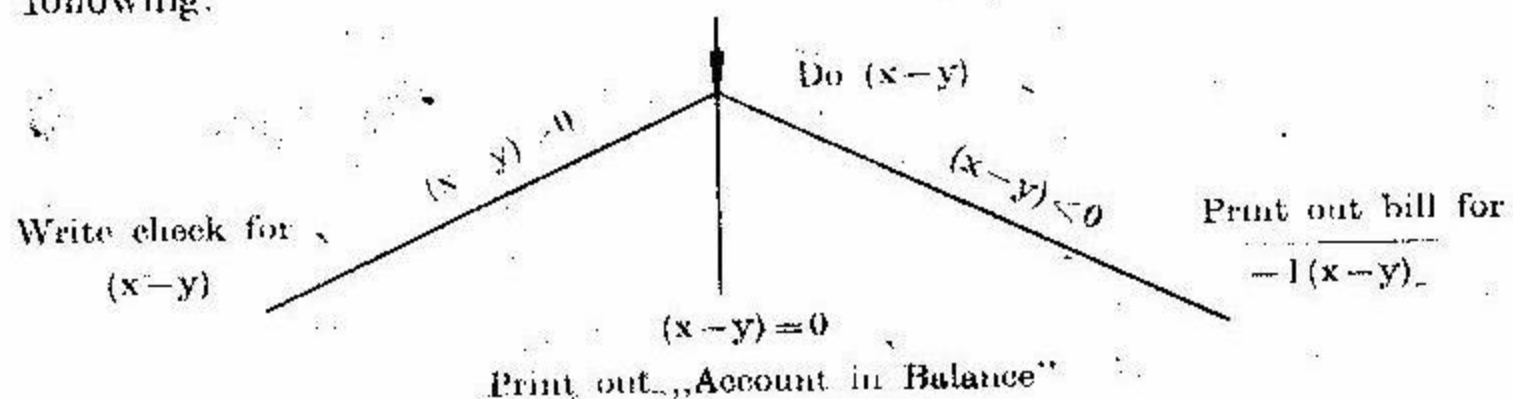
	WALK	SWIM
movement on land/non-land	+	-
pedally/non-pedally	+	irrelevant
one foot/feet	+	irrelevant

The third type of presentation is a "flow chart" presentation. The term "flow chart" is taken from computer programming. Flow charts indicate the questions to be asked by the computer and give instructions as to how to proceed after the question is answered. The instructions contain the criteria for possible answers. Example:

Assume that a computer has been programmed to compute income tax. At some point the computer arrives at the following, where *x* is the amount deducted from one's salary and *y* is the amount of tax due the government.

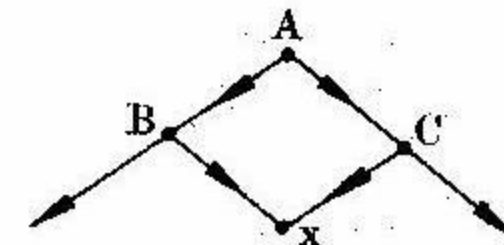
- Do $x-y$
- If $x-y$ is greater than 0 write check for $x-y$
- If $x-y$ is less than 0, multiply by -1 and write bill for $-1(x-y)$.
- If $x-y$ equals 0 print out "Account exactly in balance".

It can be seen from this example that the criteria involved in determining whether or not a refund is sent is contained in the instructional statements which give the computer the instructions on how to proceed after performing the operation $x-y$. A flow chart diagram for this step would look like the following:



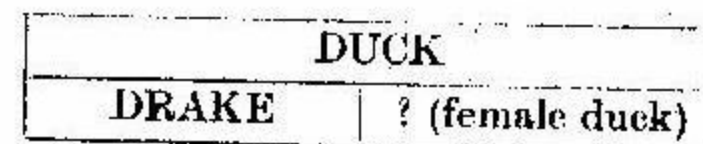
This approach is advantageous in solving the problem presented by the other two approaches. The question "pedally vs. non-pedally" would be asked only if the response to a previous question merited its asking.

A further advantage derived from this method is the availability of interpretation of forms from either the speaker's or the listener's viewpoint. One need only read in the direction of the arrows to understand how the speaker arrived at a given form, and read in the reverse direction to understand how the form may be interpreted. This is especially valuable in the area of ambiguity. Consider the following:

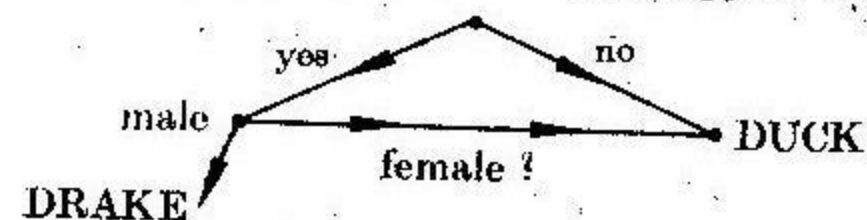


The above diagram indicates that "x" may be arrived at by making certain decisions at "A" and "C", or by making a different decision at "A" and a decision at "B". The speaker may arrive at the form unambiguously, but the hearer, starting at "x", is uncertain as to the route used to arrive there, and is confused, then, as to whether the components of "x" are "A" and "C" or "A" and "B".¹

The appearance of a triangle indicates that the system is not symmetrical at that point. In an earlier example the relationships between *duck* and *drake* were discussed and shown taxonomically as:



In a "flow chart" system, these terms would appear as follows:



¹ This particular analysis seems to indicate that speakers may be unaware of ambiguities in speaking until they begin to respond as listeners "hearing", as it were, their own speech. This would mean that one's own speech can act as a stimulus to self correction only if the speaker acts as a listener at the same time (the speech to which he is listening may be the actual sounds or some sort of "mental" speech). This would account for a speaker's false starts, sudden stops and interjected clarifications of a statement just made or in the process of being made.

Another problem being raised by this approach is that it indicates that the flow chart (or sorting process) actually goes on in the mind in the fashion indicated here. This paper is not proposing that that is in fact the case. Some sort of experimental design would need to be worked out and tests conducted to gather empirical data before an assertion of that nature could be made.

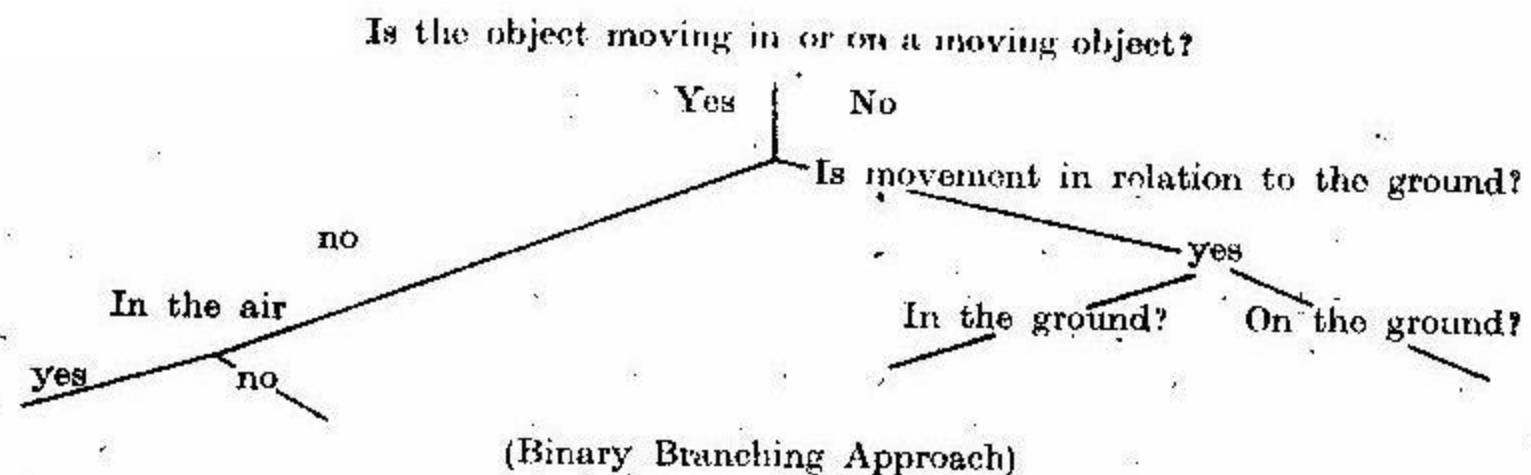
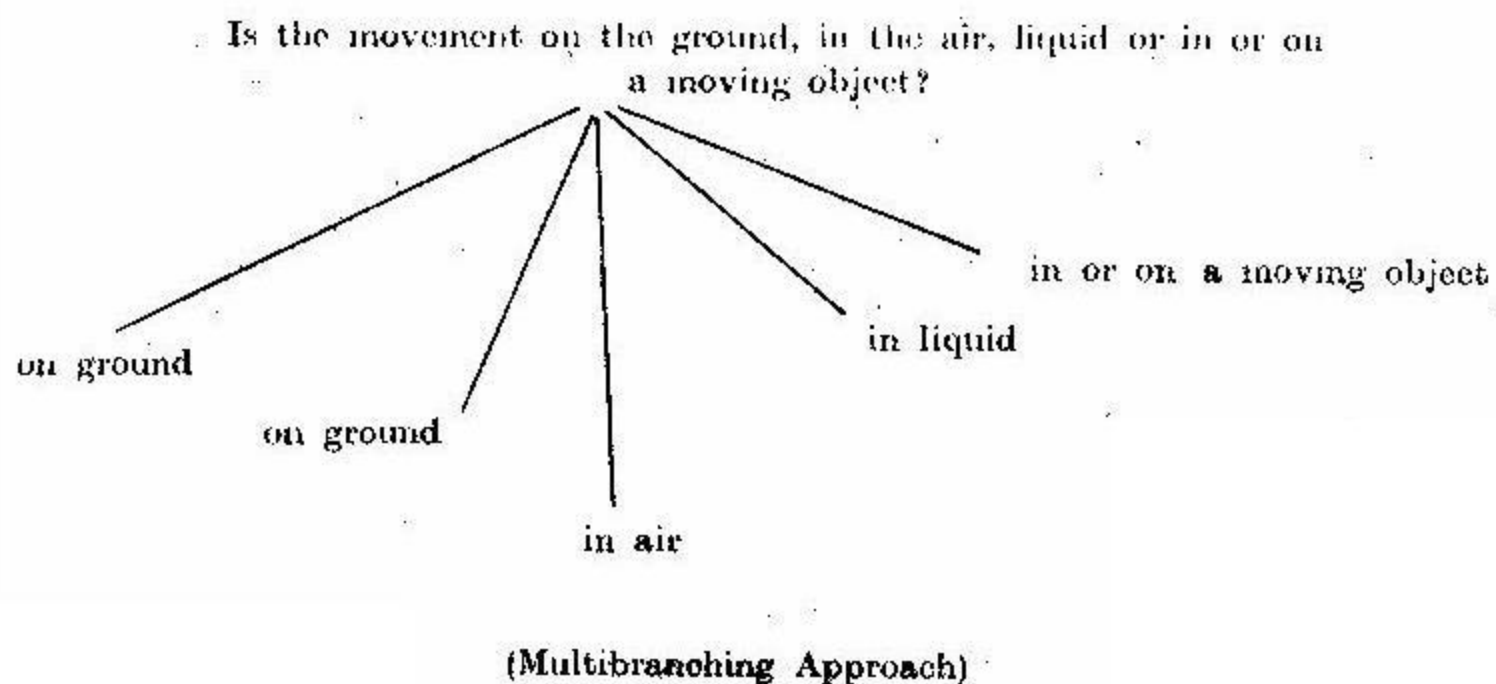
If the answer to the first question (Do you wish to emphasize the sex of the animal?) is 'no' the *duck* will be used. If the answer is 'yes', then the question is it male or female? will be asked. A response of 'male' will produce *drake*, while a response of 'female' will produce the poly-lexemic form *female duck*.

III. The analysis of some verbs of motion in English

As the title of this paper indicates, there is no attempt here to analyze all the verbs of motion in English. There is no doubt that the addition of other verbs may require a reworking of much of the "flow chart". Many more node questions would need to be introduced, and possibly several would need to be deleted, or modified to accommodate the additional data.

I have chosen to avoid a binary branching chart, in favor of a multibranching one, in that I find it difficult to justify several nodal questions in succession which seem not to have any psychological reality, and/or are not generating terms to cover those nodes. The most obvious example of this is the five-branching node at which the question asked is: "Is the movement on the ground, in the ground, in the air, in a liquid or in or on a vehicle?". Five answers are possible, and five lines lead from that node. It would have been possible to rephrase that particular question so that the branching would have always been binary, but since the problems incumbent on such a system have been present since Plato, it seems wiser to avoid them. In addition, it seems unwise to ask "Is the object moving in or on a moving object or not?", and then "Is it moving in relation to ground?", etc. (see diagram below), since the categories formed frequently seem to lack any sort of reality.

DIAGRAM CONTRASTING MULTIBRANCHING AND BINARY BRANCHING APPROACHES



The verbs in the following analysis were chosen randomly, but with an eye towards diversity. This was done primarily to make as many major categories as possible. Sets of closely related forms (such as *amble*, *perambulate*, etc.) were generally ignored, since the distinctions are rather subtle. Only in a few cases were such sets examined, primarily to show how the methodology would cope with such problems. There are also a few cases which attempt to deal with metaphoric uses (see *fly* for example), where there may be restrictions on the subject as well.²

The flow chart itself is quite complex to follow through a "key". The key is a series of questions which are in fact the components of the forms they ultimately generate. The questions are numbered, and the numbers refer to specific nodes in the chart itself. After each question, all possible answers are listed, with an instruction as to how to proceed from each answer. The instructions will be in one of two forms: a "print out" (P.O.) which indicates the appearance of the morph; or an instruction to ask another question which is also specified. For example:

- Q. 7. Is the motion aimless?
 No: 8
 Yes: P.O. 'drift'

The above example indicates that if the question "Is the motion aimless?" is answered positively, then the form to be produced is *drift*. If the answer, however, is negative, then one needs to ask question #8 next.

The key on page 136 lists the nodal questions, answers and instructions. After each question there is a short discussion as to the reason for the question

² It seems perhaps more realistic to say that certain verbs force or project certain qualities on their subjects. The verb *walk* is generally thought to require an animate subject, but it seems more that the subject of the verb *to walk* will be made animate. This would mean that in a sentence such as *He drank and drank and drank and then flowed out of here* would be interpreted to mean that he moved like a liquid or other mass noun. In this sense, it is perhaps wrong to say that motion of mass nouns is 'flow', but rather that, one should say, *flow* will cause the subject to be treated as a mass noun.

and comments. Following the key is the diagram of the flow chart, with the nodes numbered with reference to the key questions.

The last section lists the verbs considered herein, with the components as derived from the chart.

IV. The key³

Question #⁴

1. Does the object in question exhibit motion?

No: Delete

Yes: 2

This is the question which determines inclusion in the set of verbs of motion. The class is defined by this question. Any action conceived of as having motion is included in the set. If the response to this question is negative, the instruction is "Delete", this means exclude from the set. In a total analysis of English, the instruction following a negative response would simply indicate that the next question asked was not within this set.

2. Is the object in question a mass noun?

No: 5

Yes: 42

This question separates mass nouns from other nouns. These nouns are marked for certain inflectional restrictions, and behave quite differently from other nouns in English. The question indicates that among other things, certain verbs in English can only have mass nouns as their subjects.⁵

³ Comments follow questions in order to justify the question. Where no comment follows one of three possibilities is the case. Either: (1) There is a P. O. (generation of a form justifies the question); (2) The question occurred before with an explanation; (3) Only a question of self-causation lies between the question and a P. O.; or the following question occurs: "Do I wish to emphasize some aspect of the motion?" after the question. The reason being that there must be a term then for that level of organization, indicating a psychological as well as morphemic reality.

⁴ The questions were devised by examination of the verbs involved and grouping of those verbs into those which seemed related in meaning. Words were often paraphrased to arrive at the components. When two or more verbs had the same components and no others, the verbs were substituted in identically the same sentences and the contrasting meaning was analyzed for its component parts. There appears to have been a certain problem in that forms like *crawl* and *snake* contrasted for movement on the ground. *Snake* can also occur for movement in water, etc. This aspect of *snake* is not dealt with here since it developed only recently (in my mind as a possibility). It would appear, though, that the chart needs to be reworked, at least in the area of 'Snake', 'Coil', 'Spin', and 'Squirm' so that these forms can be generated without going to Question #9 which deals with the media on or in which the movement takes place. This would probably mean moving node #21 to a spot between nodes 8 and 9.

⁵ See note 2.

3. Do I wish to emphasize just the fact that it is in motion?

No: 5

Yes: 4

This is the first question which has the idea of emphasis tied to it. It indicates that frequently a speaker's choice of a lexical item is based on an aspect that he wishes to emphasize. If, for example, a ball is moving across the floor and one is asked, "What is the ball doing?", the response may, either be "It's moving" or "It's rolling", depending on whether the speaker wishes to clarify the type of motion, or whether the fact that motion is involved is sufficient.

4. Do I wish to emphasize motion relative to other objects in motion?

No: 6

Yes: 29

This question separates the verbs in English which can have only plural subjects in their intransitive form. This is because the question indicates that many objects are already moving and the relationship between objects indicates the plural number.

5. Do I wish to emphasize the velocity of the movement?

No: 7

Yes: 45

The appearance of this question in this spot indicates that the idea of speed supersedes most of the categories involved, and in fact can even be used for mass nouns (see question 31 when answer is yes).

6. Is it self moving?

No: P. O. 'Move' (transitive)

Yes: P. O. 'Move' (intransitive)

This question reappears several times at different places in the chart (and necessarily in the key). At first there was some hesitation in including the question on the grounds that it produced a distinction which is in fact apparently more syntactic than semantic. However, it became readily apparent that certain forms were ambiguous only in intransitive forms (see for example the components of *coil* (transitive) as opposed to *coil* (intransitive)). Since there appears to be no general rule which states which verbs may be made transitive, the question needed to be repeated several times.

7. Is the motion aimless?

No: 8

Yes: P. O. 'Drift'

8. Do I wish to emphasize the smoothness of the motion?

No: 9

Yes: P. O. 'Glide'

9. Is the object moving (a) on the ground (b) in the ground (c) in air (d) in a liquid (e) in or on a moving object?

If the answer is	Do
a	10
b	P. O. 'Tunnel'
c	43
d	34
e	P. O. 'Ride'

This question indicates that the medium through which or in which the motion takes place is important. This may indicate the projection of a feature onto a locative by the verb.*

10. Is the object moving on limbs?

No: 12

Yes: 13

This question distinguishes things which move on limbs from those that don't. It is possible this question can be eliminated by going to question 11 and 12 directly.

11. Is it using more limbs than usual?

No: 21

Yes: P. O. 'Crawl'

12. Is it moving on its belly?

No: 21

Yes: 13

This question may be more aptly asked as "Is the body horizontal?" Since there is no term being printed out here, and the psychological reality seems, at least in my mind, somewhat questionable, it is possible that more intensive work needs to be done at this node. At the moment, however, I can find no way of avoiding this question.

13. Is the movement undulating?

No: -40

Yes: P. O. 'Snake'

14. Are all the limbs involved clear of the ground at any time?

No: 37

Yes: 15

15. Are the feet together?

No: 16

Yes: P. O. 'Jump'

16. Is there a forward motion using just one foot?

No: 17

Yes: 18

17. Is it always the same foot?

No: P. O. 'Skip'

Yes: P. O. 'Hop'

18. Do you wish to emphasize some aspect of the motion?

No: 20

Yes: 19

* See note 2.

This question separates 'running' from its aspectual forms *trot*, *gallop*, *jog*, and seems here to have a psychological reality in that these are all forms of running.

19. Is it paced?

No: P. O. 'Run' (intransitive)

Yes: P. O. 'Trot'

The peculiarity here in generating *run* is caused more by the lack of other forms in the analysis like *jog*, *gallop*, etc. It does seem, however, that there are forms of running which would have to be specified poly-lexemically (as in *ran up*, etc.) which would require a return to the larger classificatory term *run*.

20. Is the motion self-caused?

No: P. O. 'Run' (transitive)

Yes: P. O. 'Run' (intransitive)

21. Is the motion in place?

No: 26

Yes: 22

22. Is the object forming a spiral?

No: 24

Yes: 23

23. Is the movement self-caused?

No: P. O. 'Coil' (transitive)

Yes: P. O. 'Coil' (intransitive)

24. Is it moving about an axis?

No: P. O. 'Squirm'

Yes: 25

25. Is the movement self-caused?

No: P. O. 'Spin' (transitive)

Yes: P. O. 'Spin' (intransitive)

26. Do points along a periphery sequentially meet the ground?

No: 28

Yes: 27

27. Is the movement self-caused?

No: P. O. 'Roll' (transitive)

Yes: P. O. 'Roll' (intransitive)

28. Does the movement occur with the object leaving the ground, basically moving horizontally?

No: P. O. 'Bounce'

Yes: 32

29. Are the objects moving apart?

No: 30

Yes: 41

(The psychological reality here is 'scatter', reached earlier)

30. Are they moving apart on the water?

No: P. O. 'Flock'

Yes: P. O. 'School'

31. Is the object capable of propelling itself through the air for a period of time?
No: P. O. 'Fly' (intransitive)
Yes: P. O. 'Speed'
32. Does the object rise slightly from the surface?
No: 33
Yes: P. O. 'Skim'
33. Is the movement deliberate?
No: 47
Yes: 46
34. Is it a group's motion in water to be emphasized?
No: 35
Yes: P. O. 'School'
35. Is the object alive?
No: 36
Yes: P. O. 'Swim'
36. Does it leave the surface periodically?
No: 44
Yes: P. O. 'Skim'
37. Do you wish to emphasize an aspect of the motion?
No: 38
Yes: 39
38. Is the motion self-caused?
No: P. O. 'Walk' (transitive)
Yes: P. O. 'Walk' (intransitive)
39. Is there a "military" bearing?
No: P. O. 'Stroll'
Yes: P. O. 'March'
40. Is there a forward movement?
No: 23
Yes: P. O. 'Crawl'
41. Is the movement self-caused?
No: P. O. 'Scatter' (transitive)
Yes: P. O. 'Scatter' (intransitive)
42. Do you wish to emphasize the velocity?
No: P. O. 'Flow'
Yes: P. O. 'Speed'
43. Is it self moving?
No: P. O. 'Fly' (transitive)
Yes: P. O. 'Fly' (intransitive)
44. Is the movement self-caused?
No: P. O. 'Sail' (transitive)
Yes: P. O. 'Sail' (intransitive)
45. Is it fast?
No: P. O. 'Crawl'
Yes: 31
46. Is the movement self-caused?
No: P. O. 'Slide' (transitive)
Yes: P. O. 'Slide' (intransitive)

47. Is the movement self-caused?
No: P. O. 'Slip' (transitive)
Yes: P. O. 'Slip' (intransitive)

V. The verbs and their component meanings

The verbs are listed here, alphabetically. An "A" or "B" in slash marks indicates a submeaning, and is followed by the components of each submeaning. There are as many submeanings as there are ways of reaching the form on the flow chart. The forms occur here, followed by a (y) and a series of numbers, then a (n) and a series of numbers. (y) refers to "Yes" answers and the numbers following it to the "key" questions which were answered affirmatively. (n) and the numbers following it refer to the questions which were answered negatively. Following the numbers, two letters or more may appear. These mark the answer to question number nine, the answers to which are "on the ground" (OG), "in the ground" (IG), "in the air" (IA), "in or on a moving object" (IO), and "in a liquid" (IL). If no letters occur, question #9 is not relevant.

1. BOUNCE: (y) 1 (n) 2, 3, 5, 7, 8, 10, 12, 21, 26, 28, OG
2. COIL (intransitive): /A/ (y) 1, 12, 23 (n) 2, 3, 5, 7, 8, 10, 13, 40, OG
/B/ (y) 1, 21, 22, 23 (n) 2, 3, 5, 7, 8, 10, 13, 40, OG
3. COIL (transitive): (y) 1, 21, 22 (n) 2, 3, 5, 7, 8, 10, 12, 32, OG
4. CRAWL: /A/ (y) 1, 2, 40 (n) 2, 3, 5, 7, 8, 10, 13, OG
/B/ (y) 1, 10, 11 (n) 2, 3, 5, 7, 8, 10, 13, OG
/C/ (y) 1, 5, 45
5. DRIFT: (y) 1, 7 (n) 2, 3, 5
6. FLOCK: (y) 1, 3, 4 (n) 2, 29, 30
7. FLOW: (y) 1, 2 (n) 42
8. FLY (intransitive): /A/ (y) 1, 5 (n) 2, 3, 31, 45
/B/ (y) 1, 43 (n) 2, 3, 5, 7, 8, IA
9. FLY (transitive): (y) 1 (n) 2, 3, 5, 7, 8, 43, IA
10. GLIDE: (y) 1 (n) 2, 3, 5, 7
11. HOP: (y) 1, 10, 14, 17 (n) 2, 3, 5, 7, 8, 11, 15, 16, OG
12. JUMP: (y) 1, 10, 14, 15 (n) 2, 3, 5, 7, 8, 11, OG
13. MARCH: (y) 1, 10, 37, 39 (n) 2, 3, 5, 7, 8, 11, 14, OG
14. MOVE (intransitive): (y) 1, 3, 6 (n) 2, 4
15. MOVE (transitive): (y) 1, 3 (n) 2, 4, 6
16. RIDE: (y) 1 (n) 2, 3, 5, 7, 8, IO
17. ROLL: (intransitive): (y) 1, 26, 27 (n) 2, 3, 5, 7, 8, 10, 12, 21, OG
18. ROLL: (transitive): (y) 1, 26 (n) 2, 3, 5, 6, 8, 10, 12, 21, 27, OG
19. RUN (intransitive): /A/ (y) 1, 10, 14, 16, 18 (n) 2, 3, 5, 7, 8, 11, 15, 19, OG
/B/ (y) 1, 10, 14, 16, 20 (n) 2, 3, 5, 7, 8, 11, 15, 18, OG
20. RUN (transitive): (y) 1, 10, 14, 16 (n) 2, 3, 5, 7, 8, 11, 15, 16, OG
21. SAIL (intransitive): (y) 1, 44 (n) 2, 3, 5, 7, 8, 34, 35, 36
22. SAIL (transitive): (y) 1 (n) 2, 3, 5, 7, 8, 34, 35, 36, 44
23. SCATTER (intransitive): (y) 1, 3, 4, 28 (n) 2
24. SCATTER (transitive): (y) 1, 3, 4, 29 (n) 2, 41

25. SCHOOL: /A/ (y) 1, 3, 4, 30 (n) 2, 29
/B/ (y) 1, 34 (n) 2, 3, 5, 7, 8, 11
26. SKIM: /A/ (y) 1, 28, 32 (n) 2, 3, 5, 7, 8, 12, 21, 26, OG
/B/ (y) 1, 36 (n) 2, 3, 5, 7, 8, 34, 35, 11
27. SKIP: (y) 1, 10, 14 (n) 2, 3, 5, 7, 8, 11, 15, 16, 17, OG
28. SLIDE (intransitive): (y) 1, 28, 33 (n) 2, 3, 5, 7, 8, 12, 21, 26, 46, OG
29. SLIDE (transitive): (y) 1, 28, 33, 46 (n) 2, 3, 5, 7, 8, 12, 21, 26, OG
30. SLIP (intransitive): (y) 1, 28 (n) 2, 3, 5, 7, 8, 12, 21, 26, 33, 47, OG
31. SLIP (transitive): (y) 1, 28, 47 (n) 2, 3, 5, 7, 8, 12, 21, 26, 33, OG
32. SNAKE: (y) 1, 21, 13 (n) 2, 3, 5, 7, 8, 10, OG
33. SPEED: /A/ (y) 1, 2, 42
/B/ (y) 1, 5, 45, 31 (n) 2, 3
34. SPIN (intransitive): (y) 1, 21, 24, 25 (n) 2, 3, 5, 7, 8, 10, 12, 22, OG
35. SPIN (transitive): (y) 1, 21, 24 (n) 2, 3, 5, 7, 8, 10, 12, 22, 25, OG
36. SQUIRM: (y) 1, 21 (n) 2, 3, 5, 7, 8, 10, 12, 22, 24, OG
37. STROLL: (y) 1, 10, 37 (n) 2, 3, 5, 7, 8, 11, 14, 39, OG
38. SWIM: (y) 1, 35 (n) 2, 7, 8, 34, 35, 11
39. TROT: (y) 1, 10, 14, 16, 18, 19 (n) 2, 3, 5, 7, 8, 11, 15, OG
40. TUNNEL: (y) 1 (n) 2, 3, 5, 7, 8, 11
41. WALK (intransitive): (y) 1, 10, 38 (n) 2, 3, 5, 7, 8, 11, 14, 37, OG
42. WALK (transitive): (y) 1, 10 (n) 2, 3, 5, 7, 8, 11, 14, 37, 38, OG

From the foregoing chart, it is possible to work out the components of each verb, by using the correct responses in each case. For example:

FLOW: (y) 1, 2 (n) 42

Q1 Does the object exhibit motion? Yes Go to Q2

Q2 Is the object in question a mass noun? Yes Go to Q42

Q42 Do you wish to emphasize the velocity? No P.O. FLOW

In this case the components of FLOW are: "A mass noun moves along without reference to its velocity".

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