A STUDY ON THE PROBABILITY OF *LIKELY*, *PROBABLE*, AND *POSSIBLE*

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It is claimed by Joan B. Hooper (1975: 113), making reference to the probability of the certainty adjectives, such as *likely*, *probable*, *possible*, and *conceivable*, that *likely* indicates the highest degree of probability, *conceivable* the lowest. Then she ranks them as follows: *likely > possible > probable > conceivable*. In this paper, however, I am in a position to be rather dubious as to the way she ranks them, and try to make an assumption, restricting my attention to *likely*, *probable*, and *possible*, that *likely* and *probable* indicate almost the same degree of probability, and *possible* the lowest. The observation and analysis of a wide variety of data will make it possible to provide a considerably convincing account for ranking those certainty adjectives in terms of the degree of probability.

Key words: probability, likely, probable, possible, informant survey, corpus

1. Introduction

J.B. Hooper (1975) refers to the certainty adjectives, *likely*, *probable*, *possible*, and *conceivable*, and ranks them in terms of the degree of probability as follows: *likely > possible > probable > conceivable*. Although she does not mention any evidence for her judgment, I presume that there is some doubt whether Hooper's way of ranking them is correct. (By the way, *conceivable* is excluded here in order to make my argument easier.)

Assuming that the following sentences are uttered, how will we rank them from the highest to the lowest in accordance with the probability (or likelihood) of its raining? (An informant survey of the degree of probability of *likely*, *probable*, and *possible* was carried out in the U.S., and its results will be shown in Section 3.)

1. It is *probable* that it will start to rain before evening.
2. It is *possible* that it will start to rain before evening.
3. It is *likely* that it will start to rain before evening.

Some of us will say that 1 has the highest probability of raining, 3 the second highest, and 2 the lowest. Others may say that 3 has the highest probability of raining, 1 the second highest, and 2 the lowest. There may also be some other people who will say, although it seems to be unlikely to do so, that 2 has the highest probability of raining, followed by 1 and 3.

Thus, our reactions to each sentence seem to delicately vary from one another for some reasons. We wonder if there are any clear-cut explanations as to the way they are ranked in terms of the degree of probability. So, this paper treats the probability of the certainty adjectives, viz. *likely*, *probable*, and *possible*, and is an attempt to rank them on the basis of a variety of data.

2. Syntactic and semantic properties

First, let us consider the following examples, which were basically quoted from various reference books. (NB: Asterisks denote grammatical unacceptability.)

likely

4. It's quite *likely* that the committee will accept our recommendations.
5. An early end to the dispute now seems very *likely*.
6. What's the *likely* outcome of this whole business?
7. These services are *likely* to be available to us all before long.

probable

8. It now seems *probable* that the report will damage the President's reputation.

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9. Everyone in the industry admits that strike action now seems highly *probable*.

10. The Belgians face a *probable* general election this autumn.

11. * Men are generally more *probable* to die from heart attacks than women.

possible

12. It is *possible* that he'll be late — he usually is.

13. Accidents are always *possible* in heavy industries like mining.

14. America and Russia were both *possible* financiers of the dam.

15. * You are *possible* to make a bit of money if you invest wisely.

As is naturally expected, the three certainty adjectives, viz. *likely*, *probable*, and *possible*, as in 5, 6, 9, 10, 13, and 14, can be used in both the predicative and the attributive structures, and they are also common with extraposed *that*-clauses, as in 4, 8, and 12.   However, unlike *probable* in 11 and *possible* in 15, the adjective *likely*, as shown in 7, is particularly common with subject-to-subject raising, and the structure seems to be a relatively fixed expression with a function similar to the pseudo-modal auxiliaries like *be willing to*, *be pleased to*, *be supposed to*, *be able to*, and so on.

Let us next observe how differently, from a semantic point of view, each adjective is defined in several different reference books.

likely

— something that is *likely* will probably happen or is probably true

(LDOCE, 2003)

— probable or expected (*more likely* and *most likely* are the usual forms)

(OALD, 2000)

— You use *likely* to indicate that something is probably the case or will probably happen in a particular situation.

(COBUILD, 2001)

— expected to happen; probable

(CIDOE, 1995)

— 1) having a better chance of existing or occurring than not

2) having the character of a probability

(WTNID, 1961)

probable

— likely to exist, happen, or be true

(LDOCE, 2003)

— likely to happen, to exist or to be true

(OALD, 2000)

— If you say that something is *probable*, you mean that it is likely to be true or likely to happen

(COBUILD, 2001)

— likely to be true or likely to happen

(CIDOE, 1995)

— that can reasonably and fairly convincingly be accepted as true, factual, or possible without being undeniably so.

(WTNID, 1961)

possible

— If something is *possible*, it ca be done or achieved

(LDOCE, 2003)

— 1) that can be done or achieved
2) that might exist or happen but is not certain to

(OALD, 2000)

— 1) If it is *possible* to do something, it can be done
2) A *possible* event is one that might happen

(COBUILD, 2001)

— that can be done or achieved, or that can exist.

(CIDOE, 1995)

— 1) that may or may not occur
2) that may chance
3) dependent on contingency
4) neither probable nor impossible

(WTNID, 1961)

In addition, WTNID (1961) expatiates on each adjective as follows:

Likely applies to what seems to be true or to be as alleged, suggested, or represented, the chances being considerably in favor of the thing or person being as indicated. *Probable* applies to that which is so supported by evidence that is adequate although not conclusive or by reason that is worthy of belief or acceptance. *Possible* refers to that which is within the limit of what may happen or of what a person or thing may do, although it may not seem *probable*.

And also, I referred to Merriam-Webster Inc. and Oxford University Press for their stances on how they deal with each adjective.   The following are their replies:

Merriam-Webster Inc.
Probable, *likely*, and *possible* all relate to things that may or

may not become true, real, or actual. *Probable* suggests that the chances in favor of something are quite great, although there are no grounds for certitude. *Probable* is used when there exists much evidence for something, but not actual proof … *Likely* is less strong a word than *probable*. It allows for less presumption than *probable* but still suggests the chances are in favor of something … *Possible* suggests nothing of the chances of something becoming true, real, or actual. It only indicates that something is within the limits of performance, attainment, or conception …

Oxford Univ. Press

It is impossible to rank *probable* and *likely* in different positions. *Likely* entered the English language from the earlier Old Norse source and *probable*, with its identical meaning, came from the later influence of Romance languages via the Norman Conquest. They refer to exactly the same degree of probability, meaning something like 'that can be reasonably expected'. *Possible* is definitely lower than the other two, meaning 'that can happen or exist' … *Likely* is slightly more informal than *probable*, but of course, *probably* is very common as an adverb …

According to what we have seen so far, *likely* and *probable*, on which Merriam-Webster Inc. and Oxford Univ. Press seem to give slightly different views from each other, have a similar meaning to each other in that both of them refer to almost the same degree of probability (or likelihood), meaning something like 'that may (or can) be reasonably expected to happen or to be so'.

On the other hand, *possible* seems to be the most neutral of these three terms. It suggests that nothing of the chances of something becomes true, real, or actual, and merely indicates that something can be done, exist, or happen.

3. Informant survey

In 2000 I carried out in the U.S., for the purpose of observing the intuition of native speakers of English, the following paper-based informant survey of 141 adults by a random sampling method on the degree of probability of *likely*, *probable*, and *possible*. The contents of the survey, its results, and a number of comments made by the informants are as follows:

Survey contents

Each of the sentences below has, in some way, a probability of raining. Would you rank them from the highest to the lowest (1 being the highest) according to the probability of its raining? Please write the appropriate

letter below the number.

(A) It is *probable* that it will start to rain before evening.
(B) It is *possible* that it will start to rain before evening.
(C) It is *likely* that it will start to rain before evening.

	1	2	3
Ranking:	>	>	>

Please make comments, if any, on each of the sentences or on this questionnaire.

Survey results

Ranking						Total
1 (highest)		2		3 (lowest)		
A	>	B	>	C		2
A	>	C	>	B		51
B	>	A	>	C		6
B	>	C	>	A		8
C	>	A	>	B		67
C	>	B	>	A		7

(A: *probable*　B: *possible*　C: *likely*)

Comments of informants (with occupations and ages)

· A > C > B

Probable and *likely* are so close in meaning that rating them is nearly meaningless.

(PR man, 49)

· A > C > B

The difference between *probable* and *likely* is 'most likely' a subjective reaction rather than an intrinsic difference in meaning.

(Clerk, 35)

· A > C > B

Probable means it is quite sure that it will rain. *Likely* is less probable. *Possible* is that it could rain but it may not.

(Teacher, 49)

· A > C > B

A lot depends on the humidity in the air and other weather factors. I feel that *probable* and *likely* are about the same in meaning.

(Homemaker, 48)

· A > C > B

I would say these sentences this way:
It will *probably* start to rain before evening.
It will *possibly* start to rain before evening.
It will *likely* start to rain before evening.

(Teacher, 63)

· C > A > B

If something is likely, then it is also probable.   If something is probable, then it is also possible.   However, the converse of the two previous conditions is not true. Namely, if something is possible, it is not necessarily probable.   Again, if something is probable, it is not necessarily likely.

(Data analyst, 31)

· C > A > B

I think the word *likely* means the strongest and *probable* means nearly the same, but *possible* doesn't imply that it will rain.

(Truck driver, 42)

· C > A > B

For me *likely* and *probable* are of equal value.

(Music teacher, 37)

· C > A > B

Likely conveys the greatest likelihood of rain.   *Probable* conveys a stronger sense than *possible*.   *Possible* may or may not have rain.

(Lawyer, 43)

· C > A > B

Probable and *likely* are close, but *likely* is more probable. *Possible* is less likely (or probable).

(Editor, 48)

· C > A > B

Likely, to me, indicates a higher probability than *probable*. *Possible* is the lowest ranking.

(Administrator, 57)

The survey results above indicate that opinions and reactions obviously vary among the informants on the degree of probability of each word, and a number of informants appear to find it rather difficult to deliver judgments particularly on the degree of probability of *likely* and *probable*.   One of the informants makes a symbolic comment: The difference between *probable* and *likely* is 'most likely' a subjective reaction rather than an intrinsic difference in meaning.

4.   Corpus data

I wonder if there are any specific intensifiers or modifiers that tend to occur with *likely* and *probable*.   Let us now turn to how the collocations of *likely* and *probable* are dealt with in the corpus, observing the statistically useful data of the CobuildDirect corpus, which is made up of 50 million words of contemporary written and spoken text.

Table 1: Frequency of intensifiers (or modifiers) with *likely* and *probable*

	likely	*probable*
more	52	3
less	11	3
most	9	1
quite	5	1
very	4	2
least	2	0
highly	1	2
more than	0	2
fairly	0	1
possibly	0	1
entirely	0	1
overwhelmingly	0	1

NB: *likely* — out of 240 instances

probable — out of 92 instances

Here are some of the instances from the displays of concordance lines in the corpus:

likely

· … developed where you know you're *more likely* to go with your daughter or say …

· … Fergusson is tall and blonde, a *more likely* candidate for Baker's dumb sidekick …

· … hopeful that it's going to be *less likely*, not *more likely*, that the people …

· … the vehicle we ride is *less likely* that we can actually kill or hurt …

· … in women than men and women are *most likely* to be affected just before their …

· … ratio that France, Germany's *most likely* enemy in the immediate future …

· … The diplomats also say it is *quite likely* that the five permanent members of …

· … to music loud in studios is *quite likely* to encounter high volumes in one of …

· … a Sindhi prime minister is … is *very likely*.   I think, in general, that …

· … mean that Asian-Americans are *least likely* to live in poverty of any of the …

· … it does say Not proven but *highly likely* to be … Thank you.   Can we have …

probable

· … time to hit the shelves.   A *more probable* explanation is bid speculation ….

• … life much more pleasant.　It is *more probable* that no such thing will occur, and …

• … although it made even *less probable* the success of any attempt to …

• … Well, it's *quite probable* I can find you a job, I think …

• … procession so far on Foot?　All *very probable*, or rather ridiculous Romances …

• … desperate voyages.　It is *highly probable* that many of the Services …

• … is far from clear.　It's *more than probable* that she'll write her memoirs …

• … captive, even though it is *fairly probable* he would not survive in the wild?

• … of approach as it is *possibly probable* to be.　Now I am going to admit in …

• … the same way.　So it's *entirely probable* that there will be an …

• … In this case, it is *overwhelmingly probable* that the aliens concerned will be …

According to the data shown above, there is definitely a tendency for *likely* as an adjective not to be used alone, but to be more often used in the combinations like *more likely*, *less likely*, *most likely*, *quite likely*, *very likely*, and so on, whereas *probable*, unlike *likely*, is less often used with such intensifiers as *more, less, most, quite*, and *very*.　In addition, the certainty adjective *probable* tends to appear with many other intensifiers, such as *highly, more than, fairly, possibly, entirely*, and *overwhelmingly*, even though only one or two instances for each intensifier can be found in this corpus data. However, those various intensifiers do not seem to contribute to clarifying which one of them has a higher degree of probability.

5.　Conclusion

In this paper, we have been concerned, on the basis of various kinds of data, with the probability of the certainty adjectives *likely*, *probable*, and *possible*.　First, we considered the syntactic and semantic properties of each adjective.　Second, we referred to Merriam-Webster Inc. and Oxford Univ. Press, which are leading and influential dictionary publishers in the U. S. and the U.K. respectively, for their stances on the degree of probability of the three terms.　Third, some intriguing data were compiled through an informant survey carried out in the U.S..　And fourth, we examined, observing the data of the CobuildDirect corpus, the collocations of *likely* and *probable*.

The conclusion we can derive from what we have seen so far is as follows:

Possible is a word for describing something that can (or may) be done or that can (or may) happen, so we can say that something even improbable or unlikely, in a sense, is possible.　Accordingly, it follows that *possible* indicates the lowest degree of probability.

As for *likely* and *probable*, it seems somewhat difficult to decide which one of them indicates a higher degree of probability.　It is rather unfortunate that none of the dictionary definitions fully satisfy us, indicating that *likely* and *probable* describe much the same degree of probability. The survey results above show that *likely* and *probable* refer to almost the same degree of probability (*likely* is slightly higher, though), which I think implies that there seem to be only subtle differences between them and it may probably (or likely) be a matter of subjective judgment, as one of the informants mentions earlier.　Of particular interest is the fact that even the two leading dictionary publishers assume their subtly different attitudes toward the treatment of those two particular words: *likely* is less strong a word than *probable* (*Webster*), and *likely* and *probable* refer to exactly the same degree of probability (*Oxford*).　A wide variety of intensifiers which often appear with *likely* and *probable* seem to have little to do with the matter of probability.

Finally, I would conclude at the present stage, giving careful observation and analysis to all the data mentioned above, with the remark that *likely* and *probable* refer to almost the same degree of probability.

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