



A SYSTEMATIC DESIGN OF TIME-ASPECT GRAPHIC SYSTEM FOR VISUALISING ENGLISH TENSES

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Abstract:

Visual instruments such as graphics may be useful in the learning and teaching process for any language grammar. Time charts or graphics for this purpose have long been commonly used all over the world in the language learning and teaching including English. However, the publications in the form of books and other course material in this ground do not cover all of the English tenses and fail to approach to the matter in a systematic way. This paper proposes a new time-aspect graphic system for English Language tenses, which is complete in the sense that it visualize all of the sixteen tenses in a systematic manner. First, timing elements such as time axis and reference points were designated. Then for representation of aspect of the tenses special conceptual symbols were designed. Finally, graphics (charts or maps) for each of the sixteen tenses was implemented using the time elements and aspect symbols over exemplary sentences. Simple sentences using the same main verb *write*, were chosen for sake of homogeneity and ease of comparison, however the designed system is available to complex sentences. The timing elements and graphical symbols together conform a complete consistent visual representation group addressing English tenses. The designed visual system is expected to be helpful in the education of English Tenses and is readily adaptable to other languages.

Keywords: visual representation of English tenses, time and aspect graphics

1. Introduction

In the teaching of grammar of any language, using graphics may be helpful to some extent, depending upon the system used. Time charts for this purpose have long been commonly used all over the world. The literature is abundant with this kind of applications [2-7]. Drawbacks arise because of the hardship of representing the aspect, which is defined as *“look, view, looking, way of looking, the situation of one planet with*

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respect to another...[1]”, component together with timing in the same graphic. Therefore some commonly used signs, symbols fall unsatisfactory for the aim, and some of them fail to conform to a consistent group. This paper offers a complete graphical representation system which may be useful in the education of English Tenses and adaptable readily to other languages. First, sixteen tenses are grouped in a matrix form, rows and columns indicating time and aspect, respectively. Then timing and reference signs are described as in Table 2, and aspect symbols are designed as in Table 3, as a basis for the whole representation system. Finally, for each of the sixteen tenses of English Language these timing, reference and *aspect* elements are constructed in a fashion to yield specific time-aspect graphic, thus making a complete visual system. For the best knowledge of the author there is in literature no any such a complete system comprising all of the sixteen tenses of English Language.

2. Method

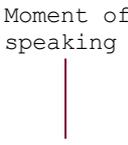
In the context of language the term *tense* is sometimes defined deficiently as “*form of a verb showing time of an action or state*”, since it also has an *aspect* feature. Therefore, a more correct definition may be “*a form taken by a verb to indicate the time and also the continuance or completeness of an action [1]*”. English Tenses conventionally are grouped as in Table 1, so that columns denote time and rows denote aspect [8].

Table 1: English Tenses Matrix

Time Aspect	Present	Past	Future	Future in the Past (Conditional)
Simple	—↑	—↑	—↑	—↑
Continuous	←┘	←┘	←┘	←┘
Perfect	←┘	←┘	←┘	←┘
Per. Cont.	←┘	←┘	←┘	←┘

In the designed visual representation system, *time* component was described by a horizontal axis in a way *moment of speaking* is centered on it with a vertical line, which was defined as the general or global reference point for all acts of occurrences. Possibly existing, expressed or implied, in a sentence, secondary or tertiary reference points were also described similarly but with a dashed vertical line, as illustrated in Table 2.

Table 2: Time and Reference Description of Tenses

Time axis	
General reference time point	
Other reference time points	

On the other hand, the *aspect or viewpoint* components were described using different but conceptually consistent symbols. Namely, discrete point sign was assigned to Simple Tenses; a curved line piece was assigned to Continuous Tenses in a fashion to reflect the progressive nature of the event; a closed line piece (geometrically an ellipse) was assigned to Perfect Tenses with an eye to expose the completeness of the act or event; and Perfect Continuous Tenses were assigned a compound sign composed of the ingredient individual symbols, as shown in Table 3.

Table 3: Aspect Description of Tenses

Simple Tenses	
Continuous Tenses	
Perfect Tenses	
Per. Cont. Tenses	

Admittedly, it is almost impossible to apply the tables strictly for every sentence without any modification. However, these modifications, where needed in the study, were kept minimal and logically coherent. For example, in Simple Present Tense, an action or event occurring in a limited time interval was designated with a straight line, which is conventionally defined as composed of numerous individual points. The application of the designed novel tense representation system is illustrated in Chapter III, with one simple sentence for each tense, and each type if any.

3. Implementation of the Developed Graphic System

In this chapter, the implementation of the novel graphic system is illustrated over examples. In all of the exemplary sentences, the English verb *write* is used for sake of simplicity, homogeneity and comparison.

3.1 Simple Tenses

A. Simple Present Tense (Type I)

S1: I am a writer.

(Here, *moment of speaking* is the primary reference of time.)

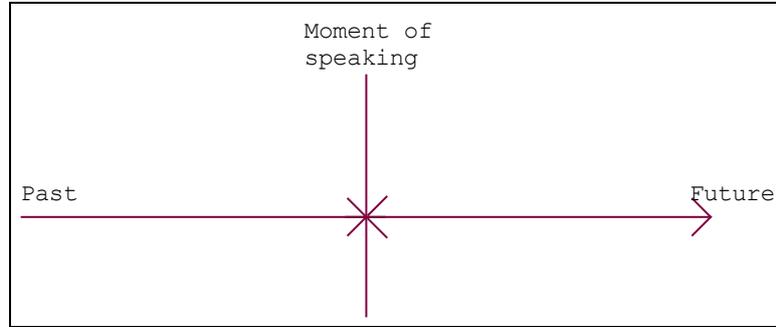


Figure 3.1: Graphic of S1 (Type I, only one time point)

B. Simple Present Tense (Type II)

S2: I often write letters to my friends.

(Here, *the moment of speaking* is the primary reference of time.)

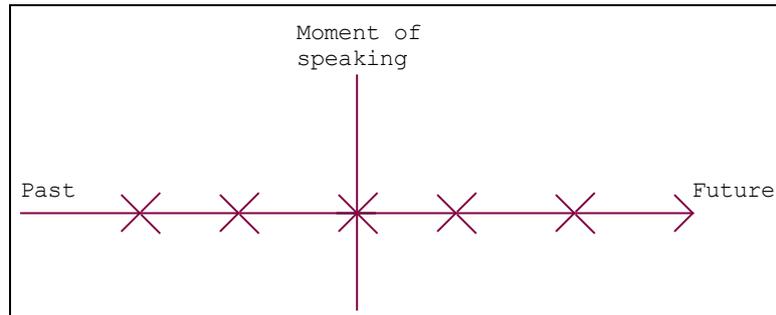


Figure 3.2: Graphic of S2 (Type II, several time points)

C. Simple Present Tense (Type III)

S3: Authors write books and articles.

(Here, *the moment of speaking* is the primary reference of time.)

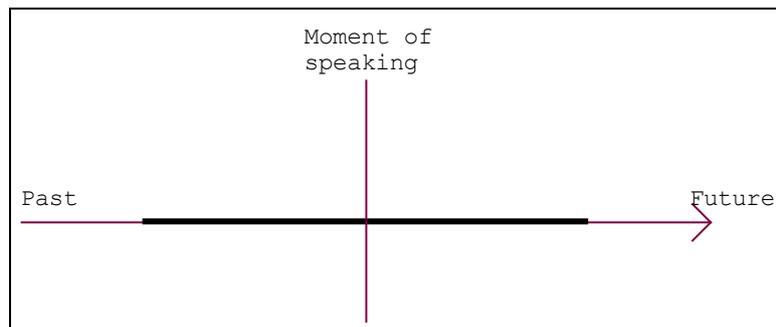


Figure 3.3: Graphic of S3 (Type III, numerous time points merge into a line)

D. Simple Past Tense (Type I)

S4: I wrote a letter yesterday.

(Here, *the moment of speaking* is the primary reference of time.)

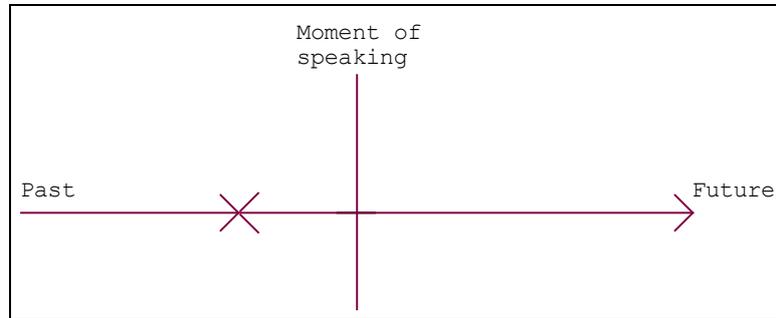


Figure 3.4: Graphic of S4 (Type I)

E. Simple Past Tense (Type II)

S5: All over the Monday night, I wrote an article.

(Here, *the moment of speaking* is the primary reference of time.)

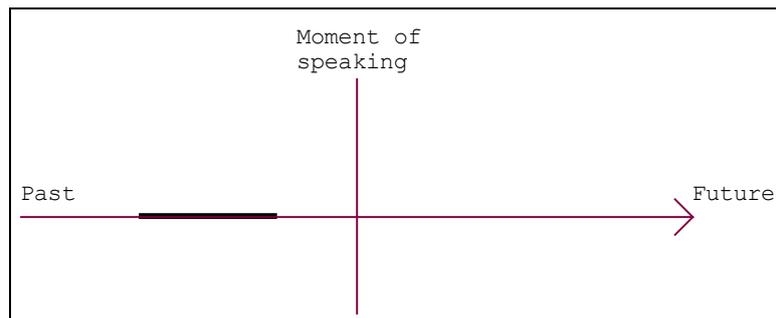


Figure 3.5: Graphic of S5 (Type II)

F. Simple Future Tense

S6: I will write to him tomorrow.

(Here, *the moment of speaking* is the primary reference of time.)

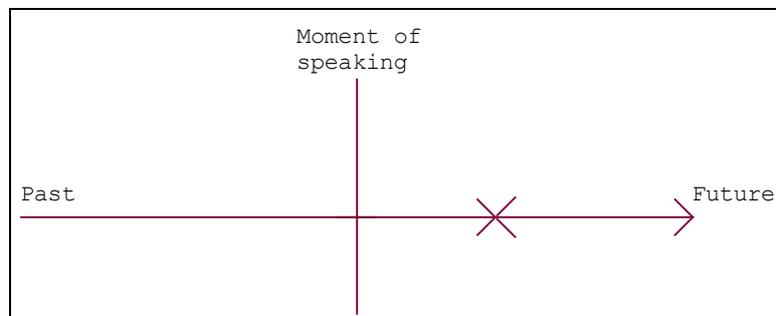


Figure 3.6: Graphic of S6

G. Simple Future in the Past Tense

S7: I would write to him the following weekend.

(Here *the moment of speaking* is the primary reference; secondary reference is not expressed but impliedly one week before the moment of writing. That is, the moment of writing is past according to the primary reference and future according to the secondary reference.)

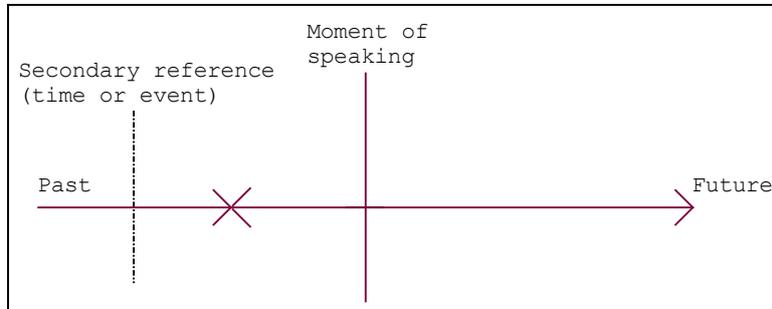


Figure 3.7: Graphic of S7

3.2 Continuous Tenses

A. Present Continuous Tense

S8: I am writing a letter.

(Here, *the moment of speaking* is the primary reference of time)

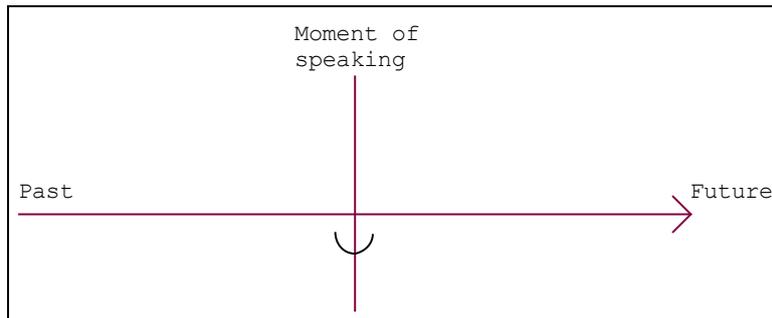


Figure 3.8: Graphic of S8

B. Past Continuous Tense

S9: Yesterday midnight, I was writing a letter.

(Here, *the moment of speaking* is the primary reference and *yesterday midnight* is secondary reference of time. That is, the moment of writing is past according to the primary reference and continuous according to the secondary reference.)

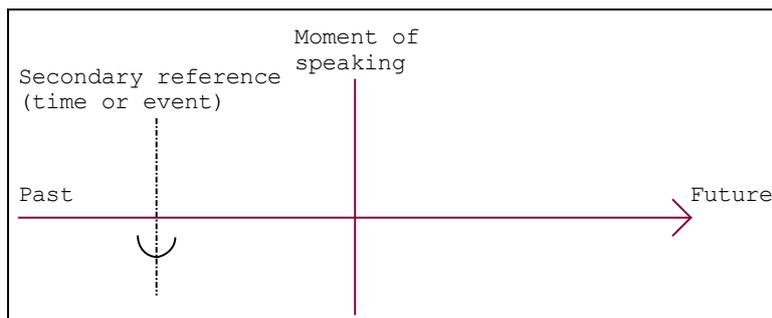


Figure 3.9: Graphic of S9

C. Future Continuous Tense

S10: Tomorrow midnight, I will be writing a letter.

(Here, *the moment of speaking* is the primary reference and *tomorrow midnight* is secondary reference of time. That is, the moment of writing is future according to the primary reference and continuous according to the secondary reference.)

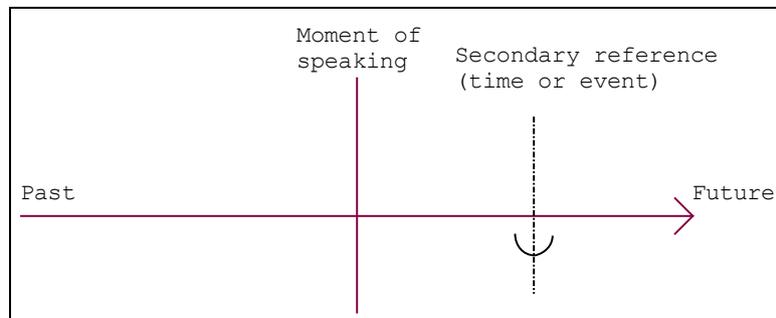


Figure 3.10: Graphic of S10

D. Future Continuous in the Past Tense

S11: The following midnight I would be writing a letter.

(Here *the moment of speaking* is the primary reference; secondary reference is the *following midnight* according to the tertiary reference, which is not expressed but impliedly one week before the moment of writing. That is, the moment of writing is past according to the primary reference, continuous according to the secondary reference and future according to the tertiary reference.)

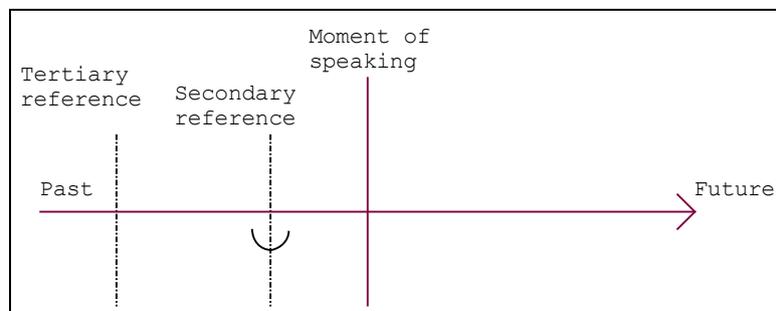


Figure 3.11: Graphic of S11

3.3 Perfect Tenses

A. Present Perfect Tense (Type I)

S12: I have just written a letter.

(Here, *the moment of speaking* is the primary reference)

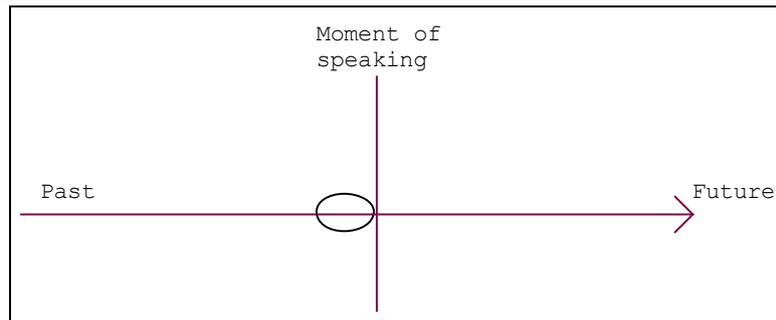


Figure 3.12: Graphic of S12 (Type I)

B. Present Perfect Tense (Type II)

S13: I have written three letters to him so far.

(Here, *the moment of speaking* is the primary reference)

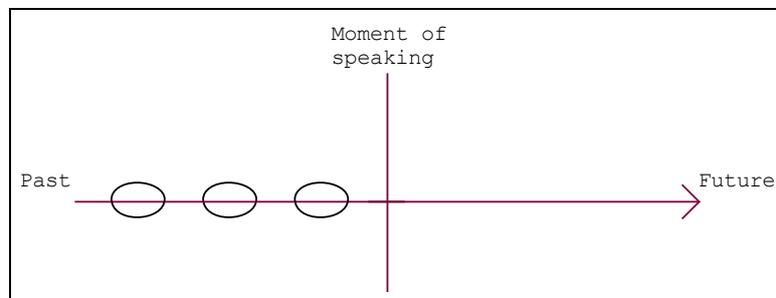


Figure 3.13: Graphic of S13 (Type II)

C. Present Perfect Tense (Type III)

S14: I have written for ten years for this journal.

(Here, *the moment of speaking* is the primary reference)

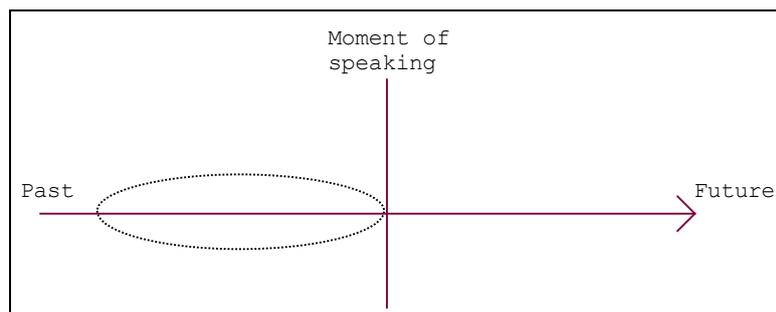


Figure 3.14: Graphic of Present Perfect Tense (Type III)

D. Past Perfect Tense

S15: Upon her graduation, I had written a letter of congratulation to her.

(Here, *the moment of speaking* is the primary reference and *her graduation* is the secondary reference of time.)

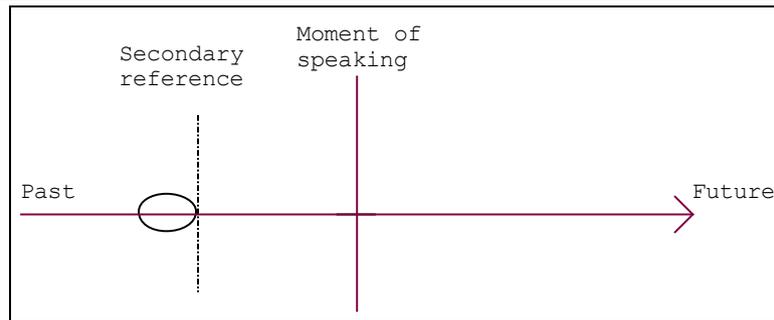


Figure 3.15: Graphic of S15

E. Future Perfect Tense

S16: At the end of next week, I will have written my third article.

(Here, *the moment of speaking* is the primary reference and *the end of next week* is the secondary reference of time.)

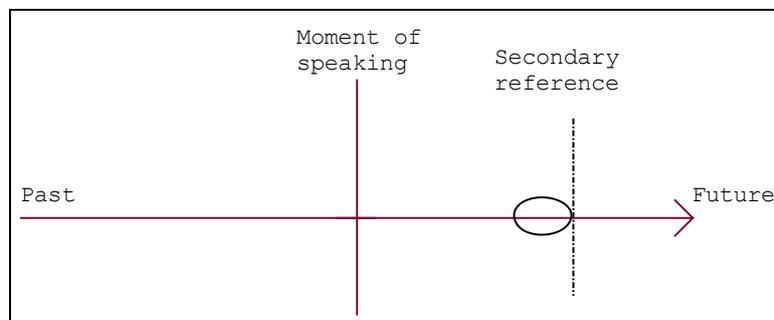


Figure 3.16: Graphic of S16

F. Future Perfect in the Past Tense

S17: At the end of the following week, I would have written my third article.

(Here *the moment of speaking* is the primary reference; secondary reference is *the end of the following week* according to the tertiary reference, which is not expressed but impliedly one week before the completion of writing. That is, the completion of writing is past according to the primary reference perfect according to the secondary reference and future according to the tertiary reference.)

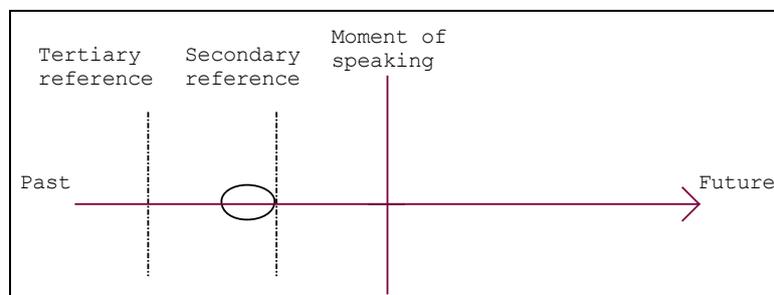


Figure 3.17: Graphic of Future Perfect in the Past Tense

3.4 Perfect Continuous Tenses

A. Present Perfect Continuous Tense

S18: I have been writing a letter for one hour.

(Here, *the moment of speaking* is the primary reference.)

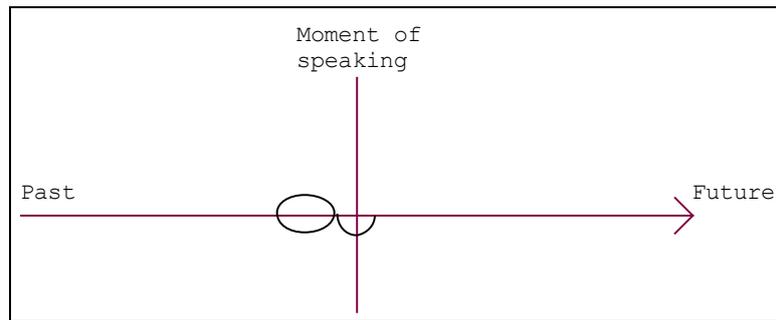


Figure 3.18: Graphic of S18

B. Past Perfect Continuous Tense

S19: Yesterday midnight I had been writing an article letter for four hours.

(Here, *the moment of speaking* is the primary reference; *the yesterday midnight* is the secondary reference of time.)

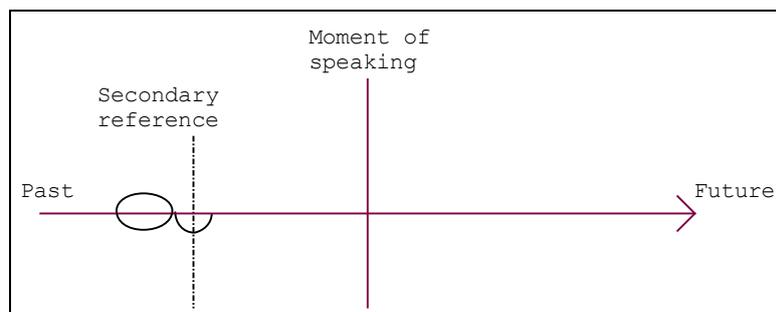


Figure 3.19: Graphic of S19

C. Future Perfect Continuous Tense

S20: Tomorrow midnight I had been writing an article for four hours.

(Here, *the moment of speaking* is the primary reference, *the tomorrow midnight* is the secondary reference of time.)

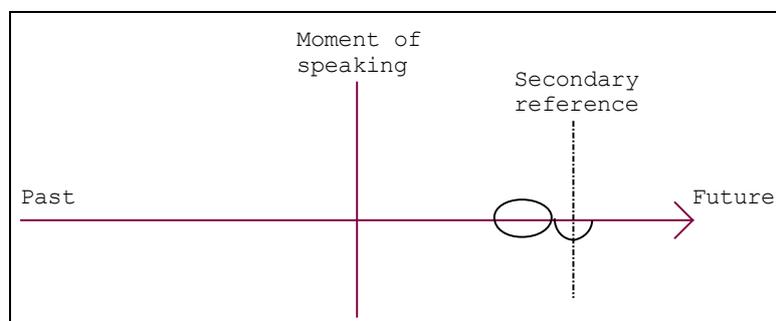


Figure 3.20: Graphic of S20

D. Future Perfect Continuous in the Past Tense

S21: The following midnight I had been writing an article for four hours.

(Here *the moment of speaking* is the primary reference; secondary reference is *the following midnight* according to the tertiary reference, which is not expressed but impliedly one

week before the continuing act of writing. That is, the act of writing is past according to the primary reference, perfect continuous according to the secondary reference and future according to the tertiary reference.)

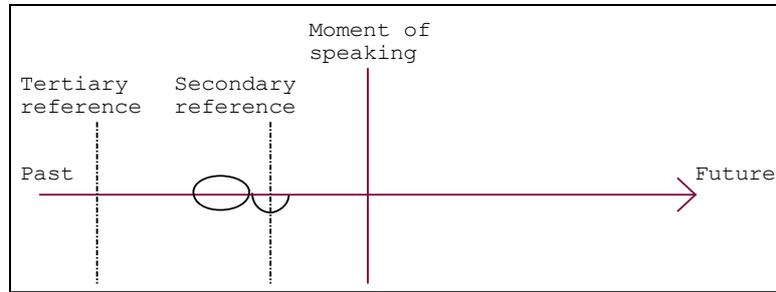


Figure 3.21: Graphic of S21

4. Conclusion

In this work is proposed a systematic set of time-aspect graphics for visualizing English Tenses, which is complete in itself in the sense that every one of English Tenses is visually represented with a specific graphic, including subtypes. Examples are given as simple sentences, but in case of complex sentences including subordinate clauses, the system is similarly applicable because of the consequences of the tenses in English Grammar. On the other hand, although the system is designed for English Tenses, it can readily be arranged to any other language. The proposed system may expectedly be utilized in the education of English Tenses as an auxiliary tool, and is also intended to provoke further studies in this context.

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