

CHAPTER 1

Introduction

Scientiae radices amarae, fructus dulces.

Korzenie wiedzy są gorzkie, ale jej owoce słodkie.

1.1 Setting the scene

Socrates, a famous Athenian philosopher from the 5th century B.C. (c. 470–399 B.C.), was regarded as the wisest man ever, at least according to the Delphic oracle. He did not consider himself particularly wise, though. To find out whether the oracle was right, he would engage in conversations with other wise men or men who considered themselves to be exceptionally wise and came to the conclusion that those apparently wise men in fact knew little but they were not aware of this. And this very fact made him in some sense wiser than them: he knew one thing more than they knew, namely he knew that he knew nothing, while the others did not know this (cf. Plato, *Obrona Sokratesa* 621A–D; cited after Kalinkowski 1997: 208).

After so many years this famous saying *oīda ouk eidōs* (οἶδα οὐκ εἰδώς) (*Scio me nihil scire* ‘I know that I know nothing’) has lost nothing of its validity. To give an example: If you ask a primary school pupil what a noun or verb is, you will get a clear answer. Likewise, it will also be no problem for a primary school pupil to define the subject of a sentence. Our pupil will also equally self-confidently tell us that tense is a category of verbs but not of nouns. How can it then be that our pupil – after he or she has spent many years studying languages and their grammars – is no longer sure about such seemingly simple and basic things? The present book will provide an answer to this. It will show how simple facts can easily turn out to be complicated matters once we leave the relatively secure ground of simple sentences from a single language. Taking into account data from other languages, especially non-Indo-European languages, often helps to better understand a problem investigated in one particular language. This does not mean that we should neglect single-language studies. What we need is both detailed studies of individual languages and insights from crosslinguistic research. The present book will demonstrate the importance of a multidimensional approach and interdisciplinary research: only if we

investigate a given phenomenon from a broader perspective, if we take into account different aspects of grammar (syntax, morphology, and semantics), and if we combine them with insights from relevant diachronic, typological, and psycho- and neuro-linguistic studies, will we be able to get a clearer picture of the problem under investigation.

What looks like a straightforward answer to a given linguistic problem is often preceded by long and hard research, as always in life. But this book will also show that an answer to one question usually gives rise to other questions, and such questions in turn require further research. This is part of normal scientific research, which is hard but also very rewarding if you see how the pieces of a puzzle start to form a clear picture, if you see that all of a sudden everything starts to make sense. Or, as a famous saying ascribed to Aristotle says: *Scientiae radices amarae, fructus dulces* ('The roots of education are bitter, but the fruit is sweet') (after Kalinkowski 1997: 208).

1.2 Introducing the puzzles

If you ask a layman how many different tenses there are in Polish, he or she will certainly tell you that there are three tenses: past tense, present tense, and future tense. And if you ask him/her to give you some examples, he or she will certainly produce something like (1.1).

- | | |
|---|---------------|
| (1.1.) a. Jan pisał.
'John was writing.' | PAST |
| b. Jan pisze.
'John is writing.' | PRESENT TENSE |
| c. Jan będzie pisać.
'John will write/be writing.' | FUTURE |

However, a closer look at these seemingly simple and clear examples reveals that the situation is much more complicated. Apart from tense distinctions, Polish also has aspectual distinctions: it distinguishes perfective and imperfective verbs. The interplay between tense and aspect is not symmetrical though. In order to see this, let us consider the following examples in more detail:¹

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|--|
| (1.2) a. Jan <u>pisał</u> książkę. PAST
John write.IPFV.PTCP.SG.M book.ACC
'John was writing a book.' |
|--|

¹ For clarity, in the following examples some morphemes, e.g., perfective prefixes or agreement (present tense) suffixes, will be separated from the rest of the verb with a hyphen, although this is not a convention of Polish orthography.

- b. Jan **na-pisał** książkę.
 John write.PFV.PTCP.SG.M book.ACC
 ‘John wrote a book.’
- (1.3) a. Jan *pisz-e* książkę. PRESENT TENSE?
 John write.IPFV.PRS.3SG book.ACC
 ‘John is writing a book.’
- b. Jan **na-pisz-e** książkę.
 John write.PFV.PRS.3SG book.ACC
 ‘John will write a book.’
- (1.4) a. Jan *będzi-e* *pisać* książkę. FUTURE?
 John be.AUX.3SG write.IPFV.INF book.ACC
 ‘John will write / will be writing a book.’
- a.’ Jan *będzi-e* *pisał* książkę.
 John be.AUX.3SG write.IPFV.PTCP.SG.M book.ACC
 ‘John will write / will be writing a book.’
- b. *Jan *będzi-e* **na-pisać** książkę.
 John be.AUX.3SG write.PFV.INF book.ACC
- b.’ *Jan *będzi-e* **na-pisał** książkę.
 John be.AUX.3SG write.PFV.PTCP.SG.M book.ACC

In the past tense both imperfective and perfective verbs are possible, as illustrated in (1.2), and in both cases the temporal interpretation is that of a past event. However, the same is not the case in the present tense; cf. (1.3.): here only an imperfective verb receives a present tense interpretation, while a perfective verb denotes a future eventuality. In the future tense constructions in (1.4), which consist of the so-called “future auxiliary” *będzie* and a lexical verb, only imperfective verbs are allowed; cf. (1.4a/a’) vs. (1.4b/b’). Moreover, there are two variants of such compound future constructions: one with an infinitive (1.4a) and one with the so-called *l*-participle (1.4a’). To make things even more complicated, the *l*-participle is actually the form used in the past tense (cf. (1.2)),² which makes such examples appear to

² To be precise, the past tense in Polish is formed with the so-called past participle (= *l*-participle) of both perfective and imperfective verbs and the inflectional ending (= person and number subject agreement morphology); cf. (i). We will return to these issues in the following chapters in more detail. Here, just for the sake of illustration, the full paradigm of the person and number agreement morphology (for the past tense) (cf. (ii)) as well as the paradigm of participle endings (cf. (iii)) are provided. Note that gender is marked on the *l*-participle. While in the singular verbal agreement is either masculine, feminine, or neuter, there are two forms of verbal agreement in the plural: virile, which occurs with nouns of masculine-personal gender, and nonvirile, which occurs with all other genders.

contain past morphology in the future tense. And there is also something strange about the future auxiliary *będzie*. It is related to the verb *być* ‘to be’, actually it is its future form; cf. (1.5c). However, the inflectional *-e* suffix in *będzie* seems to be identical with the inflectional suffix of ordinary present tense verbs; cf. (1.3). This fact would suggest that, at least from a morphological point of view, *będzie* is a present tense form. But assuming this to be the case, two present tense forms of *być* ‘to be’ would then exist as there is another regular present tense form of *być*, namely *jest*; cf. (1.5b).

- (1.5) a. był PAST
 be.PST.3SG.M
 ‘s/he was’
- b. jest PRESENT TENSE
 be.PRS.3SG
 ‘s/he is’
- c. będzie (PRESENT TENSE?) FUTURE
 be.FUT.3SG
 ‘s/he will be’

Another issue is that on the assumption that *będzie* has present tense morphology and the *l*-participle contains past morphology, then, strangely enough, in constructions like in (1.4a’) two different tense features/tense specifications would be present, present tense and past tense, which should have consequences for the structure of these constructions. Furthermore, assuming that the infinitival complement of

- (i) Czytał-a-m książkę. / Prze-czytał-a-m książkę.
 read.IPFV.PTCP.1SG.F book.ACC / read.PFV.PTCP.1SG.F book.ACC
 ‘I (feminine) was reading a book.’ / ‘I (feminine) read a book.’

- (ii) The paradigm of the person and number agreement (for the past tense)

PERSON	NUMBER	
	SINGULAR	PLURAL
1.	-m	-ś
2.	-śmy	-ście
3.	-∅	-∅

- (iii) The paradigm of participle endings

GENDER	NUMBER	
	SINGULAR	PLURAL
MASCULINE	-ł	
FEMININE	-ła	
NEUTER	-ło	
VIRILE		-li
NONVIRILE		-ły

będzie in (1.4a) does not bear any tense feature, this would make these two variants of the compound future tense in Polish, that is the variant with an infinitival complement (1.4a) and the variant with an *l*-participle complement (1.4a'), syntactically and semantically different from each other.

What also makes the future auxiliary *będzie* exceptional is the fact – already mentioned above – that it only selects imperfective verbal complements; cf. (1.4a/a') vs. (1.4b/b'). This makes it different from other auxiliaries in Polish, e.g., from the conditional auxiliary, which can co-occur with both perfective and imperfective verbs; cf. (1.6).³

- (1.6) a. Teraz Jan pisał-**by** książkę.
 now John write.IPFV.PTCP.SG.M+COND book.ACC
 'Now John would write a book.'
- b. Jan chętnie **na-pisał-by** książkę.
 John willingly write.PFV.PTCP.SG.M+COND book.ACC
 'John would like to write a book.'

³ Conditional constructions consist of the particle *by*, which always co-occurs with the (person + number) subject agreement suffix, and the past participle (the *l*-participle) of both perfective and imperfective verbs; see (i, ii), and (iii), respectively. The complex *by*+agreement morphology can occur in two different positions: it can be attached to the *l*-participle (i.e., it can form one complex with the *l*-participle), as illustrated in (i), or it can appear separately to the left of the participle, as in (ii) (cf. Borsley and Rivero 1994: 375f.; Dornisch 1997: 186).

- (i) Na-pisali+*by*+ście ten artykuł.
 write.PFV.PTCP.PL.VIRILE +COND+2PL [this paper].ACC
 'You would write this paper.'
- (ii) Wy *by*+ście na-pisali ten artykuł.
 you COND+2PL write.PFV.PTCP.PL.VIRILE [this paper].ACC
 'You would write this paper.'
- (iii) My pracowali+*by*+śmy dłużej.
 we work.IPFV.PTCP.PL.VIRILE +COND+1PL longer
 'We would work longer.'

There is no consensus in the literature as far as the status of the particle *by* is concerned. While, for instance, Fisiak et al. (1978: 99ff.) speak about the conditional construction as marked by the mood suffix *-by*, Borsley and Rivero (1994) (cf. also Witkoś 1998) treat *by* as a conditional auxiliary. There is also disagreement regarding the question of whether the complex consisting of the COND particle *by*+agreement morphology should be regarded as just one element (an "inflected auxiliary") generated as such in one position, as is assumed in Borsley and Rivero (1994: 389f.) (see however footnote 4 in Borsley and Rivero 1994: 390 for some alternative suggestions), or whether it should rather be taken to consist of two separate elements, namely the actual conditional auxiliary *by* and the person-number subject agreement morphology, which are accordingly generated in two different positions. This latter view is advocated, e.g., by Dornisch (1997). See Błaszczak (2001a: Ch. 2) for a more detailed discussion of this issue; see Migdalski (2006) for an excellent overview of compound tenses in Slavic; see also Tomaszewicz (2008; 2012) for a discussion of conditional and subjunctive mood in Polish.

With respect to aspectual selectional properties the future auxiliary *będzie* is not only different from other auxiliaries in Polish but also from other Slavic languages employing a BE-auxiliary in future tense constructions. Consider the Slovenian examples in (1.7) (Franc Marušič, personal communication (p.c.), as cited in Błaszczak and Klimek-Jankowska 2013a: 17). They show that the Slovenian future auxiliary, unlike its Polish counterpart, is compatible with both imperfective and perfective participial (*l*-participle) complements.

(1.7) *Slovenian*

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|----|------------|----------------------|--|
| a. | bo | pisal | |
| | be.AUX.3SG | write.IPFV.PTCP.SG.M | |
| | | | ‘He/she will write / will be writing.’ |
| b. | bo | napisal | |
| | be.AUX.3SG | write.PFV.PTCP.SG.M | |
| | | | ‘He/she will write / will have written.’ |

On the other hand, in a comparable periphrastic future tense construction in Russian also only imperfective complements are allowed, just like in Polish; see (1.8) (Mezhevich 2006: 51–52). However, unlike in Polish, in Russian the future auxiliary *budet* takes only infinitival and no participial complements.

(1.8) *Russian*

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|------|--------|----------------|---------------------------|
| a. | Ona/on | bud- <i>et</i> | čitat’. |
| | she/he | be.3SG | read.IPFV.INF |
| | | | ‘She/he will be reading.’ |
| b. * | Ona/on | bud- <i>et</i> | pro-čitat’. |
| | she/he | be.3SG | read.PFV.INF |

In view of the examples discussed so far, one may have gained the impression that Slavic languages in general use a BE-auxiliary in future tense constructions. This is not true as there are many Slavic languages in which a different auxiliary is used (see Chapter 3 for more discussion on this topic). Take, for example, Bulgarian. As shown in (1.9) (Tomić 2004: 523), in future tense constructions a modal clitic *šte* is used, which is a descendant of the Old Slavic modal verb *xotěti* ‘will/want’ (Tomić 2004: 523, 534). This makes the Bulgarian future tense different from the Polish compound future tense but similar to English future constructions with the auxiliary *will*, which historically also derives from a modal verb, more specifically, from the Old English verb *willan* meaning ‘wish’ (see Lightfoot 2006: 37f. and the references cited therein).

(1.9) *Bulgarian*

Petăr	šte	dojde	utre.
Petar	will.MOD.CL	come.PFV.PRS.3SG	tomorrow
'Petar will come tomorrow.'			

1.3 Posing research questions

As the discussion in the preceding section has shown, even our simple starting question about the number of grammatical tenses in Polish turned out in the end to be quite complicated and not easy to answer. Whereas there can be no doubts as to the existence of the past tense in Polish, the case of the present tense and the future tense is more complicated. A present tense verb can give rise to a future meaning if it is perfective. On the other hand, periphrastic future constructions contain an auxiliary verb whose morphological form seems to be that of a present tense verb. And whereas there is one past tense in contemporary Polish, there is more than one way of expressing future time reference: one can use a present tense form of a perfective verb; in addition, one can use a periphrastic (compound) future construction with an auxiliary *będzie* and an infinitival complement or a periphrastic future construction with an auxiliary *będzie* and an *l*-participle complement. What we observe in Polish does not necessarily correspond to what we find in other Slavic languages, which makes the picture even hazier at first. The first question we should ask is a question about tense in general and about future tense in particular.

QUESTION COMPLEX 1:

What is the nature of tense? Is tense a universal category? Can there be truly tenseless languages? If so, what are the alternative means of expressing tense? Is tense an exclusively verbal category? How is it expressed in the languages of the world? How many different tense distinctions are there? Is a Tense Phrase (TP) always projected in the syntactic structure of a clause? What is the relation between tense and case marking of nominal phrases? What makes the future tense special? How is it realized in the languages of the world? Is the future a tense category at all? If not, how could it be analyzed otherwise?

The final three questions will lead us directly to another question complex.

QUESTION COMPLEX 2:

What is the origin of different future tense markers crosslinguistically? Does the origin of a given future construction still matter for its present meaning and does it restrict/determine the range of its possible uses? Are, for example, future con-

structions based on a modal verb such as ‘want’ different in this respect from future constructions based on a different verb, e.g., ‘be(come)’?

How did different future constructions develop in Slavic languages and in Polish in particular? What is the origin of the Polish periphrastic future? Why are there two variants of it? Are there any (semantic or syntactic) differences between these two variants of compound future?

The latter questions will provide a basis for asking more detailed questions about the semantics and syntax of future tense constructions in Polish and other Slavic languages, which is the subject of Question complex 3.

QUESTION COMPLEX 3:

What is the syntactic structure of future tense constructions in different Slavic languages? Do futures which have a modal origin, as is the case in Bulgarian, differ structurally from futures which do not have a modal origin, as is the case in Slovenian and Polish? Do the compound futures in Polish and Slovenian have the same or different syntactic structures? Does a specific syntactic structure restrict in some sense the range of possible interpretations available for a given future construction? How can the future meaning be derived? Where does it come from? Can the future reference be derived in the same way in languages with modal futures and in those without modal futures? What different interpretations are possible for future constructions and are such interpretations equally available for futures in Polish, Slovenian, and Bulgarian? What are the differences in the use of perfective and imperfective futures? How can such differences be accounted for? Regarding Polish, what is the nature and the role of the future auxiliary *będzie* in compound future constructions? How is the future meaning derived in periphrastic future constructions and in the case of perfective present tense verbs? Is it derived in the same way or should there be different mechanisms assumed for this?

While the questions in complex 3 aim, among other things, at proposing an adequate syntactic and semantic analysis of Polish future constructions which both takes the existing theoretical proposals into account and considers the relevant similarities and differences among Slavic languages, the last complex asks deeper questions about Polish compound future constructions from a psycholinguistic perspective.

QUESTION COMPLEX 4:

What is the nature of the aspectual selection of *będzie*, i.e., the fact that *będzie* only selects for imperfective complements? Is it a purely morphosyntactic selection or is it rather a semantic matter? Are periphrastic future constructions with

infinitival complements processed in a significantly different way from those with participial complements? And finally, can we find any psycholinguistic evidence for the claim that the *l*-participle has a past tense feature specification in the periphrastic future construction?

1.4 Developing a research plan – Or how this work is structured

The questions formulated above are constructed in such a way that each preceding complex provides a foundation for the next one. The questions range from broad, more general issues in complex 1, which will give us a better understanding of the category tense and in particular of future tense, to more focused questions in complex 2, which will provide more insight into the emergence of different future tense constructions and the differentiation of their meanings and uses. These questions then lead to even more specialized questions in complex 3 about the semantics and syntax of future constructions in Slavic languages, set against a crosslinguistic background, and these in turn bring us to the processing of tense, with particular focus on the periphrastic future constructions in Polish, in complex 4.

The first question complex is the subject of Chapter 2. There a crosslinguistic (typological) perspective will be taken. Evidence from different languages, including creole languages, will help us to answer the questions formulated above. Arguments coming from psycholinguistic (language acquisition) and neurolinguistic research as well as animal research will also be taken into consideration.

In Chapter 3 a diachronic perspective will be taken. Different origins of future markers will be discussed. In particular, the focus will be on the development of future tense constructions in Polish against the Slavic background. Special attention will be paid to the question of the origin and nature of the so-called future auxiliary *będzie* in periphrastic future tense constructions in Polish and the emergence of two variants of the periphrastic future tense construction in Polish, one with an infinitive and one with an *l*-participle complement, again against the background of other Slavic languages possessing comparable constructions. Another issue taken into account in Chapter 3 will be the question of the future denotation of a perfective present tense verb. To this end, we will look at how new present tense forms emerge, and how old forms are re-used and possibly develop new uses in different languages. This will help us to understand the Polish (Slavic) situation better. Finally, the question of whether the origin of a given future construction still matters for its present meaning and restricts/determines the range of its possible uses will be asked. More specifically, we will try to figure out, partly on the basis of a questionnaire, whether future tense constructions based on a modal verb (like, e.g., those in Bul-

garian) differ in their meaning and range of uses from future tense constructions which are not based on a modal verb (like those in Polish or Slovenian).

With the background provided in Chapter 2 and Chapter 3, we will be in a position to ask more specialized questions about the semantics and syntax of future constructions in three selected Slavic languages (Bulgarian, Slovenian, and Polish) in Chapter 4. The aim of this chapter will be to develop a better understanding of future, in particular, to disentangle the basic components (ingredients) of future meaning and figure out how these ingredients interact with each other and along which dimensions they can differ in different languages. In particular, attention will be paid to the question of whether there is a special future tense in Polish, how a future time reference is derived in future constructions in Polish, and whether the same mechanism is employed for this in both simple future and periphrastic future constructions or whether different mechanisms should be postulated for different future tense constructions. Another interesting issue discussed in Chapter 4 will be the question of possible semantic differences between perfective and imperfective future constructions, in addition to the obvious aspectual differences between them. For this purpose we will include the results of an online scenario-based questionnaire study of Błaszczak and Klimek-Jankowska (2012; 2013a; 2013b) in Polish and Slovenian in our considerations.

The analysis to be proposed for Polish future tense constructions would not be complete without taking into consideration similarities and differences regarding the relevant constructions in other Slavic languages and without critically evaluating the existing theoretical proposals in the literature regarding such constructions. To eliminate any remaining doubts about some crucial aspects of the proposed analysis for the discussed future tense constructions, in Chapter 5 a psycholinguistic/experimental perspective will be taken. The results of two event-related brain potential (ERP) experiments which were conducted in the Psycholinguistic (EEG) Laboratory at the Center for Experimental Research on Natural Language (University of Wrocław) will be reported. The research questions of the conducted experiments included the nature of the aspectual selection of the future auxiliary, the question of any possible differences between periphrastic future constructions with infinitival and participial complements, and the question of the possible past tense specification of the *l*-participle. The chapter will include an explanation of the chosen ERP method; it will also describe in detail the design, the experimental materials, the experimental procedures, and the relevant behavioral and ERP results.

Finally, Chapter 6 will conclude this book by summarizing the answers found during the investigation of the research questions put forward in section 1.3.