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WEATHER FORECAST AS A GENRE

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АНОТАЦІЯ

Косар Б. І. Прогноз погоди як жанр (на матеріалі англійської мови). – Кваліфікаційна робота освітнього ступеня “бакалавр”.

Дослідження присвячено вивченню жанрових особливостей прогнозу погоди як окремого та відносно молодого типу комунікації. Актуальність теми зумовлено популярністю та активним використанням синоптичних текстів в повсякденному житті, котрі є джерелом інформації для широкого загалу.

Об'єктом дослідження є англомовні письмові та усні синоптичні тексти з найпопулярніших метеорологічних сайтів, таких як Met Office, BBC, CNN, а також телевізійних каналів, таких як FOX, CBS, AccuWeather та інших. Предметом роботи є типові мовні засоби, застосовувані у формуванні прогнозу погоди.

Метою дослідження є з'ясування та окреслення певних лексичних, синтаксичних, стилістичних та структурних елементів англійської мови, що використовуються у метеорологічному дискурсі та його жанрових інваріантах.

Методи дослідження, використані в цій роботі, включають методи опису, зіставлення, класифікації, а також метод суцільної вибірки із метою формування фактичного матеріалу дослідження.

За результатами проведеного дослідження можна зробити висновок, що прогноз погоди як окремий вид комунікації має свої жанрові особливості та норми, що формують його план вираження і зміст. Також синоптичні тексти поділяються на жанрові інваріанти, а саме Інтернет, газетний та телевізійний прогноз погоди, та демонструють певні відмінності на всіх мовних рівнях.

На лексичному рівні спостерігаємо використання метеорологічної термінології, темпоральних маркерів, абревіацій, акронімів, топонімів та епістемічних лексем "хеджів". На синтаксичному рівні специфіка жанру прогнозу погоди виражена через вибір структури речень. Перевага надається простим реченням із широким використанням еліптичних та односкладних речень. На структурному рівні спостерігається неоднорідність, кожен жанровий інваріант має власні особливості типового макету тексту.

На стилістичному рівні виділяється досить широке використання лексичних та синтаксичних засобів виразності та стилістичних прийомів, таких як метафора, персоніфікація, метонімія, а також інверсія, паралелізм та повторення.

Ключові слова: жанр, прогноз погоди, синоптичні тексти, жанрові інваріанти, жанрові особливості.

ABSTRACT

Kosar B.I. Weather forecast as a genre. – Bachelor's degree qualification paper.

The present research is devoted to the study of genre features of weather forecast as a separate and relatively young type of communication. The relevance of the of the topic is determined by the popularity and active utilization of synoptic texts, which are a source of information for the general public on everyday basis.

The object of the research is English-language written and oral synoptic texts on the most popular meteorological websites, such as the Met Office, BBC, CNN, as well as TV channels, such as FOX, CBS, AccuWeather and others. The subject of the paper are typical language means used in weather forecast.

The purpose of the study is to clarify and define the most common lexical, syntactic, stylistic and structural elements that are used in English meteorological discourse and its genre invariants.

The research methods used in this paper include the methods of description, comparison, classification, as well as the continuous sampling method in order to form the actual research material.

Based on the results of the study, it can be concluded that the weather forecast as a distinct type of communication has special genre conventions and norms that shape its form and content. Moreover, synoptic texts are divided into genre invariants, namely Internet, newspaper and television weather forecast, that demonstrate certain variations at all linguistic levels.

At the lexical level, we observe the use of meteorological terminology, temporal markers, abbreviations, acronyms, toponyms and lexical hedges. At the syntactic level, the specificity of the weather forecast genre is expressed through the choice of sentence structure. A simple sentence type is preferred, as well as elliptical and one-member sentences. At the structural level, heterogeneity is observed, since each genre invariant has its own features of a typical text layout.

At the stylistic level, we distinguish a wide use of lexical and syntactic expressive means as well as stylistic devices, such as metaphor, personification, metonymy, along with inversion, parallelism and repetition, etc.

Keywords: genre, weather forecast, synoptic texts, genre invariants, genre features

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INTRODUCTION

Weather phenomena directly affect people in all areas of life, from planning everyday affairs and choosing clothes, to professional activity and life safety. Discussing the weather serves as a great way to start small talk or to support a formal dialogue, while forecasts have become an integral part of most people's daily lives. The prevalence is one of the main reasons for perceiving weather forecast as a unique genre that combines scientific accuracy with comprehensible language. The awareness of the unique characteristics of communication in various settings can be gained through studying genres in the dynamic field of linguistics. Hence, the primary focus of this paper is meteorological discourse, with a particular emphasis on weather forecasts. Moreover, special attention is paid to the notion of genre as one of the key concepts of the work. Many foreign scholars, such as M. Bakhtin [1], T. Todorov [63], J. Swales [57], C.R. Miller [44], M.A.K. Halliday [34], as well as Ukrainian linguists such as M. Vakulenko [64], M. Kulibaba [6], O. Chernysh [7], G. Kozlovska [40], D. Dergach [4] devoted their works to the concept of genre, since it is one of the central and well-know terms of linguistics.

However, the question of the genre nature of weather forecasting remains an undeveloped topic hitherto, since the concept itself is more typical for literary texts than for non-literary ones. Thus, the key task of this paper is to consider the weather forecast within the framework of genre in modern meteorological discourse.

The scientific problem is manifested in the fact that there are no clearly defined linguistic features and genre conventions in various forms of weather forecast distribution, such as television, newspapers, and the Internet, which distinguish the genre and establish its boundaries.

The topicality of this research paper lies in immediate relevance and practical utility of the linguistic study of the weather forecast in order to differentiate, apply and recognize typical genre characteristics as well as also to expand and supplement relatively modest knowledge on this topic.

The aim of the work is to identify a number of typical linguistic devices found in this genre and shed light on the unique structural and syntactic characteristics of synoptic texts. Therefore, this paper aims to contribute to the larger discussion on the relationship between language and specialized fields (meteorology). To achieve this aim, the following **tasks** have to be accomplished:

- to define the concept of genre and approaches to the study of genre from different linguistic perspectives;
- to define the concept of weather forecast as a genre, as well as its classification and relationships in the system of genres;
- to analyze the genre features and conventions of the weather forecast from the lexical, syntactic and structural aspects;
- to compare features in genre invariants of television (oral), Internet and newspaper (written) weather forecasts.

The **object** of the study is written and oral weather forecasts that are publicly available on the Internet. **The subject** of the research is the genre of weather forecast as a distinctive text type as well as its linguistic and structural characteristics.

The methods used in the investigation of the topic include descriptive, comparative, and stylistic analysis, as well as the analysis of secondary data.

The research material of our paper consists of 100 English synoptic texts from Internet websites, newspaper publications and video forecasts from various popular resources, such as BBC Weather [13], Met Office [65], CNN [68] AccuWeather [8], FOX [16], CBS News [19] and others, as well as from numerous parts of the world, such as Great Britain, the USA, Europe.

The theoretical value of the paper consists in the comprehensive study of the main features of weather forecast as a complex and dynamic linguistic phenomenon, while **the practical value** of the study lies in the possibility of using the obtained results in teaching courses in English stylistics, genre studies, media linguistics, etc.; in compiling educational resources and editing manuals on these disciplines.

The present paper consists of the introduction, two chapters, conclusions, references and appendices.

1. GENRE IN LITERATURE AND LINGUISTICS. THE GENRE OF WEATHER FORECAST IN THE ENGLISH LANGUAGE

1.1 The concept of genre: definition, history, theories

The definition of genre at first glance may seem stable and clear, but in modern linguistics it is not quite so. Genres are basic components of written and oral communication, determining the way people perceive, interpret, and respond to different types of text. However, the term "genre" is imbued with complexity and confusion: on the one hand, it is perceived as a means of "labeling" or "containing" the content, on the other hand, genre actively shapes and even generates the content it represents. To begin with, the term "genre" was borrowed from French, meaning *"kind, sort, style"* [32], according to Etymology Dictionary. Another etymology of genre can be traced back to the Latin word *genus*, meaning *"a class of things."* Moreover, it also has roots in the word *gener*, meaning *"to generate"* [12, p. 4]. Furthermore, genre, a common concept in literature, has begun to extend to other fields over the last centuries. Because of that, many new perspectives of the notion have emerged, and are actively discussed. Still, genre studies are far from being a unified discipline. According to the Encyclopedia Britannica, the term "genre" can be defined as *"a distinctive type or category of literary composition, such as the epic, tragedy, comedy, novel, and short story"* [33].

The latest perspectives on the notion of genre derive from the studies of many major scholars working with different objectives and from different areas: literature (M. Bakhtin, T. Todorov), linguistics (M. Halliday, J. Swales), and rhetoric (C. Miller). One of the traditional definitions of genres comes from literature scholars. Thus, literary theorist T. Todorov, has stated that genres are a *"horizon of expectation for readers, and models of writing for authors"* [63, p. 163]. Another definition is presented by linguist J. Swales, who has described genre as *"a class of communicative events, the members of which share some set of communicative purposes... In addition to purpose, exemplars of a genre exhibit various patterns of similarity in terms of* *structure, style, content and intended audience"* [57, p. 58]. As we can see, there are many perspectives on that concept.

History and development of literary genres is a very important component of the concept itself, since from early times this term has been used mostly for literary texts than for non-literary ones. As a matter of fact, genres have their most ancient origins in the earliest societies, where oral traditions and primitive forms of written communication laid the foundation. Therefore, linguist R. Coher has stated that genres possess a very old history and from the very beginning arose to *"contrast, complement, define each other's aims"* [22, p. 206].

Considering the literary theory, we can say that the concept of genre originated with Plato's classification systems. Plato categorized literature based on the three most popular classic genres in Ancient Greece, so called *"illustrious triad"*: narrative, drama, and epic. Later, poetry was added to that classification by Plato's pupil, Aristotle [31, p. 6-8]. Moreover, we can generally describe the history of genres based on the main literary movements overtime. Thus, starting from the period of antiquity, and moving into the Middle Ages, the main literary genres became romance and religion (Arthurian tales, Dante Alighieri's "Divine Comedy"), while the Renaissance and Enlightenment period was marked by the creation of new genres and reinterpretation of the old ones, such as drama and satire (William Shakespeare, Jonathan Swift, Jean-Baptiste "Moliere"). The 19th and early 20th centuries were marked by such literary movements as romanticism, realism, and modernism, which respectively gave birth to such genres as conversational poetry, novels, short stories, and others (Jane Austen, Lord Byron, Charles Dickens, Virginia Woolf). In the second half of the 20th century, the period of postmodernism began, which, accordingly, brought novelty to literary genres (Umberto Eco, Thomas Pynchon) [61].

Nevertheless, it is quite difficult to trace the exact dates of the emergence of different genres, but, definitely, with time and many changes in literature, genre categories became more and more loose, and thus new genres and sub-genres emerged. Those changes in the history of genres can be described as subdivision and fusion. T. Todorov has described that process: *"a new genre is always the transformation of* *one or several old genres: by inversion, by displacement, by combination…it is a system in continual transformation"* [63, p. 161]. Thus, development of new literary as well as non-literary genres happens overtime by means of transformation of genres that came before them.

History and development of genres' studies are almost as old as the concept of genre itself. They trace back to ancient philosophers and medieval scholars such as D. Alighieri, who addressed the narrowly definable genres of medieval writing in his "De vulgari eloquentia" [24, p. 17]. Nevertheless, the most active period of studying genres began in the 19th and 20th centuries, with many devoted to that concept works of such scholars as M. Bakhtin, N. Frye, J. Swales and others.

However, the perception of genre and its significance has undergone major changes throughout history, ranging from being recognized as a central linguistic category to facing complete rejection. For example, in the early 1920s, B. Croce, a famous Italian philosopher in his book "Aesthetics as a Science", delivered *"a best-known assault on the role of genre in literature and art"* [18, p. 1], and basically rejected the need in the existence of genres as such, arguing that the concept of genre denies the concept of art and artistic freedom [18, p. 1-2]. Yet, by the late 1930s, interest in genre studies reappeared, only to decline again, when the focus shifted towards style as the main tool for classification of texts. The next rise and fall of interest in genre studies can be traced in the 1970s, and the late 1980s, with the emergence of post-structuralism, which ideas stood against the comprehension of language as a stable, closed system and thus left no room for the concept of genres [7, p. 1]. Although debates about the importance and functions of genre are still ongoing, today scholars perceive this concept as one of the main ones in linguistics and do not deny its indisputable usefulness for successful communication.

Various approaches to the concept of genre are integral part of modern genres' studies. Therefore, **three powerful genre schools** have been formed - the English for Specific Purpose (ESP) school, the North American New Rhetoric Study (NRS) school, and the Australian systematic functional linguistics (SFL) school. Each school postulates its vision of genre features, functions and therefore, definitions.

The founder of the main ideas of the genre in the **ESP school** was an American linguist J. Swales, who stated, that genre has *“communicative purpose”* and *“expectations”* (linguistic and rhetorical conventions) [57, p. 58]. V. Bhatia, another influential scholar of that school, underlined the role of communicative goals that establish structural forms and constrain lexico-grammatical resources of genres [14, p. 630]. Therefore, the ESP school developed its own approach to the concept of genre, in which the notion of genre appears as a broad phenomenon characterized by:

- interactivity (the genre is a discursive practice between the author and the reader, and their ideas about the genre of the same text may not match);
- ambiguity (the genre can have different interpretations and can be implemented in various forms);
- historicity (any genre can have different characteristics according to the period in which its classification took place);
- intertextuality (the structure and content of the text is formed by previous texts of the same genre) [7, p. 7-8].

Besides, within the ESP genre school, special attention is paid to specific genre features, while the functions of texts and their social contexts are not emphasized.

Unlike the ESP genre school, scholars of **NRS school** are interested in the situational context and the social goals of a genre in recurrent situation. The approach of that school is based on the work of linguist C. Miller "Genre as Social Action" (1984), in which she has defined genre as *“typified rhetorical actions”* [44, p. 151] that *“acquires meaning from situation and from the social context in which situation arose”* [44, p. 163]. According to C. Miller theory, it is context that guides the reader, it determines expectations for the genre as well as content of the text (situation/context + form = genre). In other words, readers comprehend the context of each genre the same way people understand different settings (hospitals, offices) because each genre, as well as each setting, has its own set of conventions and expectations.

On the other hand, **the SFL school’s** approach to genre is laid on systemic functional linguistics theory, that was proposed by the British linguist M. Halliday. Within his theory, genre has been described as *“the network of meaning”* with the same purpose or *"meaning potential"*, similar structures and language features [34, p. 13, 100]. Moreover, at the center of the approach of Australian school is the relationship between the concepts of genre, style and register. While those notions represent different aspects of language and communication, they often overlap and influence one another. Therefore, **style** applies to many aspects, such as language and expression correspondence, expressive means, stylistic devices, etc [50, p. 24]. It involves how language is used, including the arrangement of sentences and choice of words. J. Swift back in the 18th century aptly described style as *"the proper words in the proper places"* [30, p. 33]. Considering style in terms of how language means are used for specific communication goals in specific context, it is called a functional style. Every genre have its typical functional style.

Meanwhile, **register** can be defined as *"the way speaker uses language differently in different circumstances"*, according to ThoughtCo [36]. Registers are influenced by different factors, such as context, purpose or audience, and sometimes even referred to as stylistic variations. Undoubtedly, it shares some similarities with the concept of style, but register mainly represents language variations in informal, colloquial communicative situations and represent the degree of formality in language [9, p. 23-24]. Considering the relation between registers and genres, it is suggested that genre is a broader concept. Therefore, any set of texts sharing a similar register can be classified within the same genre. However, while different genres may share some common features, no two registers will be exactly alike [43, p. 1-2].

Therefore, on the basis of these concepts and definitions of genres from different points of view (schools), we can conclude that any text, be it a written or oral, belongs to one or another genre and has its style and register. While genres are produced by an author or a group of authors, its content is greatly affected by social context and meet audience expectations as well as genre convention.

In genre's studies, in addition to different schools, there are also various **genre theories**. To being with, we can state that communication (between the author of the text and its recipient) is one of the main aspects of the genre. Therefore, we can approach the study of genres using **speech act theory**, which considers genres as specific communicative acts. That theory was proposed in the work of the Oxford linguist J. L. Austin "How to Do Things with Words" (1962) and the work of American philosopher J. R. Searle "Speech Acts: An Essay in the Philosophy of Language" (1969). J. Austin insisted that saying something is doing something (performatives and constatives, [11, p. 4-7, 12], while J. Searle widened the theory and added the notion of consequence or effect – perlocutionary act [54, p. 25-26]. Therefore, within that theory three simultaneously performed acts were described: locutionary act (words uttered); illocutionary act (intention or force behind the words); and perlocutionary act (the effect of the words) [49, p. 5].

Moreover, the concept of genre and speech acts are closely connected through the notion of discourse. Thus, T. Todorov has mentioned following: *"A speech act includes a locutor who speaks, an allocutor who is addressed, a time and a place, a discourse that proceeds and follows it: in short, a speech-act context. In other words, a discourse is always and necessarily a speech act"* [63, p. 162]. Based on that, we can argue that discourse and therefore speech acts play a crucial role in the construction and negotiation of genre conventions and expectations. In the context of the study of genres, the theory of speech acts helps to understand how communicative actions are structured within specific genre forms.

However, it will be much more useful to rely on the Eastern European approach to the study of communication, namely **M. Bakhtin's genre theory**. In it, the scholar has emphasized the *"complex relationship between the text and the created context*" and outlined genres as the result of communication and interaction in various sociocultural contexts [1]. Moreover, M. Bakhtin emphasized the "dialogical character" of genres. According to scholar, the concept of genre is a process of communication, a dialogue between the author and the addressee, that is, that the understanding of any text always has a dialogical character. His ideas also highlighted the heterogeneity and polyphony of genres, which means that any expression has certain and relatively stable form, i.e. oral or written speech genre. However, within each genre there are many different interpretations, reflecting the diversity of individual perspectives [1]. One of the greatest Bakhtin's discoveries within the theory was the genre nature of functional styles. He had emphasized that the genre consists of three main aspects – the compositional structure of the text, functional style, and content [5, p. 102]. Moreover, the theory also proposed the "survival" and development of genres, which implies that genres can be seen as dynamic forms that constantly evolve and emerge under the influence of sociocultural changes, in contrast to relatively stable functional styles.

No less important is the fact that Bakhtin was the first to consider the concept of genre not only in a literary context, but also in a linguistic one. Thus, he extended the concept to all possible statements, which can include both a literary work and a one-word household remark [1]. Overall, this theory made a significant revolution in linguistics and became the scientific basis for the long-term study of genres in a number of linguistic branches [5, p. 104].

Another genre theory in our interest is **the classic theory**. It began to take shape within the works of Plato and Aristotle and, according to the linguist J. Farrell, *"…ancients invented and perfected certain genres and that the works they left might serve as models for later writers"* [27, p. 383]. In this theory, the main aspect is the relationship between the author and the "voice" of the text. Despite the logic of such a theory, modern linguists have long departed from the classical or "original" classification of genres (tragedy, comedy, epic poetry, and lyric poetry) [21, p. 617]. More and more scholars, and especially literary critics, believe that a work must "break" genre conventions to be outstanding and expand the literary universe [26, p. 704-705]. However, the first classical theory of genres undoubtedly laid the groundwork for subsequent discussions of genres in literature and linguistics.

Overall, due to the rapid development of a relatively new context, and, therefore, the rapid emergence of many new genres, it is also possible to distinguish **contemporary genre theory** and **rhetorical genre theory**. Within those theories, genres do not have specific characteristics, but rather have *"family resemblances"*. [57, p. 49] Moreover, it is stated that in the modern environment different texts are so mixed, overlapped and divided into sub-genres that it is difficult to differentiate them, let alone create a clear set of features for each genre. About this confusion, linguist A. Fowler writes following: *"An individual text within a genre rarely if ever has all of the characteristic features of the genre"* [28, p. 215].

Another scholar, G. Kress, has emphasized that genres should be perceived only in a social context, giving a following definition: *"a kind of text that derives its form from the structure of a (frequently repeated) social occasion, with its characteristic participants and their purposes"* [41, p. 183]. Contemporary genre theory emphasizes genres' flexibility and refuses strict classifications. As stated in the work of A. J. Devitt: *"Genre is an abstraction or generality once removed from the concrete or particular"* [25, p. 580]. New genre variants or even new genres develop and emerge as a consequence of changing social contexts or technological advancements, providing alternative forms of language expression [12, p. 159-160].

Considering all the above-mentioned ideas and works of different scholars and researchers, we may propose our own generalized definition of the notion of genre, and therefore describe it as part of a language system with specific conventions that is dynamically developed and formed through social interactions. This definition liberates us from the need to consider genres as just strict and fixed classifications and takes into account different contrasting views of scholars on the genre.

1.2 The history of weather forecasting

Weather forecasting dates to ancient civilizations, when people began to rely on observations of plants, animals, and gods and associate them with various weather phenomena. They noticed relationships between past and future weather events, and certain connection between weather and animal behavior. Interestingly, similar methods of predicting the weather are also found today, known as "folklore lore". We often see them in weather proverbs, sayings, and verse ("Evening red and morning gray are sure signs of a fine day"). This experience has been accumulated over the generations to produce weather lore [35, p. 6-7]. However, it has little in common with scientific prediction methods and is not characterized by reliability.

As a matter of fact, Aristotle's "Meterologica" (340 BC) is considered to be the first documented text that theoretically described weather phenomena. Further, the forecasting process developed gradually with the invention of meteorological instruments, such as the hygrometer (Nicholas of Cusa, 15th century), thermometer (Galileo Galilei, late 16th century), barometer (Evangelista Torricelli, 17th century), etc. Meteorologists use some of those instruments to this day. We can count the development of widespread, regular weather forecasting from the invention of telegraphs in the middle of the 18th century [47, p. 505-506]. Meteorological pioneer R. FitzRoy (UK) is recognized for organizing the first public weather forecasts in the early 19th century, thus giving people access to regular and highly accurate forecasts in newspapers. It was his work that led to the development of the oldest and most authoritative meteorological service today, namely The Met Office [17]. Weather forecast columns quickly became extremely popular after being first published in The Times in 1861 throughout the United Kingdom [67]. This first-documented clipping from The Times undoubtedly shaped the genre of weather forecasting and set its standards for centuries to come.

Furthermore, in 1911, the UK Met Office took a groundbreaking step by initiating the broadcast of the first oral weather forecasts through radio. In addition, the evolution of weather forecasting continued with the invention of television. In 1936, the BBC pioneered TV forecasts, introducing assisting tools such as weather maps, to enhance the demonstration of weather information on-screen. Originating from the UK, the greatest development of the TV weather forecast genre took place in America, where the first broadcasters in the 1980s made revolutionary progress by incorporating on-screen satellite weather images and computer graphics [10, p. 10].

These developments not only revolutionized the dissemination of weather information but also marked significant milestones in the history of meteorology, laying the foundation for modern-day weather forecasting techniques and setting weather forecast standards.

1.3 Weather forecast as a separate speech genre

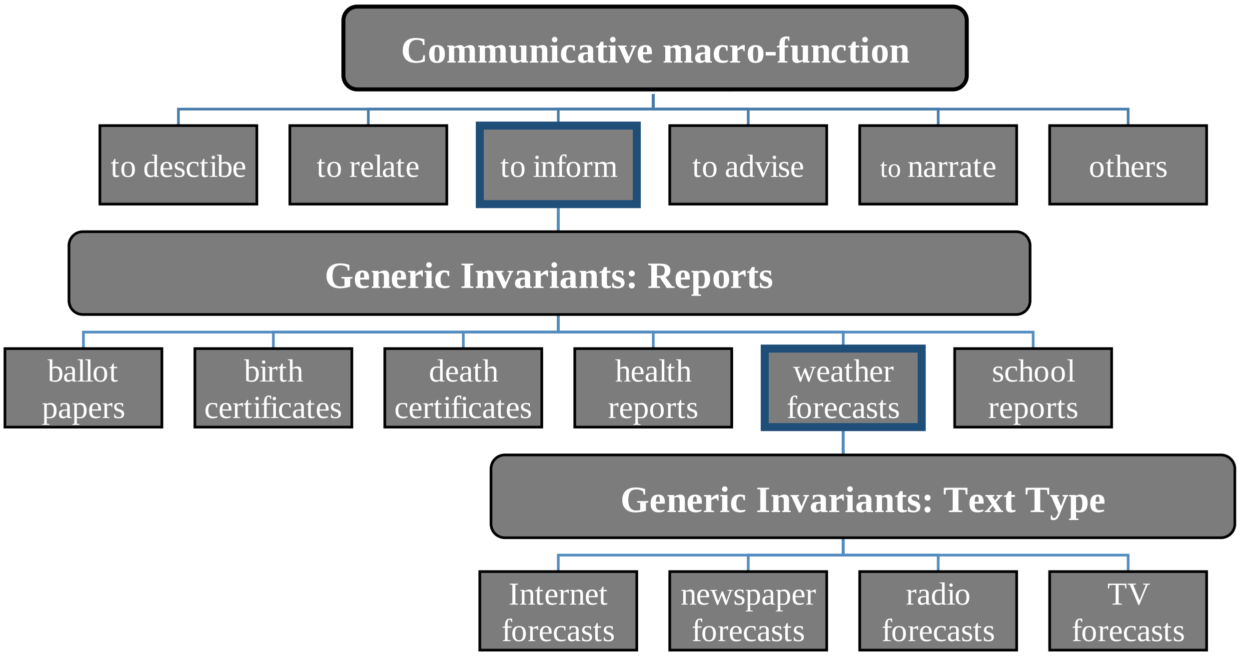
To begin with, weather forecasting is a relatively young and unexplored genre, so we suggest starting with its **definitions**. According to the Cambridge Dictionary, weather forecast is defined as *“a statement of what the weather is likely to be for the next day or few days, usually broadcast on television or radio or printed in a newspaper”* [66]. Thus, a weather forecast as a genre refers to the structured presentation of meteorological information aimed at informing the audience about anticipated weather conditions over a specific period. Moreover, we can also look at the related term "prediction". This term is also often interpreted in dictionaries as a foresight of what may happen in the near future. However, it should be noted that it is correct to use "forecast" and not "prediction" in relation to synoptic texts, since this term conveys an analytical and scientific process based on facts [55, p. 150].

In addition, weather forecasts can be distributed through different media including television, radio, newspapers, Internet, etc. Considering the oral variety of the genre, we can describe it as a specific oral discourse type which functions within a fairly set framework involving a number of recurrent features, including a well-defined lexical field and recognizable prosodic patterns [45, p. 2]. Based on the main modern methods of distribution of weather forecasts, we also can refer to it as "media genre". In the system of media genres, an apt definition was given by L. Shulinova, who has defined it as *"an analytical genre, the purpose of which is based on facts, objective data to determine possible future results, events, etc., present today or in the past, important or interesting for the recipient, society, humanity"* [55, p. 150]. Thus, the special functional-structural arrangement of language components and stylistic features of weather forecast, which are formed under the influence of the communicative context in the media sphere, are emphasized. In addition, such genres differ in their dynamic nature and combination of verbal (text) and non-verbal components (graphic elements, diagrams, symbols, icons) [4, p. 31-32].

The main **function** of the weather forecast genre is, first of all, to inform, although it can be argued that it is not the only one, since this genre also carries an informative, popularizing and even entertaining function [60, p. 15]. However, it is worth noting that in addition to the generally positive impact on the recipients of the weather forecast, there are also such synoptic texts that provide inaccurate or exaggerated information, manipulate the audience and sow panic [55, p. 150]. This, in turn, can be justified by the great competition of authors within the genre.

Typology and classification of the weather forecast genre are rather unexplored areas in genre studies, although they are undoubtedly necessary and important elements for understanding genre interrelationships and the main features of synoptic texts. Therefore, we suggest looking at the weather forecast genre in the frameworks of the **functional typology,** in which every genre has its classification according to their main function or purpose. In more details, we considered the classification of the weather forecast genre in the context of communicative micro- and macro-functions proposed by linguist G. Simons [56, p. 14] and its translation from French into English, developed by his student, A. Provoost [52, p. 37-38].

Figure 1.3 Functional typology of weather forecast



In that typology, communicative macro-functions mainly reflect the speaker's or writer's intentions when using language. Considering the genre of weather forecasts, the main communicative macro-function is “to inform” (or informative function due to M. Halliday [34, p. 19-20]), as we can see in the scheme. Besides, this kind of genre classification can be justified by the category of "informativeness" in the text categories system, which all synoptic texts undoubtedly have. They fit the traditional features of informational text, namely the statement that information *"must be valuable, useful, new, interesting, and real"* [40, p. 7].

Furthermore, within G. Simons' classification, genre families, or genres of macro-function "to inform", encompass multiple textual varieties with several similar characteristic. We are mainly interested in the genre family "reports", which includes school reports, health reports, ballot papers and personal reporting documents (death or birth certificates). While each sub-genre functions independently and has its linguistic peculiarities and structure, they are part of the same family. All those sub-genres also possess some similar characteristics, such as:

- the genres of this family are non-interactive, they do not provide any direct feedback (although the genres itself can influence the audience);
- the genres of this family have specific forms and structures that are clearly defined, predictable, and conform to conventions [52, p. 40-41].

As we can classify weather forecasts into a larger family of reports, we can also subdivide this genre into four main text types: Internet, written press, radio, and TV forecasts. Although the main difference of those sub-genres is their form (oral or written), they have similarities:

- detailed description of the weather for some concrete period;
- focus on one or more specific geographical locations;
- periodic repetition with the submission of new information in the same codified format [52, p. 43].

Moreover, along with common characteristics regarding the form of the text and its content, there are also common linguistic aspect (lexical, pragmatical, syntactical, compositional) in all generic invariants of weather forecast. First of all, we attribute them the style of popular scientific literature, as synoptic texts combine scientific patterns and accessibility, specificity, and simplicity [53, p. 123]. Other linguistic features of such texts are monothematicity and homogeneity, due to their main communicative task of conveying information about the weather. In the synoptic text, the vocabulary is homogeneous and clearly defined, as its main groups are words for marking time (days of the week, months, parts of the day, chronological deixis); names of geographical objects (toponyms) and parts of the world, as well as tokens for denoting weather conditions (including technical terms) [6, p. 39]. Moreover, we can also highlight such general features of the genre as syntactic and lexical compression of text and low redundancy [39, p. 5]. In addition, we can include "body language", namely natural signs of communication (facial expressions, postural and proxemic signs, vocal indicators) among the characteristic features of audio-visual weather forecasts, which play an important role in the process of communication between the author and the recipient of the text [23, p 7-8].

In contrast to the classification based on the main linguistic conventions and forms of the text, we can also consider the classification of the genre based on other (non-linguistic) criteria. For example, it is possible to distinguish different types of weather forecasts on the basis of the target audience or its professional focus. According to this classification, we can distinguish the forecast for general use and professional forecasts (such as aviation or agricultural synoptic texts). From a linguistic perspective, specialized forecasts tend to be more technically oriented, they use technical meteorological terms, and require a certain level of knowledge to be fully understood. Moreover, we can also distinguish types of synoptic texts based on validity period criteria. Thus, the following types are distinguished:

- short-term weather forecasts (from 1 to 3 days);
- medium range weather forecasts (from 3 to 10 days);
- long-term weather forecasts (from 10 days to a month) [38, p. 5].

Besides, weather forecasts can differ in their locality (local or regional), so the center of the synoptic text can be a country, city, state, region, and others.

CONCLUSION TO CHAPTER 1

Genre as a concept is considered from different perspectives in areas such as literary theory, linguistics, rhetoric, and others. Combining different views, it can be defined as a dynamic and developing concept, which denotes the classification of any literary or non-literary texts according to their linguistic features, as well as corresponding to the conventions and expectations of the recipients. Despite the widespread use, the concept of genre remains complex and multifaceted, requesting further discussion and analysis.

Moreover, the historical development of genres traces back to ancient oral tradition and evolves alongside different literary movements. Nevertheless, the study of genres has shifted interest over centuries many times. Despite periods of decline, genre studies are undoubtedly significant nowadays, shaping our understanding of communication process overall.

There are three main genre schools with different approaches, namely the ESP school, that focuses on the historicity, intertextuality, ambiguity, and interactivity characteristics of the genre; the NRS school, that highlights situational context and social goals of genres; and the SFL school, that emphasizes the relationship between genres and the concepts of style and register. As a matter of fact, genres are studied within different theories, such as M. Bakhtin's theory, which considers genres as dynamic and dialogic, shaped by social-cultural interactions; classical theory, that views genres as normative and static categories with stylistic purity; and contemporary theory, which emphasize the flexibility, active development, and social context of genres.

Furthermore, we can distinguish weather forecast as a relatively young separate genre. Historically, weather forecasting dates to ancient civilizations, with significant developments occurring with the invention of meteorological instruments and the adoption of new ways of transmitting information. In addition, the genre of weather forecast is primarily a presentation of meteorological information that informs about the expected weather conditions; that has its own distinctive features at different linguistic levels; that has genre invariants based on form (newspapers, radio, TV, Internet); and that serves functions beyond mere prediction, including informing, popularizing, and entertaining.

Furthermore, according to the functional classification of communicative macro-functions, synoptic texts can be categorized as non-literary, informational genres, or more specifically, they belong to the sub-genre of reports. Synoptic texts are characterized by their non-iterativeness, monothematicity and clear predictable structure, as well as homogeneous vocabulary and compression of the text. We define the style of the genre as popular science. In addition, it is possible to single out non-linguistic criteria for the classification of genre invariants of the weather forecast, such as target audience, validity period and locality.

Generally, just like the concept of genre itself, the genre of weather forecast does not have clearly established and regulated conventions, which stimulates its further active study.

2. LINGUISTIC FEATURES OF WEATHER FORECAST

2.1 General characteristics of the style of weather forecast

The way people tend to convey ideas, thoughts and information depends on the communication situation, the purpose of a particular text and the sphere of human activity it belongs to. In modern linguistics, this is known as **functional style**. Therefore, styles are specific types of literary language, which are determined by the sphere of use and characterized by various language means [2, p. 42]. Most scholars distinguish **five main functional styles of language**: 1) belles-lettres style; 2) publicistic style together with the newspaper style; 3) the style of scientific prose; 4) the style of official documents. These styles arise in the literary norm of the language and are opposed to 5) the conversational (or colloquial) style which is considered the primary functional style [70, p. 50-51].

In general, each functional style is a relatively stable system consisting of some basic characteristics and at the same time possessing a number of distinctive lexical and syntactic features. However, it is possible that some texts may deviate from the standard or combine the features of several styles. A vivid example of this process can serve **the popular-science style** (sub-style of scientific prose), to which we attribute weather forecast. One the one hand, weather forecast is based on knowledge about meteorology, which is formed with the help of scientific research and observations. On the other hand, synoptic texts do not exclude the use of emotional coloring or stylistic devices which are absent from purely scientific texts.

Synoptic texts are characterized by genre heterogeneity. They differ from each other not only in size, but also in composition and informative content. In general, within the popular-scientific style, we can divide the genre invariants of the weather forecast according to their form:

- **Internet weather forecasts** are short, informative messages and daily updates on meteorological sites that describe only weather conditions;

- **newspaper weather forecasts** are publication in online or printed newspaper editions that describe the weather conditions and their impact on people or areas of life, as well as provide comments;
- **television weather forecasts** are parts of news programs devoted to the weather in the form of a discussion or dialogue, with speeches by meteorologists, news presenters and reporters (involve publicistic style);

The table below presents stylistic features at different linguistic levels that are characteristic of synoptic texts and their genre invariant, where + indicates typical, - indicates atypical, +/- indicates infrequent but presence of features.

Table 2.1 Stylistic peculiarities of synoptic texts**.**

	Stylistic peculiarities	Internet forecast	Newspaper forecast	Oral forecast
Lexical	Terminology (technical/meteorological)	+	+	+
	Hedges	+	+	+
	Toponyms	+/-	+	+
	Temporal markers	+	+	+
	Lexical stylistic devices	-	+	+
Syntactic	Predominance of declarative sentences	+	+	+
	Simple sentences	+	+/-	+
	Composite sentences	+	+	+/-
	Elliptical sentences	+	-	+
	Syntactical stylistic devices	+/-	+	+
	Rhetorical questions	-	+	+/-
	Parallelisms (syntactic repetitions)	+	+	+
Structural	Heading and subheading	+/-	+	+
	Logical sequence	+	+	+
	Key vocabulary	+	+	+
	Discourse markers and connectors	+	+	+
Other	Graphic elements	+	+/-	+
	Live footage/images	-	+	+
	Icons and symbols	+	+	+
	Interviews/quotes/indirect speech	-	+/-	+

As we can see, although all invariants belong to the same genre and are characterized by the same style, they also possess their own typical features. For example, stylistic figures and tropes are not found in Internet weather forecasts, while they are quite frequent in newspaper and television versions. All the specified features are described in more detail in the parts that follow.

2.2 Lexical features of weather forecast

The genre of weather forecast aims to convey clear and scientific information in a commonly understood language for a broad audience. That is why this genre has various lexical features, which we can distinguish:

- **terminology** and **lexis of lexico-semantic field of synoptic meteorology** include words and phrases that denote and describe weather phenomena, parameters and conditions, such as "low pressure", "hail", "forecaster", etc;
- **time markers** include words and phrases that describe the time when a weather event or change in weather conditions is expected, such as "this morning", "periodical", "soon", etc;
- **abbreviations** and **acronyms** include shortened word, phrase or initials to compress the text (usually in written forecasts), such as, "C" for degrees Celsius, "Met office" for Meteorological office, etc;
- **toponyms** include words or phrases denoting proper names of cities, countries, or geographical units, such as California, London, Pacific Ocean, etc;
- **lexical hedges** include words or phrases denoting probabilities or uncertainties, such as "probably", "possible", "likely".

These lexical features most of all distinguish the weather forecast from other informational texts, and could be found in all genre invariants.

2.2.1 Vocabulary of weather forecast

According to the stylistic classification, there are **three main layers of vocabulary** in the English language. The **literary layer** encompasses vocabulary that has no local or dialectal character. The **neutral layer** consists of widely accepted vocabulary used in everyday communication across different contexts. The **colloquial (conversational) layer** includes vocabulary that we usually find in spoken conversational language and regional dialects [72, p. 73].

Based on this classification, we can state that the genre of written weather forecast is characterized by a mostly neutral and partly literary layer of vocabulary. Thus, the colloquial layer is not inherent in synoptic texts, although we can occasionally meet it in oral weather forecasts. (*"Oh, <u>we got this</u> through, we have this <u>dip out</u> to the west that's going to create a space through the plains for something to develop"* – FOX Weather [86].)

While the neutral layer is generally homogeneous, there are several groups in the literary and colloquial layers. Considering the literary vocabulary in the genres of weather forecast, we could point out **terms** as a special group of words. While other subgroups of this layer, such as poetical words, archaic words, foreignisms, barbarisms and neologisms, do not stand out in the general vocabulary of the weather forecast, the terms are an integral part of it.

Meteorological terminology is one of the main features of the genre. Scholars consider terms to be expressed through a word or collocation and to have a specific scientific function as well as precisely limited sphere of use [64, p. 6]. Based on this, it can be stated that the meteorological terms arise in a professional environment and are used to perform the nominative function – that is to name a weather phenomenon or aspect, and formally does not differ from other words. As a rule, most meteorological terms are not difficult for audience to perceive, mainly because they have been gradually introduced into daily lexicon through mass media.

However, it is also worth noting that the use of terms and modified expressions (term + modifiers) can also harm the informativeness of the weather forecast, because sometimes they overlap (a weather condition with relatively small cloud cover can simultaneously be described as "sunny," "fair skies" or "considerable cloudiness"). Thus, the need for authors to carefully choose terminology and correctly interpret it to the recipients has been emphasized by A. H. Murphy, and B. G. Brown. [46, p. 15]

Moreover, it should be noted that not all words used in meteorological discourse are terms. Nevertheless, all words that are related to the description of weather phenomena and occur in the genre of weather forecast are part of **the lexico-semantic field of synoptic meteorology,** that was developed and studied in the work of M. Kulibaba [6, p. 80]. The concept of the lexico-semantic field is considered as a broad collection of words of different parts of the language, united by a common concept. According to scholars, the lexeme "weather" is not an independent lexical unit, but a set of relations with synonyms, hyponyms (precipitation – rain), derivatives (to forecast (v.) – forecasting (n.)), and word phrases (air temperature, torrential rain) [3, p. 23].

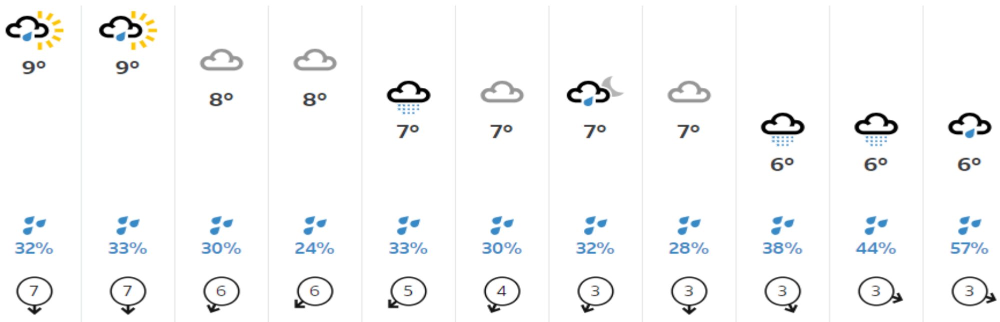
Based on the analyzed synoptic texts and dictionaries recognized worldwide in the meteorological community, such as the World Meteorological Organization Glossary [59] and information from The Meteorological Office website [69], we have concluded a list of the most common meteorological terms, words and phrases in weather forecasts and which are included in the lexical-semantic field of synoptic meteorology. Our glossary includes our own brief unified definitions for each token and is divided into categories related to a particular aspect of meteorology. This glossary of meteorological terms can be found in Appendix 5.

In addition, we also have analyzed the vocabulary in different genre invariants of the weather forecast. To conduct this and subsequent analyzes in the paper, we will use data from our **sample**, which can be found in the Appendices 1, 2, 3 and 4. The sample is divided into three main groups: **Internet weather forecasts**, namely 26 short synoptic texts from the website of the meteorological station Met Office [65], which represent a nationwide long-term (two weeks) forecast for Great Britain for the period from April 2023 to April 2024; 20 short synoptic texts from the BBC website [13], which represent a short-term local forecasts for London for October 2023. Since the information on these sites is updated regularly, we used the site archiving service [37], which allowed us to find weather forecasts for the past period; **newspaper weather forecasts**, namely 5 forecast articles from the online version of the CNN newspaper [68] for January-March 2024; as well as **oral weather forecasts**, namely 5 videos from YouTube website [71], which are synoptic texts of the most popular American channels, such as CBS [20], TODAY [62], and FOX [29]. Thus, we tried to cover as much variety of weather forecasts as possible, which makes our analysis informative, relevant and comprehensive. The results of the research can be found in the table below.

Table 2.2.1 Analysis of vocabulary in generic invariants of weather forecast

Vocab. types	Internet forecast		Newspaper forecast		Oral forecast	
	%	Examples	%	Examples	%	Examples
Neutral layer	≈ 95%	*Temperature, conditions, wind, showers;*	≈ 85%	*Air, wind, snowfall, climate, chance;*	≈ 70%	*Impact, risk, warning, location, forecast;*
Literary layer	≈ 5%	*High pressure, drizzle, precipitation;*	≈ 12%	*El Niño, La Niña, Atmospheric river;*	≈ 15%	*Bomb cyclone, torrential rain, storm system, jet stream;*
Colloquial level	0%	none	≈ 3%	*Hang on, miss out, smack;*	≈ 15%	*Folks, oh boy, perk up, take a peek, stuff;*

As demonstrated in the table, for all variants of synoptic texts, the neutral layer of vocabulary prevails. We can also see a small percentage of use of the literary layer (5% for Internet predictions, 12% for newspaper predictions, 15% for oral predictions). Such a low frequency of the use of terms (literary layer) in Internet forecasts can be attributed to the fact that websites usually convey meteorological terms such as "precipitation", "humidity", "temperature" and others via standardized tables and in graphic symbols, rather than integrating them into the text. For example:



Graphic element 2.2.1 from BBC weather website [13]

On the other hand, newspaper and oral synoptic texts often focus on meteorological terms, explaining them or even taking them as the main idea of the text.

In addition, we see that the use of the colloquial layer of vocabulary is the most typical for oral weather forecasts (15%). This can be justified by the oral format of this type of synoptic texts, where informal vocabulary can often be found.

2.2.2 Lexico-semantic parameters of weather forecast

Time markers

Temporality is one of the features of the weather forecast genre. In linguistic, the category of time is conveyed on many levels, using such linguistic notions as temporal lexical units, morphemes with temporal meaning, tense forms of verbs, syntactic constructions. However, in the context of weather forecasting, we will consider the most used lexical method of time denotation, namely **time markers.** Unlike many other genres, the weather forecast is distinguished by its relatively short relevance. Precisely because of the transience and periodicity of the texts of this genre, temporality play an important role in weather forecasting.

Undoubtedly, every time marker in the language is related to the notion of deixis. As we consider the concept of time, this deictic sign is "now" of a speaker or writer of particular synoptic text. Even when one speaks or writes of external ways of measuring time (a clock or calendar), it is still connected to the moment of speech [6, p. 66-68]. Regarding the contextual time markers, we can point out several deictic points, and, on their basis, propose our own classification of lexical units denoting time in the genre of weather forecast:

- **external time markers** refer to time references external to the forecast, such as calendar date, month or hour, such as "Monday", "June 29", "in March", "at 6 p.m.", etc. For example: *"...That is <u>from Friday through Tuesday</u> covering two storms headed our way"* (CBS News Sacramento Channel) [77].
- **event time markers** (chronology) refer to time references related to the sequence of weather events, such as "after", "before", "later", etc. For example: *"We have some time <u>before</u> we get to that rainfall"* (CBS News Sacramento Channel) [77].

- **speaker's time markers** refer to the speaker's perspective or perception of the events, such as "now", "in the evening", "a few minutes ago", "next hours", etc. For example: *"Over the next few hours we will begin to see the rain fall gradually"* (CBS News Sacramento Channel) [77].

As we can see, all these time markers were found within one synoptic text, which exposes them as an important and very typical lexical feature for all invariants of the weather forecast genre.

Hedges

Another lexical-semantic feature of the synoptic texts is the widespread use of **hedges**, therefore, words or expressions that aim to mitigate the strength of any statement. Cognitive linguist G. Lakoff defined the notion of hedge as *"words whose job is to make things fuzzier or less fuzzy"* [42, p. 471]. In weather forecasting, hedges are used to express uncertainty, improve clarity, and maintain public trust. Prince et al. (1982) has proposed to classify hedging expressions into two main classes, namely **approximators** and **shields:** [51, p. 83-85]

1) **approximators** mitigate the degree of accuracy of a statement. In this category, the following two sub-classes were distinguished:

   - **adapters** are expressions that soften the initial meaning for further clarification, such as "somewhere", "more or less", "a little more", "around", "sort of", etc. For example: *"Following on from earlier in the month, either the period will start changeable with temperatures overall around average…"* (Met Office) [120]. *"Temperatures are set to linger around 10C, with the wind making it feel a little more like 7C or 8C."* (Shropshire Star News) [79];

   - **rounders** are expressions that convey approximate, imprecise predictions or values, such as "approximately", "near", "about", etc. For example: *"Temperatures dipped into the 20s in Jackson… and were all approximately 20 degrees below the historical average for each of those cities."* (AccuWeather) [117], *"…wind gusts of 40 to 50 to near 60mph in the northeast…"* (TODAY Channel) [115];

2) **shields** indicate the level of uncertainty of the speaker. In this category, the following two sub-classes can be distinguished:

- **plausibility shields** are expressions that make the statement true, but as possibility, convey subjective opinion, such as "maybe", "perhaps", "it seems to", "I think", etc. We can also refer to that category phrases such as "confidence is low", "we are unsure yet", etc. For example: *"...we'll go from the upper 80s, maybe increasing the rain chances just a bit..."* (CBS Miami) [76], *"During the period, the confidence is low"* (Met Office) [121];
- **attribution shields** are expressions that attribute the truth of information to an external source, such as "according to", "presumably", "it is said", etc. For example: *"More than half of the tornadoes in an average year occur from April through June, according to the Storm Prediction Center"* (CNN) [73].

In general, it is hedging that help maintain public trust in weather forecasts and convey at the language level the idea that weather is primarily a variable phenomenon.

Toponyms

In any synoptic text, we can find such a lexical feature as the use of **toponyms**. The lexical group of toponyms includes all geographic names of cities, villages, rivers, mountains, lakes, valleys, provinces, countries, etc. This category of toponymic vocabulary is quite productive in meteorological discourse due to the fact that the weather forecast is usually made for a certain country and covers its various territories. In addition, the prediction of weather conditions depends on weather phenomena that occur in other parts of the globe, which causes the involvement of various toponyms, going beyond the boundaries of one country [6, p. 17-18].

As we have concluded earlier, the genre of weather forecast can vary in its locality, and there are certainly many synoptic texts that, even without specifying the location, are aimed at specific audience (such as a forecast in a local newspaper, where it is clear that the synoptic text provides information specifically about the region where this newspaper was published). However, there are also more broadly targeted forecasts, common to a region, country, or group of countries. In such forecasts, toponyms are used to specify weather conditions in specific places. For example:

"Tonight, the first major snowstorm of the season marches east after packing a punch in the South and Midwest. Heavy snow blanketed roads in Winslow, Arkansas, leaving this driver stuck in need of help" (CBS News) [78].

In addition, among toponyms in weather forecasts (especially in oral and newspaper) we can find not only official names, but also so-called **poetonyms.** Thus, in the following example, the author uses a poetic name for New York: *"While the system will not likely be a big rain producer for the Big Apple…"* (FOX5 New York) [105]. We can consider another case, where the author aptly uses a poetonym for Chicago: *"The Windy City will live up to its nickname Wednesday, according to a blustery forecast from the National Weather Service."* (WTTW News) [87].

2.2.3 Lexical expressive means and stylistic devices

Stylistic devices embellish the text, give the synoptic message an emotional coloring and help to transfer scientific meteorological information into a popular-science style for a wider audience. They are very common to newspaper and oral synoptic texts, while in Internet forecasts we can find them very rarely. After analyzing lexis from our sample as well as synoptic texts from additional resources, we managed to outline the most typical stylistic devices.

To begin with, quite often we can come across such a stylistic device as a **metaphor**. For example, we see how the author describes intense snowfall: *"New weather maps show a snow blanket stretching more than 670 miles across the length of the UK in the next few weeks"* (Express Weather) [126]. In the following case, we see a metaphor with indirect comparison: *"...summery weather will be a frequent visitor this week and through into next as well"* (NetWeather) [110]. Moreover, metaphors also help to convey severe weather conditions, as in the following case, in which the author describes extreme temperature: *"A relentless wave of heat continues to steamroll across Massachusetts on Wednesday…"* (MassLive) [97].

In addition, metaphor is particularly typical for oral weather forecasts. Thus, in following example we can see it in the expression "Old Man Winter", which comes from mythology and denotes cold weather: *"Old Man Winter is about to make a big* *comeback..."* (News Center Maine) [103]. In the next example we can see metaphor with the reference to literature and films, where "Grinch" associates with time before Christmas: *"Latest details for Grinch storm in Maine..."* (News Center Maine) [102].

Another example of metaphor, and, perhaps, the most popular one is the the expression "Mother Nature", which refers to weather conditions in general: *"Mother Nature shows no sign of letting up"* (TODAY Channel) [114], *"But it seems Mother Nature has the seasons mixed up"* (CNN) [128], *"Another live look of Mother Nature and that is her cranking up the heat in Houston this weekend"* (KHOU 11 Channel) [88]. In the last example, we can see how the TV channel played with this stylistic device, using it also in the headline: *"Mother Nature cranking up heat for Mother's Day Weekend"*, which creates an interesting connection between the weather conditions and the weather forecast period, the national holiday of Mother's Day.

We can also find metaphors based on the comparison of weather changes to the actions of living beings, also known as **personification**. Usually, such stylistic device is implemented through verbs that have the meaning of movement. For example, when describing the temperature, we can usually find metaphors with the verbs "to march", "to arrive", which in this case compares the approaching bad weather with an army: *"Sunday has arrived with a west-east split in the weather, but with rain marching in from the wes*t…" (NetWeather) [107]. In following case, weather forecast describes the rapid movement of weather using verb "to race": *"The next cold front is racing toward San Antonio"* (Express News San Antonio) [112]. Another example demonstrates the comparison of the gradual onset of weather conditions with something mysterious approaching, using verb "to creep": *"Rain and snow creeping over parts of California"* (LosAngeles Times) [106].

Furthermore, we can find **metonymy**, which is usually used to name the source of information, a specific meteorologist or a group of meteorologists, with one word or expression, for example: *"The National Weather Service's Los Angeles office is warning that damaging, life-threatening flooding is increasingly likely"* (SF Gate) [104], or *"On Friday, the MET office said that for Christmas Eve and even Christmas Day, the highest temperature is expected to reach 17°C"* (NewsBook Malta) [100].

Regarding the following stylistic devices, we can conclude that their main purpose is to bring humor to synoptic texts and to optimistically describe unpleasant weather conditions. These stylistic devices are most typical for oral weather forecasts and forecasts in newspapers. We can see humorous use of pun in the following example, where a common phrase "rain on parade" in the context of a weather create a playful reference to actual rain: *"<u>Don't let the weather rain on your parade</u> – Sunday Forecast"* (CapeTown) [82]. Another example of a pun is an expression where the speaker under "outdoor event" refers to both weather conditions and a sport, which will be discussed later in the forecast: *"Stay weather aware because we have <u>a lot of outdoor events</u> that are taking place. I'm thinking <u>soccer and baseball…and heavy rain</u>"* (WKYC Channel) [129].

Moreover, in oral forecasts, we can find an **oxymoron**, which is usually aimed at emphasizing the contrast of weather conditions, for instance: *"We get a break midday into the afternoon and then <u>the storms start to fire</u> the west of us"* (WKYC Channel) [129].

In addition, a **hyperbole** is used to describe abnormal weather conditions, as illustrated in following case: *"A multi-day <u>deluge of rain and thunderstorms</u> is aiming at the South this week, raising concerns for flooding across the region."* (AccuWeather) [101]. Another use of hyperbole to describe low temperatures can be seen in the following example: *"At the heel of the storms will be <u>a bone-chilling cold arctic front</u> that is already being felt in western Canada…"* (BBC Weather) [74]. Although hyperbole usually serves only as a stylistic device, quite often in synoptic texts we can find terms such as "bomb cyclone", "polar vortex" and "atmospheric river" in incorrect, hyperbolic use, usually to attract the attention of the audience at any cost. So, hyperboles serve not only as a stylistic trope, but also as "hyped words" that lead to exaggerated synoptic information [15].

Fixed phrases are very common to synoptic texts. Specifically, **proverbs and sayings** can not only serve as a good catchy title, but also form the basis of a whole newspaper article or a synoptic oral text. Thus, the old saying "to come in like a lion and to go out like a lamb" became the main element in the article describing the unstable weather conditions in March: *"Does March really come in like a lion and go out like a lamb?"* (FOX Weather) [81]. Moreover, we have found another successful use of saying in oral weather forecasts, where speakers warn of thunderstorm activity: *"If you're outside like we are and it starts a thunder there is a saying I want you to remember, and this is something you can also teach your kids. So, when thunder roars, go indoors!"* (FOX 4 Now Channel) [85]. Another folklore weather saying is used in an article about weather conditions in April: *"April is set to start off quite rainy, but there is some signal in the long-range forecast for things to improve. A sunny shower; won't last half an hour"* (MeteoRed) [113].

The analysis of stylistic devices in written and oral synoptic texts demonstrates that metaphors, metonymys and hyperboles are most often used in headlines in order to attract readers' attention, make the headline more interesting and memorable, as well as convey the main idea or emotional load of the article or news. The same can be said about proverbs and sayings, which act as an apt addition to the text, or become its main idea, while such stylistic devices as pun and oxymoron add some humor to oral and newspaper synoptic texts.

2.3 Syntactic and structural peculiarities of weather forecast

2.3.1 Syntactic features of weather forecast

According to M. Tallerman, syntax is described as *"sentence construction"* [58, p. 1], therefore, it is the arrangement of words into phrases and sentences. Syntax mainly studies how words work together to convey meaning. Moreover, the object of studying syntax is various syntactic units that can be found in a coherent text, i.e. phrases, sentences; or a complex syntactic entity (text). In our study, we will mostly focus on **sentences** as basic syntactic units. There are two main approaches to sentence classification: **functional and structural** [48, p. 26-28].

According to functional (or communicative-syntactic) classification, there are four basic types of sentences: **declarative sentences:** *"Winds from the north or northwest are expected to affect the UK at the start of this period"* (Met Office) [122];

interrogative sentences: *"Curious, do you expect to get the heaviest snowfall?"* (CBS News Channel) [78]; **imperative sentences**: *"Use caution on the waters there in the Atlantic"* (CBS Miami Channel) [76]; and **exclamatory sentences**: *"It has been nonstop!"* (TODAY Channel) [114].

According to structural classification, sentences may be **simple** and **composite**. On one hand, there are **simple sentences**, which contain one predicative line (the connection between the subject and the predicate) and convey a complete thought: *"Downpours can be expected"* (CBS Miami Channel) [76]. On the other hand, there are **composite sentences**, which contain two or more predicative lines. They may be **compound** sentences: *"Rain will arrive overnight, and it will continue persistent into Friday morning"* (BBC) [90]; **complex sentences**: *"Many areas will see large amounts of sunshine, although it will be on the breezy side, especially in the south and west"* (Met Office) [124]; and **compound-complex**: *"Temperatures in general are expected to remain above average, with some mild nights also likely, though it could feel chilly in any clear and settled overnight conditions, and occasional mist and fog patches and touches of ground frost are possible"* (Met Office) [119].

In addition, on the basis of their structure, simple sentences can be divided into **one-member** and **two-member** sentences. A one-member sentences, also known as a sentence fragments, have only one member, which is neither a subject nor a predicate. They can be **nominal**: *"A gentle southwesterly breeze"* (BBC) [95], *"Another warm day"* (BBC) [90]; or **verbal:** *"Staying breezy"* (BBC) [92]. Based on our sample, such sentences are very typical of Internet predictions (about 20% of sentences have only one-member). The use of such sentences serves as a way of compressing the synoptic text without losing informativeness.

Two-member sentences contain two main parts of the sentences, although sometimes this type of sentences may be **elliptical** (incomplete). The missing part or parts can be understood and restored from the context: *"Wednesday will be cloudy, with outbreaks of rain moving in from the south through the morning onwards. <u>(Wednesday will be)</u> Rather windy, with a freshening easterly wind"* (BBC) [91], *"<u>(The weather is)</u> Turning dry but also cloudy in the afternoon. A band of rain (will fall) by* *the evening"* (BBC) [93]. Nevertheless, the newspaper and oral weather forecasts also have those types of sentences, but they are mostly used in **headlines**: *"Sunny morning for most, rain in north"* (Met Office Channel) [99], *"Slowly becoming more settled"* (Met Office Channel) [98].

The **word order** in the sentences generally follows standard English syntax rules, with subject-verb-object order in most cases. However, there are instances of inversion, which is used for emphasis or stylistic effect. **Phrases** such as noun phrases ("dense fog alerts", "record levels" (CNN) [109], verb phrases ("were hoisted", "could miss out" (CNN) [127], adverbial phrases ("on Thursday morning" (BBC) [94], "across the continental United States" (CNN) [109]) are widely used throughout the text.

Regarding the principal part of the sentence, we have some difference within genre invariants. In most cases, the **subject** of the Internet and newspaper synoptic texts is **a noun** or **a noun phrase** denoting a natural phenomenon: *"<u>Rain</u> will begin Thursday evening in central Texas and progress with the storm's track to the east…"* (CNN) [127], *"<u>A mixture of sunshine and showers</u>, these potentially heavy or thundery, is expected on Wednesday"* (Met Office) [125].

However, in oral weather forecasts the most typical **subject** is the **collective pronoun** "we", which denotes the audience and the meteorologist in general, or the **subjective personal pronoun** "you", which makes the forecast a direct appeal to each viewer individually: *"<u>We</u> do have some tornado warnings as well as <u>we</u> look at the Mississippi and on into Arkansas"* (TODAY Channel) [114], *"<u>You</u> can see all these heavy showers and thunderstorms moving up"* (TODAY Channel) [115].

Considering **predicate**, we can often find **a modal verbal predicate**, which emphasizes the uncertainty of predictive information: *"This morning, parts of the South <u>could see</u> tornadoes"* (TODAY Channel) [115], *"These temperatures <u>might not be frigid</u>…"* (CNN) [128], *"Tomorrow morning <u>may see</u> some light cloud…"* (BBC) [96]. In online weather forecasts, the predicate is most often expressed as a **future-oriented verb phrase** using the future simple tense: *"Many areas <u>will see</u> large amounts of sunshine, although it <u>will be</u> on the breezy side, especially in the south and* *west"* (Met Office) [124], *"This evening <u>will continue to see</u> a mix of variable cloud and clear spells"* (BBC) [89].

To conduct a quantitative analysis of types of sentences in generic invariants, we carefully studied all the texts in our sample (46 short Internet messages, 5 forecast newspaper articles and 5 oral weather forecast). The results of the analysis can be found in the tables below.

Table 2.3.1 Analysis of sentences' types due to functional classification

Types	MET/BBC - Internet forecast	CNN - newspaper forecast	YouTube - oral forecast
Declarative	*"Winds from the north or northwest are expected to affect the UK at the start of this period."* (Met Office) [122]	*"The cold isn't just an anomaly, it will pose a risk for agricultural interests in the Southeast with the growing season underway there."* (CNN) [128]	*"The storm could bring the first significant snow of the season for several cities along the East Coast."* (CBS News Channel) [78]
Sample	100%	≈ 90%	≈ 85%
Interrogative	none	*"Who will see snow this weekend?"* (CNN) [127]	*"Curious, do you expect to get the heaviest snowfall?"* (CBS News) [78]
Sample	0%	≈ 3%	≈ 8%
Imperative	none	*"Use stakes with your plant coverings or drape them over patio furniture so they don't crush the plant."* (CNN) [128]	*"Use caution on the waters there in the Atlantic."* (CBS Miami Channel) [76]
Sample	0%	≈ 7%	≈ 4%
Exclamatory	none	none	*"This train won't stop!"* (TODAY Channel) [115]
Sample	0%	0%	≈ 3%

Table 2.3.1 Analysis of sentences' types due to structural classification

Types	MET/BBC - Internet forecast	CNN - newspaper forecast	YouTube - oral forecast
Simple	*"Temperatures will*	*" Less than an inch of*	*"Downpours can be*

	mostly be below normal." (Met Office) [122]	*snow is expected in the five boroughs and Long Island"* (CNN) [127]	*expected."* (CBS Miami Channel) [76]
Sample	≈ 65%	≈ 40%	≈ 60%
Compound	*"Some rain will be remain possible at times, and short showers will be confined to western parts of the UK."* (Met Office) [123]	*"April begins Monday, and Mother Nature is bringing everything but the kitchen sink."* (CNN) [73]	*"The breeze is just a little lighter, and the temperatures drop into the upper 70s there in the evening. "* (CBS Miami Channel) [76]
Sample	≈ 15%	≈ 30%	≈ 20%
Complex	*"Cloud will continue to increase from the south-west, though a few clear spells are expected to develop through the early hours."* (BBC) [92]	*"Widespread precipitation is expected as the very large system traverses from the Central US on Sunday to the Northeast by midweek."* (CNN) [73]	*"The entire storm system is trekking northeast, where some cities await the first significant snowfall in nearly two years. "* (CBS News) [78]
Sample	≈ 15%	≈ 20%	≈ 17%
Compound-Complex	*"There are still likely to be some showers, nevertheless around coasts in the north precipitation is not expected, but in general most areas start to see settled condition develop. "* (Met Office) [118]	*"When the air can't hold any more moisture it condenses into tiny water droplets that take the visible form of a cloud – and clouds right at the surface are called fog.."* (CNN) [109]	*"It is setup that we typically see this time of year, where the jet stream aiding in some of that wind shear, and the low pressure really erupting out of the Rockies."* (Fox Weather Channel) [86]
Sample	≈ 5%	≈ 10%	≈ 3%

As we can see in the table, most sentences in all variants of synoptic texts belong to a simple sentence type (40-60%). This was expected since this type of sentence is the main one in popular science style.

In greater detail, simple sentence type prevails in Internet synoptic texts (65%), while compound and complex types take the second and third places respectively. We also can see that other types of sentences besides declaratives are not typical of such texts. This can be justified by the fact that this invariant of the weather forecast aims to be as simple and informative as possible, avoiding loaded structures. Considering newspaper weather forecasts, the composite sentence type occupies a larger part compared to the simple sentence type. Thus, compound (30%) and complex (20%) make up half sentences of the entire text. This can be explained by the fact that newspaper synoptic texts are less limited in size and are oriented towards more careful reading. Also, in the texts of this variant, we see a small percentage of imperative (7%) and interrogative (3%) sentence types, which are usually found in headlines or when providing advice to the reader.

In addition, we see the highest percentage of the use of simple sentences in oral predictions (60%), which is expected, since this type of sentence is the most typical for live, informal speech. While composite sentence types such as complex (17%) and compound (20%) sentences are mainly avoided, as it can be difficult for a speaker to quickly build such complex sentences without losing the main idea. Moreover, we can also see a small percentage of the use of interrogative (8%), imperative (4%), and exclamatory sentences (3%), which is also justified by the oral format of the text.

2.3.2 Syntactical expressive means and stylistic devices

Considering the typical patterns of syntax, we can highlight some interesting **stylistic devices** (otherwise called **figures of speech**) in oral and written synoptic texts that serve to emphasize a certain aspect in the weather forecast, make it easier to perceive or create a certain atmosphere.

To begin with, it is quite typical to use **inversion**: to put prepositional phrase or adverbial phrase first in a sentence: *“Later tonight, temperatures will drop into the upper 30s and lower 40s”* (CBS News) [116], *"As soon as the sun comes up the fog will start to dissipate. By mid morning, it will clear"* (KSBY News) [80]. Moreover, stylistic inversion can emphasize a place where certain weather conditions are expected: *"Near the coast, winds may frequently gust between 40 and 60 mph and could reach hurricane-force strength"* (AccuWeather) [108].

In oral and newspaper weather forecasts, we can often find **parallelism** when a speaker lists the weather conditions for several regions using the same construction:

"<u>We've got</u> severe weather down through the southeast. <u>We've got</u> tornado watches into central Alabama on into the panhandle of Florida. <u>We've got</u> a couple of tornado warnings around Dothan, also Panama City, and <u>we've got</u> severe thunderstorm warnings" (TODAY Channel) [114]. Additionally, in written synoptic texts, an author can create humorous effect by using parallelism: *"It <u>will be</u> cold, as low as 9 degrees. The players and fans <u>will be</u> freezing. The game <u>will be</u> a war of attrition played out on the frozen tundra"* (The New York Times) [75].

Besides, we can also encounter **repetition,** when a speaker describes similar weather conditions in neighboring regions: *"Peak impacts for Buffalo – <u>strong winds.</u> Heavy rain in Atlanta... Strong storms, <u>flood risk</u> and <u>gusty winds</u> in Chicago, wintry travel, and <u>gusty winds</u> till three this morning... Peak impacts for Philadelphia – a <u>flood risk</u>, <u>strong winds</u>..."* (TODAY Channel) [115]. Similarly, the repetition of one word can also serve as a humorous device and make the headline eye-catching: *"<u>Hot, hot, hot,</u> and then <u>rain, rain, rain</u>"* (Edmonton Journal) [83].

Represented speech (indirect speech or reported speech) is used to summarize statements or predictions made by meteorologists, interviewees or experts without directly quoting them: *"<u>The owners here tell me that</u> winter snow is actually arriving later each year, which means they have to keep pushing back…"* (CBS News Channel) [78], *"This year's Atlantic hurricane season could be one of the most active ever recorded, <u>a team of experts</u> at Colorado State University <u>warned</u> on Thursday"* (The Weather Network) [84]. Moreover, **direct speech** is an important part of many newspaper synoptic texts, and some of them are based entirely on quotations from experts: *"We're slightly past peak [strength] at this point," <u>L'Heureux told</u> CNN…"El Niño impacts don't occur in isolation anymore. There's certainly a climate change component," <u>L'Heureux said</u>"* (CNN) [111].

Another stylistic device of synoptic texts is **rhetorical questions.** Usually, such questions are used in titles, so in the main body of the text authors answer them, creating the effect of communication with the audience: *"<u>Stuck in a fog?</u> It's not just you, it's been record foggy in the US"* (CNN) [109], or *"<u>Who will see snow this weekend?</u> First big winter storm of the season targets Northeast and mid-Atlantic"* (CNN) [127].

2.3.3 Structural features of weather forecast

Internet weather forecast

As a matter of fact, Internet synoptic texts have the simplest structure of all analyzed by us. They are rather short messages and are usually not divided into such elements as introduction, main body and conclusions. The main idea of such a text is a weather forecast for a specific period of time, so they are based on three main elements of weather – temperature, precipitation and winds, which can be described in various order. To clearly see the structure of such a text, it is suggested to look at one of many text from our sample, namely *“Met Office forecast for Tuesday 5 September – Thursday 14 September”* [124].

To begin with, the overall structure of that text is primarily informative (expected conditions): *“Many areas will see large amounts of sunshine…”*, with description elements (current conditions): *“This period begins with high pressure probably centred to the east of the UK…”*. Moreover, this text is characterised by coherence, follows the chronological model of initial situation, potential changes, and reassurance. In addition, we see a lot of key vocabulary related to the main theme of the text: "high pressure", "breezy", "cloud cover", "outbreaks of rain", "showers", "thunderstorms". In addition, it also has cohesive devices manifested in the use of connectors, such as "although", "though" (contrast), "especially" (emphasis), "and" (addition), "with time" (sequence) as well as pronouns, such as "it", that refer back to previously mentioned elements.

Instead of a headline, such texts usually simply indicate the date of the forecast: *“Tuesday 5 Sep – Thursday 14 Sep”*. The text structure is a single paragraph, starting with a topic sentence and supporting ideas. In that example, the text consists mostly of complex sentences with multiple clauses. Sentence length varies, but most of them are of moderate length. Thus, there are 5 sentences in total, with lengths ranging from a minimum of 20 to a maximum of 43 words (an average of 25 words per sentence).

Newspaper weather forecast

The next text for analysis is a newspaper synopsis text, which has quite noticeable differences. We suggest analyzing one of the texts from sample, the CNN article dated March 30, 2024 – *"April will bring severe storms, snow and flooding as a wide-reaching storm crosses the US"* [73].

The first thing worth noting is the headlines (a word phrase or sentence that introduce the main ideas) and subheading (short texts found under headline that gives further insight), which are very typical for newspaper invariant. Unlike Internet texts, the title of the newspaper invariant does not indicate the forecast dates, but rather often it has stylistic devices. In greater detail, our headline contains a metaphor in the form of personification: *"April will bring"* and *"storm crosses the US"*. In contrast to Internet synoptic texts, newspaper weather forecasts choose a specific weather phenomenon or weather conditions (in our case – unstable and changeable weather in the first week of April) as the central idea, and based on it, provides forecasting. Moreover, the overall structure of that text is primarily informative (expected weather conditions), with sequence elements (forecast from Monday to Thursday) and comparison-contrast elements (different condition in different part of country). In newspaper weather forecasts, we can see that the text also has a clear text structure, which can be divided into an introduction, main body and conclusions.

To begin with, in the introduction the author sets the scene for the upcoming weather event and briefly describes them, using figurative language: *"April begins Monday, and <u>Mother Nature is bringing everything but the kitchen sink</u>. A multi-day system will slide across much of the country and bring the potential for tornadoes, large hail, flooding and even snow…"*. The main part is divided into 12 paragraphs, each of which describes in detail the weather conditions in different geographical locations and on different days of the week as well as comparing them: *"<u>On Monday,</u> severe thunderstorms are possible <u>from northern Texas to southern Ohio</u>…The best chance for severe storms will occur <u>in the afternoon</u> and continue <u>through the evening hours</u>"* (paragraph 4), and *"But while <u>some parts of the South</u> may feel more like summer, <u>parts of the northern tier of the US</u> will look and feel more like winter next week"* (paragraph 9). Commonly, such synoptic texts do not draw conclusions, but refer to future forecasts, or encourage readers to take a certain action: *"...so keep checking back over the next few days for the latest thinking"* (paragraph 14).

Subsequently, newspaper synoptic texts have a clear coherence and are well coordinated, as they follow a chronological logical flow of information (from Monday to Tuesday). Throughout the text we see key vocabulary: "tornadoes", "severe thunderstorms", "freezing rain", and "large hail". Repetition of key words enhances focus and maintains the main idea of the text: "severe threat" (paragraphs 3, 4), "April" (paragraphs 1, 2, 3, 4), "snow" (paragraphs 3, 6, 7, 8, 11, 12, 13, 14). In addition, cohesive devices are transmitted through connectors and discourse markers: "and" (addition), "as if" (comparison), "but" (contrast), "while" (contrast). That helps connect ideas or signal transitions between topics or time frames within the forecast.

In general, there is a mix of simple, compound, and complex sentences throughout the text. Compositionally, the text is divided into 14 paragraphs, the length of which is from 1 to 5 sentences (an average of 4 sentences per paragraph), when the length of sentences varies from a minimum of 10 to a maximum of 60 words (an average of 35 words per sentence).

Oral weather forecast

Weather forecasts in audio-visual form are distinguished by their unique structure and composition of the text. We propose to consider the example of the oral weather forecast of TODAY Channel *"Bomb cyclone to bring severe weather and Arctic cold across US"* [114], and its transcription in Appendix 5.

To begin with, the overall structure of that text is primarily informative (expected weather conditions) with description elements (current weather condition), cause-effect elements (severe weather conditions causing problems). Considering structural peculiarities of oral synoptic texts, change of speaker is very typical. This helps to create a logical flow of the text and divide information by main topics and segments, although there are also forecasts where all the information is presented by one person. In our example, we can see that different information is presented mostly by three different speakers, namely a voice-over, a reporter and a meteorologist. Accordingly, the structure of the text is divided into three main parts: in the beginning, a voice-over introduces and tells audience about the current weather conditions. In our case, the text starts with the ongoing description of a bomb cyclone affecting the country: *"This morning, the latest wave of brutal winter weather in the form of a bomb cyclone detonating across the country"*. The voice-over uses metaphorical language, such as *"latest wave of brutal winter weather"* and *"bomb cyclone detonating"*, and thus creates a sense of urgency and severity. Also, there is a parallel structure *"twisters and hail hammering the South, and blizzards slamming the Midwest"*, that enhances the flow of the narration. Moreover, the speaker emphasize on the most important information, such as emergencies and alerts in the first segment. It may also include interviews: *"...a second avalanche in Lake Tahoe after one Wednesday killed one person and buried three others, including Jason Parker.*

- *You said you couldn't move. - interviewer.*

- *No, you can't move at all. It's a scary feeling. - Jason Parker."*

The central segment usually contains a weather forecast for a specific period of time, presented by the meteorologist. It also provides information for specific regions, depending on the target audience: *"So as this bomb cyclone makes its way up into the upper Midwest, biting cold, blinding snow for the Midwest tomorrow. Blustery and colder in the northeast of New England, intense snow bands around the Great Lakes"*. The use of numerical data adds specificity and credibility to the forecast: *"Hundred and forty-five million of us under wind alerts"*. In the closing segment, the speaker usually highlights the main points, says goodbye, refers to the future forecasts or encourages some action: *"Toward the end of the week we're going to track uncertain. Thanks for watching. Don't miss the "Today" show"*. Since oral texts are difficult to divide into paragraphs, it can be argued that transitions from one topic to another occur through shifts in speaker, changes in graphic information or location focus.

Furthermore, we can see how synonyms and keywords used in the text maintain coherence: "bomb cyclone", "torrential rain", "flooding", "avalanches", "snow". Moreover, there are different discourse markers that create text cohesion: "This morning", "by Monday", "next week" (sequencing), "but", "while" (contrast), "and" (addition). What is not demonstrated in this example, but is typical of spoken weather forecasts, is the use of informal markers such as "You know", "Actually", "I mean", "Kind of", "Well". Besides, use of demonstratives is frequent, such as *"That avalanche interview", "This thing", "That would be", "this is a city, this is a population"*. Such demonstratives refer back to a specific thing mentioned earlier, creating a cohesive link. Moreover, the text contains different pronouns: "here" to refer to the previously mentioned locations: *"Here in the Chicago land area…"*; or "it" to refer to the winter storm: *"It has been nonstop!"*.

While the text mainly consists of simple declarative sentences, the length of the sentences varies from a minimum of 2 words to a maximum of 35 words (on average 13 words per sentence).

Using the example of 3 texts of different weather forecast text types, we aimed to demonstrate patterns of structure that are typical for Internet, newspaper, and oral weather forecasts. In the table below, we compared these three invariants.

Table 2.3.3 Comparative analysis of text structure

Text structure	Internet forecast	Newspaper forecast	Oral forecast
Overall structure	Informative	Informative	Informative
Organizational patterns	Sequence, description, cause and effect	Cause and effect, comparison, problem and solution	Sequence, cause and effect, comparison
Layout	Single paragraph	Introduction, main body, conclusion	Segments
Paragraph structure	-	Topic sentence, supporting details, transitions	Focus on different aspects, location or time frame
Heading	Dates or time frames	Main topic/idea with catchy phrase	Dates and locations or catchy phrase
Discourse markers and connectors	Coordinating and subordinating conjunctions, markers of addition, sequence, contrast and comparison	Coordinating and subordinating conjunctions, markers of cause-effect, sequence, addition, contrast and comparison	Coordinating and subordinating conjunctions, markers of addition, sequence, emphasis, cause-effect, informal markers
Sentence complexity	Simple and compound	Compound and complex	Simple

Sentence length	On average 24 words	On average 30 words	On average 15 words
Other peculiarities	Tables, maps	Graphic elements, quotations of experts, figurative language	Change of speaker, interviews, numerical data, maps

Based on our table, we can claim that all three types of text structure are similar in terms of general structure, organizational models of means of maintaining cohesion and coherence. The composition of the texts is different: the layout for newspaper texts contain introduction, main body and conclusion, while Internet forecasts and oral forecasts do not structure information according to such models. Moreover, we can argue that the headline is typical only for newspaper texts, while the others invariants may simply specify the date of the forecast or not have it at all.

Oral weather forecasts turned out to be the shortest in terms of the number of words in a sentence, which is not surprising, since they mostly consist of simple short sentences. Moreover, newspaper weather forecasts proved out to be the longest in terms of the number of words in a sentence and the most complex in terms of sentence types, while Internet synoptic texts are in the middle.

Additionally, all invariants have their unique peculiarities. To be specific, 2 out of 5 oral forecasts under analysis included interviews; in 3 out of 5 newspaper forecasts we came across indirect speech or quotes; 5 of 5 newspaper synoptic texts contained maps, images, footage, or other graphic elements, while all 46 short Internet texts were accomplished by tables.

CONCLUSION TO CHAPTER 2

Synoptic texts, including Internet forecasts, newspaper forecasts, and oral forecasts, demonstrate distinct features at the lexical, syntactic and structural levels. These features result from the specific requirements of each media platform where they are published and at the same time preserve their genre conventions.

Considering vocabulary of synoptic texts, we singled out a literary layer, namely the wide use of meteorological terms, such as *high pressure*, *font*, *precipitation* and others. In addition, the analysis showed the predominance of neutral vocabulary in all variants, and also singled out the lexical-semantic field of synoptic meteorology as the main one. Nevertheless, a set of lexical features inherent in all invariants of the genre was outlined, such as time markers *(now, Friday, after),* lexical hedges *(around, approximately, according to)* and toponyms *(New York, London, Great Britain).* Also, such lexical expressive means as metaphor *(Mother Nature*), metonymy *(MET Office said),* personification *(cold font is racing)* and hyperbole *(deluge of rain)* play an important role in the stylistic content of newspaper and television weather forecasts, while Internet weather forecasts are atypical.

Additionally, syntactic features were analyzed. Thus, the simple declarative sentences were outlined as the most common, along with the wide use of elliptical sentences *(A band of rain by the evening)* and one-member sentences *(Another warm day)*. Moreover, the principal parts of the sentence were investigated, and it was concluded that in Internet and newspaper weather forecasts, the subject is most often expressed by a noun or a noun phrase, while in oral weather forecasts the subject is a collective or subjective personal pronoun. Regarding the predicate, we found out that it is usually a future-oriented verb phrase as well as a simple or phrasal modal. Among the typical syntactic expressive means of weather forecasts, we distinguished inversion (*By mid morning, it will clear*), repetition (*Hot, hot, hot, and then rain, rain, rain*) and parallelism (*We've got a couple of tornado warnings..., we've got severe thunderstorm warnings*).

Having analyzed and compared three different structures of synoptic texts from different genre invariants, we outlined their main structural features as well as their cohesion and coherence devices. Thus, Internet forecasts are short texts typically consisting of just one paragraph, complemented with organizational patterns of sequence and description, as well as graphic elements. On the other hand, newspaper weather forecasts turned out to be the longest in terms of the number of words in a sentence, and to have a clear structure with an introduction, main body and conclusion, as well as a title, which usually contains stylistic devices. At the same time, oral synoptic texts were distinguished by their special layout in the form of segments with a shift of speakers or graphic content, and often included direct speech in the form of an interview.

No doubt, there are still many different linguistic aspects that have not been explored in this paper. Although all genre invariants of synoptic texts share typical stylistic, lexical, syntactic, and structural features, they differ to a greater or lesser extent. It is these differences that should be the subject of further linguistic research and analysis.

CONCLUSION

This research is aimed to examine the peculiarities of a unique genre of weather forecasting which is quite unexplored from the linguistic point of view. In order to study these peculiarities, we had to take a closer look at the concept of genre that has a long history and has been studied by many scholars, such as M. Bakhtin, T. Todorov, J. Swales and others. Based on their perspectives, we have developed a unified definition that describes a genre as a type or category of any texts (oral or written), with a dynamic nature and strong dependence on the social context. In addition, each genre has certain characteristics, namely a typical arrangement of elements, lexical and grammatical constructions, stylistic devises, as well as the target audience and the purpose of communication.

Therefore, the weather forecast is a separate informational genre on the modern media platforms, with the main purpose of transmitting information about meteorological conditions for a certain period of time. Since the texts of this genre have quite significant differences, we identified 3 main genre invariants: the Internet, newspaper, and television weather forecasts. Having analyzed the different text types of this genre, we have concluded that this genre is generally characterized by homogeneous vocabulary, monothematicity and compression. In addition, synoptic texts in all genre invariants have certain linguistic features. In more detail, the following features were determined at the lexical level:

- predominance of a neutral vocabulary layer (from 70 to 90%);
- use of meteorological terminology (from 5 to 15%);
- wide use of lexemes from the lexical-semantic field of synoptic meteorology, namely, words or expressions to denote various weather phenomena (rain, thunderstorm), weather systems (low pressure, humidity) and related lexemes (meteorologist, forecaster);
- use of toponyms (London, the South, the Great Lakes);
- use of vocabulary to denote time, temporal markers (now, from Friday);
- use of lexical hedges (around, maybe, according to);

As for the syntactic level, certain features have been highlighted that vary depending on genre invariants. Thus, we have found out that the use of complex syntactic constructions, namely the high frequency of composite sentences (60%), is more characteristic of newspaper synoptic texts. This is justified by the fact that newspaper weather forecasts are the least limited in text size. In contrast, television synoptic texts are characterized by a simple sentence type (60%) as the most used, as well as the presence of interrogative (8%) and exclamatory (4%) types of sentences. Moreover, we have concluded that the use of elliptical and one-member sentences (20%) is the most typical of Internet synoptic texts, which is a consequence of the general brevity and small format of such texts.

Besides, our analysis has revealed the use of stylistic means in synoptic texts, such as metaphor, personification, metonymy, pun, oxymoron, hyperbole, proverbs and sayings at the lexical level; as well as inversion, parallelism, repetition, represented speech and rhetorical questions at the syntactic level. Stylistic means are very common for newspaper and television weather forecasts, while they have not been found in Internet synoptic texts.

Considering the structure of weather forecasts, certain differences and features within the genre have been described. While the general organizational patterns of the text as well as the means of cohesion and coherence are common to all genre invariants, in terms of structure and layout, the comparison of text types showed the greatest differences among all analyzed language levels. Thus, Internet forecasts turned out to be the most simple and short in their structure, usually not divided into structural elements. At the same time, newspaper weather forecasts are standardized, with a heading, subheading, introduction, main body, and conclusion. Also, an interesting feature of this genre invariant is the choice of a specific natural phenomenon or the direct influence (usually negative) of weather on a person as the main topic of the text, while meteorological information recedes into the background. On the contrary, the oral weather forecast turned out to be the least standardized because its structure can vary significantly, and sometimes includes such elements as the change of speakers (5 of 5) or an interview (2 of 5). In general, it can be stated that the structure of television weather forecasts is not perceived as a cliché, rather it is characterized by attempts to stand out in the way of presenting information.

Thus, although the genre invariants have some differences at all linguistic levels, they are still varieties of the same genre of weather forecasting. In addition, all the above-mentioned language features help to achieve the main pragmatic goal, which is to communicate information about weather conditions clearly and effectively. Thereby, specialized vocabulary and mainly concise syntactic structures ensure clarity, stylistic devices add emotional coloring, and the use of a consistent and flexible text structure facilitates the perception of information. In general, we can conclude that the linguistic features of the weather forecast play a key role in successful communication with the audience.

In general, the prospects for the study of this topic lie in further investigation of the genre nature of non-literary texts, the development of the theoretical foundations of the analysis of synoptic texts, their classification, similarities, and differences. Consequently, the expansion of the analyzed material for further study of the relatively young and rapidly developing genre of weather forecasting is necessary.

РЕЗЮМЕ

Представлене дослідження присвячено вивченню особливого типу комунікації, а саме жанру прогнозу погоди. Актуальність теми зумовлено потребою аналізу метеорологічного дискурсу на базі англомовних синоптичних текстів, оскільки вони посідають важливе місце в сучасному медіапросторі, несуть практичну користь та широко використовуються як у повсякденному житті людей, так і в професійній діяльності.

Особливу увагу приділено власне поняттю жанру, що є одним з основних елементів у лінгвістиці. Попри різноманітність підходів та довготривале вивчення, концепт жанру та жанрові особливості нелітературних текстів залишаються маловивченими. Над поняттям жанру та лінгвістичними ознаками прогнозу погоди працювало багато відомих іноземних та вітчизняних науковців, а саме Цветан Тодоров, котрий досліджував історію та походження літературних жанрів, та наголошував на незамінності системи поділу творів, Джон Свейлс, котрий розглядав жанр як сукупність соціокультурних, лінгвістичних та когнітивних аспектів мови, Михайло Бахтін, котрий першим запропонував сприймати будь-які висловлювання як мовленнєві жанри, а також Ганна Козловська, котра вивчала різноманітні прагматичні функції мови в прогнозах погоди, Марія Кулібаба, котра вивчала жанрову специфіку метеодискурсу та інші. З огляду на це, продовження та доповнення праць з вивчення нелітературних жанрів, а також лінгвістичний аналіз прогнозу як жанру, що швидко розвивається та видозмінюються в сучасному медіасередовищі, вважаємо необхідним і перспективним.

Об'єктом нашого дослідження є вибірка з 50 різноманітних за формою (письмові та усні) та специфікою (короткотривалі та довготривалі, локальні та загальні) синоптичні тексти, а також загальний аналіз 50 прогнозів з найпопулярніших англомовних метеорологічних сайтів та телевізійних каналів (Met Office, BBC, CNN, FOX, CBS, AccuWeather та інші). Загальна кількість опрацьованих прогнозів складає 100 одиниць. Предметом цієї роботи є

окреслення, вивчення та порівняння типових мовних засобів на всіх мовних рівнях, а також огляд метеорологічного вокабуляру та лексично-семантичного поля "синоптична метеорологія".

Мета нашого дослідження полягає у вивченні унікальних лексичних, синтаксичних, стилістичних та структурних особливостей англомовних прогнозів погоди, а також у демонстрації лінгвістичних відмінностей жанрових інваріантів синоптичних текстів (Інтернет, газетні та телевізійні прогнози погоди). Задля досягнення мети, було виконано цілу низку завдань, а саме:

- окреслено поняття жанру та підходи до його вивчення як з лінгвістичного, так і літературознавчого поглядів;
- розкрито поняття прогнозу погоди як нелітературного інформаційного жанру, представлено його класифікацію та різновиди;
- проаналізовано жанрові особливості синоптичних текстів та виокремлено найбільш вживані мовні одиниці;
- проведено порівняльний аналіз жанрових інваріантів прогнозу погоди, виявлено їхні спільні та відмінні риси.

Представлена робота складається зі вступу, двох розділів – теоретичного і практичного, висновків, списку літератури та фактичного матеріалу дослідження, а також додатків.

На основі проведеного дослідження можна зробити висновок, що прогноз погоди – це в першу чергу окремий вид комунікації, що має власні жанрові конвенції та норми, які безпосередньо впливають на форму та зміст синоптичних текстів. Історія виникнення прогнозу погоди бере свій початок ще з античних часів, проте з розвитком технологій та метеорологічних приладів, а також нових способів розповсюдження інформації (таких як телеграф, радіо, телебачення, Інтернет) синоптичні тексти значно видозмінювались та продовжують розвиватись і в наш час. Загалом прогноз погоди ми відносимо до нелітературних інформаційних жанрів, оформлених здебільшого у науково-популярному стилі (оскільки вони базуються на наукових фактах), яким також притаманні деякі елементи художнього стилю. Зазвичай синоптичні тексти є малоформатними та монотематичними, а також з прагмалінгвістичного погляду вони здебільшого виконують функцію інформування.

Щодо лексичних особливостей, у перебігу дослідження було виявлено, що переважна більшість слів, використовуваних у прогнозі погоди, належать до нейтральної лексики, а також досить розповсюдженим є вживання метеорологічної термінології. Загалом ці терміни є уніфікованими та загальнозрозумілими, більшість з них вже є частиною щоденного вокабуляру (humidity, cyclone, fonts), проте зустрічаються і такі, що мають професійну спрямованість (okta, dew point, El Nino). Крім того, ми виділили жанрову лексичну специфіку, яка полягає у використанні різноманітних темпоральних маркерів, що являють собою лексеми на позначення певних часових відрізків та допомагають реципієнту точніше інтерпретувати інформацію. Темпоральна лексика поділяється на зовнішні часові маркери (календарна дата, день тижня, місяць, пора року) – такі як Moday, June 15th, May; хронологічні часові маркери (послідовність певних подій) – такі як later, after that, before; та маркери часу мовця (сприйняття часу з погляду автора тексту) – такі як now, next hours, in the morning. Також було виявлено широке використання топонімів (лексем на позначення географічних об'єктів або сторін світу) – таких як London, West, New York, котрі є обов'язковим елементом в загальних прогнозах погоди для регіону чи країни. На окрему увагу заслуговує епістемічна лексика – така як maybe, around, I suppose, що вказує на ступінь впевненості або невпевненості в істинності інформації, що передається. Такі лексеми нагадують адресатові, що передбачити майбутні погодні умови зі стовідсотковою точністю неможливо, та підкреслюють нестабільну та мінливу природу атмосферних явищ.

На синтаксичному рівні було проаналізовано типи речень згідно з функціональною (розповідні, питальні, наказові, окличні речення) та структурною (прості та складні речення) класифікаціями. За результатами аналізу було виявлено, що найбільш типовим є просте розповідне речення, проте й інші види займають певний відсоток синоптичного тексту залежно від жанрового інваріанта. Також специфіка жанру виражена через широке використання еліптичних та односкладних речень. Загалом домінантним є прямий порядок слів, хоча трапляється також інверсія. Щодо головних членів речення, підметом, як правило, виступає слово або словосполучення, що позначає погодний феномен, а також особовий займенник 2-ї особи множини "ви" або 1-ї особи множини "ми", що сукупно позначає автора і реципієнта.

На структурному рівні жанр прогнози є відносно неоднорідним, а його жанрові інваріанти досить суттєво відрізняються. В ході дослідження було виявлено, що Інтернет прогнози погоди не поділяються на структурні частини, а є одним суцільним параграфом. На противагу цьому, газетні прогнози погоди загалом демонструють чітку структуру зі вступом, основою частиною та кінцівкою, а також мають заголовки та підзаголовки, котрі є лаконічним та інформативним переказом змісту тексту і зазвичай містять стилістичні засоби. Телевізійні прогнози погоди поділяються на сегменти з довільною структурою, вирізняються великою кількістю мовців, містять інтерв'ю, прямі трансляції з місця подій (якщо йдеться про екстремальні погодні умови) тощо.

Що стосується стилістичних засобів виразності, притаманних досліджуваному жанру, то нами було виокремлено як стилістичні прийоми (на лексичному рівні), так і стилістичні фігури (на синтаксичному рівні), що найчастіше трапляються в газетних і телевізійних синоптичних текстах і надають їм емоційного забарвлення та експресивності. Найтиповішими з лексичних засобів виразності є метафора, персоніфікація та метонімія. Також трапляються каламбур, гіпербола та оксюморон, які слугують гумористичними засобами наповнення тексту. Зі стилістичних фігур ми виділили інверсію, паралелізм та повторення, які допомагають більш рельєфно передати зміст тексту та підкреслюють важливість певних тверджень.

Отже, прогноз погоди як окремий жанр має власні жанрові особливості на всіх мовних рівнях та заслуговує на подальше ретельніше вивчення. Удосконалення теоретичних засад аналізу синоптичних текстів дозволить проводити, зокрема, порівняльні дослідження текстів прогнозів погоди різними мовами.

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120. Weather and climate change. Thursday 15 Feb – Thursday 29 Feb. *Met Office*. URL: https://web.archive.org/web/20240201013649/https://www.metoffice.gov.uk/
121. Weather and climate change. Thursday 15 Jun – Thursday 29 Jun. *Met Office*. URL: https://web.archive.org/web/20230601062207/https://www.metoffice.gov.uk/
122. Weather and climate change. Tuesday 16 Apr – Thursday 25 Apr. *Met Office*. URL: https://web.archive.org/web/20240410195521/https://www.metoffice.gov.uk/
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APPENDICES

Appendix 1

Sample of Internet weather forecast from Met Office

No	Title	Link
1.	Friday 5 Apr - Sunday 14 Apr	https://web.archive.org/web/20240401003504/https://www.metoffice.gov.uk/
2.	Tuesday 16 Apr - Thursday 25 Apr	https://web.archive.org/web/20240410195521/https://www.metoffice.gov.uk/
3.	Tuesday 5 Mar - Thursday 14 Mar	https://web.archive.org/web/20240301010610/https://www.metoffice.gov.uk/
4.	Saturday 16 Mar - Saturday 30 Mar	https://web.archive.org/web/20240301010610/https://www.metoffice.gov.uk/
5.	Monday 5 Feb - Wednesday 14 Feb	https://web.archive.org/web/20240201013649/https://www.metoffice.gov.uk/
6.	Thursday 15 Feb - Thursday 29 Feb	https://web.archive.org/web/20240201013649/https://www.metoffice.gov.uk/
7.	Friday 5 Jan - Sunday 14 Jan	https://web.archive.org/web/20240101023438/https://www.metoffice.gov.uk/
8.	Monday 15 Jan - Monday 29 Jan	https://web.archive.org/web/20240101023438/https://www.metoffice.gov.uk/
9.	Tuesday 5 Dec - Thursday 14 Dec	https://web.archive.org/web/20231201040520/https://www.metoffice.gov.uk/
10.	Friday 15 Dec - Friday 29 Dec	https://web.archive.org/web/20231201040520/https://www.metoffice.gov.uk/
11.	Sunday 5 Nov - Tuesday 14 Nov	https://web.archive.org/web/20231101013341/https://www.metoffice.gov.uk/

12.	Wednesday 15 Nov - Wednesday 29 Nov	https://web.archive.org/web/20231101013341/https://www.metoffice.gov.uk/
13.	Friday 6 Oct - Sunday 15 Oct	https://web.archive.org/web/20231001204200/https://www.metoffice.gov.uk/
14.	Monday 16 Oct - Monday 30 Oct	https://web.archive.org/web/20231001204200/https://www.metoffice.gov.uk/
15.	Tuesday 5 Sep - Thursday 14 Sep	https://web.archive.org/web/20230901002052/https://www.metoffice.gov.uk/
16.	Friday 15 Sep - Friday 29 Sep	https://web.archive.org/web/20230901002052/https://www.metoffice.gov.uk/
17.	Saturday 5 Aug - Monday 14 Aug	https://web.archive.org/web/20230801012313/https://www.metoffice.gov.uk/
18.	Tuesday 15 Aug - Tuesday 29 Aug	https://web.archive.org/web/20230801012313/https://www.metoffice.gov.uk/
19.	Wednesday 5 Jul - Friday 14 Jul	https://web.archive.org/web/20230701015824/https://www.metoffice.gov.uk/
20.	Saturday 15 Jul - Saturday 29 Jul	https://web.archive.org/web/20230701015824/https://www.metoffice.gov.uk/
21.	Monday 5 Jun - Wednesday 14 Jun	https://web.archive.org/web/20230601062207/https://www.metoffice.gov.uk/
22.	Thursday 15 Jun - Thursday 29 Jun	https://web.archive.org/web/20230601062207/https://www.metoffice.gov.uk/
23.	Friday 5 May - Sunday 14 May	https://web.archive.org/web/20230501012910/https://www.metoffice.gov.uk/
24.	Monday 15 May - Monday 29 May	https://web.archive.org/web/20230501012910/https://www.metoffice.gov.uk/
25.	Wednesday 5 Apr - Friday 14 Apr	https://web.archive.org/web/20230401015345/https://www.metoffice.gov.uk/
26.	Saturday 15 Apr - Saturday 29 Apr	https://web.archive.org/web/20230401015345/https://www.metoffice.gov.uk/

Appendix 2

Sample of Internet weather forecast from BBC Weather

1.	October 1, 2023	https://web.archive.org/web/20231001144505/https://www.bbc.com/weather/2643743
2.	October 5, 2023	https://web.archive.org/web/20231005104350/https://www.bbc.com/weather/2643743
3.	October 7, 2023	https://web.archive.org/web/20231007184844/https://www.bbc.com/weather/2643743
4.	October 9, 2023	https://web.archive.org/web/20231009151659/https://www.bbc.com/weather/2643743
5.	October 10, 2023	https://web.archive.org/web/2023101016455

		9/https://www.bbc.com/weather/2643743
6.	October 11, 2023	https://web.archive.org/web/2023101118212 5/https://www.bbc.com/weather/2643743
7.	October 13, 2023	https://web.archive.org/web/2023101310401 5/https://www.bbc.com/weather/2643743
8.	October 14, 2023	https://web.archive.org/web/2023101417171 4/https://www.bbc.com/weather/2643743
9.	October 15, 2023	https://web.archive.org/web/2023101515471 3/https://www.bbc.com/weather/2643743
10.	October 17, 2023	https://web.archive.org/web/2023101717521 7/https://www.bbc.com/weather/2643743
11.	October 18, 2023	https://web.archive.org/web/2023101817334 6/https://www.bbc.com/weather/2643743
12.	October 20, 2023	https://web.archive.org/web/2023102010420 2/https://www.bbc.com/weather/2643743
13.	October 21, 2023	https://web.archive.org/web/2023102110434 1/https://www.bbc.com/weather/2643743
14.	October 22, 2023	https://web.archive.org/web/2023102216221 0/https://www.bbc.com/weather/2643743
15.	October 23, 2023	https://web.archive.org/web/2023102316264 6/https://www.bbc.com/weather/2643743
16.	October 25, 2023	https://web.archive.org/web/2023102500213 0/https://www.bbc.com/weather/2643743
17.	October 27, 2023	https://web.archive.org/web/2023102700475 0/https://www.bbc.com/weather/2643743
18.	October 28, 2023	https://web.archive.org/web/2023102811000 6/https://www.bbc.com/weather/2643743
19.	October 30, 2023	https://web.archive.org/web/2023103017534 3/https://www.bbc.com/weather/2643743
20.	October 31, 2023	https://web.archive.org/web/2023103121591 1/https://www.bbc.com/weather/2643743

Appendix 3

Sample of newspaper weather forecast

1.	“April will bring severe storms, snow and flooding as a wide-reaching storm crosses the US” CNN, Allison Chinchar, March 30, 2024	https://edition.cnn.com/2024/03/30/weather/storm-tornadoes-snow-flooding-climate/index.html
2.	“Stuck in a fog? It’s not just you, it’s been record foggy in the US” CNN, Mary Gilbert, January 25, 2024	https://edition.cnn.com/2024/01/25/weather/weather-fog-us-climate/index.html
3.	“Super El Niño” is here, but La Niña looks likely. What’s in store for the	https://edition.cnn.com/2024/02/07/weather/el-nino-super-winter-

	coming months" CNN, Mary Gilbert, February 8, 2024	climate/index.html
4.	"Who will see snow this weekend? First big winter storm of the season targets Northeast and mid-Atlantic" CNN, Eric Zerkel, January 4, 2024	https://edition.cnn.com/2024/01/04/weather/northeast-winter-storm-snow-climate/index.html
5.	"Winter returns: Major pattern shift underway" CNN, Allison Chinchar, Sara Tonks and Mary Gilbert, March 18, 2024	https://edition.cnn.com/2024/03/16/weather/spring-weather-winter-temperatures-climate/index.html

Appendix 4

Sample of oral weather forecast

1.	"Winter storm expected to blanket Northeast with heavy snow" CBS News, January 6, 2024	https://www.youtube.com/watch?v=lrXfTFWREJw&t=3s&ab_channel=CBSNews
	Transcription: SPEAKER 1: The U.S. Northeast is bracing for a powerful winter storm that is expected to bring snow, ice, and strong winds this weekend. Nearly 30 million people were under winter weather alerts Friday, from the mid-Atlantic to New England. The storm could bring the first significant snow of the season for several cities along the East Coast, with up to a foot expected in some places. Errol Barnett reports. VOICEOVER: Tonight, the first major snowstorm of the season marches east after packing a punch in the South and Midwest. Heavy snow blanketed roads in Winslow, Arkansas, Thursday, leaving this driver stuck in need of help. And traffic on this bridge ground to a halt after several tractor trailers were involved in an accident, one even appearing to jackknife. In nearby Kansas, the snow and ice made driving there a challenge as well. At Wichita's airport, near whiteout conditions as crews work to clear the runways. The entire storm system is trekking northeast, where some cities await the first significant snowfall in nearly two years. Carl Gooch in Massachusetts is grabbing last minute sand. INTERVIEW: A little nervous, because we haven't had, you know, this much snow for a while. VOICEOVER: A snow-deprived Boston meantime could be covered in half a foot of snow. INTERVIEW: Our city teams are out there trying to prepare the streets, treat them before the snow comes down. VOICEOVER: For Wayne and Dean Ryder, owners of the Thunder Ridge Ski Area in New York, fresh powder over the weekend means their snow machines can get a break. INTERVIEW: I think New York City has not had a snowstorm like this in, I don't know, several years. 650 days. Yeah. REPORTER: Now consider this, ski slopes like this one are having to adapt to the changing weather. The owners here tell me that winter snow is actually arriving later each year, which means they have to keep pushing back,… the days they open for the season. SPEAKER 1: Carol Barnett reporting in Patterson, New York. For more on the storm, CBS News New York meteorologist Lonnie Quinn joins us. Lonnie, what's the latest on the storm? METEOROLOGIST: Okay, well, the latest, we'll take a peek at it right here. You see that you've got rain down around the Mississippi River in Mississippi, pushing into Alabama right	

	now. And north of that, getting to Illinois, a little bit of light snow there. But it's all about its progression into the northeast, and you talk about those winter weather advisories - they extend. This is a huge swath, right? It goes anywhere from Asheville, North Carolina, all the way up to Portland, Maine. It is a big chunk of the country that will be dealing with some type of winter weather. SPEAKER 1: Curious, do you expect to get the heaviest snowfall? METEOROLOGIST: It's been switching back and forth. And I'm sure, you know, for those of you, who are watching your local news, you're saying, hey, my numbers are bouncing up, they're bouncing down, they're bouncing up, they're bouncing down. SPEAKER 1: Correct. For sure. MEREOROLOGIST: Look, it's all because… if this storm, Catherine, this is key…Alright, if the storm goes far enough offshore, it supplies its own cold air to get bigger snow totals. Believe it or not, if it comes closer to shore, everyone thinks, well, that's a bigger snow event! If it comes closer to shore, it puts all the big snow inland and the coastal areas pick up a lot of rain and snow mix. And that's what we're talking about. So, the projection for a place like Philadelphia is zero. I mean, there's no rain. Yeah, it doesn't look like much of anything. New York City, the projection is less than an inch. Now you go inland. All right, look at the big number for Portland, Maine - 17.9. Boston, interesting story. You were talking about Boston. I think downtown Boston could be one to three inches of snow. You get to Brookline, which is not far, but it's just not right on the water like Boston is. That could be a three to six inch range. But I want to point this out - Tannersville, New York. Most folks watching right now have never even heard of Tannersville, New York, the biggest number on the map. And the reason why this is a story, this is home to one of the local ski areas that serves as the New York City population. And this area, they live or they die, Catherine, based on snowfall. And this is Hunter Mountain, Bel Air Mountain, Windham Mountain is up there. They had a snow drought last year. Last year, New York City itself had its least snowy winter on record - 2.3 inches for the entire season. Nothing, right? You could see, you know, over 20 inches of rain, possibly for some of those ski areas. And that's exactly an answer to the prayers up there. Their economy is based on it. And we do think that could be one of the bullseyes there. You see all the numbers here, places like Allentown, maybe 3.2, Williamsport, Pennsylvania, - 8.4. But the purple colors show you the bigger numbers. It's inland, sort of away from the coast, except for a place like Portland, Maine. SPEAKER 1: It is so impressive how you keep all that information in your head, Lonnie Quinn. Thank you so much for joining us. METEOROLOGIST: My pleasure.	
2.	“Bomb cyclone to bring severe weather and Arctic cold across US” TODAY, January 12, 2024	https://www.youtube.com/watch?v=EjZCBW4gA7Y&t=8s&ab_channel=TODAY
	Transcription: VOICEOVER: This morning, the latest wave of brutal winter weather in the form of a bomb cyclone detonating across the country. With another round of twisters and hail hammering the south, and blizzards slamming, the Midwest with blinding snow and whipping winds, causing whiteout conditions, snarling roads, and blanketing neighborhoods. INTERVIEW: We're mainly dealing with accidents. VOICEOVER: Temperatures plunging well below zero, setting the stage for possibly the coldest Iowa Caucus in history. Monday, with wind chills expected to feel like 30 below and more avalanches in the west. Near Stevens Peak in Idaho, authorities say two people were rescued, one is still missing. And a second avalanche in Lake Tahoe after one Wednesday killed one person and buried three others, including Jason Parker. INTERVIEWER: You said you couldn't move.	

	INTERVIEWEE: No, you can't move at all. It's a scary feeling. VOICEOVER: Rescuers seen here digging for Parker, who was trapped under close to four feet of snow. They found him after eight minutes. INTERVIEWEE: I started yelling, “help, help” as much as I could. My adrenaline's rushing. It was it was so it was surreal. VOICEOVER: In the northeast, another round of torrential rain is set to worsen ongoing flooding. Rivers in New Jersey still rising from the last round of severe weather earlier this week. Hard hit communities nationwide preparing for more blows, as Mother Nature shows no sign of letting up. LIVE REPORTER: Yeah, that avalanche interview is going to stick with me for a while. So glad Jason Parker's OK. Back here in Chicago. Obviously, this is a city, this is a population used to intense winters, like people here are used to conditions like this, but this bomb cyclone and this weekend, frankly, is set to be so intense that officials are pleading with people to just adjust or cancel their morning commutes. If they can, just work from home, knowing that… Again, the other differentiating factor of this storm is that brutal cold lows overnight here in the Chicago land area are expected to hover below zero into the middle of next week. I'll send it back to you. STUDIO SPEAKER 1: Maggie Wasp from cold, windy and snowy Chicago. Maggie, thank you. METEOROLOGIST: It has been nonstop! Hundred and forty five million of us under wind alerts from Texas, the Rockies, all the way into New England. Flood alerts up and down the eastern seaboard for thirty five…fifty six million people under winter alerts. And look at this, we've got tornado severe weather right now. Through eleven o'clock this morning, central time, we've got tornado watches. We do have some tornado warnings as well as we look at the Mississippi and on into Arkansas. We are ahead of the system up to the north, as Maggie was talking about, you can see the snow from Chicago, Milwaukee, back to Des Moines. This thing is going to be really intense. In fact, twenty nine million people this morning into tonight are under risk of severe weather. We're talking, tornadoes, wind gusts of seventy five miles per hour. These hurricane force gusts stretching from Jackson all the way to Wilmington. So as this bomb cyclone makes its way up into the upper Midwest, biting cold, blinding snow for the Midwest tomorrow. Blustery and colder in the northeast of New England, intense snow bands around the Great Lakes. In fact, by Monday, Chicago could see nine inches of snow. That would be more snow than they got all of last year. Hourly snowfall rates of one to two inches likely around the Great Lakes. Probably hear some thundersnow, isolated amounts of three inches or more in the northeast and New England. And guess what? Coming up next week. Here we go again. Another storm possible. Toward the end of the week we're going to track uncertain. But with cold air in place, we could finally be seeing some snow here, in the New York area, the northeast as well, where we got that snow drought. Right here. Hey, thank for watching. Don't miss the “Today” show. Every week day, at 11 AM EAST, 8 AM PAC, on our streaming channel “TODAY: All day”. To watch, go to today.com/allday or click the link right here.	
3.	“Major storm on the move to bring blizzards, tornados across the US” TODAY, January 9, 2024	https://www.youtube.com/watch?v=UtTR39cpwQY&t=2s&ab_channel=TODAY
	Transcription: SPEAKER 1: Let's get to our top story. That new round of severe weather, it's just sweeping across the country. SPEAKER 2: Yeah, it's bringing a triple threat to snow, rain and wind. A large part of the country in the cross hairs. Heavy snow overnight stretching from New Mexico to the plains	

	and into Iowa, these are the conditions in Sioux City this morning. SPEAKER 1: That storm, by the way, heading east, where a big concern here is flooding, especially for areas with snow still on the ground or still saturated from that weekend storm. SPEAKER 2: In the meantime, nearly 200 million Americans are under wind alerts. This morning, parts of the South could see tornadoes. And some schools in the Florida Panhandle are actually closed today as a precaution. SPEAKER 2: Yeah, Al's tracking all of this, but first, let's go to NBC's Maggie Vespa, joins us now from a snowy Des Moines, Iowa. Maggie, good morning, it looks pretty bad there. REPORTER: Hey, guys. Yeah, it is really bad here! Good morning, from a hard hit Des Moines, this largely transformed overnight. We had like half an inch on the ground when we got into town. And now more than four inches. You can see how thick here, more than four inches have fallen just overnight. We're expecting more than ten by the time this thing wraps up. And just I mean, look at it, you can see how fat these flakes are, how easily this is sticking. This is the kind of thick, heavy snow that basically has officials worried about things like power outages, dangerous road conditions. Several school districts have canceled classes for the day already. And actually, speaking of power outages, close to a quarter of a million Americans in the Midwest and South already without power this morning. More broadly, 54 million Americans from Texas up into Michigan, obviously covering the Des Moines area, and then up into New England are under those winter storm alerts. And then you mentioned, I mean, the triple threat. That is this thing we talk about - the wind. Some of the wind gusts that we've seen, especially yesterday going into last night, topping 70mph, Nebraska in particular… Nebraska in particular was a mess yesterday. We saw wreck, after wreck, after wreck with authorities say at least one of them being fatal. Back here in the Iowa Territory, obviously. Back here in Iowa, more broadly, looking at timing, this is also messing with politics. We're less than a week out from the caucuses, guys. And yesterday it was a big headline: Presidential candidate Nikki Haley had to cancel a campaign event because of this snow. It got that bad, that quickly, and people were already worried. Now we're seeing these forecasts really come to fruition as we get close to the caucuses next week, by the way, another threat. People are worried about the temperatures, they're supposed to plummet into potentially subzero territory. And then kind of the final layer that you talked about, is the rain. In the northeast, in states like New York, where you are, in new Jersey, already states of emergency declared, as officials worry about all that rain coming in. And potentially when you add that to the snow that you got over the weekend, and as that starts to melt, they say they are very worried about severe, if not flash flooding in those areas. So guys, a long, messy road ahead, you can see it's already coming to fruition here in Iowa. I'll send it back to you. SPEAKER 1: All right. Maggie Vespa. Maggie, thanks. SPEAKER 2: Let us see where this storm has headed and by that's a messy map right there. METEOROLOGIST: It really is, guys, right now. Good morning to you. We've got severe weather down through the southeast. We've got tornado watches into central Alabama on into the panhandle of Florida. We've got a couple of tornado warnings around Dothan, also Panama City. And we've got severe thunderstorm warnings. This tornado watch goes until 7 a.m. central time. You can see all these heavy showers and thunderstorms moving up. We widen out, you can see snow from Des Moines, Iowa where Maggie is, Chicago, Pittsburgh, Detroit. So let's time this out for you. Here's what we're looking at for today. Peak impacts for Buffalo 3 p.m. to 5 a.m., strong winds, heavy rain in Atlanta now to 1:00. Strong storms, flood risk and gusty wind, Chicago, wintry travel and gusty winds till three this morning. We move on up to the northeast. Peak impacts for Philadelphia from 3 p.m. to 3 a.m. a flood risk, strong winds. Same in D.C. from 1 till 11. Look at Charlotte, noon till 6 p.m., severe weather and a flood risk. And then we move into the northeast from 10 p.m. tonight until 7 a.m. tomorrow morning. Boston - flood risk strong winds. New York, 4 p.m. to 4 a.m., a flood risk and strong winds. Hartford, till 5

	a.m., you've got the same kind of weather conditions. Severe storms possible. An enhanced risk from the Carolinas all the way to Florida, tornadoes possible. EF2 tornadoes, strong tornadoes from Florida to the Carolinas, rain will continue with this. Wind is going to be a big, big problem. Damaging winds, travel disruptions, widespread power outages, wind gusts of 40 to 50 to near 60mph in the northeast. And rain, significant rain, heavy rain, plus the melting snow, especially in the northeast. That's going to possibly lead to some major river flooding and moderate street flooding as well. And back to the west, we've got heavy snow in northern New England. But also from Quincy, Illinois, Milwaukee, Green Bay, - low visibility, blowing and drifting snow, hazardous travel. This is a high impact storm. And guys, there's another one behind it that's going to take almost the exact same track, so busy time right now. SPEAKER 1: This train won't stop! All right, Al Roker. Al, thanks so much.	
4.	"Significant Severe Weather Event Expected Next Week For Central US" Fox Weather, April 11, 2024	https://www.youtube.com/watch?v=6ksrJ0SkNnM&t=183s&ab_channel=FOXWeather
	Transcription: SPEAKER 1: When you break it down, we're talking about, you know, a few storms last week for the Central Plains or even traditional Tornado Alley. They're a little bit behind on their average. This is typically where we'd see a little bit more eruptive behavior. The culprit is likely because of some of that Gulf moisture that just hasn't quite made it that far enough north, which really isn't all that far north, but we're talking about breaking in beyond the Texas Red River Valley and in through Kansas. It is looking like that's going to change. And we're looking ahead, the Storm Prediction Center already issuing a significant 30 percent day five risk, centered on Oklahoma. It's this typical setup that we typically see this time of year, Stephen, where you see, the jet stream aiding in some of that wind shear. And the low pressure really erupting out of the Rockies. And then as it pushes and deepens to the east, you see that very strong threat as well, but that's dry line. SPEAKER 2: It really doesn't take when we look at this type of setup, it doesn't take an expert's eye to notice. Oh, we got this trough, we have this dip out to the west that's going to create a space through the plains for something to develop. There are little details which we can we can look at just earlier this week on Monday. Some of that severe weather, not as arguably significant as…as what it could be. What it could be is what we probably will see play out on Monday. And I say that because confidence is high from the SPC, the Storm Prediction Center. And also indications right now from our guidance shows that we've got plenty of moisture that's going to be funneling into the plains. Oklahoma, up into Kansas, all at play, some of these temperatures, too. Boy, they're going to be on the warm side as we head into Monday and Tuesday. Monday night is when this is going to develop. A pretty big swath, too, that we'll have to watch depending on on where these storms develop. We've got the tornadic potential, not just that, but damaging winds and large hail, a pretty good signal. I mean, I know the focus really, Marissa, is down in Oklahoma and Texas, but where that warm sector is, where that warm front lifts far enough to the north, we could see it all the way up into Nebraska. SPEAKER 1: Yeah, depending on where it sets up, I mean. And you look at also what's going to be in place. The question is, do we see some of those more discrete cells starting to pop, that are moving into an environment that will support and sustain. All things are going to be on the table at this point and then we'll fine tune it. And then you look at what happens on Tuesday. So potential for an overnight threat, right, Monday into Tuesday. And now you're pulling into areas of the Great Lakes, Chicago going to be included in that. St. Louis all the way up into Madison, Wisconsin, potentially, with that risk for severe weather. SPEAKER 2: And I think when we look at where we've seen it so far this year, - it's here.	

	Perhaps a little better prepared, knowing what the threats are. I mean, Chicago land, they've weathered several events. Some of the severe weather has stayed to the west through Rockford, more so into Iowa. But this goes right in line with what we would see with a storm system that's going to develop through the plains. The overall setup and the thing that we'll have to watch the most is where that moisture gets transported to. Because that's the stuff that has the tendency to rise, that's the air that's less dense, and as it does begin to rise, it produces the big time storms. And then you have some incredibly dry air off the slopes in New Mexico, and that creates that clash. You do have to, this time of year, temperatures which are beginning to warm. Mid-April, you see mid-80s, low 90s begin to emerge through the Midwest. And still with some of that cold air hanging on, it's why we have that clash right here in Tornado Alley and why in April. I mean, this is the key month for tornadic activity in Tornado Alley. SPEAKER 1: That is the hot spot. And it's always interesting looking at this map because we're talking about Ohio and Illinois being the top tornado producers so far, which really is in the past couple of weeks, month or so, that we've seen some of the severe weather breakout. But watching ahead already. And it's very likely as we even look ahead eventually and towards Wednesday, we're carrying through that threat into these places that are already topping the list. Ohio leading the charts with 38 tornado reports and then Illinois at 30. This is likely going to change. And, you know, unfortunately, I think it'll go up as we head into next week. But…interesting stuff. And I think a lot of folks, you know, when you don't have an active season, when you kick off severe season, your guard kind of goes down. This would be that opportunity to start to perk those years again and stay up to date with the forecast.	
5.	“Weekend Weather Forecast” CBS Miami, October 31, 2022	https://www.youtube.com/watch?v=XFV4PY7MdkM&ab_channel=CBSMiami
	Transcription: VOICEOVER: Always tracking. This is next weather. SPEAKER 1: Next weather. Meteorologist Dave Warren joining us now to tell us what's next. As you mentioned we've got some trick or treating to do tomorrow. METEOROLOGIST: Tomorrow. Yes. happening right now. Well, we have to track the showers that are moving through parts of the area. These are brief. Downpours can be expected. Primarily, they've been south of homestead near the 18 mile stretch, but now, this is crossed over Key Biscayne, about to move towards Palmetto Bay, Cutler Bay. It's moving to the southeast at just about 10 to 15 miles an hour with the breeze. So in about an hour, if you're in this general area here, in southern Miami-Dade, just a brief shower as it continues to move off to the west. Little activity continues to push through the keys here, Tavernier, Islamorada and in the Straits. These are brief downpours that we can expect to see. And they'll continue here over the next six hours between about now and midnight. Primarily from Miami-Dade to the south, just get these brief showers pushing through the area. This week while the moisture sticks around, the front coming to the south, stalls to our north. So south of that get this moisture and the breeze coming in with on the east, so the showers will work their way through the area. Tomorrow is the key time here because things might change. The timing of these showers tomorrow may change just a bit, there in the forecast, there around in the morning. That's 7:00 in the morning, you step outside between about seven and ten. They do develop along the area here, just a few showers with the breeze, a see breeze advancing inland. There it is at two, there it is at four. How about 6 or specifically 6:40 when the sun goes down? Well, look where they are. There over the interior, that breeze kind of pushing everything through the area. So over the next few hours, tomorrow evening after sunset, well, it looks mainly dry, between about 10:00 and 11:00 at night.	

	So if you're out trick or treating after the sun goes down, we don't have any showers in the forecast, just a light breeze and very mild temperatures, dropping into the upper 70s there by 8:00-9:00 tomorrow night. So tomorrow we'll start the day with 77 degrees. The showers between about one and four, they do work their way through the area. Just low rain chances. The breeze is just a little lighter and then the temperatures drop into the upper 70s there in the evening. Use caution on the waters there in the Atlantic. 2 to 4 foot seas, 2 to 4 foot seas in the keys there, with that northeast wind 10 to 15 knots. This could be a potential tropical storm. If it does become developed, continues to develop, it will become a problem. It will stay to our south. There's the track over the next five days. By the middle of next week could even intensify to a hurricane moving towards Central America before moving over land by Wednesday and Thursday. Specifically, our forecast, Wednesday and Thursday, we'll go from the upper 80s, maybe increasing the rain chances just a bit on Tuesday. The breeze will start to pick up by the end of the week. And a little more moisture works its way into the area next weekend, increasing those showers on Sunday.

Appendix 5

Vocabulary of weather terms and weather-related phrases

Category: **TEMPERATURES**	
Air temperature	The process of scalar measurement of how hot or cold the air is at a particular area, one of the most basic parameters in weather forecasting. It is usually measured in degrees Celsius (°C) or Fahrenheit (°F). It can be influenced by various factors such as altitude, latitude, water bodies, cloud cover, and atmospheric circulation patterns.
Absolute maximum	The highest temperature or precipitation rate that has ever been recorded within a particular geographical area.
Absolute Minimum	The lowest temperature or precipitation rate that has ever been recorded within a particular geographical area.
Dew point	The temperature at which moisture saturated air starts to forms dew, fog, or clouds. At this point, the air's water vapor begins to transform into liquid water, possibly can cause different types of precipitation.
Evaporation	The process when a liquid water transforms into water vapor. Usually it happens because of increasing temperature. Fast evaporation can cause different types of precipitation.
Indian Summer	A period of untypical warm and dry weather that occurs during the autumn months in parts of North America, Europe, and Asia. This weather phenomenon is characterized by clear skies, above-average temperatures, and low precipitation rate.
Category: **PRESSURE AND FONTS**	
Pressure	An indicator of weather conditions, the force exerted by the weight of the atmosphere above a given area.
Low pressure	An area with lower atmospheric pressure than the neighboring areas. Air moves toward to the geographic center of the low-pressure system, which may cause cloud formation, and the possibility of rainfall

	or storm. Also called a cyclone or depression.
High pressure	An area with higher atmospheric pressure than the neighboring areas. Air moves outward from the geographic center of the high-pressure system, which may cause fair weather, clear skies, and generally warm temperatures. Also called an anticyclone.
Fonts	Fronts are the spaces between two separate air masses that have different temperatures, humidity, and pressure. When two separate air masses meet, they create a front, causing changes in weather conditions such as the possibility of precipitation, temperature shift, and wind changes.
Climate	The typical weather patterns that are recorded over a specific geographic region or area for a long period. It is characterized by stability and tenacity over several decades or centuries. Temperature, precipitation, humidity, wind patterns, and atmospheric pressure are factors of climate.
El Niño	The phenomenon in central and eastern equatorial Pacific Oceans, which is characterized by regular warming of ocean surface temperatures. This warming can influence global weather patterns, affecting precipitation, temperature, and atmospheric circulation patterns in various regions around the world.
La Niña	The opposite of El Niño, known as La Niña, is a phenomenon characterized by the cooling of sea surface temperatures in the central and eastern equatorial Pacific Ocean. Global weather patterns can also be influenced by this phenomenon, causing drier and cooler weather conditions in various regions around the world.
Category: **SKY CONDITIONS**	
Okta	A measurement unit used in meteorology that describes the amount of cloud cover, one okta is equivalent to one eighth of the sky.
Clear Skies	The atmospheric conditions in which the sky is devoid of clouds, equivalent to zero oktas.
Fair Skies	The atmospheric conditions characterized by cloud cover of 2 oktas or less, consisting of low and/or medium clouds.
Cloudy Skies	The atmospheric conditions characterized by cloud cover more than 4 oktas, with moderate chance of showers or even heavy rainfall.
Overcast	The atmospheric conditions characterized by complete cloud cover of 8 oktas, with high chance of showers, interrupted by periods of heavy rainfall.
Scattered clouds	The atmospheric conditions characterized by partly cloud cover of 4 to 6 oktas, when clouds do not the entire sky, and occur in small, scattered patches.
Category: **PRECIPITATION**	
Precipitation	All forms of liquid or frozen water, such as rain, snow, sleet, or hail, that falls from the atmosphere due to processes like condensation.

Rain	The most common form of precipitation event, occurring when water droplets condensate in the atmosphere and fall down under the force of gravity.
Drizzle	Precipitation event, characterized by very small water droplets that fall down slowly from the sky.
Shower	Precipitation event, often brief and intense rainfall, caused by convective or towering clouds.
Downpour	Precipitation event, a heavy and sudden rainfall, characterized by great amount of precipitation over a short period.
Torrential Rain	Precipitation event, excepted and long-formed heavy rainfall, characterized by extremely great amount of precipitation over a long period. It has a high risk of flooding and severe thunderstorms.
Sleet	Precipitation event, characterized by raindrops that partially freeze before they reach the ground, forming ice pellets. It has a potential to create dangerous driving conditions.
Hail	Precipitation event, characterized by raindrops that form solid ice pellets - hailstones, which can vary from pea-size to gold ball-size. It has a potential to cause damage to property and injure people.
Thunderstorm	Precipitation event, characterized by heavy rainfall with lightning and thunder, typically accompanied by strong winds. It has a potential to cause damage to property, cause floods and injure people.
Snowfall	Precipitation event, that occurs in cold climates with air temperature below 0°C or 32°F, characterized by small ice crystals called snowflakes fall to the ground.
Flurries	Precipitation event, light snowfall, characterized by small snowflakes slowly falling from the sky and usually melting afterward.
Blowing snow	Precipitation event, intense snowfall with strong winds that can lift snow from the ground and redistribute it. It has a potential to create hard driving conditions and significantly reduce visibility.
Blizzard	Precipitation event, severe winter storms, characterized by strong winds, great amount of snow masses and blowing snow for long period. It has a potential to cause damage to property, injure people, create hard driving conditions, and reduce visibility.
Category: **ATMOSPHERIC CONDITIONS**	
Humidity	The amount of water vapor in the air. Typically expressed as a percentage. It measures the amount of liquid in the atmosphere and is very important in establishing the perceived temperature in the region. High humidity level indicates a greater amount of water vapor in the air, while low humidity levels indicate drier air. Humidity impacts many weather and climate-related factors, such as cloud formation, precipitation, and temperature, as well as it can affect human health and comfort.
Mist	A weather phenomenon characterized, type of precipitation,

	characterized by the concentration of tiny water droplets suspended in the air. Mist is most common to early morning or late evening and is generally lighter than fog and limits visibility less.
Fog	A weather phenomenon, type of precipitation, characterized by the concentration of tiny water droplet in the air near the surface. It usually reduce visibility, has a potential to affect driving and navigating process and cause problems to aviation.
Smog	A weather phenomenon adjusted by people, a fog escalated by smoke or other atmospheric pollutants.
Sand/Dust	A weather phenomenon characterized by the suspension of fine particles of earth or sand in the air lifted by the wind, leading to a visibility reduction.
Air quality	The condition of the air in terms of the presence of pollutants, such as smoke, gases, and other substances, and what affect it has on human health and comfort, vegetation, and the ecosystem overall. Air quality is described according to the Air Quality Index (AQI).
Category: **WIND CONDITIONS**	
Wind speed	The rate at which air moves in a particular area. It is measured in units such as miles per hour (mph) or kilometers per hour (km/h). It is basic element of weather forecasts.
Wind direction	The compass direction from which the wind is blowing. It is usually reported using directions such as north, south, east, and west. It is basic element of weather forecasts.
Calm wind	The weather condition characterized by minimal or no wind, with still atmospheric conditions prevailing.
Breeze	A moderate wind characterized by low speed, providing pleasant cooling effect. It can be classified as sea breeze and land breeze on the basis of temperature differences.
Steady Wind	An unchanging wind characterized by constant wind speed and direction over a long period for a particular area.
Gusty Wind	Sudden and brief bursts of wind with higher speeds than the prevailing steady wind.
Gale Wind	A strong wind with speeds usually ranging from 39 to 54 miles per hour or 63 to 88 kilometers per hour. Thunderstorms, squalls, or low-pressure systems often cause gale winds and stormy weather conditions. It can significantly affect seas and costal areas, causing high waves..
Storm Wind	A strong wind with speeds usually ranging from 55 to 73 miles per hour or 89 to 102 kilometers per hour. Hurricanes, typhoons, and severe thunderstorms often cause storm wind. It can cause serious damage to property, power outages and injure people.
Hurricane Wind	An extremely strong wind with speeds usually ranging from 74 miles per hour or 119 kilometers per hour or greater. Hurricanes, typhoons, and cyclones often cause hurricane wind. It can cause catastrophic

	damage, such as structural collapse, flooding, and coastal area destruction.
Downburst Wind	A strong, localized winds, that occur when a great amount of cold air hit the surface and spread rapidly. It can cause significant damage to property, landscape and injure people.
Category: **NATURAL DISASTERS**	
Earthquake	A sudden and quick shaking of the surface caused by the seismic waves. It can cause further disasters such as tsunamis or landslides and potentially damage property, landscape and injure or kill people.
Tropical Cyclone	An intense and localized storms that form over warm ocean waters and cause strong winds, heavy rainfall and flooding. It can cause damage to property, landscape, and injure or kill people.
Flood	An overflow of great amount of water onto usually dry land, caused by storm, rainfall or non-natural disaster such as dam failure. It can cause serious destruction, damage property and injure or kill people.
Tornado	An extremely strong wind in the form of column of air, cause by severe thunderstorms. It can cause serious damage to property, landscape, infrastructure and injure or kill people in its path.
Wildfire	An unwanted, uncontrolled fires that spread rapidly through natural area such as forests or grasslands, and can reach urban areas. It is usually started by lightning, human activity, or volcanic eruptions and has a potential to cause damage to ecosystems, property, infrastructure and injure or kill people.
Heatwave	A prolonged period of abnormal hot weather, usually with high humidity and extreme hot temperatures. It is created by atmospheric conditions such as high pressure systems and lack of precipitation. It has a potential to cause serious damage to agriculture, infrastructure, ecosystem and injure or kill people.
Drought	A prolonged period of abnormally low precipitation. It can cause water shortages, damage to agriculture and ecosystem, potentially can injure or kill people.
Volcanic Eruption	A release of magma, gases, and volcanic ash from a volcano. Usually can start with a big explosion. It can cause catastrophic damage of infrastructure, property, environment, and can injure or kill people.
Slide	A process of eventual movement of rock, ground or show layers. It is usually triggered by natural causes such as heavy rainfall, earthquakes, or by human activities. It can cause damage to infrastructure, property, ecosystem and can injure or kill people.