Stylistic devices and expressive means in Ted talks lectures on architecture and construction

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Abstract. We analyze the specific genre of public lectures in English - the TED Talks. Being very popular nowadays these science lectures contain a lot of professionally oriented lexis and are a useful tool to enrich the vocabulary bank and improve listening skills. The characteristic traits of these lectures are brevity, appropriateness, convincingness, clarity and rigid structure, careful preparatory work, high extent of the orientation to the audience. The language of TED talks lectures on architecture is characterized by the abundance of professional terms, collocations, expressive means and stylistic devices, such as simile, metaphor, personification, hyperbola etc. Interrogative and imperative forms and personal pronouns are widely used. They help speakers establish the contact with the audience, create the expressive and emotional speech, emphasize the main idea or make listeners think about the important points of the information. The idioms, coarse lexis and lexical repetitions create vivid and meaningful performance. Also we noted the upbeat mood and high emotionality of this genre of public speech.

Keywords: popular science discourse, TED talks, lexis, collocations, stylistic devices, expressive means.

1 Introduction
The category of expressiveness has long been the subject of discussion among linguists. In its etymological sense expressiveness may be understood as “a kind of intensification of an utterance or a part of it depending on the position in the utterance of the means that manifest this category and what these means do.” Stylistic Device is a conscious and intentional intensification of some typical structure and/or semantic property of a language unit (neutral or expressive) promoted to a generalized status and thus becoming a generative model. The difference between the expressive means and stylistic devices is that expressive means have a greater degree of predictability than stylistic devices. Stylistic devices carry a greater amount of information and require a certain effort to decode their meaning. The notion of expressiveness has long been a matter of dispute among linguists. In its etymological meaning may be considered as “a kind of intensification of an utterance or a part of it depending on the position in the utterance of the means that manifest this category and what these means do”[1]. Stylistic device is a “conscious and intentional intensification of some typical structure and/or semantic property of a language unit (neutral or expressive) promoted to a generalized status and thus becoming a generative model” [1]. The difference between the expressive means and stylistic devices is that expressive means are more predictable than stylistic devices. Stylistic devices clarify a larger amount of information and demand some effort to interpret their meaning.

The peculiaries of the Ted talks lectures were studied by, E. Nicolle and P.-M. Robichaud [2], F. Romanelli, J. Cain, E. Britton and P. McNamara[3], J. Ludewig [5], Vo Sonca [5], Scotto di Carlo [6], S. Cassidy [7]and others. Many scientists conducted research about the peculiarities of academic writing and the stylistic devices used in it, and also use of the academic writing in teaching foreign languages [8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27].

We have studied the specificity of the architectural lexic in TED talks on the base of 17 lectures from 2002 to 2019. We aimed to found the peculiarities of the specific linguistic means used in talks on Architecture and Construction. Our research was based on popular public lectures presented on the official website of the world-famous conference on technology, entertainment, design, global issues, business and self-development TED (Technology | Entertainment | Design). These 17 selected videos...
give us a feeling for what TED talks are as a staple of popular discourse in the sphere of architecture and construction. As the table below shows, one of the peculiarities of TED lectures is a wide range of ideas even in such a specific domain as architecture and design. The lectures chosen for the analysis provide information about architectural concepts and projects, methods of construction in English, held in the monologue format and the themes of these range from innovative building projects to green architecture.

| Presenter       | Title                                                   | Year |
|-----------------|---------------------------------------------------------|------|
| 1. Frank Gehry  | A matter architect asks: now what                      | 2002 |
| 2. James Kunstler | How bad architecture wrecked cities                    | 2004 |
| 3.Joshua Prince Ramus | Behind the design of Seattle’s library           | 2006 |
| 4. Norman Foster | My green agenda for architecture                      | 2007 |
| 5. Michael Pawlyn | Using nature’s genius in architecture                | 2010 |
| 6. Alastair Parvin | Architecture for the people by the people         | 2013 |
| 7. Marc Kushner  | Why the buildings of the future will be shaped by you | 2014 |
| 8. Moshe Safdie  | How to reinvent apartment building                    | 2014 |
| 9. Ole Sheeren   | Why great architecture should tell a story            | 2015 |
| 10. Elora Hardy  | Hardy magical houses made of bamboo                   | 2015 |
| 11. Theaster Gates | How to revive a neighborhood: with imagination, beauty and art | 2015 |
| 12. Jeanne Gang  | Buildings that blend nature and city                  | 2016 |
| 13. Michael Murphy| Architecture that is built to heal                    | 2016 |
| 14. John Cary    | How architecture can create dignity for all           | 2017 |
| 15. Justin Davidson | Why glass towers are bad for city life and what we need instead | 2017 |
| 16. Anna Heringer | The warmth and wisdom of mud buildings                | 2017 |
| 17. Ma Yansong   | Urban architecture inspired by mountains, clouds and volcanoes | 2019 |

We made the research of the works of famous architects from the English speaking countries whose buildings are innovative, efficient, simple but unusual or provocative; some are the heritage of a country. These architects are John Cary [28], Justin Davidson [29], Jeanne Gang (founder and leader of Studio Gang) [30], Theaster Gates (professor at the University of Chicago in the Department of Visual Arts, Director of Artists Initiatives at the Lunder Institute for American Art) [31], Frank Gehry (a legendary architect, winner of Pritzker Prize and The Praemium Imperiale) [32], Norman Foster (winner of the Pritzker Prize in 1999)[33], Elora Hardy [34],Anna Herringer [35], James Kunstler (famous critic of modern architecture) [36], Marc Kushner (one of the Architizer founders) [37], Michael Murphy [38],Alastair Parvin (the founder of Open Systems Lab) [39],Michael Pawlyn [40],Joshua Prince Ramus (founder of REX, influential architecture and design firm) [41],Moshe Safdie (Harvard Professor, owner of Gold Medal of the Royal Architectural Institute of Canada)[42],Ole Sheeren [43], Ma Yansong [44].

TED lectures are watched by many people who are interested in popular science and are widely used by teachers of foreign languages at their lessons. A TED talk is a genre which is realized as a primary genre in real communication (presented for the audience at an official TED conference) and as a secondary one in the Internet (ted.com).It is a hybrid genre of the academic writing and entertaining performance, so it includes the features of both. It has lexical diversity, density and proficiency of an academic material, sophisticated vocabulary and lexical specificity[23]. Also it contains idioms elements of humor, use of collocations, metaphorical use of words, coarse language and is characterized by emotionality. Having a concise and precise nature, these lectures attract many people by their simplicity and relevant themes: nature, self-improvement, motivation, psychology,
religion, motivation. We will make a research of peculiarities of lexicon of the realm of architecture and construction in the English language.

2 Methods
We used the quantitative method going through 15 lectures in the video format and extracting the recurrent features of language and way of feeding the information. We also used the qualitative method, a statistical analysis of frequency of some words and word combinations using the free software AntConc.

3 Results and discussion
As the analysis has showed a rhetorically elated mood inherent in these talks is created by linguistic means that are usually not used in academic lectures and are due to the pragmatic specifics of a popular public lecture. They allow the presenters to achieve the necessary pragmatic effect — to attract the attention of a heterogeneous recipient and form a certain attitude to the problem in his mind.

The language of lectures is characterized by use of professional terms denoting objects, processes, phenomena of architecture, design and construction: a residential complex, infrastructure facility, public housing, sustainable material, prefabricated units, designing houses, six-story bespoke home, bridge, curving roofs, walls, giant woven pod, necessary luxuries, acoustic insulation, sustainable timber, usable length, compressive strength, concrete, green school, way of building, unique structures, bespoke furniture, details and textiles, span, huts, elaborate bridges, bamboo rafts, borax, viable building material, artisan, tapering, straight lines, well-crafted formulas, vocabulary of architecture, design in real 3D, model-making, rectangular, flat boards, sheet rock, plywood, stretch a canvas, kitchen countertops, slice up, boulder, steel joints hand-whittled, glossy skin, the main façade, earth elements, a rammed earth, technical know, load-bearing earth walls, ground floor and so on. The terms are often used to describe a certain type of building, materials, and technologies of construction providing the reader with the realistic scenery.

The lexical vocabulary of speakers is abounded with collocations of their professional sphere. The studies of lexical collocations in particular have been prolific in recent decades resulting in approaching even the term ‘collocation’ from different perspectives and distinct definitions. However, it is still one of the most controversial topics in linguistics although it is often defined as ‘a relationship between lexical items that regularly co-occur’[1].

The prevailing type of collocations used in lectures is the adjective+noun collocations: modern architecture, high-rise building, office building, tall building, school building, swimming pool, open space, private space, public realm, public square, public amenity, organizational structure, hierarchic structure, coastal region, renewable energy, high density, natural ventilation, computer-aided design. The presence of collocations “health care”, “social justice”, “social activity” tells about the close connection of architecture with the life of society. We also found the following noun+noun collocations: social housing, community center, ground level, eye level, energy consumption, water treatment, red brick.

TED talks are overloaded with first-person plural pronouns. A repeated use of the first-person plural pronouns “you” and “we” also helps to establish contact with the audience. In the sixteen modern talks studied within our research “we” is the fifth-most common item. A good example comes from the deep and sobering down citation the final of James Kunstler lecture: “We wear all black, we get very depressed, you think we're adorable, we're dead inside because we've got no choice” [36, approximate time marker is 04’47], “we are sleepwalking into the future, we’re not ready for what’s coming to us” [36,18’48]. The Dialogic nature of a popular public lecture and the maintenance of constant contact between the speaker and the audience are also achieved through the use of interrogative sentences and imperative statements addressed to the public: “could we make it more affordable? … can we open up the surface of the building so that it has more contact with the exterior?” [42, 02’45], “why, in the modern city, we often think architecture is a machine, is a box?”[44, 04’10], “and how can fictive stories of the inhabitants and users of our buildings script the
architecture, while the architecture scripts those stories at the same time?” [43, 01’58], “be prepared to be good neighbors, be prepared to find vocations that make you useful” [36, 19’17]. By using first-person plural pronouns, speakers establish a common ground with the audience; they make their talks both intimate and inclusive.

To enhance the pragmatic impact on the listeners the speakers also use intertextual associations-well-known catch phrases and aphorisms, quotations in their speech. The speaker John Cary quotes Winston Churchill: “we shape our building; thereafter they shape us” [28, 11’16]. The president noted it in 1943 when he called for the rebuilding of London’s war-damaged parliamentary chambers. Now it is a famous aphorism concerning architecture. Michael Pawlyn cites Antoine de Saint-Exupery: "If you want to build a flotilla of ships you don't sit around talking about carpentry. You need to set people's souls ablaze with visions of exploring distant shores" [40, 12’06]. The lecturer proves his point and supports his idea that a matter of highest priority in the realization of any new architectural project is an inspiration. These phraseological locutions serve as a significant and weighty argument in the context of the realization of the new architectural projects.

The special nature of using the terminology in public lecture is in the addition of the coloristic epithets and similes: “magical houses made of bamboo”, “as a fairy mushroom” to enhance expressivity of the talks or to reduces overload in mental storage of units of knowledge, thereby facilitate discourse.

In his figurative speech, Kunstler ridicules the modern rural architecture, using the form of personifications: “I’m a little cabin in the woods. I don’t have any eyes on the side of my head. I can’t see” [36, 14’00], “it is a despot building, it wants us feel like termites” [36, 07’40]. While giving inanimate objects human traits, the speaker describes the “agony of suburbia” [13’34] and creates more impressive message. M. Kushner compares grey buildings having the same design and placed in a row to military man: “look at these solid, stable little soldiers facing the ocean and keeping away the elements” [37, 02’57]. Norman Foster uses the same device to emphasize the necessary trait of the computerized sphere: “so that digital world has all the friendliness” [33, 06’04], and to describe the bold and innovative design of the building “the building opens up and breathes into those atria” [33, 26’14].

As a structural form of metaphor, personification reveals the author’s emotional attitude towards what he describes. All analyzed Talks include a wide range of comparative constructions. Kunstler compares a building that looks like a box to a DVD-player: “this is a building designed like a DVD-player: the audio-jack, power supply”[36, 17’30]. Ma Yansong uses simile: “This is actually a pair of towers that we built in Mississauga, a city outside Toronto. And people call this Marilyn Monroe Towers because of its curvature” [44, 03’10]. This language means gives their speeches imagery and expressiveness. Michael Murphy compares a building with a cucumber: “recognition seemed to come to those who prioritized novel and sculptural forms, like ribbons, or ... pickles?” [38, 02’04]. In this case, the simile realizes the principle of spirited pictorialism, visibility and serves as an important ornamented means. When describing a non-comfortable house Kunstler uses comparison: “notice the porch here. Unless the people living there are munchkins, nobody’s going to be using it” [36, 14’15]. Norman Foster underlines the unusual design of his eco-friendly project: “a building behaves rather like an aircraft wing” [33, 26’16]. Michael Pawlyn intensifies the scale of the task in construction: “a hell of a challenge...”[40, 01’48]. This hyperbola expresses emotional evaluation of reality by a speaker, shows the overflow of feeling and serves as an attribute intensifier. Marc Kushner emphasizes the multi-purposeful character of modern building by using the hyperbola: “it means that a parking garage in Miami Beach, Florida, can also be a place for sports and for yoga and you can even get married there late at night” [37, 15’52]. N. Foster also uses tautology “Dead Sea is dying” [33, 27’11] and allegory “buildings are the new cathedrals”[33, 30’50] to attract the attention of the audience to the painful questions of modern ecology that is deteriorating all the time and the vital necessity to make the architecture green.

The use of metaphors is common in TED talks. This helps to “spark a conflagration of thought that is the essence of creativity” [27]. Alastair Parvin gives the concept a familiar and compact
terminological framework and uses elusive language of metaphor [11] in order to express the idea more clearly: “inflated real-estate bubble...” [39, 02'17]. Jeanne Gang also uses the extended metaphor in this passage to encourage creativity: "I'm a relationship builder. What we really design are..." we are going to have..." that the last sentence was of that meeting. It was: "rhythm of the narrative.

Another long-standing characteristic of TED talks is their enthusiastic and optimistic spirit. The lectures create such an atmosphere by means of using anecdotes and humor. The presenters reveal the
specific situations occurring in the sphere of architecture and design with the irony which is echoed throughout all the talks. John Cary jokes about the birth of his first daughter in the ugly room that was “completely misaligned with the moment—welcoming a human being into this world” [28, 01’15]. Humor performs here heuristic function—exposure of non-correspondence between form and content, theory and practice, well-established ideas about an object or phenomenon with their real meaning. Speaking about one case from his childhood when he “decided to make water” [32, 00’12], a famous architect Frank Gehry establishes interpersonal communication and contact with the audience. Joshua Prince Ramus recalling the instance when he proposed to his wife in “the mixing chamber”—“the main technology area in building” also [41, 08’12] uses communicative function of humor. Threater Gates, a former potter, mentions his “stinky tar kettle” as “the only inheritance” but he tries “reimagine this kind of nothing material as something very special”[31, 01’11]. The humor performs self-regulation function—the ability to look at a problem through the prism of joke, that is, from different points of view, not only negative.

4 Conclusion
The study has showed that TED lecturers use verbal means to attract and retain the attention of listeners. As the analysis of TED speeches has revealed, combination of logical argumentation and emotional appeal are created by means of a great number of stylistic devices and expressive means. The vocabulary of public TED lectures is characterized by combination of neutral, familiar and low colloquial vocabulary, including slang, vulgar and taboo words. It makes use of a great number of expressive means to arouse and keep the public's interest: repetition, gradation, antithesis, rhetorical questions, inversion, and emotive words.

On a more general level, TED presenters create an emotional atmosphere through the content and the concepts they use. Specific nature of the lexical vocabulary of TED talks on architecture and construction lies in the extensive use of words of general meaning, specified in meaning by the situation, abundance of specific colloquial expressions, colloquial interjections, such as guy, there etc., use of hyperbola, expressive epithets, figurative metaphorical expressions, personification, irony, evaluative vocabulary, simile, allusion, allegory, tautology; casual, winged expressions, interrogative sentences addressed to the public, personal pronouns, and use of coarse words. Irony in the public talks usually takes the form of sarcasm or ridicule in which laudatory expressions are used to imply condemnation or contempt. It foregrounds not the logical, but the evaluative meaning. For greater emphasis expressive means based on peculiarities of idiomatic English are widely used by the speakers. The specific in using collocations of the professional sphere is that lecturers choose them to create effects by varying the normal patterns of collocation, with the aim of either startling or amusing their audience. The peculiarities of TED talks professional vocabulary are also the use of both popular terms of some special spheres of human knowledge known to the public at large (catalyst, idiosyncratic) and terms used exclusively within a profession (architecture, design and construction).

These expressive means and stylistic devices realize a variety of functions and stylistic effects in the public speech. They enrich TED talks lectures with a polished and eloquent sense and contribute to the effect of an ideal composed story; provide bright characteristics to particular phenomena in the realm of architecture; emphasize the speaker’s opinion or idea, show the high extent of emotionality, generate a humorous mood; create a vivid imagery of phenomenon.

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