

FORMING PROFESSIONAL IDENTITY IN POPULAR SCIENCE IT DISCOURSE: DISCURSIVE MARKERS AND THEIR FUNCTIONAL DIAPASON

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Abstract

Purpose: The article substantiates the necessity to include the concept of identity, in general, and professional identity, in particular, as an indispensable element of virtually every major scientific linguistic investigation, and provides the rationale behind current investigation by justifying the research subject from psychological, sociological, and applied-linguistic perspectives.

Methodology: In order to meet the stated objectives of the research, the following methods of analysis have been chosen: continuous sampling method along with corpus data collection (in order to facilitate further data analysis and reduce measurement errors to a minimum); discourse analysis (to single out and scrutinise encountered discursive markers along with their functioning in the chosen discursive space); functional analysis (to figure out the functional diapason of the analysed discourse); statistical data analysis (to assess collected, explored and presented amount of data in order to discover the underlying trends and patterns).

Result: All the discursive markers collaborate with one another, forming a strong synergistic effect in terms of both the functional scope of language units and the functional scope of professional identity formation. In conclusion, the combined functional diapason of those discursive markers in popular science IT discourses significantly contributes to the overall partial construction of non-specialist's professional identity.

Applications: This research can be used for universities, teachers, and students.

Novelty/Originality: In this research, the model of Forming professional identity in popular science IT discourse is presented in a comprehensive and complete manner.

Keywords: Identity, Professional identity, Identity formation, Discourse, Discursive marker, Popular science discourse, Popularization, Function, Functional diapason.

INTRODUCTION

Throughout all the history of humans thought the concept of identity and identification has been of pivotal importance for every field of study. Nonetheless, the timespan of identity research within the framework of contemporary linguistics has only been in full motion for less than a century. We would like to mention here that, even though there were discussions on identity before the works of Ferdinand de Saussure, Leonard Bloomfield, Edward Sapir, and Lev Scherba, even their interpretations of this subject matter were somewhat indistinct and lacked a vast amount of corpora data for thorough analysis.

At present, though, with all the research and accumulated data in the field of fundamental and applied linguistics, it stands to reason that identity, in general, and professional identity, in particular, is the sine qua non of virtually every major scientific linguistic investigation. And, what is more important, the analysis of these phenomena requires an array of precise linguistic methods and approaches.

Exploring the concept of identity and different aspects of its manifestation in terms of their linguistic implementation inevitably takes us into the realm of discourse analysis. "The principal mechanism of both the social knowledge system and group praxis is discourse. Discourse analysis, therefore, involves the investigation of the relationships between discourse and the social knowledge of the system on the one hand, and discourse and communicative practices on the other" (Bagiyan and Shleyvis, 2017, p. 6).

This is the reason why the current paper concentrates solely on discursive markers and their functional scope as major elements of forming a professional identity within a certain discursive space. While on that subject, it needs to be said that professional identity as the subject matter of this research is chosen intentionally. The rationale behind current investigation is intrinsically straightforward and can be justified from the points of view of psychology, sociology, and applied linguistics.

Psychologically speaking, “consciousness arose as a function of social behaviors as well as being a function of evolutionary adaptation” ([Davydova and Filimonova 2016, p. 204](#)), which presupposes that at the core of the psychological theory of identity lies the idea that the mind and self are essentially social. Since the majority of our lives in modern world tend to go by at work, it stands to reason that professional identity comes to the forefront of modern psychological research.

In terms of sociology, there are a whole plethora of micro-level ethnographic studies focusing on the peculiarities of professional socialization in workplaces, as well as the development and maintenance of shared professional identities. According to Evetts, shared professional identity is primarily associated with common experience, expertise, and understanding, shared ways of addressing problems. “This common identity is produced and reproduced through occupational and professional socialization by means of shared and common educational backgrounds, professional training and vocational experiences, and by the membership of professional associations (local, regional, national and international) and societies where practitioners develop and maintain a shared work culture”. Therefore, professional identity is crucial for proper understanding of almost every aspect of modern social processes.

As for the language studies of professional identity, a considerable amount of works can be found mainly in the field of applied linguistics, namely: clinical, forensic, and (foreign) language acquisition/teaching studies. All of the mentioned spheres are primarily interested in the process of shaping and changing professional identity through alterations in the professional knowledge landscape ([Radyuk and Khramchenko, 2018](#); [Irimiea, 2017](#)). To achieve their aims, researches use methodological repertoire of variationist sociolinguistics and focus on the problems of indexicality and linguistic idiosyncrasy.

Nevertheless, even taking into account extensive research in the field of humanities in general, we have to acknowledge the fact that in terms of complex linguo-cognitive analysis the sphere of professional identity is mostly ‘terra incognita’. And since discourse, as it has been stated above, is at the core of any identity linguistic study, it is only logical to dedicate this paper to the analysis of discursive markers as formation blocks of professional identity.

As for the language material used for the analysis, the choice of popular science IT discourse is well-justified and predetermined by the following: linguistically, this type of discourse is an eclectic combination of scientific and media discourse, which makes it especially interesting in terms of pragmatic and stylistic language functioning; sociologically, IT sphere is among the most influential and rapidly developing ones, apart from that the fusion of the mentioned discourse types makes this particular discourse accessible for non-specialists motivated in learning about science, making this social group a particularly interesting object of study; this, in turn, provokes the necessity to analyze all the linguistic and social intricacies from the point of view of human cognition and knowledge transfer. In other words, all the mentioned aspects make popular science IT discourse one of the most fertile areas for complex linguistic studies.

The main objective of the paper is to investigate popular science IT discourse in order to single out the variety of professional identity discursive markers and scrutinize their structural and pragmatic value in terms of their functioning in this particular discourse. Therefore, all the range of professionally marked language units, the purpose of which is to construct the professional identity of a certain professional community, are the subject of the research.

Let us also bear in mind that, since the research is conducted on the material popular science IT discourse, the construction of professional identity, in this case, is to have certain deviations from the original ‘purely professional’ construction. Simply put, the aim is not to construct a solid professional identity of a non-specialist (which is quite an improbable endeavour, to begin with), but to build a partial professional identity, focusing on fundamental aspects of a given sphere necessary to grasp the gist of the initial research. That is why one of the main ideas of the research is to find out how exactly the author has to structure the elements of popular science IT discourse so that a non-professional could be able to understand basic concepts of the field without being overburdened and bogged down in its intricacies.

Even though nowadays there is an extensive amount of data on identity in its most diverse shape and form, it seems like all the information about this phenomenon is simply lumped together under the umbrella of “identity”. The question of identity – whether personal, social or professional – has always been a captivating topic for scholarly discussion. As soon as this paper is primarily focused on professional aspects of identity formation, we are to further concentrate on the basic ideas of professional identity as described in recent linguistic studies.

The analysis of professional identity in pursuit of sorting out some rudimentary problems of this field of study is displayed in works of such researchers as E.A. Klimov, L.B. Schneider, D.P. Isaev, L.V. Klimenko, O.A. Nor-Arevyan, V.D. Bragina, V.G. Katashev, N.V. Samoukina, J. B. Barbour and J. C. Lammers, Mark D. Holden, E. Buck, J. Luk, M. Fitzmaurice, and others. Most of the scientists propose similar concepts of professional identity, both in terms of definition and basic aspects. In general, this phenomenon can be identified as a multidimensional and integrative psychological phenomenon, which ensures an individual’s integrity, congruity and certainly, and evolves through the process of professional education along with the processes of self-determination, self-organization, and personalization ([Mcintee-Atalianis, 2019](#)).

At the same time, the process of constructing professional identity can be considered as a compromise between assimilation and differentiation, at which individual’s need for deindividuation is satisfied at the ‘in-group’ level, and their

need for originality – at the level of comparison to ‘out-group’ members (Derisi, 1955, 156-159). The definition also needs to be fortified by the following: the existence of knowledge of one’s own belonging to a certain professional circle, as well as of algorithms, behavioural templates and frames; the ability to fulfill the professional requirements competently and qualitatively, and to distinguish potential benefit, success, or lack of both; the development and formation of individual style of activity performance; the aspiration to constant improvement, etc. The existence of the above-mentioned components inevitably leads to an individual’s understanding of their professional belonging to a certain social institute, i.e. their professional identity.

On the basis of the scientific literature analysis on identity research in professional context through a prism of different fields of humanities, we designate that professional identity: is functionally proved, i.e. performs the adaptive and organizing functions; is purposeful and caused by the personal intentions of an individual including satisfaction of social, spiritual, prestigious needs; shows some kind of ‘historical’ character in terms of its conditionality in time, space, and endured social, cultural, political, economic, and other aspects of social development; has its foundation in the ‘group identity’ concept, which includes interaction, interdependence, and solidarity of the members of a certain group, determined by institutional, social and situational framework, presuppositions and conventions; represents a set of socially determined dichotomies, the system of categorizations: ‘stranger <-> friend’, ‘agent <-> client’, ‘socially approved <-> socially not approved’, ‘mine <-> ours’, etc.; is not given to an individual, but is discourse-predetermined, i.e. it is built by means of speech constructs and markers; generated, embodied and represented in a verbal form within a certain discourse (Naciscione, 2010; Pratt, et al. 2006; Riley, 2007).

Thus, the importance of linguistic research of professional identity is crucial on the ground of inextricable coordination of an individual’s language, thought, and social (i.e. professional) functioning. “A professional is identified by the community he belongs to and by his discourse. A mismatch or gap between the pretended professional identity and the language used may create doubts about the real identity of the professional and may result in social unacceptability or dismissal”. Consequently, when it comes to special knowledge transfer and construction – even if partial – of an individual’s professional identity, complex analysis of professional (or popular scientific) discourse is of vital importance.

METHODS

In order to meet the stated objectives of the research, the following methods of analysis have been chosen: continuous sampling method along with corpus data collection (in order to facilitate further data analysis and reduce measurement errors to a minimum); discourse analysis (to single out and scrutinise encountered discursive markers along with their functioning in the chosen discursive space); functional analysis (to figure out the functional diapason of the analysed discourse); statistical data analysis (to assess collected, explored and presented amount of data in order to discover the underlying trends and patterns).

All the data used in the research process has been collected into a discursive data corpus after having analyzed 50 popular science articles in the sphere of IT. In total, the corpus consists of some 2000 discursive markers collected and analyzed. As soon as all the material is taken from one online source (Popular Mechanics magazine, ‘Technology’ section – <https://www.popularmechanics.com/technology/>), for convenience we will quote this particular site as a reference for all the examples in the paper, without any further specification in terms of separate articles and authors.

RESULTS AND ITS DISCUSSION

The material under scrutiny i.e. collected discursive data corpus, gives us some insight as to what elements of language are most frequently used in popular science IT discourse. Even though frequency cannot be considered the ultimate tool of scientific analysis and, more often than not, does not provide the research with any truly enlightening data, it still serves its purpose when it comes to isolating the patterns. And having all the recurrent data allows for a much narrower and, therefore, a deeper analysis of the language used. That is why usage frequency of language elements is the underlying principle of this research in terms of the analyzed discursive markers.

When it comes to popular science IT discourse, the question is how exactly all the language elements add to the formation of the addressee’s professional identity, as well as whether those elements construct this identity or simply transfer some part of professional knowledge. The way we hypothesize about the situation, any type of popular science discourse transfers a certain portion of special (professional) knowledge and, thus, increases the addressee’s knowledge on the subject and escalates their further interest in the field.

Within the framework of popular science IT discourse, a professional identity linguistic repertoire includes the following aspects: terminological units, professionally marked collocations, discursive formulas, professional jargon, allusions/references, phrasal verbs, emphatic constructions (inversions), phraseological units, irony/humor, slang. Let us remark here that all the aspects mentioned are presented in their gradual pragmatic sequence: from the units expressing minimum of connotational meanings and pragmatic presuppositions, to those with the highest degree of emotional and expressive value and pragmatic charge. Along with that, the analysis reveals two types of functioning: ‘language’ functional scope shows what functions are performed by each discursive marker, whereas ‘professional identity formation’ functional scope demonstrates how each discursive contributes to constructing this very identity.

Terminological units (31, 8%). Examples: lock button; technological interface; black hole; warp drive; megapixel camera; neural network; artificial intelligence; privacy-protection feature; etc.

Considering the fact that any popular science discourse has its roots in its 'purely' scientific counterpart (precedent scientific text), it stands to reason that terminological units in popular science IT discourse are a predominant discursive marker.

"Other Laptop Specs to Look Out For

CPU: Most laptops use Intel processors for their Central Processing Unit. You'll generally want an i5 or i7 processor, but i9 is better for hard-core gamers or video editors. GPU: The Graphics Processing Unit creates the images on your screen, though most are built into the CPU. RAM: Random Access Memory temporarily stores information to be accessed quickly, which allows your computer to multi-task. On basic devices like Chromebooks, you may get 4 GB. For most users, 8 GB is appropriate, whereas you'll want at least 16 GB for serious work or gaming".

The example describes some specifications crucial to choose the best touchscreen laptop. However, the way is happening in the text is of much more importance: the addresser uses standardized computer terminology (abbreviations), but immediately tells the addressee what each of them stands for.

It is important to emphasize that, even in cases of least emotional-expressive deviation of terminological units per se, popular science IT discourse changes the initial semantics of those elements all the same. For instance, in case of terminology usage, the vast majority of terms used are decriminalized (i.e. those units undergone the determinologization process which resulted in the terms' semantic and cognitive simplification, along with their repeated usage in everyday communication). In case there is a term that is too specific and difficult for a lay audience to understand, the addresser inevitably provides it with at least minimal elucidation, trying to explain its essence. We call this process explanatory determinologization (1, 8%). The following examples demonstrate the functioning of this phenomenon.

"In 1974, Hawking theorized that black holes emit some kind of radiation, called Hawking radiation, and now, nearly fifty years later, a group of researchers has managed to provide experimental evidence for this theoretical radiation".

"Many of these touchscreen laptops are 2-in-1 devices, meaning their screens flip or keyboards detach to turn them into a tablet".

The sentences given show that there is no relevance as to whether the term comes before or after the explanation. What is important is the explanation itself, provided in the simplest way possible. As effective as it is in terms of clarification and simplification of specific information, initially challenging for comprehension, explanatory determinologization adds greatly to general overabundance and prolixity of popular science IT discourse.

Professionally marked collocations (6, 4%). Examples: mechanical malfunctions; military maneuver; natural human inclinations; unfairly marginalized; circle of inclusion; experimental evidence; etc. 'Language' functional scope: intellectualization; knowledge dissemination; explanation; exemplification; word economy. 'Professional identity formation' functional scope: specific community initiation; special knowledge formation; special knowledge expansion.

Even though the collocations shown are professionally marked, their meaning is clear to the overwhelming majority of 'high-school-level' native speakers.

"Of course, not to pick on Apple—Samsung isn't any better, with a near \$2,000 folding phone that doesn't really fold very well, and Google is playing the game. In 2017, you could score a Pixel 2 starting at \$650, but the Pixel 3 jumped up to \$800 with only marginal improvements".

The collocation could be easily changed for 'minor changes for the better', but that would definitely be an unnecessary oversimplification. Even though this formal collocation is used along with highly colloquial phrasal verbs 'pick on' and 'jump up to', and idiomatic expression 'play the game', this seemingly inappropriate mixture of registers does not affect the overall linguo-pragmatic structure of the passage. Quite the opposite, it provides certain linguistic equilibrium to the analyzed discursive space.

Discursive formulas (11, 3%). Examples: At first site; secondly; as long as <...> is concerned; after all; we all know that; just keep in mind that; it's a long-accepted idea that; what's more; it stands to reason that; certainly; etc. 'Language' functional scope: topic introduction; explanation; discourse structuring; exemplification; indication of addressee's readiness to receive information. 'Professional identity formation' functional scope: general knowledge formation; general/special communication formation; formation of logical sequence in communication.

Discursive formulas are the staples of any scientific discourse. In that case, it is only logical that they are frequently used in popular science IT discourse as well.

Fundamentally being conversational gambits, discursive formulas play an important role in popular science IT discourse, as they serve a wide variety of functions and are formal representations of the strategies the addresser uses to structure their discursive space. Nevertheless, this discursive marker, as well as probably any other language element within the borders

of popular science IT discourse, acquires the whole range of usage possibilities and ways of emotional expressivity. By way of illustration, let us analyze the examples below.

“Arguably, it's the first time we've truly glimpsed the promise of voice-activated interfaces in real life and what they could mean for the future of tech design”.

“If that were the case, black holes would violate the laws of thermodynamics”.

In these contexts, ‘arguably’ is used to qualify the statement of a certain opinion and ‘if that were the case’ is an if-conditional clause used to talk about a certain hypothetical condition. Therefore, both formulas are applied in the same way one would do it in scientific discourse. On the other hand, this ‘classical’ usage of formal conversational gambits is quite rare in popular science IT discourse, since in the majority of cases the author’s choice falls on much more colloquial (ergo, expressive) discursive formulas, like the ones presented below.

“In a side-by-side comparison, the Pixel 3 might edge out the Pixel 3a in terms of color accuracy, but it's a near dead heat during everyday use”.

“Just keep in mind that not all touchscreens are made with the same quality”.

“A companion app provides an easy-to-follow installation guide. Plus, the doorbell cam pairs with other August home security devices”.

Professional jargon (2, 8%). Examples: guiltware; copy, paste and pray; eye candy; cookies; smug report; etc. ‘Language’ functional scope: intellectualization; knowledge dissemination; explanation; exemplification; emotional coloring; word economy. ‘Professional identity formation’ functional scope: specific community initiation; specific community integration; special knowledge formation; special knowledge expansion; dissociation from other communities.

We define professional jargon as a set of lexical units common to the representatives of certain professions or professional groups. Being restricted in their usage by specific social-professional regulations, professional jargon is usually semantically narrowed-down and emotionally expressive. The fact that this discursive marker has the lowest usage rate can be justified by the following: since one of the main functions of professional jargon is identification of oneself with a certain professional community and dissociation from others, pragmatic-communicative presuppositions of popular science IT discourse do not allow this discursive space to have a large number of professional slang units.

“A back-to-back comparison of the 2013 Hyundai Azera and long-wheelbase Santa Fe spec sheets reveals what appears to be essentially the same 3.3 liter V6 used in both applications, producing nearly identical horsepower and torque figures”.

This example demonstrates the use of the phrase ‘spec sheet’, which official counterpart is ‘datasheet’ – a very circumstantial list of a certain product’s technical characteristics, used to inform end consumers. The meaning in this particular case can be easily understood: ‘spec’ is an apocopic version of ‘specification’. Hence, considering the peculiarity of the discursive marker in question, we could suggest that the addresser mainly focuses on using only those units, which are easily recognized for a non-specialist.

Allusions / References (1, 9%). ‘Language’ functional scope: exemplification; popularisation; word economy; emotional coloring; explanation; knowledge dissemination; setting the mood. ‘Professional identity formation’ functional scope: facilitation of special knowledge formation; facilitation of special knowledge expansion; general knowledge formation; general knowledge expansion; general/special communication formation; ‘general <-> specific’ associative bond formation.

The usage of allusions and references of any kind inevitably evokes the aspect of intertextuality. In this paper, we concur with J. Farrell that intertextual significance is to be located in the author of the text rather than the reader. Allusions are much more than simply individual points of contact, but rather “elements within an extensive intertextual system” (Twigger-Ross, et al. 2003, p. 108). Since the allusion’s source domain is usually a well-known socio-cultural phenomenon, the author's choice of this stylistic device is well justified, as it provides the addressee with even more connections to establish between their cognitive base and newly integrated information.

Along with the analysis, we identified two kinds of allusion used in popular science IT discourse. The first type represents hackneyed allusions (of mostly literary nature).

“The new and improved Google AI will make its way to devices this fall, but that doesn't mean a brave new world of voice will immediately ensue”.

The reference to Aldous Huxley’s famous novel ‘Brave New World’ is extremely difficult to miss even for those who have never read the book, since the phrase has already become an integral part of everyday English.

However, even in the case, there is an addressee unable to unfold the literary significance of a certain allusion, the second type would most definitely be unanimously recognized not only by native speakers, but any person even slightly engaged in popular culture.

“In a show like Star Trek, it's easy to get lost in some of the more ambitious techs that illustrate humanity's future. There's the replicator, a machine that makes basically anything you want. The transporter is another good one. NASA would kill to get its hands on just one warp drive. But there's another piece of tech that lies in the background, and it's much more important to our lives today: the ship's computer”.

Overall, the allusion in popular science IT discourse helps the addressee to form an associative bond between general and specific knowledge, making it easy for a lay public to bridge the gap between science and everyday life.

Phrasal verbs (13, 4%). Examples: break down; do-over; hand in; put off; catch up with; get through with; think back on; run out of; etc. ‘Language’ functional scope: popularisation; explanation; exemplification; word economy. ‘Professional identity formation’ functional scope: facilitation of special knowledge formation; facilitation of special knowledge expansion; general/special communication formation; ‘general <-> specific’ associative bond formation.

It is worth mentioning from the very beginning that, due to their highly colloquial emotional-expressive connotation, at least half of the phrasal verbs in the collected corpus can be easily combined with the discursive marker of slang. The first example demonstrates typical colloquially neutral usage of phrasal verb ‘dust off’; whereas the second one demonstrates a far more frequent usage of phrasal verbs in popular science IT discourse, i.e. highly colloquial elements along with other discursive markers of ‘borderline-case’ slang nature.

“Finally, I can dust off my noise-canceling Bose earbuds, which became almost unusable when my headphone jack adapter (inevitably) broke”.

“Are packages getting stolen off your doorstep? Do you have a nosey neighbor that spends a little too much time hovering near your porch? Or maybe those darn kids keep ringing your bell and running away? If so, it might be time to beef up your home's security with a video doorbell”.

Arguably, being the most prolific source of replenishing English language vocabulary, phrasal verbs are extremely convenient to use by native speakers: they have an unconscious understanding of the meaning and usage of particles, which allows them to almost voluntarily create new phrasal verbs. Therefore, initial emotional-expressive charge of phrasal verbs (‘steal off’, ‘run away’, ‘beef up’) along with other discursive markers of highly colloquial nature (colloquialism ‘nosey’, euphemistic slang word ‘darn’) provide synergistic effect, which completely restructures precedent scientific discourse and predetermines pragmatic presuppositions of popular science IT discourse.

Emphatic constructions (Inversions) (2, 2%). ‘Language’ functional scope: emotional coloring; exemplification; popularisation; explanation; setting the mood. ‘Professional identity formation’ functional scope: facilitation of special knowledge formation; facilitation of special knowledge expansion; general knowledge formation; general knowledge expansion; general/special communication formation; formation of logical sequence in communication.

We have decided to put both ‘emphatic constructions’ and ‘inversions’ under one title: firstly, inversion is indeed an emphatic construction; secondly, no other syntactic structures of explicitly emphatic nature have been found among all the data collected.

Within the discursive space of popular science IT articles, we have detected only inversions colloquial in character; nevertheless, it would be an overstatement to claim that there is no place for literary inversions in the analysed type of discourse. The example is provided below.

“It's our voices that will really change the way we think about computing”.

Phraseological units (9, 3%). Examples: a blessing in disguise; cutting corners; bite the bullet; get out of hand; it's not rocket science; speak of the devil; etc. ‘Language’ functional scope: emotional coloring; exemplification; popularisation; explanation; word economy; setting the mood. ‘Professional identity formation’ functional scope: facilitation of special knowledge formation; facilitation of special knowledge expansion; general knowledge formation; general knowledge expansion; ‘general <-> specific’ associative bond formation; general/special communication formation.

Phraseological fund of language is one of the fundamental sources in terms of demonstration and transfer of its rich linguistic essence, extralinguistic flexibility and adaptability. More often than not, phraseological units undergo the structural-semantic transformation and are used not only to describe certain processes but to ensure that communicants have an opportunity to assess the situation, following on from their own subjective opinion and system of values. The essence of phraseological units, based on the discrepancy between the signifier and the signified, as well as their associatively and semantically isolated micro context, allows for verbally defining difficult phenomena of reality in the most expressive way.

“So while it's painful to watch once-great companies struggle, the same truth applies to all cellphone manufacturers (even Apple, who still hasn't given us a 3G-capable iPhone): better late than never”.

“While portable chargers these days are a dime a dozen, it's still pretty tricky to find one that is multifunctional, much less come across one that can work in multiple countries”.

All the described aspects of phraseological units, along with “the instantiation and development of (their) meaning in the discourse, the emergence of new associations and their chains, resulting in the creation of successive sub-images, coupled with visual development of metaphorical meaning” make them indispensable within the framework of popular science IT discourse.

Irony / Humour (7, 5%). ‘Language’ functional scope: emotional colouring; exemplification; popularisation; explanation; evaluation; setting the mood. ‘Professional identity formation’ functional scope: facilitation of special knowledge formation; facilitation of special knowledge expansion; general knowledge formation; general knowledge expansion; general/special communication formation.

When analyzing irony as a complex linguo-cognitive phenomenon, we tend to adopt the graded salience hypothesis approach, according to which “ironic meanings should be activated after literal meanings have been processed, because ironic interpretations are less salient than their literal meanings”. Here it is important to mention, that the meaning of any linguistic expression can be considered salient only if its interpretation is directly computed from the lexical meanings, which are automatically associated with entries in advance, i.e. before any extra inferences have been conceptually assumed and derived.

The stated complexity and ambiguity of irony makes it one of the major elements of popular science IT discourse since its main function is to attract the addressee’s attention to the conveyed information through the incongruence between the initial meaning of syntactic structure and its implied meaning.

“Perhaps no one understood this better than Steve Jobs, who rejected the common idea of the smartphone in 2007 and instead relied on the “digital styluses” that nature gave us—all 10 of them”.

The example shows the author’s witty remark, the meaning of which is understood even without the direct naming of the objects in question – fingers. Another interesting feature of using irony in popular science IT discourse is the usage of other stylistic devices along with irony.

“At first it doesn't sound like high praise, but the Pixel 3a and Pixel 3a XL are stunningly mediocre. The processor comes with a bit less muscle”.

In this case, the ironical meaning is conveyed through the use of oxymoronic phrase ‘stunningly mediocre’ and personification of the processor which ‘comes with a bit less muscle’. Once again, we witness synergistic effect of using more than one expressive element in order to get a much more intensified impact on the addressee.

Slang (13, 4%). Examples: hover; worth a look; shooter; most compelling of the bunch; record scratch; top-of-the-line; creepy; completely MIA; etc. ‘Language’ functional scope: emotional coloring; popularisation; explanation; exemplification; word economy; setting the mood. ‘Professional identity formation’ functional scope: facilitation of special knowledge formation; facilitation of special knowledge expansion; ‘general <-> specific’ associative bond formation; general/special communication formation.

As incredible as it may seem, slang is actually one of the principal discursive markers the author uses in order to get their message across with a minimum amount of scientific information. We share Agha’s viewpoint that slang is less of a “term of open pejoration for virtually any form of speech simply in order to dismiss it”, and more of a “term whose usage indexes relationships between discourses and their speakers” ([Webster-Wright, 2009, p. 307-308](#)). In the case of the discursive space under analysis in this paper, we define slang as one of the most productive discursive markers in terms of constructing the pragma-communicative space of popular science IT discourse.

“I’ve used the Pixel 3 every day for nearly 6 months, and after switching to the Pixel 3a for the past week, I’ve only noticed the performance hiccups when opening apps. Other than that, it just ticks along”.

As we have already mentioned above, slang as a discursive marker incorporates different types of language manifestation, i.e. it can be a colloquialism, a phrasal verb, a modified phraseological unit, professional jargon, etc. This is another reason why we consider this very type of markers to be the most influential in terms of forming the discursive space needed to attract and maintain the addressee’s attention.

“Packing an impressive 10,000 mAh battery and capable of charging up to 4 devices simultaneously, the GOSPACE SuperCharger can keep your tech essentials fueled throughout the day. It has a variety of ports built-in — two USB ports, one USB-C port, and a Qi wireless charging pad — allowing it to juice up different types of gadgets”.

The example shows that slang elements can be easily used in combination with terminological units (‘USB port’, ‘10,000 mAh battery’, ‘Qi wireless charging pad’) and nomenclature (‘GOSPACE SuperCharger’).

CONCLUSION

In conclusion, it is worth to point out once more that the formation of professional identity heavily depends on discursive space. On the one hand, discourse is formed by the professional sphere, on the other – it is the instrument of this sphere’s formation. Along with that, the process of constructing professional identity by means of different discursive practices is

absolutely conscious. This statement is confirmed by the speakers' use of concrete discursive markers, assigned to a certain professional institute.

Another important aspect to bear in mind is that all the assemblage of found discursive markers collaborates with one another, forming a strong synergistic effect in terms of both the functional scope of language units and the functional scope of professional identity formation. In conclusion, the combined functional diapason of those discursive markers significantly contributes to overall partial construction of non-specialist's professional identity.

In the context of the fast-growing and emerging market of professional services and cross-cultural interdependence of social institutes, we acknowledge the relevance and strategic necessity of further research in the field of linguistic realization of formation and expression aspects of professional identity, reflecting their professional affiliation.

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