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## INTERPROFESSIONAL DISCOURSE IN CROSS-CULTURAL COMMUNICATION

**Summary.** The status of the interprofessional discourse, its differentiative features and functions are in the focus of the present investigation. The significance of the cross-cultural communication is stressed in the interdiscursive collaboration. The research is based upon the corpus analysis of linguistic units selected from the novel “Angels and Demons” by Den Brown, wherein characters employ a intraprofessional discourse in the professional community, an interprofessional discourse (in the framework of one professional discourse) in the cross-cultural community and various discourse registers to collaborate outside of the professional discourse.

**Key words:** discourse, discourse register, interprofessional, cross-cultural communication, institutional context, situationalizing, collaboration.

**INTRODUCTION.** Interprofessional discourse has become a dominant idea in any professional collaboration [9, p. 1509–1515]. Interprofessional discourse, or discourse between individuals or representatives of different professions, such as communication between members of working personnel [6, p. 131]. The Scollons [19] originally had in mind to write a book about interdiscursive communication. The term discourse implies a relational, decentered, multiperspectival, variable approach to culture that offers less certainties to businessmen, politicians and language teachers, who prefer to see in culture something stable, predictable and controllable. Discourse, as verbal communicative practices and habits of thought, embodies a community’s identity and moral values, its understanding of history and its aspirations for the future [13, p. 308, 314].

Professional discourse, in its turn, is the language used by professionals, it’s a part of a phenomenon that James P. Gee et al. [6, p. 46f, p. 149f] call the ‘new work order’ [3; 11]. His theory based on sociolinguistic theory, cognitive science and philosophy provides a tool for investigating discourse and social practice that describes the interrelationships between language, language learning, social identity, and social context [12]; Britt-Louise Gunnarsson describes professional discourse as the language used by a diverse range of ‘professional areas’ or ‘domains’ marked by ‘a unique set of cognitive needs, social conditions and relationships with society at large’ [7, p. 5].

Interprofessional discourse together with intraprofessional discourse, or discourse within a specific profession and professional-lay discourse, communication, for instance, between lawyers and their clients, or between advertisers and their potential customers, constitute the paradigm of professional discourse [15, p. 143–158; see also: 17, p. 55–59].

In this paper we focus on the interprofessional discourse, wherein the participants from different cultural communities with different background knowledge, negotiate shared meanings in interaction. Cultural variance can be salient in that it can create differing expectations and interpretations of interactions between people [See Scollon & Scollon] [2, p. 204–216; 19, p. 13], for instance:

1. Langdon (American professor): *I’m embarrassed to admit, hat I’ve never heard of CERN* [p. 7].

2. Kohler (director general of CERN): *Not surprising, most Americans do not see Europe as the world leader in scientific research. They see us as nothing but a quaint shopping district* [p. 7].

3. Kohler: *Free Fall Tube* (understood by the members of CERN but outsiders) [p. 3].

4. Langdon: *What’s LHC stand for? asked, trying not to sound nervous.*

5. Kohler: *Large Hadron Collider. A particle accelerator* [p. 11].

6. Langdon: *Particle accelerator? [He] was vaguely familiar with the term* [p. 11].

7. Langdon: *But, I thought... Wasn’t the Big Bang proposed by Harvard astronomer Edwin Hubble?* [p. 14].

8. Kohler: *Again, American scientific arrogance. Hubble published in 1929, two years after Lemaotre* [p. 14].

According to Kohler, a European scientist, Americans are arrogant and have a misconception that any discovery in science can be made in America only.

The fact is that language and culture have not been treated as inseparable by scholars and the study of language has been since its inception the domain of linguists, not anthropologists. But culture is another name for context, i.e. the constraints imposed on individual language users by the forces of tradition, convention, fashion, and ideology [13, p. 305].

**STATE OF THE ART.** Applied Linguistics and Professional Discourse Studies – have been developing in parallel. The term ‘applied linguistics’ appears to be of relatively recent usage. It was in need in the late 1940s and 1950s in both Britain and the USA to refer to a new academic discipline of the study of the teaching and learning second or foreign languages. Due to a considerable growth in the last six decades of English as a world language, and the consequent growth in worldwide demand for academically qualified professionals – ‘applied linguistics’ has been principally identified with the teaching of English as a foreign or second language [16, p. 44–45]. And Srikant Sarangi considers that an applied linguist can be a mediator, a problem solver, an educator, a joint collaborator and a co-researcher [18, p. 374]. Scholars of language and social life have investigated discourse within a variety of institutional contexts, most notably within schools, courtrooms, corporations, clinics and hospitals. Scollon and Scollon [19] in their “Intercultural Communication” focus on the professional discourse between Americans and East Asians, especially Chinese. Francheska Bargiela and Catherine Nickerson underline that one of the defining characteristics of interprofessional discourse is status dimension in which members have equal professional role [compare Bargiela-Chippini’s definition of professional discourse: 1, p. 1–32]. We should take into consideration that that even among professionals of

international community there can be misunderstanding due to their cultural contexts they come from and their field of specialization, for instance, physicists, specializing in different areas, like theoretical physics, analytical physics, biophysics, nuclear physics, particle physics solid states physics, thermoelectricity, physics of semiconductors, for instance, Langdon thought that every member of CERN was a physicist, but they had different specialization and spoke specific registers within the discourse of physics, for instance:

9. Kohler: *Leonardo worked in the field of particle physics* [p. 9].

10. Vittoria [was]: *a Bio Entanglement Physicist. She studies the interconnectivity of life systems. Her work ties closely with her father's work in particle physics. Recently she disproved one of Einstein's fundamental theories by using atomically synchronized cameras to observe a school of tuna fish* [p. 10].

**INVESTIGATION.** At present the interprofessional discourse must be in focus of representatives of different schools, areas of the same speciality, for instance, linguistics, communication, psychology and a great variety of disciplines having human and language as an object of their research, because this type of discourse is the basis of exchange of ideas and information; to secure a further progress of the human kind [17, p. 55–59].

Here we are concerned with three issues of an integral description of interprofessional discourse (of physics): first, as a worldwide language formation for a specific discipline. We came across the corresponding text fragments in “Angels and Demons” by Dan Brown which stimulated the interprofessional discourse analysis.

James Paul Gee holds that you cannot engage in a Discourse in a less than fully fluent manner: you are either in or you are not. If you don't fully display an identity associated with a discourse, then you are saying that you do not have that identity: you are then either a pretender or an initiate. Note though, that, “the various discourses which constitute each of us as persons are changing and often are not fully consistent with each other; there is often conflict and tension between the values, beliefs, attitudes, interactional styles, uses of language, and ways of being in the world which two or more discourses represent” [5, p. 7].

Langdon's description of the campus does not differ from the scene in his home university, he tries to find common features in a new environment:

11. *When Kohler and Langdon emerged from the rear of CERN's main complex into the stark Swiss sunlight, Langdon felt as if he'd been transported home. The scene before him looked like an Ivy League campus: Scholarly looking individuals with stacks of books hustled in and out of buildings. As if to accentuate the collegiate atmosphere, two longhaired hippies hurled a Frisbee back and forth while enjoying Mahler's Fourth Symphony blaring from a dorm window* [p. 5].

But Kohler underlines specific features of his Centre:

12. Kohler: *These are our residential dorms, Kohler explained as he accelerated his wheelchair down the path toward the buildings. We have over three thousand physicists here. CERN (Conseil Européen pour la Recherche Nucléaire) single-handedly employs more than half of the world's particle physicists - the brightest minds on earth – Germans, Japanese, Italians, Dutch, you name it. Our physicists represent over five hundred universities and sixty nationalities. Langdon was amazed* [p. 5].

The problem of interprofessional collaboration becomes more and more urgent at the time of continental, intercontinental and global cooperation [21], English was the language of communication at CERN and, evidently, their own culture could influence their interdiscursive practice [see: 20], for instance:

13. Langdon: *How do they all communicate?* [p. 4].

14. Kohler: *English, of course. The universal language of science. Langdon had always heard math was the universal language of science, but he was too tired to argue* [p. 4].

The discourse roles change in the speech continuum: professional → layman → professional → depending on the situation, the following text fragment illustrate the talk between the professional physicist Kohler and Langdon who came as a professional expert in symbology, but a layman in physics, for instance:

15. Kohler: *Are you familiar with particle physics, Mr. Langdon?* [p. 4].

16. Langdon: *I'm familiar with general physics – falling bodies, that sort of thing. His years of high-diving experience had given him a profound respect for the awesome power of gravitational acceleration. “Particle physics is the study of atoms, isn't it?”* [p. 4].

Given the nature of discourses, social languages connect specific social activities and specific socially situated identities associated with a discourse (Gee, 1996, 1999). Accordingly, we must admit that discourse of a human can include various types of discourse registers depending on the communicative situation.

This suggests that knowing a specific social language means knowing how to use its specific grammatical and lexical features in a manner that is characteristic of the discourse. Thus, Gee's theory holds that meaning in language is “situationalised”, i.e. meaning is linked to people's experiences and perceptions relative to the discourse they are presently using language within, for instance:

17. Langdon: *I'm relieved to see that even brilliant physicists make mistakes. Whoever wrote that note made a mistake. That column isn't Ionic. Ionic columns are uniform in width. That one's tapered. It's Doric - the Greek counterpart. A common mistake* [p. 6].

Langdon tries to interpret the objects he sees through his professional discourse and its culture, what makes him sound as an outsider of the community.

18. Kohler: *The author meant it as a joke, ... Ionic means containing ions – electrically charged particles. Most objects contain them* [p. 6].

In text fragments (18–19) an illustration of the role change, Langdon conversing with Vittoria becomes a layman:

19. Kohler: *Tell us about your father's experiment* [p. 14].

20. Vittoria: *Rectifying science with religion has been my father's life dream... The exact moment of creation. Time zero. Even today, science cannot grasp the initial moment of creation. Our equations explain the early universe quite effectively, but as we move back in time, approaching time zero, suddenly our mathematics disintegrates, and everything becomes meaningless* [p. 14].

21. Vittoria: *My father created a universe... from nothing at all. It was done on a much smaller scale, of course. The process was remarkably simple. He accelerated two ultrathin particle beams in opposite directions around the accelerator tube. The two beams collided head-on at enormous speeds, driving into one another and compressing all their energy into a single pinpoint. He achieved extreme energy densities* [p. 15].

Kohler regained his professional role in conversation with Vittoria (20–21) and further in (22–23):

22. Kohler: *But there are enormous technological barriers to actually storing antimatter. What about neutralization?* [p. 16].

23. Vittoria: *The batteries activate automatically,” Vittoria said”, when the trap is moved from the recharger. They work for twenty-four hours. Like a reserve tank of gas, ... Antimatter has some astonishing characteristics, ... which make it quite dangerous.*

*A ten milligram sample – the volume of a grain of sand – is hypothesized to hold as much energy as about two hundred metric tons of conventional rocket fuel* [p. 16].

First, the formation of one world-wide discourse of a certain discipline is a necessity for a global collaboration, otherwise groups of professionals either from one school, or from one country will not understand each other especially, it concerns the terms. The success or failure of the CERN project or any international project may depend on the participants' level of their interprofessional discourse and, consequently, there comes an assignment for linguists and subject matter experts to initiate an elaboration of a worldwide language of a discipline.

The conceptual system of physics in the text is represented by the following semantic domain: *antimatter technology, back-up battery, electromagnetic field, nematocystic charge, liquid plasma, antimatter trap, accelerator tube* which constitute the basis of the professionals' communication within the given community. Compare Langdon's semantic domain: *religious iconology, symbology, cruciform, anthropology, religious artifact, cycladic idol, boccus, illuminati, ancient document, paleontologist* representing the concept of symbology. Thus, the people employing this or that discourses can be considered interprofessional discourse users. Dell H. Hymes admits that the universal functions of speech are 'the same in every group and for every personality' [9, p. 55–83; see the language functions: 10, p. 373] and our aim is to reveal their characteristics. Let's take commander Olivetti's discourse represented by the semantic field "security" (*advanced sensing equipment, incendiary device, radioactive isotope scanner, olfactory filter, advanced metal detector, X-ray scanners*), see the text:

24. Comandante Principale Olivetti: *There is something you need to know. Despite the archaic appearance of Vatican City, every single entrance, both public and private, is equipped with the most advanced sensing equipment known to man. If someone tried to enter with any sort of incendiary device it would be detected instantly. We have radioactive isotope scanners, olfactory filters designed by the American DEA to detect the faintest chemical signatures of combustibles and toxins. We also use the most advanced metal detectors and X-ray scanners available* [p. 27].

Vittorio knew much about security and could argue with the comandante, i.e. she could converse making use of several discourse registers – physics, biology, art, religion, history, etc., for example, there is her conversation with Olivetti:

25. Vittorio: *Unfortunately, antimatter is nonradioactive, its chemical signature is that of pure hydrogen, and the canister is plastic. None of those devices would have detected it* [p. 27].

Evidently, we can point out that a person within his/her lifespan develops a discourse consisting of n-number of discourses. This hypothesis finds its proof in the process of semantic mapping of the leading characters' discourse in the novel.

The conceptual system of religion is actualized in the novel by a semantic field including the following lexemes: *church, pope, priest, cardinal, divinity, saint, sacrifice, sanctuary, basilica, chapel, dogma, commandment, altar, faith, congregation, sermon, pagan, conversion, lithurgy, camerlegno, hell, paradise*, etc, for instance:

26. Chamberlain: (...) *a Pope is a man torn between two worlds... the real world and the divine. He warned that any church that ignored reality would not survive to enjoy the divine. The real world is upon us tonight. We would be vain to ignore it. Pride and precedent cannot overshadow reason* [p. 34].

27. Langdon: *Christianity did not borrow only from sun worship. The ritual of Christian canonization is taken from the ancient*

*'god-making' rite of Euhemerus. The practice of 'god-eating' – that is, Holy Communion – was borrowed from the Aztecs. Even the concept of Christ dying for our sins is arguably not exclusively Christian; the self-sacrifice of a young man to absolve the sins of his people appears in the earliest tradition of the Quetzalcoatl* [p. 51].

We can see that the conceptual system of the novel seems to be a mosaic – the correlating concepts of science, symbology, security, religion, arts and others advance the plot.

When investigating the language vocabulary in diachrony we will be able to pinpoint the contribution of every group or a personality into the word stock enrichment in its development.

As for the ethnic-cultural features in the characters' discourse we come to the conclusion that a new worldview the character perceives through his/her native (or first) language, for example:

28. Docent (at the Pantheon): *"Ah, your wife!" the docent exclaimed, clearly thrilled to have another guest. He motioned to her short pants and hiking boots. Now you I can tell are American!* [p. 52]. See: a docent is a guide, typically on a voluntary basis in a museum, art gallery, or zoo.

Vittoria's manners, speech, clothes and boots pointed to her and Langdon's American style. But Vittoria always underlined her Italian descent.

29. Vittoria: *I'm Italian. [...] Vittoria whispered, trying to turn her back the guide. Galileo's Diagramma. I need to see it* [p. 52].

30. Docent: *Diagramma? My! You two certainly know your history! Unfortunately that document is not viewable. It is under secret preservation in the Vatican Arc* – [p. 52].

Likewise Langdon perceived everything new (or foreign) through his "American eye", for instance:

31. Langdon: [...] *studied CERN's director, still trying to process the bizarre surroundings. "Spirituality and physics?" Langdon had spent his career studying religious history, and if there was one recurring theme, it was that science and religion had been oil and water since day one... archenemies... unmixable* [p. 9].

32. *When Kohler and Langdon emerged from the rear of CERN's main complex into the stark Swiss sunlight, Langdon felt as if he'd been transported home. The scene before him looked like an Ivy League campus* [p. 5].

33. Langdon [gathered his thoughts and continued]: *The Illuminati grew more powerful in Europe and set their sights on America, a fledgling government many of whose leaders were Masons – George Washington, Ben Franklin – honest, God-fearing men who were unaware of the Illuminati stronghold on the Masons. The Illuminati took advantage of the infiltration and helped found banks, universities, and industry to finance their ultimate quest. Langdon paused. The creation of a single unified world state – a kind of secular New World Order* [p. 8].

Langdon's cognition is based on his world view rooted in American values.

34. Kohler: *A petty misconception over a petty technology. CERN is far greater than a global connection of computers. Our scientists produce miracles almost daily. [...] Perhaps miracle is the wrong word. I was simply trying to speak your language* [= the discourse of the religious symbologist] [p. 4].

35. Langdon: *My language? Not to disappoint you, sir, but I study religious symbology - I'm an academic, not a priest* [p. 4].

Langdon meant that experts in religion and symbology speak different discourses or rather discourse registers [4, p. 21–37].

The investigation of the characters' interprofessional discourse in the novel and their constant role change in various communicative

situations we understand that culture plays a decisive role in the mutual understanding of the speakers [cf.; 14, p. 201–207]. And teaching English as other language methodology must be based on on multiculturalism for the learners to enjoy equality in the modern world.

**CONCLUSION AND PERSPECTIVES.** This article addresses some of the most salient issues raised in recent transnational education scholarship, with a particular focus on cross-cultural and various types of professional discourse. We must admit that poor interprofessional collaboration can negatively affect the common cooperation.

At present, due to the global spread of English ethnic-cultural component conspicuous in the speakers' of other languages is being lost in the process of learning English, though it plays the main role in their acquisition of English. Therefore, culture and language must be inseparable in this field as well as social contexts into which the speakers' of other languages are integrated.

The suggested tendencies of the interprofessional discourse investigation requires collaboration of linguists and subject matter specialists to help people understand each other on the way to Global Home.

Further on the investigation of interprofessional discourse must evolve various approaches from multiple levels, providing a deep analysis of the dynamics of creating and maintaining professional relationships at work.

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#### Михайленко В. В. Інтерпрофесійний дискурс у міжкультурній комунікації

**Анотація.** У фокусі дослідження – статус міжпрофесійного дискурсу, його характеристики й функції. Наголошено на значущості міжкультурної комунікації в міждискурсивному співробітництві. Дослідження базується на корпусному аналізі мовленнєвих одиниць, дібраних із роману «Ангели і демони» Дена Брауна, в якому персонажі мають можливість використовувати професійний дискурс у професійному співтоваристві, міжпрофесійний дискурс у рамках одного міжкультурного співтовариства й різні регістри дискурсу для спільної роботи за межами професійного дискурсу.

**Ключові слова:** дискурс, дискурс-регістр, інтерпрофесійний дискурс, міжкультурна комунікація, інституційний контекст, ситуація, співпраця.

#### Михайленко В. В. Інтерпрофесіональний дискурс в міжкультурній комунікації

**Анотація.** В фокусі дослідження – статус інтерпрофесіонального дискурсу, його характеристики й функції. Отмечена значимость межкультурной коммуникации для междискурсивного сотрудничества. Исследование базируется на корпусном анализе речевых единиц, отобранных из романа «Ангелы и демоны» Дена Брауна, где персонажи имеют возможность использовать профессиональный дискурс в профессиональном сообществе и междискурсивном сообществе, а также различные регистры дискурса для совместной работы за пределами определённого профессионального дискурса.

**Ключевые слова:** дискурс, дискурс-регістр, інтерпрофесіональний дискурс, міжкультурна комунікація, інституціональний контекст, ситуація, співпраця.