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Beyond “Tribes and Territories” in Humanities

Abstract: Largely used in the early 1990’s for the cultures of academic disciplines and their roots in different knowledge characteristics, the “tribes and territories” metaphor refers to the borders between traditional disciplines and the researchers’ and academics’ tendency to isolate themselves within the limits of their own discipline. Starting from the belief that a fragmentary approach can only provide a limited perspective upon the object of knowledge, the interdisciplinary approach has gradually gained solid ground starting from the second decade of the 20th century, leading thus to the development of interdisciplinary research fields. In this context, both sociolinguistics, developed at the confluence of linguistics with sociology, starting in the mid-20th century, and computational linguistics, emerging at the end of the same century, at the borderline between classical linguistics and computer science, propose interdisciplinary approaches to language facts, by exploring the conceptual and methodological apparatus of linguistics, sociology and the automatic processing of language. This study presents the methodological particularities of the two disciplines, highlighting the arguments they bring to support the interdisciplinary research of linguistic phenomena.

Keywords: interdisciplinarity, humanities, sociolinguistics, computational linguistics.

1. The “tribes and territories” metaphor

The “tribes and territories” metaphor was coined by Tony Becher in his work entitled *Academic Tribes and Territories: Intellectual enquiry and the culture of disciplines*, first published in 1989. The book provides an account of researches, data and theories indicating that “the knowledge structures of disciplines (the academic territories) strongly condition or even determine the behaviour and values of academics. In this account academics live in disciplinary tribes with common sets of practices, at least as far as research practices are concerned” (Trowler 2014, 17). The empirical research Becher’s thesis is based upon was conducted in the mid 1980’s in several top

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universities in Great Britain (Birmingham; Brighton Polytechnic; Bristol; Cambridge; Chelsea College London; Essex; Exeter; Imperial College London; Kent; London School of Economics; Reading; Southampton; University College London) and USA (University of California: Berkeley, Los Angeles, San Francisco; Santa Barbara; Stanford). Becher gathered a total of 221 interviews with respected scholars and researchers from over 12 academic fields, interrogating their approach to research and the influence of the structure of knowledge on research practices in those different disciplines.

The knowledge structures that constitute the epistemological nucleus of the disciplines present: (i) a cognitive dimension (Biglan 1973; Kolb 1981), in relation to which one can distinguish between *hard* and *soft*, *pure* and *applicative* disciplines, and (ii) a social dimension (Becher 1989), in relation to which one can differentiate between four other types of disciplines: *convergent* and *divergent*, *urban* and *rural*. Based on these classifications, it is possible to state that physics for example is hard, pure, convergent and urban, while sociology is soft, pure, divergent and rural. The disciplinary knowledge characteristics generate practice differences between the academic "tribes", mirrored by their approach of the research issues, by their collaboration with researchers working in different fields, and even by their methods of disseminating the outcomes of their research.

The importance of Tony Becher's book lies in the construction of a new framework for conceptualizing the influences exerted on academic practices, through the reflections he proposes on major questions regarding the status of academic disciplines and the relationships between them: Have disciplines been displaced by inter-disciplinarity, having outlived their usefulness? and How significant are disciplinary differences in teaching and research practices? (Becher 1994).

While some researchers regard it as outdated (Manathunga and Brew 2012, 44). when it comes to reflecting the new realities of the academic and research world, the "tribes and territories" metaphor could be related to the atomization and fragmentation tendency characterizing the classical inter-disciplinary approach to knowledge phenomena Starting from the mid-20th century, the disciplinary perspective has been perceived as insufficient in meeting the challenges of a society that is constantly changing, due to the continuous development of the information and communication fields. Consequently, "the atmosphere of indifference, and even adversity and hostility that used to dominate (and still dominates) the relations between the 'exact' sciences and humanities appears increasingly anachronistic" (Marcus 2011, 10). The natural response to this was not necessarily aimed at giving up the disciplinary approach perspectives, but rather at stimulating interdisciplinary interaction, the conceptual and methodological dialogue

between various fields of study, due to the firm belief that such an approach could provide a more complex knowledge of the investigated phenomena.

2. Inter-, pluri-, multi- and trans-disciplinarity

The 20th century is marked by a complex process of reconfiguration of the field of knowledge, resulted from the need of a holistic, unifying perspective that could trespass the rigid borderlines between traditional disciplines, a tendency that had already been anticipated by the birth of hybrid research field as well as by the unprecedented development of the comparative studies. The profound epistemological crisis generated the restructuring of “the way we think about the way we think” was reflected by an increased permeability of the borderlines between various knowledge and research fields, a hybridization of genres and the post-modern return to the great theories and cosmologies. According to Julie Thomson Klein, “all interdisciplinary activities are rooted in the ideas of unity and synthesis, evoking a common epistemology of convergence” (Klein 1990, 11).

A series of new terms that had been coined in the 19th century, such as *inter-*, *multi-*, *pluri-* and *transdisciplinarity*, designate the interference between traditional disciplines, a certain blurring of the separating lines between research fields and a conceptual and methodological transfer between disciplines. Despite their success, the above-mentioned terms lack rigour as far as their definitions are concerned, being often used as umbrella-terms carrying a variety of meanings and significations. Generally speaking, interdisciplinarity involves the combining of two or more academic disciplines into one activity. General dictionaries define *interdisciplinarity* as the transfer of concepts and methodology from one discipline to another with the aim of approaching research issues from a more adequate perspective. Thus, according to *The Oxford English Dictionary* interdisciplinarity means “of or pertaining to two or more disciplines or branches of learning; contributing to or benefiting from two or more disciplines”. *The Collins Dictionary* defines interdisciplinarity as “the quality or state of involving more than one discipline”, while *The Cambridge Dictionary* provides the following definition: “the fact of involving two or more different subjects or areas of knowledge”.

One can note that most dictionary definitions relate the term *interdisciplinarity* with *disciplinarity*, with a delimitation of the specific difference between the two concepts. Emphasizing the close connection between the two terms, Louis Menand states that “interdisciplinarity is not only completely consistent with disciplinarity, it actually depends on the concept” (Menand 2001, 52). Consequently, “understanding the role of disciplines in interdisciplinary studies should be central to a full understanding of interdisciplinarity” (Newell 1998, 541).

Interdisciplinary research represents an individual or team research method aimed at capitalizing “data, information, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a discipline or field of research practice” (Keestra et al. 2016, 31). Interdisciplinary research approach requires “not pasting two disciplines together to create one product but rather an integration and a synthesis of ideas and methods” (Newell 1998, 541). The purpose of interdisciplinary research is actually a pragmatic one: to solve a problem, to resolve an issue, to raise a new question, to explain a phenomenon, to create a new product, or to address a topic, all these being too complex for the methodological inventory of a single discipline and requiring thus an interdisciplinary approach. The aim of interdisciplinary approaches is finally “to produce a more comprehensive understanding or cognitive advancement” (Repko 2008, 12).

Starting from the dictionary definition of the adjective *interdisciplinary*: “involving two or more different subjects or areas of knowledge” (*Cambridge Dictionary*), we define the interdisciplinary approach as the connection between two or more academic disciplines in some way or ways. We must mention that dictionary definitions “remain rather vague regarding what exactly is being used or combined within the involved disciplines or how that combination is actually accomplished” (Augsburg 2016, 13). The semantic dilution of the term is the result of both its use at a large scale and the lack of unitary criteria used in the evaluation of interdisciplinarity. Thus, in the academic context, *interdisciplinarity* has become an over-used term: there is hardly any scientific event nowadays that does not declare its interdisciplinary character, while scientific publications massively encourage, by means of their editorial policies, scientific papers proposing interdisciplinary approaches. Lately, the assessment of research projects has been entirely based on the interdisciplinary nature of their scientific approach. Taking into account this terminological inflation one might rightfully ask whether interdisciplinarity is a trend or a reality of contemporary scientific reality.

In the academic discourse, interdisciplinarity typically applies to four realms: knowledge, research, education, and theory (Nissani 1995, 121). *Interdisciplinarity* is in competition with the other terms mentioned above: *trans-*, *pluri-* and *multidisciplinarity*, although the semantic delimitations between these terms are not always clear. In these conditions, *interdisciplinarity* is often used in a relation of synonymy with the concepts of *pluridisciplinarity* and *transdisciplinarity*, despite the differences in meaning displayed by these terms. To sum up, while *pluridisciplinarity* represents the study of an object by means of multiple disciplinary contributions, and while *transdisciplinarity* aims at studying *among*, *through* and *beyond* disciplines, in order to reach a better

understanding of the world, from the perspective of knowledge, *interdisciplinarity* designates the transfer of concepts and methods from one discipline to the other. Transdisciplinarity is regarded “as the further development of inter-disciplinarity” (Mittelstrass 2011, 329)

The term *interdisciplinarity* gained ground in the field of education sciences, where it defines the process of cooperation, unification and unitary codification of various scientific disciplines, involving a certain degree of integration between the different fields of knowledge and between different approaches, as well as the use of a common language allowing for conceptual and methodological changes. The interdisciplinary approach in the field of education sciences is based on the belief that no educational discipline is a closed field, the interdisciplinary correlation of information from different fields being beneficial for the development of both the critical and reflective thinking of an individual.

Transgressing certain epistemological and methodological barriers between various disciplines has resulted in a re-assessment of the research object, which is no longer regarded from the unique perspective of a single discipline, but rather placed under the magnifying glass of the interdisciplinary approach. The research object is studied from all angles, while the analysis is performed with methodological and epistemological tools belonging to several disciplines, aimed at rendering the research deeper and more extended. The exploitation of the connections between disciplines requires, nevertheless, superior skills and abilities from the researcher, since interdisciplinarity means more than the mere agglutination of concepts and methods belonging to different disciplines, it actually implies the systemic and integrative usage of these methods and concepts.

3. Arguments for an interdisciplinary approach of language facts

Analysing the arguments in favour of interdisciplinarity, Bengt Hansson highlights two aspects that are essential to the phenomenon of knowledge: (i) the nature of problems and (ii) the nature of breakthroughs (Hansson 1999, 339). The former refers to the complexity of the issues that should be solved by science and that require the joint effort of several disciplines to identify solutions. The latter aspect, highlighted by the history of science, indicates that the major discoveries were the outcome of the exploitation of the knowledge and methods of several disciplines and rather than of disciplinary approaches.

Without aiming at providing an exhaustive presentation of the meaning of language, we feel it is necessary to introduce a series of conceptual clarifications that refer to the framework of our study. The identity of verbal language, among other “languages” used by people (the language of

colours, the language of clothes, the language of architecture, the language of music and the like), is defined by the relationship with the other, each act of language being the product of an individual who can only define himself/herself in relation to another individual, according to the principle of otherness (without another human being there is no self-consciousness). Language is not just any faculty, or merely one of the many activities performed by an individual; on the contrary, it is one of the fundamental dimensions of the existence of a human being: "Whereas by means of their work people build a world which is appropriate for their physical existence, by means of language they build an existence that is appropriate for their spiritual life" (Coşeriu 2009, 39).

Awareness with regard to the primordial nature of verbal language among all communication systems has turned it into a central topic of reflection and research since ancient times (from this viewpoint, rhetoric, philosophy and logic are areas systematically concerned with the nature and manifestations of verbal language). The 20th century brought along a reflective return towards the nature of language, inaugurating new disciplines, such as linguistics, semiotics or pragmatics which assume it as a research object. This ever-increasing interest is fuelled by the linguistic turn, initiated by the *Course in General Linguistics* (1916), authored by the Geneva linguist Ferdinand de Saussure, who emphasizes the necessity of a theory of language. The proper understanding of the importance of language in the communication process and the immense potential of discursiveness turns discursive acts into a favourite research object of the humanities. Moreover, the emergence of computer languages, with the immense potential they open for human knowledge and communication, has stimulated the emergence of new fields of analysis, proving once again the constantly changing nature of verbal language. The interdisciplinary approach to language facts is supported by the premise that the development of a fully comprehensive explanatory model of the language phenomenon should definitely take into account both the implicit linguistic factors (linguistic units, linguistic relations and structures) and the extra-linguistic factors (ontological, gnoseological and social in the first place).

3.1. Sociolinguistics

One of the modern frontier disciplines developed during the second half of the 20th century, namely sociolinguistics (SL), emerged at the crossroad between linguistics and sociology. Although it represents an independent interdisciplinary field, SL is still regarded by certain researchers as a mere branch of linguistics. Aiming at the systematic study of the functioning of language in its micro- and macro-social context, the new discipline has its roots in the USA. The term *socio-linguistics* was used for the first time in 1952

by H.C. Currie. In 1963 sociolinguistic research became official and the Sociolinguistic Commission was founded, followed in 1964 by the first symposium of ethno- and sociolinguistics, held in Bloomington. The emergence of sociolinguistics was anticipated by a series of disciplines belonging to traditional linguistics which dealt with relating linguistic phenomena to extra-linguistic factors: dialectology and linguistic geography, historical linguistics, the study of bi- and multilingualism. An important part in the development of SL was played by language sociology studies, initiated in Europe around the mid-20th century. Among the sources of SL we should also mention the studies conducted by the American anthropologists and ethnologists who, while studying the indigenous linguistic communities, aimed at explaining, among other aspects, the verbal interaction occurring within and outside these groups. The American linguist William Labov is known as the founder of quantitative sociolinguistics, as he proposes a social approach to the language by means of the sociolinguistic model through the variability concept. The importance of using language in the social context in which it is materialized is also advocated for by Labov, who emphasizes linguistic productions rather than theorized linguistic abstractions, stressing the importance of the study of the social context in which language is manifested.

Whereas in the foreign literature on the field the two concepts, namely sociolinguistics and language sociology designate the same reality, the Romanian literature manifests a tendency towards semantic specialization, as the term “sociolinguistics” is used to designate the new discipline, whereas “language sociology” is claimed by sociologists as one of the branches of their science. In the case of language sociology, language facts are only mentioned for the characterization of certain sociological categories.

After the emergence of SL, the discipline follows an upward trend, as indicated by the large number of studies and works in the field, the more and more numerous departments of sociolinguistics in universities as well as the multitude of scientific events organized around this topic. While SL researchers were at first interested in highlighting the dependence of the language facts variation on the variation of social factors in a given socio-cultural community, towards the end of the 20th century SL became obviously close to pragmatics, for the benefit of both disciplines.

As far as the object of study of SL is concerned, at the beginnings of this discipline researchers were rather suspicious with regard to a specific object of study, perceiving SL rather as a particular way of approaching linguistic facts, as an extra-linguistic, sociocultural perspective upon the linguistic code. The rigorous designation of a specific research object proved to be a lengthy and difficult process. According to the existing definitions SL is limited to: the study of the relationship between language and social factors such as class, age, gender and ethnicity (Hudson 1996, 3); or as the study

of the effect of any and all aspects of society, including cultural norms, expectations, and context on the way language is used (Trudgill 2000, 20); the study of stylistic and social variation of language (Wardhaugh 2010, 10) or to “the study of language variety and variation in relation with the structure of the linguistic communities of speakers” (Coşeriu 1994, 133). We could sum up by saying that the object of SL is linguistic diversity influenced by social factors. The literature in the field distinguishes between four main types of linguistic variation which act at a macro-social level with repercussions at the individual communicative behaviour level: (i) *diastatic variation* (i.e. social); (ii) *diaphasic variation* (i.e. stylistic); (iii) *diatopic variation* (territorial or dialectal) and (iv) *diachronic variation* (or historical).

With regard to the process of delimiting the research object of SL, Coşeriu refers to a system displaying three levels of language achievement defined as activity, knowledge and product (individual / historical / universal), which would have the following correspondents: discourse sociolinguistics, the sociolinguistics of languages and the sociolinguistics of speech in general (Coşeriu 1981, 8). Each of these three dimensions of manifestation is associated its own tasks. Thus: 1. the purpose of speech SL in general would be to investigate the degree of knowledge and use of general norms of speech (...) in relation to the social (or sociocultural) structure of linguistic communities; 2. the object of a SL of languages would be the study of the diastatic variation (of sociolects respectively) of an idiom in their reciprocal relations, as well as the study of the inter-diastatic knowledge (respectively of the extent to which the different sociolects are shared and known in a given community); 3. the sociolinguistic of discourse would consider traditional discourses and types of discourse as attributes of social categories, specifying their status and prestige in a given social context.

As far as its methodology is concerned, SL does not consist in a juxtaposition of the issues and work methods linguistics and sociology normally deal with, but it represents a new qualitative field which has its own objectives and research tools. As an interdisciplinary study, SL reflects the mutual implication relationship between linguistics and sociology. The existence of such a relationship is closely connected with the twofold aspect of the linguistic act: an interaction fact between individuals and, at the same time, a coordinated manifestation of certain linguistic elements. Sociolinguistics targets, on the one hand, the correlations between social structures and linguistic structures and, on the other hand, the changes that occur in this relationship, trying to find out the interaction between social and linguistic structures.

The main method used for the collection of material SL coincides with the one used in dialectology: the investigation. Both the direct investigation (where answers to a pre-established questionnaire are written down on the

spot) and the indirect investigation (where the entire interview/investigation is recorded and subsequently transcribed) are used. Exact data regarding the characteristics of verbal interaction within different communities can be provided by the recording of various conversations between the members of a community rather than by a questionnaire investigation. A slight guidance of the conversation by the investigator might help obtain data regarding the attitude of the members of the community towards people outside that community (the insider-outside relationship). The dialectal investigation differs from the sociolinguistic investigation in terms of the informers and the questionnaire. While in dialectology the aim is to identify the typical informer for a certain community, for a certain age group or social category, the SL investigation requires the simultaneous use of several informers, of different ages and professions who were either born in the respective community or have recently settled there (Haugen, 1971, defines it as “the intensive study of a population”). This difference results from the fact that dialectology deals with determining the local invariant features of language whose confrontation can provide the image of the characteristics of linguistic variation on a large territory, that is horizontally, whereas SL aims at establishing the “social invariants” of language, whose confrontation provides information about the vertical differentiations within language; for each locality, the juxtaposition of social invariants provides a mosaic-like image of the structure of the language.

The sociolinguistic investigation is not limited to rural or conservative communities; it actually targets the most diverse types of communities, including the large urban settlements. A special type of research, described and used by W. Labov is the one he labels as “rapid anonymous investigations” which consist in systematic observations based on brief conversations during which the investigator does not introduce himself/herself as such to the subjects. Such investigations were carried out in several department stores in New York. Moreover, non-systematic observations can also be carried out (where the specialist has no intervention whatsoever in orienting/guiding the discussions) by recording conversations between various individuals in places where verbal interaction is spontaneous and sufficient from a quantitative viewpoint (restaurants, means of transportation, stores, etc.). In such situations, the investigator has no information about the subjects, except for the information they communicate accidentally and obviously except for the information revealed by their manner of speech. The questionnaire used in SL investigations is significantly shorter than the one used in dialectal investigations, as the researcher aims at investigating as many people as possible. The researchers are interested in only a limited number of linguistic phenomena, the so-called linguistic variables, which are attributed the status of relevant indicators for the distinctions applied to a certain community.

The issues related to SL have been approached in different manners, depending on the existing traditions related to linguistic research. In USA, for instance, in the anthropological research tradition, the accent fell on the study of the relationships between standard language and culture and Indian languages and cultures, bilingualism and urban dialectology. In France, where linguistic geography first appeared, SL exploited the outcomes of dialectology, while an equally vivid interest was manifested for discourse studies (with a focus on political discourse) and school SL. In Germany, the focus fell on the theory and practice of communication, whereas in the former Soviet Union the main interest was centred upon planning and linguistic policies, determined by multilingualism and the enforcement of Russian as the official language. Sociolinguistics has been underrepresented in Romania, where the few sporadic approaches in the field belong mainly to dialectologists, challenged by the relationship between dialects and the literary language. Moreover, we should mention the contributions in psycholinguistics signed by Tatiana Slama-Cazacu, as well as the language sociology studies published by Traian Herseni along with the school sociolinguistic studies conducted by Marina Ciolac. The central issues regarding the relationship between the literary language and the other levels and styles of the language have been frequently approached by both linguists and dialectologists almost exclusively from the perspective of normative linguistics and stylistics and very rarely from a sociolinguistic viewpoint.

3.2. Computational linguistics

A relatively young discipline, computational linguistics (CL) is situated, as suggested by its name, at the borderline between classical linguistic and computer sciences. Along with The Technology of Human Language (THL), CL approaches the study of human language from a double perspective:

a) a theoretical one, as it adds the theoretical and experimental apparatus of computer sciences to the language investigation methods specific to classical linguistics;

b) an experimental one, as its ultimate aim is to help people communicate with the machine in the most natural way possible, namely by using natural language.

CL is basically a discipline that uses computerized techniques of linguistic analysis that involve algorithms, data structures and formal models of representation as well as artificial intelligence techniques. Based on various formalisms, with the aim of creating various algorithms and programs for intelligent processing (analysis, understanding, interpretation, translation) of texts, computational linguistics aims at “understanding” and processing

natural language using the computer. Beyond the specific methodological inventory, CL shares similar objectives with the other scientific fields, aiming at capturing the dynamics of discourse and its defining features.

The history of the field is about half a century long, as its beginnings can be traced around the mid-20th century, being associated with the attempts of automated processing related to mathematical linguistics research and the computational linguistics of the 1960's. At the beginning the main interests of the researchers in the field focused on automatic translation programmes; the area of research subsequently extended comprising various other issues such as: computer-assisted lexicographic research, "direct translation" models, syntactic analysis, statistical analysis of natural languages, dependence grammars, mathematical linguistics, etc.

The research efforts undertaken in this field were initially of a theoretical nature: they mainly sought to prove some of the theories developed on natural language by quantitative methods. The advent of the internet brought along a commercial interest, the creation and exploitation of applications that use human language, computer applications being nowadays largely used in telephone services and tourism. However, at present, most applications in the THL field seem to be centred upon the efficient use of the information space offered by the *web*. Studies indicate that nowadays people waste at least as much time in searching for information as they do for the productive use of such information, even if most of the information known today is available, one way or another, as text on the *web*.

A tendency to preserve the identity of national languages has become obvious in our modern society. In a world where politics, the economy and information have been globalized and somehow standardized, the languages of smaller and medium nations are in the danger of being diminished or even disappear as they are taken over by those languages spoken at a larger scale. The electronic presence of a language within the web has become an indicator of its use: the more present a language is in the electronic media, the more important that language is. Consequently, the priority of each linguistic community is to create electronic linguistic resources of large dimensions and to develop the necessary technology for the processing of their specific language.

A research direction belonging to the field of computational linguistics, automated discourse analysis is an interdisciplinary approach whose aim is to perform the discourse analysis using computer specific tools. It relies on the conceptual and theoretical apparatus used in rhetoric, linguistics, communication sciences, psychology, sociology, to which the experimental potential of information media is added. Specialists in the field of computational linguistics believe that since a text is spoken and triggers a certain linguistic behaviour, it becomes discourse. In CL, discourse has been at the centre of several computational theories. Computational linguistics starts

from the premise that beyond any diverse and seemingly disordered string of words there is a structure and this structure is revealed by the theories of syntax. In turn, semantics is concerned with the way in which the elementary meanings of words, which become so fragile when separated from context, are combined and form the meanings of utterances. How are these meanings of separate sentences interconnected in the story communicated by an entire text and which are the laws that discourse is based upon? These are questions for which computational theories of discourse seek answers.

Regarded from the larger perspective of CL, the theories of discourse enter the stage only after morphology, syntax and computational semantics already brought their contribution to the field. These approaches must actually be regarded as complementary, as they all aim at understanding the laws that govern a discursive manifestation. The basic constitutive element of a discourse is called discourse unit. Most authors accept the clause as the discourse unit. A clause generally communicates a situation, an event, a state. Most theories approaching the issue of discourse representation and processing accept the hypothesis that the discourse structure has a tree-like representation. Discourse units are attached to the tree-like structure gradually, as they occur.

Which is the message that the author intends to send with a text and how does the author persuade the reader about his/her intention? Considering that any concept can be expressed in several ways, why do we choose a specific form over the other? What are the elements that contribute to the cohesion of a text, what makes it coherent? Can one use a pronoun (a referential expression, generally) anywhere in a text? What is the connection between discourse structure and referentiality? These are the questions discourse theories attempt to provide answers to. Four of these theories certainly dominate the field of computational linguistics: *the rhetoric structures theory*, *the attentional state theory*, *the centres theory* and *the veins theory* (Cristea 2002, 271-304, Cristea et al. 1998).

Each of the above-mentioned classical discourse theories provides the framework for subsequent analytical development meant to overcome the limits of one model or another, to deepen and confer more significance to the research. Of the main research directions belonging to automated discourse analysis we mention: morphological analysis, lexical analysis, syntactic analysis, semantic analysis, cognitive-discursive analysis. In this respect, a series of analysis programmes has been designed to follow up a single level of discourse, along with programmes aimed at performing a more complex analysis, on multiple levels (Grosz et al. 1995). The main advantages of automated discourse analysis refer to: the possibility of processing large corpora; the capacity to express linguistic theories in a formal manner; the assessment of the validity of certain natural language theories; establishing

certain patterns at a semantic and syntactic level as well as defining the relationships between the two levels of a text; establishing the right premises for the objectification of discourse interpretations (Grosz and Sidner 1986). Nevertheless, computer-aided discourse analysis is challenged by a series of limitations, as well. First of all, only texts in electronic format can be processed. Secondly, there are aspects of language that computer technology is still unable to formalize. Such an example would be issues related to semantic ambiguity that can only be solved in relation to their discursive context. Last but not least, computer-assisted analysis remains mainly a quantitative type of analysis.

Despite all the above-mentioned limitations, the computer-assisted processing and analysis of language facts has seen an unprecedented development.

In analysing human language, by means of extremely rigorous methods inherited from its mathematical origin, informatics is far from destroying its mysterious nature, its ambiguity or poetic dimension. It aims at identifying the sources of this ambiguity without imposing artificial clarity when language is inherently ambiguous and it can discover structure and regularity in those areas of language where a poet can merely perceive a debauchery of imagination transposed into words. (Cristea 2005, 1)

4. Conclusions

Based on the general theory of systems and on the systemic approach methodology, interdisciplinarity proposes a complex and holistic approach to the knowledge phenomena by establishing connections and interactions between various fields. The interdisciplinary approach aims at trespassing the artificial borderlines between disciplines, representing a strict requirement in a world prone to constant change and cognitive accumulation in various fields of knowledge. The researcher's capacity to hold an integrative perspective enable him/her acquire a deeper understanding of the topic and adapt his/her research methods, concepts and specific skills to a more complex and extended issues. From this perspective, interdisciplinarity has two main advantages: (i) complementarity: starting from the premise that a single discipline cannot explain a phenomenon by itself, we can rightfully state that the contribution of several disciplines shall lead to a better understanding of the object of study and (ii) creativity: the interaction between disciplines contributes to the production of original explanations and to new methodological solutions.

Interdisciplinarity is based on our understanding of the fact that we live in a world of complexity, where the hermetic borders between disciplines are no longer valid, a world in which we must identify the connections between various fields of knowledge. Hyper-specialization and atomism

lead to a limited perspective upon the object of study, preventing the researcher from gaining a unitary perspective upon it. The ability to re-trace a common language, the awareness with regard to the multiform nature of research objects and consequently the awareness with regard to the superiority of an interdisciplinary approach have become the main focus of scientific research, with the aim of identifying solutions that could increase the quality of the research outcomes.

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