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COGNITIVE, SOCIAL AND LITERARY SYSTEMS: AN EMPIRICAL APPROACH

With the concept of Empirical Study of Literature (ESL), developed at the universities of Bielefeld and Siegen in the eighties of the last century, part of the literary science became the domain of social studies. Thus, the field of literary research expanded towards the interdisciplinary studies. A systematic approach to this heterogeneous field required the development of new theoretical concepts. This paper provides an outline of the model that should allow for an efficient organisation of empirical knowledge concerning literary communication phenomena.

The ESL concept occurred in reaction to the crisis in the literary science in the second half of the 20th century when, following a growing popularity of natural sciences, the scientific criteria, methods and functions of the so-called humanistic disciplines became questionable (Rusch 1987). Traditional literary studies, based on hermeneutic assumptions, came under criticism by two sides: the Marxist dialectic line reproached it for a lack of social engagement and the advocates of the Anglo-Saxon understanding of the analytical theory of science, however, for uncertainty and unscientific character. Within this setting, a new theoretical concept began to be adopted in Bielefeld in the mid-seventies, trying to provide social significance and strict scientific nature to the literary science. At the University of Bielefeld, a project group was set up called *Literary Communication Theory* (S.J.Schmidt, R.Zobel, P.Finke, J.Wirrer, W.Kindt), soon renamed NIKOL (Non-conservative Study of Literature). It is mainly interested in textological theories, analytical study of literature and a shift from interpretative practice. The epistemological concepts of J.D.Sneed and W.Stegmüller constitute a theoretical base of research work. A number of empirical studies were developed during this period — such as those concerning the notion of literature in the Federal Republic of Germany, personality

variables of authors and psychological aspects of literary perception. In the second half of the seventies, a systematic, social and scientifically theoretical approach of N.Luhmann became increasingly important and first contact was established with biologically inspired constructivism of H.Maturana. This is the time of a shift from analytical linguistic study of literature to empirical sociological research, which found the ground for its systematic justification in *Grundriß...* (Schmidt 1980). The innovative character of this concept is reflected in requests for a strict delineation between participation in literary communication and its empirical analysis, in cognitive-theoretical reflection, presenting rationale for literary research in analytical or structuralistic theory of science, introducing systems theory, using sociological methodology and in a request to consider the criterion of usefulness. Empirical research is basically a systematic analysis of cognitive and social aspects of *communication processes* — only within this context an investigation of literary texts becomes sensible. Empirical study of literature thus forms part of the tradition of sociologically-oriented literary theories, a tradition that starts with Russian formalism, Prague or French aesthetic structuralism and materialistic literary theories, followed by literary production aesthetics, receptions and communications (Rusch 1994).

The publication of *Grundriß* coincides with Schmidt's arrival to the university in Siegen, where the members of the second generation of NIKOL group gather together (G.Rusch, H.Hauptmeier, A.Barsch, R.Viehoff, D.Meutsch). ESL becomes an integral part of sociological sciences, adopting at the same time their empirical methods. In 1984, LUMIS (Institute for Empirical Literature and Media Research) is set up at the University in Siegen and the staff members of the dissolved FeoLL Institute in Paderborn joined the NIKOL group, which has at least two important implications: on the one hand, constructivist and system-theoretical approach is strengthened and on the other hand, under their influence, ESL's development finds an even more consistent orientation towards communication, media and sociological sciences (Viehoff 2002). As interdisciplinarity expands so do the international links. In 1987, IGEL (International Society for the Empirical Study of Literature) is founded, operating at a practically global level.

In the second part, I try to connect both theoretical principles, around which ESL is built — namely the theory of knowledge and the systems theory.

The knowledge-theoretical assumptions of empirical study of literature are nowadays based mostly on the so-called radical constructivism, which played only a marginal role in the original ESL concepts. This is a discourse, referring on the one hand on philosophical traditions (Pyrrhon, Vico, Berkeley) and being based, on the other hand, on the latest findings in natural and social science (Schmidt 1994). Within the natural sciences, neurophysiological theories of perception and knowledge are particularly crucial, focusing on the problem of the knowledge process rather than on traditional epistemological question of the contents of perception and consciousness, whereby they develop the concepts of a) differentiation between cognitive systems and their environment, b) organisational confinement of cognitive systems and c) cognitive self-referentiation. Social sciences upgrade the neurophysiological findings mainly by developing and confirming the thesis on the impact of social processes on (self)organisation of cognitive systems. The relationships between cognition, communication, media and culture are in the centre of attention. Thus, radical constructivism comes to the next general conclusion: through sensomotor, cognitive and socially-oriented behaviour *empirical realities* are created in our brains, capable of being verified solely in terms of their usefulness in solving problems and not in terms of their (non)compliance with some of our perception-independent worlds.

Through deontologisation of the notion of empiricism, radical constructivism does not fall into relativism, scepticism or irrationalistic criticism of science. On the contrary: when it avoids the contradictions of ontological duality, it derives in a more convincing manner its own scientific-theoretical assumptions, similarly as the realistic outlines manage to do this, while at the same time it maintains fundamental criteria of scientific engagement: stability of scientific results, metatheoretical norms (theoreticity, empiricity, usefulness) and methodicity of scientific processes (Schmidt 1994). It is vital here, however, that these processes are no longer evaluated according to the

category of (apparent) objectivity, but merely according to collective knowledge, accepted in the social system of science. Now, such notions as credibility, reliability, descriptiveness, efficiency, operating economy, compatibility (with verified procedures) etc. become priorities (Rusch 1985).

(Literary)-scientific work is described on this basis as a methodical and systematic establishment of stable states in the context of knowledge about literary phenomena. The results of a scientific activity prove to be stable particularly when they derive from an empirical explanation of logically arranged notional systems. At this point, cognitive theory already moves towards systems theory.

One of the key problems ESL has to address at the theoretical level is the problem of modelling a complex network of phenomena, related to literary communication. This network encompasses the phenomena of orientation behaviour, referring to the literary texts or assuming them and a whole set of cognitive, communication and social contexts viewed as a precondition for such behaviour (Kos 2000).

Systems theory is regarded as the most efficient instrument in organising complex knowledge. It is understood in continuation as a holistic strategy of problem solving, based on the idea of wholeness, whereby it makes no distinction between system component properties and their interaction relationships — properties, defining a certain phenomenon as a system component, are its *interaction components,* i.e. properties appearing in the interaction network, regarded as a system (Hejl 1992). Systems can be described by means of four elements: components, delineation criteria, structures and functions.

The above findings indicate that literary communication is influenced by various factors. It seems reasonable, therefore, to systematise them at minimum two levels: through a distinction between biological, cognitive and social phenomena on one hand and on the other, through a coherent instrumentalisation of systems theory. To put it otherwise: a distinction will be made between living, cognitive and social systems, conceptualised according to the same criteria. Thus, their interrelationship, their specific features and their importance to functioning of literary systems will become apparent.

a) Living systems may be briefly described as follows:
− Their components are those constituents of a system (e.g. cells, tissues, organs), produced by it in the function of preserving such "self-production" (autopoiesis) (Maturana, Varela 1980);
− At the same time, autopoiesis is a delineating criterion of living systems, since a difference is established on its basis between system components and "non-system" phenomena;
− The structures of living systems are those sets of system interactions, preserving a continuity over a certain time period;
− Self-preservation is a central function of living systems — it can solely be performed by those systems, capable of accepting the influences from the environment without destroying it.

b) Cognitive systems are characterized by the following features:
− Their components are processes in the central nervous system and states of consciousness. The interrelation between both levels has not been investigated yet, but an assumption exists that local interactions are created in the nervous system, providing a basis for semantic relations at the level of the states of consciousness (Stadler, Kruse 1992). It is crucial, however, that changeability of neuronal states is not limited by the principle of autopoiesis: such states may have completely different meanings in various networks and environments.
− The delineation criteria of cognitive systems should primarily include the criteria for preservation and transformation of cognitive states (e.g. coherence, compliance with previous experiences), largely developed by the systems as such (Roth 1990). In addition, the criterion of complexity is also important to make a distinction between cognitive and other phenomena. However, the question here is not merely of the evolution of the nervous system but also of consensual or cultural evolution — cognitive systems develop their abilities only in the process of mutual orientation in an environment already formed in social and cultural terms.
− The term "structure of cognitive systems" designates relatively permanent interaction patterns at both the level of processes in the central nervous system, and at the level of the states of

consciousness. At a most complex level the cognitive structures may also be called the models of reality — the models because the only reality granting us direct access is established on the basis of cognitive mechanisms, even though we attribute to these models a characteristic of existing also outside the cognitive systems.

– Optimisation of neuronal states and states of consciousness is a key function of cognitive systems. The notion of optimisation designates in this case a manner of cognitive system self-organisation, allowing individuals to successfully orientate, survive and satisfy their needs. A distinction may be made between the rational (information orientation), emotional (balance between comfort and discomfort) and normative (value assessment of a practical significance of cognitive processes) functional aspects.

c) Social systems have the following characteristics:

– Their components are those living systems, having shaped comparable models of reality in their cognitive subsystems and coordinating at the same time their actions through these models. The level of their individuality is related to the level of social systems diversity and complexity.

– The delineation criteria of social systems may be defined through situational and communication contexts of the orientational behaviour. The difference between both types of contexts lies in that the first are characterized by a process of unilateral alteration of cognitive systems in interaction with the environment (= trivialisation) and the second, however, by mutual cognitive changes, resulting from an interaction between communication partners (Foerster 1993).

– The social system structures are relatively permanent interaction patterns, established through an interaction of individuals with regard to the comparable models of reality. They may be described primarily by such terms as "social roles" (resulting from a mutual typisation of habitualised actions) and "social elites" (i.e. social groups possessing considerably more power or influence on social changes than non-elite groups).

– A key function of social systems is mutual optimisation of neuronal states and states of consciousness. Similarly as in the case of

cognitive systems, a distinction may be made here as well between rational (mutual orientation based on establishing and explaining the models of reality), emotional (balancing comfort and discomfort through socially controlled representation of emotional states) and normative (value assessment of practical significance of social processes) functional aspects.

d) Thus, the literary systems can be described as follows:

– Their components are those living organisms, which have formed, on the basis of literary criteria, comparable models of reality in their cognitive subsystems, coordinating at the same time their actions on the same basis.

– The following aspects are important in delineation criteria of literary systems, namely: media (printed, acoustic, audiovisual), prevalent functional orientation (reporting, reflection, appelative function, playing with language and conventions, reproduction), attitude to "reality" (authenticity, reality, fictionality), stylistic and thematic features of literary texts. Relation of literary texts to "reality", manifested in the form of two literary conventions: fictionality and multiple meaning, is key for making a distinction between literary and non-literary phenomena. At issue here is decontextualisation of the reality modus and consensuality.

– The structures of literary systems are relatively stable interaction patters, established through a coordination of actions based on literary models of reality. The "social role" category, serving for description of these patterns, encompasses: authors, publishers, editors, critics, reviewers, book sellers, librarians, readers, type setters, directors, scientists, politicians (if, of course, they accept cultural programmes) etc. (Rusch 1991).

– A mutual optimisation of the neuronal states and the states of consciousness through decontextualisation of the reality modus and consensuality is a key function of literary systems. At the levels of all three functional aspects the issue concerns an expansion and control of cognitive and communication skills of participants in the literary system and consequently, preservation of their orientation and adjustment ability.

The aim of such schematisation is to make possible a quick formation of invariants concerning a great number of phenomena, relevant to the literary theory and in this way to obtain an orientation advantage.

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