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**THE TEXT-PROCESSING APPROACH  
TO LITERARY NARRATIVES**

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# THE TEXT-PROCESSING APPROACH TO LITERARY NARRATIVES

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## Zusammenfassung

In dieser Abhandlung wird versucht, eine Theorie des literarischen Erzählens aus der Perspektive der kognitiven Psychologie zu entwickeln. Dazu wird in einem ersten Abschnitt begründet, warum es sinnvoll oder sogar notwendig ist, schon vorliegende psychologische Erzähltheorien aus kognitionswissenschaftlicher Perspektive zu rekonstruieren und zu ergänzen. Hauptargument ist dabei, daß nur aus einer solchen Perspektive das Beziehungsverhältnis zwischen einem (literarischen) Text und einem (literarischen) Leser adäquat, d.h. auch: empirisch erklärt werden kann.

In einem weiteren Abschnitt beschäftigt sich der Verfasser mit den psychologisch relevanten Aspekten des Erzählens und zeigt, daß aus psychologischer Sicht alltägliches soziales Handeln und Erzählen (in schriftlicher Form, als Text) strukturgleich beschreibbar sind, Narratologie also nur einen - zu definierenden - Spezialfall einer allgemeinen psychologischen Handlungstheorie darstellt. In einem systematisch am Aspekt der "Subjektivität" literarischen Handelns orientierten Forschungsrückblick kommt der Verfasser schließlich zur Darstellung des gegenwärtigen Forschungsstandes zum Problem des Textverstehens in der empirischen Literaturwissenschaft. Seine Überlegungen führen ihn zu dem Vorschlag, rezeptives literarisches Handeln mit Texten als "Text-Processing" zu modellieren. Zur Stützung dieses Vorschlages zeigt er anhand empirischer Studien auf, welche Funktion der literarische Text innerhalb des "Text-Processing"-Modells hat und schließlich auch, wie - unter Einschluß sozialpsychologischer Theorieteile - die Entstehung von "Literarizität" solcher rezeptiven Handlungen zu erklären ist.

Die gesamte Abhandlung ist durchgängig von der Idee geprägt, die Stellung und Funktion der "Interpretation" in der Literaturwissenschaft produktiv zu kritisieren.

## Summary

The paper presents an attempt to develop a theory of literary narration from the perspective of cognitive psychology. The first section offers arguments for why it seems reasonable or even necessary to reconstruct or supplement existing psychological theories of narration from the point of view of cognitive science. The principal argument is that the relationship between a (literary) text and a (literary) reader can be adequately, i.e. also empirically, explained only from such a perspective.

In a further section the author deals with those aspects of narration which are of psychological relevance, and he is able to show that, from the point of view of psychology, the descriptive structure of ordinary social action and narration (in written form, i.e. as text) are the same; thus, narratology represents only one special case of the general psychological theory of action, which, however, still needs to be defined.

After a systematic research report centering on the "subjective" aspect of literary action, the author expounds the present state of knowledge with regard to the problem of textual understanding as it is conceived of by the empirical study of literature. He eventually proposes modelling the literary reception of texts as a kind of "text-processing". With recourse to empirical analyses he supports his proposal by demonstrating the functioning of the literary text within the "text-processing" model as well as the emergence of the specific "literary" quality of receptive action in the context of social-psychological constraints. The primary intention of the paper throughout is to advance some productive criticism of both the position and the function of "interpretation" in literary study.



## THE TEXT-PROCESSING APPROACH TO LITERARY NARRATIVES

### 1. Psychological assumptions in the study of literary reading

#### *Introduction*

This study is about the psychology of literary narratives and is written from a cognitivist perspective. Cognitive psychology deals with the acquisition, organization, and subsequent use of experience that living organisms, in particular human beings, perform when coping with their environments. Also widely used for denoting the subject of cognitive psychology is the term information processing. The notion of experience has deliberately been chosen here in accord with Bartlett's original schema-definition ("masses of organized past experiences", Bartlett, 1932, pp. 197-198) as well as with his notion of "attitude" or "general impression" that includes feeling and affect in the process of schema-based construction (pp. 206-207). The term "experience" may help to avoid the strong computer analogy which suggests high abstractness and analytical character of the information, presupposes passivity of the processor, and places the process outside any social context. The present approach is in line with those ecological conceptions of cognitive psychology which make the cognitive processes dependent on the contexts where they take place (e.g., Neisser, 1976) and accommodate not only the "cold", emotionless, analytical cognizing, but also the emotion-driven dynamics of cognition (Abelson, 1968; Martindale, 1981; Brewer and Nakamura, 1984). The complexity of literary phenomena itself necessitates the adoption of this broader view. What cognitive psychology, which has lent most of the theoretical scaffold and methodological insight to this enterprise, can finally profit, is perhaps some insight into the systematic variation of psychological processes within a specific context of human existence.

#### *Why cognitive psychology?*

Not only cognitive psychology, but also two other major theoretical streams in the development of psychology in the 20th century have made significant attempts to extend their competences to the field of literature. Most of the reader-response or -impact studies popular in the fifties and the sixties in the U.S. and in Germany stem clearly from a *behaviorist* approach. The principle of behaviorism that objective environmental stimuli are directly or by mediation associated with behavioral responses has simply been transferred to the domain of literary texts and readers' reactions. Literary texts, or rather their single features such as genre, theme, figurative richness, or sentence complexity have been conceived as objective stimuli and correlated with (mostly evaluative) reactions of the readers. The tacit assumption underlying behavioristically oriented research is that there is something objectively given "in the text" which makes it literary, i.e. gives the reactions of the readers an aesthetic direction. With the same logic, it has also been taken for granted that the reaction of the readers to a literary text (as it is determined by experts, like literary critics) are always

and everywhere aesthetic. Open to question are only the impact factors (e.g., types of characters in a joke) and the effect size (e.g., length of the laughter the joke elicits) which may then vary with readers' gender, social position, personality, etc. Basically, aesthetic impact is equated with preference or liking, with approach vs. avoidance behavior, or in Richards' (1924) terms with appetencies vs. aversions.

Theoretical generalizations which drew upon the behaviorist tradition make this *hedonistic equation* explicit. For Richards, anything represents aesthetic value "which will satisfy an appetency without involving the frustration of some equal or more important appetency" (1924, p. 48). Another characteristic of behaviorist theorizing prominent in Dewey (1934/1958) but also in Burke (1941/1973) is the claim that literature rewards the reader with the experience of successful adaptation. The assumption that literature is a form of adaptation, necessarily entails an approximation between literary and non-literary, "real life", phenomena. Indeed, as Richards puts it: "When we look at a picture, or read a poem, or listen to music, we are not doing something quite unlike what we are doing on our way to the gallery or when we dressed in the morning." (Richards, 1924, p. 16). In this view, neither aesthetic objects nor their perception constitute special ontological categories.

Reflections of this position emerge again in a trivialized way in impact studies which tried to detect the literary impact in attitude, or behavioral, changes (Halász & Sipos, 1969; Geiger, 1975). Here literature is clearly equated with, or rather degraded to, persuasive communication. This anti-aesthetic tendency is still stronger in those psychological studies of literary texts which confirmed that literature was just as well exposed to prestige suggestion as any other ordinary communication (Halász 1972). These studies bracket both the formal and the content aspects of the text as well as the ontological status of the text and the logical relation of the readers to the text. The text is treated as an undifferentiated whole, as *one* stimulus. Even the hedonistic aspect of pleasure vanishes.

There is, however, a broadly researched theory in the behaviorist tradition, which has endeavored to encompass both the complex qualities of the artwork and the pleasure in the reaction to them. Berlyne's (1971) experimental aesthetics with its key concepts "collative variables" on the one hand, and "arousal level" on the other, has also been thought to apply to literature (Kamann, 1963; Evans, 1969). In Berlyne's theory, collative stimulus variables such as *novelty*, *incongruity*, *irregularity*, *asymmetry* represent the complexity of the perceived object. They are related to the level of arousal in a linear function. The more complex the stimulus, the higher the arousal it evokes. Since medium-level arousal is the most pleasant arousal state (i.e., pleasure and arousal show a reversed u-shape function), people will avoid extremely novel, incongruent or fully regular and familiar stimuli; instead they seek moderate complexity. And this is exactly what art and literature provide: by organizing stimuli in a moderately complex manner they elicit aesthetic pleasure.

Berlyne also recognized that the content of the stimulus, its informativeness or meaning, which Berlyne termed ecological qualities, also contribute to its activation potential. However, he did not suggest any measurement for these qualities. In the domain of aesthetics, he clearly gave priority to formal complexity. For literature, he stressed originality of metaphors, symmetry or regularity of rhymes, etc.



While Berlyne's theory seems to be applicable to accounting for literary evolution (Martindale, 1975; 1990), how literary styles and themes are forced to change over time through habituation of initial complexity, it says only little about the aesthetic process in which individual recipients are faced with particular artworks. How can a reader of the last decade of the 20th century equally enjoy and appreciate Dante's *Divine Comedy*, Shakespeare's sonnets, Tolstoy's *Anna Karenina* or Robbe-Grillet's *La Maison de rendez-vous*? The only possible answer is that there must be "something" in the reader which enables her to relate to all these texts of seemingly various levels of complexity in an aesthetic fashion. With other words, complexity is neither a timeless standard, nor a norm bound to a given production-period, but a quality which is relative to the readers' prior knowledge and experiences. Berlyne's attempt to link cognition and motivation, and thereby give an empirical psychological foundation to the energetic theories of aesthetics (e.g., Allen, 1877) stopped halfway. Such variables as novelty or incongruity are cognitive in nature, i.e., they presuppose internal psychological entities against which these qualities can be matched. The motivational pleasure of cognizing cannot come from the stimuli "out there". If it takes place at all, it is accompanying, or resulting from, the cognitive work on the aesthetic stimuli.

### *Psychoanalysis*

According to a bibliography from the middle of the 1960s 90% of approximately 4500 psychological references to literature are of a psychoanalytic or psychiatric orientation (quoted by Lindauer, 1974). This ratio has probably not changed in the past decades. Why is there this genuine psychoanalytic interest in literature, and what is psychoanalysis' contribution to the study of literary narratives?

First, it has to be noted that psychoanalysis, pursuing Freud's lead, is primarily oriented toward the creative process (Freud, 1908; Kris, 1952). In close relation with this perspective, a psychoanalytic mode of literary interpretation has developed. The Freudian theory of mind is applied to the text. The analyst's task is "to decode the text in terms of the protagonist/creator's unconscious correspondences" (Fizer, 1981, 87). The analysis of literary texts thus inevitably becomes an analysis of the writer's repressed emotional conflicts and unconscious desires. Freud posits the ontological status of art and fiction "halfway between a reality which frustrates wishes and the wishfulfilling world of the imagination" (Freud, XIII., 188). What saves literature from submerging in wishfulfilling imagination is artistic form which serves to soften and to disguise the character of the creator's egoistic day-dream. Form ensures that the recipients of the presentation of the creator's phantasies arrive at a "purely formal --that is, aesthetic-- pleasure" (Freud, IX., 153).

While form is simply meant to "domesticate" wild phantasy-impulses, and literary forms have indeed received little attention in psychoanalysis, the content of literature in the psychoanalytic view stems from, and is about, human motives, and stays accordingly in the foreground of the psychoanalytic interpretation. In other words, the attraction of psychoanalytic writers to literary works can be explained in that they possess a theoretical-analytical apparatus which applies well to uncovering the assumed deeper motivational content of a text below its surface motivational structure.

This short and necessarily simplifying summary of psychoanalytic research in literature cannot include the variations which grew out of the Freudian tradition and

modified it in a more or less significant way. Each major psychoanalytic school espoused literature, applying their own concepts about the structure and dynamics of mind. For instance, Jung (1928/1976) laid greater stress on the nature and function of artistic symbols, and derived their dynamics from the supraindividual or collective unconscious (archetypes). For Adler's study on Dostoyevsky, the struggle goes on not between the antagonistic strata of the psyche whose existence is denied in the Adlerian ego-psychology but it arises as a conflict between the instinct of striving for superiority and environmental constraints. Lesser (1957/1968) also denies the predominance of the unconscious projection in literary fiction: "...fiction heeds the demands of both the reality principle and the pleasure principle, ... it provides a forum in which the positions of the id, the ego, and the superego all receive hearing, ...it seeks to reconcile the various claims it brings forward" (Lesser, 1957/1968, 79-79). In a Kohutian self-psychological framework, frustrated narcissism becomes the basic experience. According to Brooks Bouson (1989, 48), Thomas Mann, in *Death in Venice*, "expressing narcissistic anxieties and converting them into art, both exposes us to and defends us against the lurking fears and fantasies of the broken artist". These modifications, however, do not alter the original Freudian position that substantiates the motivational conflict in literary fiction and the supposed mechanism of "resolution by projection".

The psychoanalytic tradition still looking back to Freud resists empirical testing of statements derived from theoretical constructs. Norman Holland (1975; 1985) is a refreshing exception who took the trouble and, by close analysis of interviews with readers, empirically scrutinised the literary response. On the ground of the variability of the responses of different readers to the same text, and the similarity of the responses of one reader to different texts, Holland concludes that neither the author nor the text but the reader determines the story. He proposed a four-component scheme of how readers re-create literary texts. According to this scheme (DEFT) readers bring literary, as well as non-literary, cultural *expectations* to the text based on their prior experiences with literature and other entities in the world. Mental processes are, however, filtered through and shaped by the characteristic *defense mechanisms* (e.g., identification, projection, repression, etc.) of the reader, and are imbued by the reader's characteristic *fantasies*. In this process the reader continuously *transforms* the text and the invested fantasies into a morally, intellectually, socially and aesthetically coherent experience. Based on the ever-present personal defenses and fantasies Holland claims that the literary work is re-created by the reader's personal identity, and personal identity is re-created by the literary experience (1985, p. 9).

As is apparent in the scheme above, Holland tries to accommodate cognitive or, as he calls them, cultural processes in literary reception. In this sense, literary experience for him is not a mere discharge of conflicting energies. It is also clear, however, that he remains in the psychoanalytic framework and, therefore, gives priority to the dynamic aspects of the mental processes: individually unique defense patterns and fantasies govern the experience. This leads to a denial of any impact on the side of the text ("the text can neither stop, nor advance the reader in his enterprise", Holland, 1985, p. 6) and to claim that the empirical study of literary reading can only yield generalizations of the type of the DEFT-model.

In the DEFT-model of reception, as opposed to a stimulus-response model, Holland recognizes the eminent role of the reader's interpretation. But with the same gesture he makes it undetachable from the motivational responses. The interpretation itself becomes the response. Without questioning that literary interpretation involves continuous emotional evaluation (c.f. Abelson, 1987), it can still be helpful to distinguish between interpretation and subsequent responses. Not only because this is suggested by the cognitive theories of emotion (Schachter and Singer, 1962) or because the variability of interpretations of a text by different readers, which seemed to be so distracting to Holland, can be reduced in this way. It is also helpful because it can help to remedy the weakest point of Holland's theory, i.e., the fully projective character of literary interpretation. It is a way to restore the links between the text and a reader. As I will try to show, interpretation or meaning, when they are stripped of the ballast of the idiographic reactions, can be related to the structure and the content of the text as well as to the psychological characterizations of the readers. Bringing back the text into the psychological study of literature has another benefit. It permits to study those processes which participate in the text-reader interaction, and this study is the ultimate goal of the cognitive approach.

### *Narratology*

Gordon Bower (1976) once remarked (cit. Rubin and Gardner, 1985) that all human psychology can be reconstructed from stories. In contrast to this, empirical psychology, bound to an elementarist-associationist tradition, showed a long-lasting neglect toward texts in general and narratives in particular. Wundt himself referred them to "Völkerpsychology" to which the methods valid in empirical psychology do not apply. With the notable exception of Bartlett (1932), the study of the relation between basic psychological processes and story production and understanding has until recently remained outside the boundaries of empirical psychology. Instead, these relations have become, though implicitly, objects of analyses dealing with narratives from as diverse angles as ethnography (Propp, 1928/1968; Ben-Amos, 1969; Colby, 1973), linguistics (Dressler, 1977; Beaugrande, 1980; Petöfi, 1979; Labov and Waletzky, 1967), semiotics (Barthes, 1967; Todorov, 1973; Eco, 1976) and, last but not least, literary criticism. Given that a substantial part of the subject matter of literary criticism consists of narrative prose, the most extensive work in narratology has been completed in this domain (Prince, 1990).

Several features pertinent to verbal narratives have been uncovered and studied, such as temporal order and speed of narration, narrative distance and narrative point of view, relation between the events as they happened and as narrated, possible worlds within the universe of narratives, etc.

Narratological work in literature, however, has also been facilitated by the presumption shared by many theoreticians particularly in the first half of this century that literariness has to be sought in the text itself: in its language, style, and composition. This view has determined the approach of the Russian formalists, the European structuralists, the American New Critics. Even Marxist critics, e.g. Caudwell (1937/1970), Lukács (1962), took this position, though they laid the stress not on the formal characteristics of the text but on its content. A conspicuous common feature of all the above-mentioned theories is that they have shown little affinity to a

psychological approach. Sometimes they even explicitly denied the relevance of psychology for explaining literature (e.g., Shklovsky, 1917/65; Lukács, 1962).

A more careful analysis would easily show that each of the aforementioned theories have implicit psychological postulates and constructs. Indeed, narratological concepts were discussed under the heading of "psychology of literary forms" in the early seventies (Hankiss, 1970). The specific example of the debate between the Russian formalists and Vygotsky will serve to illustrate the problem and will also show how cognitive psychology has lent new perspectives to a better understanding of how literature works. A leading theoretician of the formalist school, Shklovsky (1917/1965), conceptualized the aim of the arts as "unwrapping" things from the everyday routine packages of perception and lending them sensibility again. Artistic devices such as delay, deviation, or condensation, which stand at the core of the formalist theory were vehicles for performing this function. In his *Psychology of Art* Vygotsky (1971) pointed out that Shklovsky was speaking throughout -with an allusion to Molière's Monsieur Jourdain- in psychological prose, because the de-automatization principle itself was based on a psychological assumption about the automatism of all everyday experiences. Although Vygotsky was clearly right in his position, the lack of adequate psychological theories pertaining to everyday versus literary representation and processing of information prevented both him and the formalists from giving a detailed psychological account of the literary experience. The distinction between "automatic" and "non-automatic", "conceptual" and "experience-like" became meaningful only from the late 1960s when cognitive psychology established itself as a science of mental activity (Neisser, 1967; Craik & Lockhart, 1972; Lindsey & Norman, 1972; Newell & Simon, 1972; Shiffrin and Schneider, 1977).

Emergence of cognitive concepts, such as story grammars (Rumelhart, 1975; Thorndyke, 1977; Mandler and Johnson, 1977), person- or role-schemata (Rosch & Mervis, 1975), event and action knowledge (Schank and Abelson, 1977), since they corresponded to basic narratological concepts such as story structures, characters, and actions, made it possible to carry narratological studies beyond the boundaries of the text. This possibility led to a cognitivisation of narratology (Ibsch, 1990), so that the characteristics pertinent to literary narratives are empirically studied in the process of production and comprehension (see Halász, 1987; Martindale, 1988; Halász, László, and Pléh, 1988).

### *Subjective criticism*

Literary theories emerging from the 1960s, in contrast to the text-based theories, have focused on how readers create literary meaning out of the text. It is the main contention of the "reception theories" or "subjective criticism" found in the work of Bleich (1978), Fish (1970), Iser (1978), Jauss (1982), is that the text does not have objective qualities and that only what readers do when experiencing the text really matters. In these approaches *interpretation* becomes the focus of study. The apparent anti-empiricism and anti-psychologism of the various schools of subjective criticism cannot be explained away by the lack of adequate psychological concepts and methods of interpretation. It rather rests on a deliberate meta-theoretical decision, which, following Husserl (1900/1928), excludes psychology's inductive summation of the particulars from the investigation of any form of knowledge, leaving this study to *a priori* intuition.

A reconciliation between phenomenological hermeneutics and empirical psychology was already initiated by Merleau-Ponty (1945), a student of Husserl, who acknowledged that an intelligible relation can exist between the two modes of knowing, and psychological theory does not necessarily reduce psychological relations to external relations of pure facts. A similar conclusion was drawn by the Gestalt psychologists who felt encouraged exactly by phenomenology studying empirically intrinsic organizations of perception and thought (Koffka, 1935/1962).

In contemporary cognitive psychology, a similar research strategy can be observed which tries to reconcile theoretical intuition and empirical psychological validation. This trend is also present in cognitive social psychology, particularly in social perception and understanding, where meaningful organizational units of social behavior, such as scripts (Abelson, 1975), plans (Lehnert, 1981), goals (Abbot and Black, 1986), themes (Dyer, 1983) and scenarios (Collins, Brown, and Larkin, 1980) are assumed and tested against empirical data or computer simulation. The insight that social situations and narrative texts are comprehended by using the same knowledge structures (Black, Galambos and Read, 1984; Read, 1987) provides ground for looking for the functions of these and other knowledge representations in interpretation of complex narratives like literary texts.

### *The Empirical Study of Literature*

The relevance of the cognitive approach was outlined against the major streams of twentieth century literary criticism, i.e. the narratological and the subjective-hermeneutic positions. However, a new literary theory, the empirical study of literature (ESL) has emerged recently (Schmidt, 1982; Groeben, 1982; Ibsch, Schram, and Steen, 1991) which not only accommodates but invites psychology to participate in explaining literary process. According to the ESL theory, the literary system is a sub-system of the society and is governed by socially produced and accepted conventions. Literary socialization leads to a skill of applying the two major conventions: the aesthetic convention which suspends the validity of the norms of the factual world replacing them with aesthetic norms, and the polyvalence convention which, by allowing multiple meaning for the same text, replaces the monovalence convention of ordinary communication (Schmidt, 1982; 1992).

Although these conventions are clearly non-psychological in nature, i.e. psychological processes are not equated with literature, the social and psychological conditions of literary socialization, and the processes of literary meaning formation become primary targets of research (cf. Viehoff, 1986; Meutsch and Schmidt, 1986). Readers' interpretations of literature and literary texts in a broad sense serve as objective empirical material for constructing a theory of literature (Groeben, 1972; Scheele and Groeben, 1988).

By providing the necessary analytical tools to describe the processes of different ways of meaning formation, cognitive psychology, and primarily research on reading and discourse processing, have offered an avenue to the ESL theory for the study of literary meaning. This approach has another benefit. As opposed to the insistence of the narratological theory and the subjective criticism on the priority of either the text or the recipient in the explanation of the literary process, the ESL theory emphasizes the interactive character of the literary process (Schmidt, 1982; Groeben, 1982; Rosenblatt,

1978; Harker, 1987). Here cognitive psychology which provides structures both for the text as information source and the reader's mind as it is mobilized during reading becomes a useful tool for transforming the old issues of literary understanding into empirical questions.

## **2. From discursive schemes to nondiscursive experiences**

In a simple cognitivist framework a text can be described as information organized on several levels (physical, lexical, semantic, grammatical, textual, pragmatic), while the recipient can be characterized as having the same sort of knowledge organized into cognitive schemata. The interaction of the external information and the various knowledge structures of the reader, whether directed by the external information in the text (bottom up), or by the existing schemata of the reader (top down), results in a mental representation of the text. Studying this mental representation enables researchers to infer the characteristics of the process itself. This position was most highly elaborated in Van Dijk & Kintsch (1983) where various types of interactions between text-information and readers' knowledge sources are described as discourse strategies.

At the core of text-comprehension, however, a predominant role is given to semantic or conceptual processing "Surface structural" (e.g. morpho-phonological, and syntactic) information in the text is to be "translated" or "transformed" into meanings which are cognitively represented in terms of (propositionally constructed) concepts (Van Dijk, 1979, p. 145). The readers' task in comprehension is to connect adjacent sentences semantically, thereby establishing a coherent text-representation. The interpretation of individual sentences and the establishment of coherence relations between successive sentences proceed with the help of information already transformed into conceptual-propositional micro-structures. However, interpretation proceeds not only locally, but also on a more general level concerning the theme, topic or gist of the text. As a result, semantic macro-structures evolve which consist of generalized macro-propositions. Both *local* and *global* interpretations draws heavily upon semantic structures or schemata of world knowledge which are sources of several kinds of inference. Even if one assumes, as story grammar theorists did, that there would exist a syntax for a particular category of text, i.e., for stories, the effect of these narrative superstructures is made explicit again on the semantic level, namely in semantic macro-structures.

The possibility of applying the text-processing paradigm to literary texts has challenged many scholars. Assuming that the laws of text-processing are general (Van Dijk, 1979, p. 151), the task seemed to be quite straightforward. One should look for modifications in local and global semantic interpretation that occur in a non-instrumental pragmatic framework of reading literature. Thus, no matter whether these modifications are due to surface-structural, linguistic characteristics of literary texts (e.g., rhythm, rhyme, figurative language, etc.), as it is held by the text-based literary theories, or to the general pragmatic context of literature, as it is stated by the context-based theories, these studies sought characteristics of literary text processing in semantic representation. Semantic representations of short literary texts or excerpts were subjected to memory studies which showed that readers semantically reorganize scrambled literary stories (Kintsch, Mandel, and Kozminsky, 1977), or the semantic

macro-structure of a short story does not differ significantly from that of the non-literary description of the same event (Halász, 1981). However, criticism of this type of text-processing approach to literature, which rejected the use of schema-based theories and memory experiments in the study of literary text-processing, emerged very soon (cf. Spiro, 1982). The criticism came from three directions.

Since AI research deals with knowledge structures which are presumed to be similar to cognitive schemata used in human text-understanding, one of the ways of confronting the text-processing paradigm with the requirements of processing literature is to explore the current and foreseeable boundaries of computer understanding. This is exactly what Abelson (1987) did in a succinct paper in which he also contributed to the more general debate on whether computers can ever successfully imitate human mental life (cf. Dreyfus, 1979; Searle, 1980).

Abelson considered five possible types of limitations on the AI appreciation of literature. Understanding *complex plots* characteristic of literary narratives seems to be less problematic although the currently available text-understanding programs are designed only for simple texts. The *credibility-evaluation* problem raised by Searle (1980) also seems to be manageable in the long run according to Abelson. Multiple environments for representing belief systems (Wilks and Bien, 1983) may serve to understand how the interacting characters understand and credit each other in a literary narrative and how the reader (the program) decides on the credibility of each character. *General critical evaluation*, e.g. saying that a plot was unimaginative or a character was unconvincing, along with other aspects such as having *sensory-motor experiences*, treating *thematic aboutness*, and dealing with *moods* of the characters seems to be more problematic. All these requirements of reading literary narratives have to do with individual experiences. When saying that a plot is unimaginative people have experiences of imaginativeness. When real readers cope with the thematic aboutness of a story in order to arrive at possible analogical meanings, they command an enormous store of historical incidents, other stories, and personal experiences. When they understand a character's mood they are not only sensitive to various possible degrees of that mood but also have personal experiences of it. If computers were able to build up a "big dictionary" of "personal" experiences there still remains the problem that readers of literature somehow go beyond a "semantic package connoting a given experience" (Abelson, 1987, p. 43): they bodily participate in understanding. Understanding the scene in *The old man and the sea* in which the old fisherman struggles with the big fish with bare hands does not stop at a mental representation of inferences like "fishing line cut flesh", "the fisherman was tired", or "it was difficult to land the fish", rather readers feel the fishing line cutting their own palm and wince with the old man's pain.

Another way to challenge the text-processing paradigm in literature is to show the deficiencies of the empirically tested schema-theories in describing literary comprehension (Spiro, 1980; 1982). In this analysis the comprehension of experimental texts generally used in the laboratory is contrasted with the comprehension of literary narratives.

Spiro's central notion is "summary experience" which is hard to capture in experimental texts based on semantic schemata. In the case of short laboratory texts understanding proceeds as continuous matching between preexisting or newly constructed discursive schemata with text-information. The goal or criterion of

understanding is to arrive at a coherent, "objective" meaning. This type of comprehension is prone to be subjected to the analytic procedures of the schema approach. In contrast, literary narratives are generally longer strips of texts in which situations unfold at a different pace. It is quite typical that short stories or novels contain episodes in which practically nothing happens, so that the situation becomes "overlearned" for the readers. What still remains "interesting" for the reader after having understood the situation is her own changing personal evaluation of the situation by which she relates herself, her personal values and world views to the situation. These evaluatively charged experiences decide on the personal relevance of the situation, i.e., they are the "data" for literary understanding. Consequently, the comprehension of literature, as opposed to the comprehension of short laboratory texts is a kind of "long-term comprehension," not only because it takes place when reading a longer text but also because it involves an extension, beyond and after the understanding of the "objective" meaning of a situation, into personally felt, holistic and nondiscursive phenomenal experiences.

Yet another challenge to the applicability of semantically based schema-theoretical text-processing approaches to literary understanding came from the psychological interpretation of the literary theories of the Russian Formalists and Czech structuralist linguists. According to the structuralists' contention, the literariness of a text is provided by its structure and language. A literary narrative, using aesthetic devices such as condensation, delay, or deviation, transforms the naturally occurring events into artistically structured discourse (Shklovsky, 1917/1965). Brewer and Lichtenstein (1981) showed that these structural tools of story-telling are related to distinct affective responses, e.g. curiosity, suspense, and surprise, respectively. Consequently, it is hard to detach comprehension of a situation described by a literary text from the phenomenal experience of the affective tension which is evoked by the mode of presentation. The other basic tenet of the formalists is that poetic language escapes semantic automatisms. By departures from normal, everyday language use, literary texts lend new sensibility to "dried out", automatically used and comprehended concepts. The process which is named *defamiliarization* by Shklovsky (1917/65), *deautomatization* by Tynjanov (1924/1965), and *foregrounding* by Mukarovsky (1932/1964), enriches words with associations, feelings and images which were not proper to them when used outside the literary text. Thus, in text-processing terminology, the formalist position suggests that literature-specific information is to be sought in the text, in its language and structure, but it is coded, at least partly, not in conceptual schemata and propositions, but much rather in feelings and images. (Van Peer, 1986; Kuiken and Miall, 1992).

### 3. Empirical demonstration 1: The power of the literary text

If we want to study empirically the specifics of literary text-processing as compared to the general, ordinary processes of text-comprehension, then, before looking for specific deviations, the first and minimal step we should do is to make sure that there are empirically observable, not only introspectively accessible, differences between them at all. If we find a task that readers of non-literary texts can perform during or after reading, and that readers of literary texts cannot do the same, this finding would suggest a distinction between the underlying processes of text comprehension. Such a



phenomenon was demonstrated in an experiment (László, 1984/87), however inadvertently.

In order to present the above phenomenon, we need a brief reminder of the nature of psychological experimentation in general, and experimentation with texts in particular. Psychological experiments involve three basic components: *experimenter*, *task*, and *subjects*. The task varies certain aspects of the psychological construct which is to be tested in the experiment (these are called independent variables), and the subjects' performance (the dependent variable) provides the data for this test. The experimenter asks or instructs subjects to perform the task. Sometimes the instruction varies the cognitive set of the subjects toward different aspects of the same task, i.e., the dependent variables are generated not by task-variants, but by instruction.

Text-processing is studied by on-line, e.g. reading time or thinking-aloud methods, and retrospective, e.g. memory or summarization tasks. Manipulation of the task by instruction is an often used procedure in these studies. Frederiksen (1975), for instance, studied inferencing strategies when reading a text about a political problem. One group of subjects read the text for a later memory test, another group read the text for finding a solution of the political problem. Black (1981) let one group of his subjects read a text in the understanding that they had to write an essay on the text whereas another group was instructed to give a comprehensibility rating on the text. Pléh (1987) varied the purpose of reading by giving such tasks as, for instance, writing a summary, abbreviate the text to the half, or finding a moral for the text. All these studies showed that readers pick up and represent information of the text according to the task they were given. Anderson and Pichert (1978) varied readers' perspectives on a text which described a villa. They instructed their subjects to look at the situation through the eyes of a burglar or a real estate agent. Depending on the perspective, subjects represented and recalled different information of the text.

In the above experiments, subjects obviously followed the instructions which, in these cases, were quite innocent, i.e. it did not cause any physical, psychological or moral difficulty to follow them. However, experimental subjects are usually obedient to more extreme instructions when psychologists torture them with boring and exhausting tasks, sometimes even with electroshock. They do their best in conforming to the instruction when they are presented with an unsolvable task (a favourite technique for evoking anxiety or increasing arousal), or they can be persuaded to carry out such hopelessly difficult performances as a dual attention task (e.g. Spelke, Hirsch and Neisser, 1976). Some social psychological experiments, e.g., Zimbardo's prison-study or Milgram's studies on obedience to authority (Milgram, 1974), dramatically show that subjects comply with an instruction that requires amoral behavior. In the light of these facts it might be informative to have a closer look at experimental circumstances in which subjects do not follow the instructions.

The experimental paradigm that we intended to use in the László (1984/1987) experiment is also based on instruction. The experiment was planned in the framework of the "*levels of processing*" theory ( Craik and Lockhart, 1972). This theory suggests that texts can be processed on different levels, starting from the physical attributes of the letters or words (this is part of the task when we correct galley proofs) down to the deepest level of processing where pragmatic information is processed. Experimental results show that a sentence such as "Mary deceived John" is more memorable when it

is processed semantically (e.g., when subjects have to generate a continuation for it) than when it is not (e.g. when subjects have to decide on whether the sentence was typed in upper or lower case). However, this sentence is even more deeply processed and better remembered when someone who knows Mary and John and their circumstances hears it in a conversation, i.e. when pragmatic information is involved in discourse processing ( Craik and Tulving, 1975). In "levels of processing" experiments orienting tasks introduced by instruction select particular attributes of an event for encoding. A given attribute, e.g. the form of a letter, will be encoded only if the orienting task requires the subject to deal with that attribute. Subsequent developments in the "levels of processing" theory (Lockhart and Craik, 1990) showed that despite the orienting task information processing is never limited to one particular level. If subjects are instructed to encode only the form of a letter, they generally also process, however superficially, the meaning of the word. These new developments, however, did not affect the original goal of the László (1984/87) experiment.

The underlying idea was quite simple. Every assumption concerning literary text processing suggests a "deeper" kind of processing in which not only semantic but also rich pragmatic information along with personal experiences, possibly visual images, is processed. If we "cut off" all these processing levels with the help of an orienting task during the reading of a literary text, the cognitive deficit in subsequent memory and imagery tasks, compared with the similarly "mutilated" processing of a non-literary text and with the non-mutilated processing of the same literary text, will show those processes which are specific to literary comprehension. Accordingly, we selected a powerful realist short story (Barbarians by Zsigmond Móricz) and a compatible news report both telling about a village murder. One group of subjects read the short story after a "normal" instruction requesting them to understand and enjoy the story. This experimental situation which was similar to a life situation, ran smoothly, of course. The second group read the news story. Here we introduced an orienting task in order to keep text-processing on a "shallow" level. The subjects had been instructed to check every adjective in the text; thus the subjects had to process the text on the level of lexical and grammatical information, and semantic, pragmatic, and experiential processes remained residual. The subjects accomplished the task without any problem.

Counting on subjects' cooperation, we thought it would work with literary texts as well. Problems, however, occurred as soon as we started to test the first subject in this group. We noticed that the first subject read more slowly than the normal speed of the reception. When we realised that instead of checking adjectives he had first read a passage and returned to checking only then, we repeated the instruction and asked him to conform. He managed to follow the instructions for two or three lines but then he continued to work according to his previous method. Another subject even seemed to refrain from any particular effort to do what she was asked to do. She stopped checking adjectives after a couple of lines and plunged into reading. For the next two subjects we abolished the time constraint but this did not help either: the subjects were reading with apparent joy. When we warned them to keep the instruction in mind, one of them made some effort but the other explicitly stated that he neither could nor wanted to conform to the instruction. Subsequently, we promised extra money if subjects managed to check at least 70% of the adjectives within the time limit - all in vain. The experiment had to be left unfinished.

It is not the place here to claim the glory of being able to stir up experimental subjects against the instruction once believed omnipotent. It is more important that, although the subjects' failure to follow the instruction prevented us from continuing the experiment because of the loss caused by the mutilation of the comprehension process to test specific hypotheses about the nature of literary "addition" or transformation of text-processing in subsequent experimental tasks, this failure dramatically demonstrates the unique character of literary text comprehension. Remember that the orienting task that we applied posed no difficulties when it was carried out on ordinary linguistic material (such as a newspaper story). The very fact that paid and usually obedient subjects could not or did not want to conform to an instruction which required a relatively shallow processing of a short story suggests that literature raises unique demands toward the "depth" of text-processing. By this finding, the minimal empirical support for literary text processing as a unique psychological entity amenable to empirical studies is accomplished. However, by the failure of the orienting task, the royal road of studying psychological components of this particular type of text processing within one experiment has also been blocked. What "depth" means in psychological terms of literary text processing should be systematically enlightened by further experiments.

#### **4. Empirical demonstration 2: Literary text and literary context - Where does literariness come from?**

In empirical studies psychological constructs, such as literary text-processing, should obligatorily be related to environmental or stimulus conditions. The predicament of the psychology of literature, as it is the case with all social studies, lies in the fact that environmental conditions such as literature, literary text, or short story, are also constructed. For a long time this dilemma in the psychology of art and literature has been solved by "objectivization". Actual or casual experts decided on the quality of the stimulus material, whether it was literary or not, then psychological processes were related to this "objectively" defined material. This approach resembles the epistemological position of that branch of literary criticism which we characterized in the first chapter as seeking literariness in the text, as if it would be objectively coded in the language, the style, and the composition of the text. The phenomenon of the first demonstration that subjects were unable to suspend a particular, deeper way of text-processing when reading a short story indicates the strengths of the given narrative text. One score for the objective text theories.

However, there are both scientific and intuitive observations which contradict the assumption that texts themselves carry literariness. For the former, Pratt (1977) convincingly demonstrated that there were no exclusive features of the language used in literature which would distinguish it from ordinary language. For the latter, we find several examples of found poetry, of news items inserted into novels by Henry Miller, Jorge Luis Borges, Vladimir Paral, and other authors, or whole short stories whose text, like pieces of object art, originally served some everyday function. These texts become literary by inclusion in the literary context. In other words, a pragmatic context is constructed around them wherein discourse loses its instrumental function such as informing about the world, or performing everyday speech acts. Instead, it assumes a

ritual function (Pratt, 1977; Van Dijk, 1979) or literary-aesthetic force (Culler, 1975) which centers around its meaning. Schmidt (1982; 1992) describes the boundary conditions of the literary context with the help of two macroconventions which historically became part of the shared knowledge of society. Schmidt (1989) gives an excellent overview how these conventions evolved in 18th century German literature. The *Aesthetic convention* tells the participants in literary communication that all actors in the literary system must be willing and able:

- To extend their action potential (or the action potential of other participants in the literary system) beyond the usual criteria of true/false or useful/ useless, and to orient themselves toward expectations, norms, and criteria which are deemed aesthetically relevant in the respective literary system or subsystem;
- To designate communicative action intended as literary by appropriate signals during production, and to follow such signals during reception;
- To select as a frame of reference for assertions in literary texts not just the socially established world model he or she is accustomed to in his or her respective social group but virtually all constructible frames of reference;
- To deemphasize the fact convention which reads: It is common knowledge in our society that communicative objects, especially texts, should permit reference to the world model accepted in that society, so that people can decide if the assertions conveyed by the text are true and what their practical relevance is;

while the *Polyvalence convention* prescribes that

- Text producers are not bound by the monovalence convention, namely that (a) text producers are expected to shape their texts in such a way that different people at different times can assign them one and the same reading, and (b) text receivers are expected to strive for the assignment of a single reading to the texts;
- Text receivers have the freedom to produce different readings from the same text at different times and in different situations (= the weak version of the polyvalence convention hypothesis; see Groeben, 1982) or during a single reading process (= the strong version of the polyvalence convention hypothesis), and they accept others to do likewise;
- Text receivers evaluate the different cognitive, emotive, and moral reading results obtained at different levels of reception in terms of their needs, abilities, intentions and motivations, although the reasons behind these evaluations may differ as a function of the participant and the situation;
- Text mediators and text processors should not overtly counteract these regulations (Schmidt, 1992, pp. 231-232).

Although Schmidt's macroconventions give reference not only to logical-pragmatic concepts (e.g., true-false; factive-fictive), but also to psychological processes (e.g. the role of cognitive, emotive, and moral factors in evolving different readings) when defining literary context, the author does not tell us *when* and *how* these conventions are put into effect. There is a twin-norm for signalling literary intention properly, and to follow such signals in reception. This definition, however, implies that all signalled literary intention is granted and followed, which is clearly not always the case. Moreover, such a definition deprives readers of applying the polyvalence convention to those discourses whose literary intention is not signalled. It excludes private literature, for instance, to apply aesthetic and polyvalence conventions to a correspondence, a

birthday greeting, or even a cookbook recipe. Maybe these gestures are inappropriate according to the norms of an existing literary system, and communicating or acting upon them causes embarrassment, but we generally read texts, even in an experimental situation, in privacy and our inner experiences need not be communicated.

A further problem is that if we recognize a text as part of literary communication, we do not necessarily exploit the freedom of producing different readings in the same or different reading situations. Our recognition is based on social knowledge (which includes that multiple readings are possible) and on the judgment of prestigious literary institutions (publishing houses) or authors which "properly signalise", but at least on our intuition that draws on our psychological experiences with the text, for instance, on our own multiple readings.

Thus, according to context-theory, the literariness of a text depends on the context, i.e., on the pragmatic convention system wherein it is allocated. What is objective, is the socially constructed context. In order to test the relevance of the context theory to psychological text-processing, we repeated, now deliberately, the first demonstration with the orienting task which requested a shallow processing of a literary text. This time we gave the subjects the following text which was published in the "One minute short stories" book by István Örkény (1968), one of the best known contemporary Hungarian writers.

#### WHATEVER ONE SHOULD KNOW

Valid for two regions, within one hour, maximum four changes. The journey should be made on the shortest way leading to its aim. Transfer is valid only at crossings, branchings and end-stations, however, it should be made for a line whose route deviates from that of the previously used line. Each route and each Danube bridge is allowed to be travelled through only once.

Detours and interruptions are forbidden!

This text used to be printed on the back side of the bus and tram transfer tickets which had been used in Budapest public transportation until the late fifties.

The subjects were all familiar with the author. They also knew that "one minute short story" is one of his favourite genres. There was no doubt about the literariness of the presented text. We gave them the same orienting task as we did in the previous demonstration, i.e., they had to check the adjectives while reading the text. In contrast to the first demonstration, this time we did not experience any resistance toward the orienting task. The subjects were able to perform the task without any problem.

On the basis of this result, should we abandon our insight into the unique and compelling requirements of literary texts or literally contextualised texts toward psychological processing that we gained in the first demonstration? A simple explanation for the above result is that the *interestingness* of the two texts differs (cf. Hidi, Bard, and Hidiard, 1982), i.e. not literariness but mere interestingness of the text prevented the subjects from following the orienting task in the first demonstration, and this of course, would suggest that we should give up our conclusion. However, when we subsequently asked the subjects to rate the interestingness of both texts, we did not find

significant differences between the interestingness judgements. (We remind the reader that the subjects in the first demonstration were capable of the "shallow" processing of a news-story which described a murder. Thus, the "storiness" of the Barbarians as opposed to the "anti-storiness" of the "Whatever one should know" cannot be held responsible for the readers' reaction, either. Not to mention that failure to follow the orienting task occurred right at the beginning of Barbarians where actually nothing had happened yet.)

What can then explain the different outcomes with the two "stories"? My proposal is the following. In our culture, some texts are more typical of literature than others. In other cultures, as Ben-Amos (1969) showed with narrative genres, actual literature consists of other text types. Even surface structure and vocabulary choice of a text can be indicative of its literariness in a given culture (Brewer, 1980; Brewer and Hay, 1984). "If a scene is described as a *stand of coniferous saplings on a 50-meter morain* the discourse force is almost certain to be to inform. If the same scene is described as a *sublime sylvan knoll*, the discourse force is almost to be literary-aesthetic. If it is described as a *little old molehill dressed up fit to kill with pine trees* the discourse force is almost certain to be to entertain" (Brewer, 1980, p. 226). Móricz's Barbarians has several features of a typical realist short story. Örkény's "Whatever one should know", as many creations of modern prose, presents a puzzle to the reader. It does not mean that the Barbarians is more literary or more valuable than Örkény's "Whatever one should know", it only means that most readers have much more implicit knowledge and experience how to treat and experience Barbarians as literature than with "Whatever one should know". In this sense, Barbarians frames itself into the literary context without any special signalling, not according to some general pragmatic, linguistic, or psychological rules, but according to the existing cultural practice and literary socialization of the readers.

Theoretically speaking, the text of Barbarians can be used for other pragmatic purposes than literary communication. It could be seen as a transcript of the inspector's report, as a letter in which someone informs a friend about the recent atrocities in the desert, etc. Practically or empirically, this reversal of the pragmatic context does not happen, or it would be very difficult to enforce it, because the text itself heavily contextualizes the short story into the literary domain for all readers who received literary socialization in our culture. On the other hand, "Whatever one should know" has the form of an expository text which had a pragmatic function of informing or instructing, before it was transferred into the literary context. Its status in the literary context is uncertain because most readers do not have easy access to the resources necessary to treat and experience it as literature. Therefore, when getting a task which allows, and even urges the readers to flip back the text into an everyday context, they willingly and easily perform this reversal. In brief, when our readers processed "Whatever one should know" on a "shallow" level with ease, they treated not as a literary, but as a non-literary text.

The first conclusion we should draw here is that readers accept, and respond to, any text as a piece of literary communication, if its literary purpose is "properly signalled", i.e. if these signals are part of the shared knowledge of a culture. Literature, in this sense, is "produced" by the literary context. In this light, our initial question, i.e. how to relate psychological processes of text-comprehension to specific literary conditions, can

be solved in a fairly simple manner. We do not need experts in order to qualify texts "objectively" as literature. If we want the readers to respond to a text as literature we only have to make sure that literary intention as prescribed by the literary conventions is properly signalled.

However, response here does not necessarily mean more than acknowledging that the events in the text are fictional so that asking whether a statement is true or false is irrelevant and we do not ridicule someone who gives the text a polyvalent reading. There is no guarantee that, in a particular encounter with a text communicated as literature, beyond applying this meta-cognitive cultural knowledge, readers do not remain in a psychological sense "neutral" toward the text. Psychologically, they may proceed in the same way as they do with any other fictional or non-fictional text that they find too easy or too difficult to understand, or simply entertaining.

We should, thus, admit that for empirical studies of psychological text-processing there are no objective criteria of the literariness of a text; psychological literariness emerges in the reading process, and probably in the psychological aftermath of reading. At first glance, this statement leads to a psychological ontology of literature but this is not the case. I do not intend to define literature by the presence or absence of certain psychological processes and thereby commit the sin of psychologism (Husserl, 1900). My only claim is here that literary experience has a psychological aspect which may change from reader to reader, from genre to genre, or from culture to culture, from one historical period to another. However, in this variation we may find regularities which may help to enlighten literature's status and function in human life.

The empirical study of literary text processing which is part of the psychological study of literature, instead of with firm, "objective" definitions can work only with premises about the "literary" nature of the reading situation when it deals with actual texts and readers in actual experiments or other empirical assessments. These premises are based partly on the shared cultural knowledge about the literary context, partly on the relation between the representativeness of the text of a literary text-type and the readers' literary socialization, i.e. how much practice they have with experiencing such texts as literature. Controlling these factors enhances the likelihood that what happens in the reading situation is actually a kind of literary text-processing whose characteristics may be a matter of interest for both literary studies and for a cognitive psychology investigating the capacities of the human mind.

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