Also by Astrid Ensslin

Language in the Media

CANONIZING HYPERTEXT

Explorations and Constructions

ASTRID ENSSLIN

story opens with Michael, who has been in prison for six months over allegations of having murdered Lana, a crime which he did not commit, yet for which he cannot provide a satisfactory alibi. The hypertext story reveals Michael's frustration over his hopeless situation. In his (waking) dreams, Lana speaks to him, giving him clues as to what really happened. She suggests that he should consult his sister Florence, her best friend, who, despite her suspicions, decides to help her brother. She finds out that Lana was killed by her own father in one of his psychopathic fits. The last daydream is set after Michael's release, as he converses with Lana at the cemetery, under a cherry tree. Whereas the hypertext sequence serves to reveal the gist of the detective story, the essential detail can only be obtained from the dreams, the reading of which requires utter patience, calm, and the appropriate breathing rate and depth.

Bizarre as it may sound, the speed and intensity of information transfer during Michael's 'dreams' is entirely dependent on the reader's respiratory mechanism. The breathing rate is measured by means of a run-of-the-mill microphone, attached to a headset and placed directly underneath the reader's nostrils. The software used to transfer the measured data to the computer is called Hyper Trans Fiction Matrix, and was especially created for Kate Pullinger's project by the German software programmer Stefan Schemat, whose responsibilities were, according to the credits, 'hypnotic lyrics, programming, sound & vision of the dreams'. Babel created the hypertext, on which the 'daydreams' are based, and the background sound to them. Whereas the sound in the 'daydreams' serves purely decorative purposes, the 'dream' voices, read by Mufrida Hayes and Harry Capehorn, are in fact crucial to understanding the dialogues between the two main characters, as no written information is revealed in their subconscious conversations.

The Breathing Wall owes its attractiveness to a variety of things. Visually and auditorily, a lot of effort and attention to detail went into creating an enticing user interface. Background images, colours and sounds change frequently, giving the work a synaesthetic aura akin to film. However, verbal language remains the decisive medium of information retrieval. Reading and listening are the two major receptive activities undertaken by the perceiver. Nevertheless, for experienced and unexperienced readers alike, the most important aspect is the overriding physical impression of finding their respiratory apparatus in harmony with that of the protagonist, thus establishing a previously unknown degree of identification. Michael is told by Lana to 'sleep', 'breathe', 'feel [his] lungs' and 'dream' [*Daydream 2*]. These instructions are meant for him as well as for the readers in order to intensify their reading and listening experience.

At the time of writing this study, only very few reviews of *The Breathing Wall* were available either in print or online. One exception is Picot's review (2004) at *The Hyperliterature Exchange*, who coins the term 'hyperventiliterature' for Pullinger's work. At the aforementioned trAce Conference, the large number of people wanting to do a test session and buy a copy of the CD-ROM shows how great the acclaim was (and may be in future), at least among hypertext and New Media experts.

Chapter 4

Literary Competence – Conceptual Adaptations

1   Constructivist Influences on Literature Teaching

Human beings can only comprehend what they have made themselves. This is why the world exists and why the world, as experienced by human beings, has to be the way it is, precisely because they have made it this way.
(*Schmidt, 2002: 152, my translation*)

This chapter marks the beginning of the second part of this study, which is concerned with the constructive side of hypertext. It investigates the philosophy of constructivism in terms of its significance as the prevailing learning theory of our day[1] and, thereafter, outlines conclusions which can be drawn for an extended, hypermedia-centred concept of literary competence. Chapter 4 provides the pedagogic background to Chapter 5, which will report the findings of a hypertext-based, literary action research project aimed at implementing contemporary educational philosophy.

Coined in the eighteenth century by the Neapolitan philosopher Giambattista Vico, constructivism has, in the course of the twentieth century, pervaded almost all academic disciplines (von Glasersfeld, 2002: 29; Ensslin, 2004: 308).[2] Its major implications, however, were already formulated and discussed among philosophers of Greek Antiquity – particularly pre-Socratians such as Xenophanes (570–475 BC), Alcmaion (approximately 530–500 BC), Democritus (460–370 BC) and Heraclitus (540–480 BC), as well as by sceptics across the centuries. What they had in common was their defiant attitude towards the positivist chimera of absolute truth.

To offer an alternative, they understood all knowledge to be relative and subjective, if not absurd in itself: '. . . we cannot know what every object really is or is not like' (Democritus; quoted in von Glasersfeld, 2002: 9 – my translation). Reinforced by the Enlightenment philosophers Hume, Berkeley and Kant as well as by Darwinian evolutionism, this fundamentally rebellious idea, which threatened to overthrow the prevailing dogma of conventional empiricism, was revisited and refined by Jean Piaget from the 1930s onwards and, as of the late 1960s, by Jerome Bruner.[3] It finally led to radical changes in the outlook on developmental psychology, in that knowledge came to be seen as the result of cognitive processing, which was felt to be part of human adaptation to and of environmental structures. In this context, Piaget used the two

complementary concepts of accommodation and assimilation. Accommodation is, in his view, the adaptation of the environment to the human subject, whereas by assimilation he understood the exact opposite: adjustment to one's environment. Both phenomena are in fact essential for the 'human organism'[4] insofar as they enable it to reach an approximate understanding of its construct of the world, which ultimately depends on the individual's aims in life. This idea, which Popper (1963) refers to as *instrumentalism*, regards knowledge as a means to an end. Human beings will only learn what is of interest to them – either extrinsically or intrinsically motivated.

Hence, all human beings gradually adapt to the world and, at the same time, adapt the world to themselves in their own particular ways, depending on their specific potentials, skills, abilities, inclinations, characteristics, situational dispositions and opportunities. They have to find individual ways through the 'jungle' of obstacles, which consists of the 'objects' (Latin for 'what has been thrown in the way') with which they are confronted in daily life. Therefore, von Glasersfeld (2002) uses the term *viability* to describe the human ability to make things feasible and plausible, to modify them to their own benefit, and, ultimately, to survive physically, mentally and spiritually.

Radical constructivism, a coinage of Ernst von Glasersfeld (see Reinfried, 2000), is associated with the names of Humberto R. Maturana, Karl Popper, Francisco J. Varela, Siegfried J. Schmidt, Heinz von Foerster, Ernst von Glasersfeld and Paul Watzlawick. It is, in itself, a metatheory (Werning, 1998), which seeks empirically to undermine blind belief in the objectivity of science and the interconnectedness of power and truth. Its essential claim is the subjectivity of all scientific evidence, which conventionally conforms to and thus reinforces hierarchical, centralistic and dualistic Western thought. Radical constructivism regards human beings as *autopoietic systems* (e.g. Varela, 1979; Maturana, 1980; Maturana and Varela, 1980), which are organized by the principle of *operational autonomy*.[5] Although interacting with their environment to guarantee their own survival, they are neurally disconnected from it and act independently – each in his or her own way.

Before the cognitive turn in psychology, philosophy and linguistics, which first started in the mid-1940s and gathered force in the 1960s and 1970s, literary education across Europe was seen primarily as an ideological vehicle, in a moral as well as a nationalist sense. In a dogmatic way, it aimed to prepare learners for their future roles in society, stereotypical though they were. In Imperialist and Weimar Germany, for instance, the *Nibelungenlied* and other heroic epics were given primarily to boys to read, whereas the exclusively domestic, yielding image of the Wilhelminian woman was spoon-fed to girls by means of serialized 'Backfischromane' such as Emmy von Rhoden's *Der Trotzkopf* and Else Ury's *Das Nesthäkchen* (Wilkending, 2002: 48). Correspondingly, the growing book market in Victorian England was ideologically instrumentalized to promote enculturation and the development of appropriate linguistic style in young readers. To help them – boys and girls alike – become members of a 'textual community' (Stock, 1983), medieval and Arthurian literature, as well

as Sir Walter Scott's historical novels, with their ideal of chivalry, of 'good manners and breeding', were understood to make particularly suitable reading (see Sir Walter Scott's *Essay on Chivalry* of 1819). By means of popular literary forms such as serial novels and children's book adaptations, chivalric literature was functionalized to help create and preserve cultural memory and collective national identity – especially in order to mark the contrast between 'English heritage' and what was perceived to be the historically inferior, dangerously progress-oriented American culture – through its deeply rooted tension between myth and history (Müller-Oberhäuser, 2002: 25–34).

By the same token, the late nineteenth century saw the beginning of a tradition in England, spearheaded by eminent scholars like Matthew Arnold, F. R. Leavis and Denys Thompson, according to which English ought to be considered *the* educational subject, not only for the purpose of developing a unified and unifying national identity. The central status of English as a subject in its own right was accounted for, for instance, by the beliefs that the appropriate use of the mother tongue is a prerequisite to civilized living, and that literature provides a plethora of material, the familiarity with which leads to wisdom via enjoyment (Allen, 1980: 8).

In response to emerging popular culture in the 1960s, Thompson, one of the major educationalists of that day, saw the role of the English teacher 'in terms of countering the effects of a mass society . . . at a time when human values [imagination, sympathy, understanding and tolerance] are not upheld' (quoted in Allen, 1980: 9). Thompson believed in the importance of 'experiencing' literature and, most of all, literary language, 'the most deeply effective form of language', which 'shapes the habits of mind and feeling which determine a man's capacity for living' (*ibid.*: 9).

In following up the idea of literature as personal experience, Thompson drew on theories developed as early as the 1930s in the USA, where progressive educationalists like Louise Rosenblatt opposed the predominance of New Criticism with her so-called transactional theory of the literary work. Rosenblatt maintained that reading was essentially exploration, i.e. aesthetic experiences that had 'both social origin and effect' (Pike, 2003: 61) and that were performed by the reader as a 'form of intense personal activity' (Rosenblatt, 1976: v). Thompson's approach, however, diverges from Rosenblatt's in its quasi-utilitarian outlook on the 'effectiveness' of reading. The postulation of 'effectiveness' was, at the time, informed by the emergence of communication theory and linguistic pragmatics. Upon closer examination, however, Thompson's view that 'literature is the best route to good communications – that is, practical uses of language' (quoted in Allen, 1980: 9) was ultimately directed towards the development of moral values, his keyword for which was 'growth'. In so doing, he partly subscribed to the conventional understanding of literature as a vehicle for ethical education.

Adopting a more sociological, psychological position, Rosenblatt's approach may be regarded as an early forerunner of reader-response criticism, which did not come into full swing until the 1960s and led, about two decades later, to

the decisive turn in educational theory towards individualization and learner-centred curriculum planning.[6] As a matter of fact, it was as early as 1966 when a child-centred view was first foregrounded on a large scale and with a considerable effect, at a seminal education seminar in Dartmouth, USA. Harris (1980: 20) summarizes the results of this conference in terms of there being a:

> general movement in at least the theory of education towards a child-centred and outward-looking and away from a subject-centred organization of the curriculum … Again and again, successful teaching is seen as focused in the child himself, in his attitude to learning and in his growth as a mature person.

At the beginning of the twenty-first century, constructivist philosophy, complemented, in the field of literature, by the tenets of reader-response criticism, may be regarded as the predominant paradigm in educational theory and practice. It has two basic principles: First, the relationship between the subjective organism and its environment ('milieu'). According to Maturana and Varela (1998), the milieu cannot be objectively known. It differs from the empirical world, which influences the individual by means of perturbations. Individuals perpetually re-construct their reality in a sensory, affective and cognitive way, on the basis of interaction with the empirical world. It is transformed functionally, according to personal interests. Hence, deep learning, which, as opposed to surface learning, helps integrate new data with existing knowledge structures in a meaningful way, can only occur if the learner is able to identify the personal relevance in a learning object (Biggs, 1979).

Second, constructivism focuses on 'understanding the learning subject' (Werning, 1998: 40 – my translation), who is characterized by three attributes: structural determinacy, self-referentiality and non-triviality. Structural determinacy can be explained in terms of the human organism determining autonomously how it is going to deal with its immediate environment. External stimuli, i.e. cognitive information, will only be embedded in the reality structures of an individual if he or she has emotional or functional reasons for this to happen – in other words, if the information is subjectively regarded as relevant. Hence, the 'structure' of a living organism decides selectively on its objects of perception.

Individuals are self-referential in that all their mental, verbal or physical actions, in varying degrees of intensity and transparency, give account of their personal structure. Human subjects find themselves in continuous interaction with their experienced environment, yet always act in a manner that relates back to their own needs and interests.

Finally, living human organisms are non-trivial because, rather than acting and re-acting according to simple cause-and-effect mechanisms, they are essentially unpredictable. Human self-understanding is historically determined. Therefore, the structure of human perception and reality is highly flexible and changes permanently in response to its changing environment. Werning

describes this phenomenon in terms of 'structural dynamics' (*ibid.*: 40). In other words, human beings are not like the 'black box' of behaviorism, which claims that responses (output) are predictable given certain stimuli (input). Contrarily, humans perpetually reflect on their actions and make decisions in alignment with their present environment as well as their current physical and mental disposition.

To draw consequences for literary education, pedagogues should try to stimulate 'the complex affective and cognitive systems … which operate in accordance with their own logic' (*ibid.*: 40). As every individual is structurally determined, students cannot be expected to respond with equal enthusiasm to learning objects stipulated by the curriculum or provided by the teacher. Therefore, learners need help in identifying the potential significance and personal relevance, in Reich's (1998) words, the 'transparency' of the learning object. This awareness-raising process needs to be complemented with a variety and openness of teaching methods, which meet different learning styles and interests, for example egalitarian classroom discourse, encouraging students to rethink their own concepts and attitudes, and learning activities that will stimulate 'activists', 'theorists', 'pragmatists' and 'reflectors' (Honey and Mumford, 1982), as well as facilitating top-down, bottom-up and sequential learning styles (Stanton and Stammers, 1990).[7] With respect to non-triviality, a constructivist classroom should encourage 'variety and individuality' (Werning, 1998: 40). As the internal structure of the human organism changes incessantly, and, furthermore, hardly any group or classroom community is homogeneous, there has to be room for unexpected contributions, suggestions and reactions, as well as creative individualism. Such an integrative didactic approach implies, according to Werning, 'inviting learners to question, evaluate, elaborate, refute, reconfirm etc. their own constructions of reality' (*ibid.*: 40 – my translation). By means of peer and tutor feedback, learners are made to develop a critical attitude towards their existing and newly acquired cognitive structures.

From a literary vantage point, the most influential figure in educational constructivism has been Siegfried J. Schmidt. Based on an explicitly non-positivistic point of view, Schmidt (2002) has designed a constructivist approach to literary theory, which he calls *empirical*. According to this theory, the central objective of learning and teaching is a procedural literary 'system' rather than an objectified literary 'body'. Schmidt derives the term *empirical* from a new understanding of literary theory as a science, which, by definition, has to make explicit its epistemological, linguistic and literary principles.

In this theoretical framework, he sets out to explain Maturana's (1980) theory of autopoietic systems, which cognitively develop through the observation of oneself and other organisms. Cognition is regarded as a life-long process, which cannot be described in terms of an ultimate and unalterable categorization of the observed objective environment. Instead, it is considered an ongoing, dynamic procedure, triggered by the observation and processing of new information and by integrating it with pre-existing knowledge structures.

Schmidt refrains from any kind of objective categorization within general human cognition. On the contrary, cognition is, in his view, essentially subjective and self-determined, as each individual system develops its own categories and representations. As a result, cognitive processes are entirely subject-determined and, therefore, cannot account for any kind of objective environment. Hence, reality as a generic, objectifiable concept does not exist, but can only be understood as a conglomerate of subjective descriptions and representations, which, in turn, cast more light on the observer himself than on the phenomena he or she observes. 'Humans can only know what they have created themselves' (Schmidt, 2002: 152 – my translation), which is why 'the world' as we like to call it is always the world of an individual and can only reflect his or her temporary, highly dynamic and flexible dispositions.

Consequently, what an empirical approach to teaching literature ventures to do is to foreground the individual and to take into consideration the distinctive needs, motives and interests of the surrounding society – in other words peer groups as they are situated in highly individualized and contextualized, often even overlapping structures. Every human being is a co-product of genetics, society and education. As far as the latter two are concerned, this implies that humanity is guided by historically grown conventions, generated through societal experiences. These conventions are chiefly reflected by language, which again is the basis of interaction and coordination (*ibid.*: 153). Interaction being the prerequisite of communication, Schmidt adopts Maturana's redefinition of language: rather than regarding language, in Saussurean terms, as a self-contained and fixed system of signs, or (as pragmatists like Hymes, Austin, Searle or Grice did) as a means of communication, the biologist Maturana sees language as a system of orientational behaviour, which forms the basis of consensual behaviour between linguistically interacting systems (Maturana, 1982: 73).

Each language system is therefore a self-contained network of *denotations*, which cannot be defined on a quasi-objective basis, as was traditionally done by logical positivists like Russell and Frege or by semioticians of the Saussurian tradition, but are essentially observer-determined. Similarly, from a constructivist point of view, the long-established term *reference* does not stand for the process of linguistically relating to concrete or abstract phenomena in an objective reality, but to some socially acquired type of orientational, linguistic behaviour, based on individual sensory perception, which serves to construct analogous informational structures within the cognitive systems of communicating organisms.

Finally, to draw a connecting line to the relation between the human subject and literary text, *literary meaning*, which had long been considered a teachable or even objectifiable textual property, was redefined in the constructivist educational paradigm, in analogy to the reader-response paradigm shift in critical theory. 'Literary meaning' came to be seen not only in the context of the time in which the text was written or the situation in which the writer is said to have been, but chiefly within the highly complex cognitive context of the reader, who

will never read the same text twice but rather perceive, understand and process different aspects of the concrete written body differently each time he or she tackles it. Meaning, hence, has to be considered as a highly ramified network of situationally determined contextual relations, a multiple concept depending on the number of communicators, situations and temporal data derived intra- and extratextually.

For an empirical way of teaching literature, this implies a departure from the spoon-feed approach towards 'empowering' the learner-reader. (N.B.: I am using the Landowian term deliberately to demonstrate the relevance of Landow's claim with regard to learners' needs. It has been highlighted previously that reader empowerment, which Landow associates with (w)reading hypertext, is a dangerous simplification if not distortion of the empirical and cognitive nature of reading nonlinear texts.)

Understanding literary content underlies individual construction mechanisms, which are both intentional and holistic and involve a multiplicity of cognitive processes and epistemic subsystems (see; van Dijk, 1980; de Beaugrande and Dressler, 1981; Groeben, 1982). Consequently, among the crucial skills that students of literature need to develop is the ability to identify and verbalize their own subjective representation of contextually variable literary meaning: where they derived it from, what linguistic and stylistic means of the text illustrate their concepts and, finally, what other potential representations they deliberately neglected, and for what reasons. Activities supporting the evolution of such skills may be performed either autonomously or jointly, in open discourse. Evidently, in an exploratory hypertextual learning environment, such activities are easy to implement, as hypertext by its own nature undermines the possibility of arriving at a unified reading. Possible implications for a constructive hypertextual learning environment, which is designed in such a way as to address the aforementioned need for learner empowerment, will be examined in Chapter 5.

2 Aspects of Literary Competence

Every performance presupposes competence.
(Greimas, 1985: 357)

As maintained by Storrer (2002), hypertext as a macrostructural principle (with an emphasis on expository, as opposed to literary, hypertext) does not require a new concept of textuality. What it needs is, rather, an extended concept that takes account of the distinctive cohesive qualities of textual networks, lexias and links, as well as the trans-semiotic implications of hypermedia. According to Barthes, every image, every film, advertisement, song, in short, every perceivable element of our environment, has semiotic qualities and can be 'read' like a text. As mentioned previously, text is understood in this study

primarily in terms of alphanumeric, scripted text, and other semiotic systems will be investigated only to the extent to which they supplement and complement script. Nevertheless, when it comes to developing a hypertext- or hypermedia-'proof' concept of literary competence, as is done in the remaining sections of this chapter, those issues have to be taken into consideration. So do the issues of mediality, navigation and communication, which, in a hypertextual environment, radically differ from a traditional print-based environment.

The origin of the 'competence' concept dates back to Chomsky's idea of linguistic, or grammatical competence, which he understands as the intuitive knowledge of an ideal speaker-listener about the rules of a language, and which he juxtaposes with 'performance', the actual manifestations of competence in speech. In Chomsky's view, competence is *innate to every human being* of normal physical and psychological disposition. Having linguistic competence equals the ability to form an infinite number of sentences from a finite set of grammatical rules. In Chomsky's view, which has been refuted by cognitivists and constructivists, this innate linguistic competence effects that, during early childhood, human beings 'choose' one or more language systems from a universal stock of inborn linguistic parameters, depending on which language community or communities they are most frequently exposed to. Because of this so-called Language Acquisition Device, which operates in conjunction with various hypothesis-forming processes, children can, according to Chomsky's nativist theory, acquire any natural language.

The concept of competence was adopted and further developed from the 1970s onwards, particularly by cognitivists in the tradition of Piaget on the one hand, and social scientists and constructivists on the other. The central debate revolved around the question of whether competence development might or might not be associated with social interaction and the participation in communicative processes (Bruner, 1977; Vygotsky, 1934/1986; Habermas, 1995). According to Piaget, competence acquisition succeeds processes of assimilation and accommodation, which are performed autonomously by learners in the construction and reconstruction of reality. In opposition to Piaget's intrasubjective, self-regulating assumption, subjective competences came to be seen as the result of intersubjective, communicative competence, which, in turn, can only emerge on the basis of communicative processes (Sutter and Charlton, 2002: 134). Consequently, the teacher's function is, in Vygotsky's interactionist view, that of an expert who implements his or her knowledge in collaboration with the learners. Knowledge acquisition equals sharing activities rather than internalizing individual cognitive structures (Sutter and Charlton, 2002: 141). Expert and peer feedback, which Nunan (1991: 87) refers to as 'conferencing' and which he contextualizes in terms of discovery learning, are seen as essential elements of the learning process. Collaborative learning involves the following steps (Collins *et al.*, 1989):

1. Modelling on the part of the expert
2. Individual encouragement on the part of the expert

3. Scaffolding and fading, i.e. gradual withdrawal of the expert for the sake of learner empowerment
4. Articulation of newly acquired and learned knowledge structures on the part of the learners
5. Learner reflection.

Contemporary educational theory subscribes to a combined approach, which is informed by both approaches described above. *Sensu* the tenets of 'interactionist constructivism' (Sutter, 1999), subjects construct cognitive structures both independently and in interaction with other individuals.

Following from and opposing Chomsky's (1965) notion, I shall, in what follows, discuss three different approaches to *literary* competence. First, Culler (1975), a structuralist indebted to Chomsky, presupposes a finite, complete set of rules contained within the literary system of a human being. Every human being owns an 'implicit understanding of the operations of literary discourse' (Culler, 1975: 114), which may be understood as *acquired* knowledge of literature, including, for instance, tropes, themes and genres. In other words, Culler cannot help departing from Chomsky's radical approach on account of the truism that knowledge of literary structures can only develop gradually with a growing experience in reading fictional and poetic texts or, for that matter, observing dramatic forms on stage. This dynamic, diachronic notion of competence corresponds with Hymes's (1971) organic concept of communicative competence, which draws on Piaget's stages of cognitive development rather than Chomsky's synchronic concept. Hymes deviates from Chomsky in that his concept of competence is strongly influenced by the communicative function of language rather than the idea of language as a system of rules. Communicative competence not only contains grammatical competence (vocabulary, grammar, phonology, orthography and discourse knowledge) but includes pragmatic aspects such as interactional skills, cultural framework, illocutionary functions and sociolinguistic variations of human discourse.

Another dividing feature between Culler and Chomsky is the Chomskyan distinction between linguistic universals and specific idiomatic knowledge, whereas for Culler, literary competence is universal (for all languages). Like Chomsky, Culler emphasizes literature as a rule system, disregarding the individual 'use' component.

I contend that literary competence, which is a multiple concept comprising a set of distinctly operating subcompetences, is both learned (through formal teaching) and acquired (through natural exposure). In opposition to Culler, I argue that literary structures are just as dynamic and use-related as linguistic structures. Furthermore, there is no such thing as a universal set of literary rules, or a maximally competent literary subject (in analogy to Chomsky's ideal speaker-listener). Literary conventions are historically relative phenomena, which are, from a diachronic perspective, continually extended, modified and subverted to varying degrees in individual language communities. Similarly, literary forms are permanently developing, evolving, appearing and

disappearing, processes which have to be observed by learners and 'experts' alike, so as to enable them to compare and contrast formal variations.

Hubert Ivo (1971) developed the concept further. His approach was informed by demands predominant during the late 1960s, namely that young people should acquire skills that will facilitate their orientation and proactive participation in their particular socio-cultural environments. This demand should be addressed particularly in the literary classroom. Ivo distinguishes between critical and poetic competence, which, as he maintains, should be reflected in teaching objectives. Under poetic competence, Ivo subsumes three aspects: understanding poetically encoded texts, understanding poetic encoding and the ability to sojourn in fictional worlds. Poetically encoded texts are, in Ivo's view, texts in which language is superimposed with secondary structures which deliberately deviate from standardized usage. To identify such deviations, readers need to have acquired knowledge of standard forms and usage. Therefore, understanding poetically encoded texts is an acquired, largely unreflected skill which can hardly be taught formally but rather evolves through repeated exposure to poetically encoded texts. Understanding poetic encoding takes learners a step further as it confirms them in what they can do already. Provided learners are able to identify poetic language, the chances are that they will soon be able to identify 'irregular', poetic structures and patterns and name them according to their form and function. Finally, the ability to project one's own consciousness into fictional worlds for a limited period of time, and thereby experience previously unfamiliar situations, helps to develop the ability to regulate one's own life and routines prospectively.

On the other hand, Ivo's concept of critical competence comprises the ability to reflect critically on literary texts, their fictionality, reception and effects and the ability to analyse contemporary literary communication processes and their message about historical and social issues. The problem that Haas (2001) sees in his approach is a tendency towards generalization, which threatens to neglect the emotional componence of the learner. Haas further points out that, following Ivo, during the 1980s the emphasis was on critical, and during the 1990s on poetic competence. Based on Ivo's subcategorization, Haas (2001) suggests an entire taxonomy of literary (sub)competences:

By *literary competence*, Haas means the ability to connect to a text affectively and cognitively. In my view, the choice of term is rather unfortunate as it may cause confusions with the superordinate term 'literary competence'. I will thus call this aspect of literary competence *receptive-interactive competence*. *Emotive competence* is to Haas a vital aspect, which draws on the latest findings of neurolinguistics and brain research. It encompasses any ability to respond to a text emotionally in terms of identifying oneself with it to a certain degree upon reading it. Performative evidence of emotive competence may be any spontaneous response to reading, such as the expression of emotions, empathy and sympathy with characters, which are also manifestations of emotional intelligence.

3. *Creative competence* refers to creative productivity that manifests itself in reaction to what has been read and learned about a text. Haas sees in this aspect an elementary human need to interact and interfere with objects, to change them and experience oneself as a 'co-author' in the artistic process.

4. *Emancipatory competence* comprises three aspects of the learner's autonomization process: the ability to make independent decisions as to how to deal with a literary text, the ability to immerse and lose oneself in an aesthetic text and thereby gain a distance from everyday life, and the ability to solve psychological, interhuman problems on the basis of previous reading experience.

5. *Projectory competence* is closely related to emancipatory competence in that it means the ability to mediate between the fictional and the real world in order to deduce concrete action plans for everyday life.

6. The concept of *aesthetic competence* corresponds to Culler's idea of being able to identify the poetological structure of an aesthetic text, to analyse stylistic and formal elements in order to arrive at an interpretation and an attempt to comprehend authorial intentions and strategies on the basis of linguistic and organizational evidence.

7. *Critical competence* manifests itself in the learner's ability to read, understand and evaluate a text critically, under ideological, socio-political and ethical criteria. Evidently, to achieve this level of competence, a considerable amount of background information is required, which may be reserved for advanced readers, yet can be provided to a certain extent by teachers in the form of informational input.

For my current investigation, which aims predominantly at advanced learners and readers (see Chapter 5.4) yet presupposes unfamiliarity with literary hypertext on the part of the learners, I shall take a closer look at specific aspects of literary competence which seem appropriate for advanced, post-A-level learners (approximately 19 to 20 years of age). At this stage it needs to be conceded that Haas's taxonomy has considerable shortcomings, especially with regard to the extended mediality of contemporary concepts of literature, which he fails to take into account. My first emphasis is thus on *creative competence*, particularly in relation to the role of writing, which requires highly complex cognitive and motoric skills. There are no phonetic, physical or physiognomic aids that may be used by the sender to indicate certain nuances of meaning. Similarly, writing requires detailed knowledge of various text types and their underlying structural and stylistic conventions. Therefore, inexperienced writers have to learn how to reflect critically on language, style, and the organization of knowledge in order to create a piece of writing that will be understood in the intended way (bearing in mind that, in a hypertextual paradigm, unintended readings may be the writer's main intention, which further complicates the composition process).

The significance of writing in literary pedagogy has increased over the past few decades, particularly with regard to cognitive processes and the construction of human knowledge. Since the advent of electronic text proces...

programmes, writing has been revolutionized in that it has come to be seen as a process rather than a product. In this regard, Flower and Hayes (1981) propose a three-stage model, which presents writing as a complex process that involves drafting, writing and rewriting. They distinguish between four basic, constantly interacting elements: planning (content and structure), converting concepts into language, self-monitoring and re-visiting. Ong (1982) further asserts that writing restructures consciousness, which allows human beings to rearrange their semantic networks. Especially the *creative* engagement with text helps prevent writer's blocks and establish a momentum of *flow*[8] (Csikszentmihalyi, 1990; Paefgen, 1999).

Among the advantages of *collaborative* writing projects is the fact that individual decisions are encouraged yet have to be aligned to those of others, which supports the development of social competence by means of joint ventures as well as compromising and converging ideas. In this respect, Smith and Kollock (1999) consider a triad of interaction, communication and coordination to be the essence of student collaboration.

Hypertext structures may be regarded as providing an ideal framework for collaborative creative writing, as they are flexible and expand infinitely (see Nielsen, 1990). Study into research-oriented hypertextual collaborative writing has been done by Trigg and Suchmann (1999), who describe a Note-Cards project. They come to the conclusion that hypertext is appropriate for collaborative writing because it allows 'the coexistence of multiple overlapping organizations of information' (*ibid.*: 46), which is particularly useful 'if authors are in the process of progressively reorganizing their work' (*ibid.*: 51). Furthermore, they emphasize the possibility of annotating authoring and editing activities. Finally, collaborators feel urged to adapt discursively to previously unfamiliar medial structures, which opens up possibilities of reciprocal dialogic learning.

3   Media Competence in Literary Studies

Digital literature requires authors to have multimedia competence.
(Simanowski, 1999b: 4)

My second emphasis is on *media* in the sense of *hypermedia competence*, which is not listed in Haas's catalogue but is indispensable for hypertext pedagogy. As Groeben (2002) points out, the term 'media' refers to technological means of communication on the one hand and their implications for processes of socialization and the development of individual personality, identity and world pictures on the other (160). Similarly, media competence is, according to Baacke (1999), Theunert (1999) and Sutter and Charlton (2002), a pluralist concept, which includes aspects of understanding, operation, implementation, production, critical evaluation and reciprocity (Dewe and Sander, 1996).

Understanding media requires linguistic, semiotic, logical and sociological knowledge, which enables recipients to reconstruct semantic structures of media phenomena. Of particular importance for developing receptive strategies is theoretical and practical media knowledge. The practical side, i.e. operating media, implies a variety of psycho-motor skills such as reading, writing, technical knowledge, and what, in the field of New Media, has come to be described by the buzz phrase 'ICT skills'. Implementing media necessitates experience with everyday psychological phenomena such as the implications of learner autonomy. Producing media warrants a wide range of technical skills, knowledge about media production and distribution and aesthetic awareness, which are needed for both effective media design and cogent argument. In order to be able to comment critically on media phenomena, individuals need to possess normative knowledge about social values as well as the ability to question acquired concepts rather than taking them for granted. Finally, the reciprocity of media usage implies the ability to communicate and collaborate through media.

Groebel (1997) discusses media competence from the teacher's point of view, who has to be able to implement media so as to facilitate autonomous learning. This requires not only technical know-how on the part of the teacher, but, more importantly, factual knowledge about distinct media qualities, semiotics, production, and the critical evaluation of sender–receiver relationships, particularly as regards digital media and manifestations of virtual reality.

Adopting a diachronic perspective, Tulodziecki (1997–1998) follows the history of media pedagogy since the beginning of the twentieth century. Taking international discrepancies into consideration, the overall development started with an attitude which sought to preserve traditional forms and protect national, largely book-centred heritage from an invasion of innovative media such as film and television. This attitude was soon revised, as film and later television gradually became accepted as art forms in their own right (in the case of film) and as important catalysts of Western democracy and capitalism (in the case of television and Hollywood film). Almost instantly, this also led to various critical approaches (e.g. by Foucault, Althusser and Barthes), which have sought to deconstruct the media as subliminal carriers of mainstream ideology.

With regard to hypertext pedagogy, operating and understanding the medium are the two most problematic, as well as most intimately related aspects, which almost necessarily generate a media- and self-critical, 'deconstructivist' stance in the reader, especially with regard to the palpability of textual, intertextual and meta(hyper)textual semantics. Similarly, the New Media, especially the internet with its nonlinear forms of organization, require a variety of specific reading and interpretation strategies, not to mention a plethora of technical skills when it comes to producing media texts. In relation to this, Daiber (1999) and Simanowski (2002c) emphasize that antilinear narrative, which may be regarded as the essence of hypertext, is largely constituted by the existence of hyperlinks and that consequently, in a New Media

paradigm, literary hermeneutics needs to be extended by adding the hyperlink as a seminal analytical criterion.

With this in mind, and by drawing on Bernstein's (1998) linking patterns (see Chapter 1.1), Wenz (2000, 2001) identifies three main hypertextual reading styles: the reader, the zapper and the player. Wenz (2001) maintains that readers who are accustomed to zapping television channels are most likely to translate that strategy into reading hypertext. Accordingly, readers who often play computer games will apply more explorative, exhaustive reading strategies in their intention to find out about the scope of a hypertext, its layers and boundaries. Inexperienced hypertext readers, on the other hand, will most likely transfer their habitually linear reading styles to hyper-documents and thus spend a lot of time reading them thoroughly and comprehensively.

The *desideratum* of meta-media knowledge holds true in particular for literary hypertext, which generally instrumentalizes the lack or simulation of navigational aids (maps, dynamic content pages, history lists, search engines) for aesthetic effect. Furthermore, hypertext authors mostly leave the scope and level of networking complexity unaccounted for, thus leaving the reader uncertain as to the length and difficulty of the receptive process. Textual meaning – if there is any – is only in the minority of cases discernible or indeed reliably inferrable. Therefore, readers have to be more pro-active and autonomous in terms of constructing textual coherence than they would be in tackling a conventional print text. What is more, user interfaces vary such that, as a matter of fact, every hypertext presents a different medial form in its own right, the operability of which needs exploring before any serious reading can occur in the first place (Flender and Christmann, 2002: 219). Thus, reader expectations are bound to be broken from hypertext to hypertext, which, paradoxically, constitutes an expectation in itself.

As Kuhlen (1991) asserts, hypertext in particular demands a new form of competence, which depends on both theoretical and practical knowledge and skill. First, hypertext is essentially dialogic, i.e. conceptualized in such a way as to enable system-user interaction and multi-user cooperation. The possibility of actually contributing to an already existing literary work, or rather work-in-process, requires a higher degree of creativity on the part of the reader than in a completed, self-contained print medium. Needless to say, familiarity with run-of-the-mill internet functionalities such as using a mouse to click-activate electronic processes as well as a keyboard to actually type in one's own written contribution is a prerequisite to handling hypertext in the first place. Second, narrative hypertexts in particular defy any sense of delimitation. Instead of demarcating boundaries, the reader is left uncertain as to the mere physical extensions of the text. Even if the number of lexias is in fact countable, which is the case in software-based, offline hypertexts like the Eastgate product range, this does not mean that any reader will ever manage to visit all of them, let alone experience every possible plot. Given an inexperienced hypertext reader, this is bound to result in uncertainty and frustration. As Schnierer (2003: 94) puts it:

even a closed hypertext, however, does not have to have limits visible to the reader. Readers new to hypertext are usually disturbed by texts whose size cannot be established. Invisible textual boundaries initially work in much the same way as non-existent ones, even though they do delimit the reading process eventually.

Third, hypertext represents content in a nonlinear format. This does not necessarily imply, however, that each node contains one self-contained episodic plot section. On the contrary, 'hyper-' poetic licence very often prevents readers from 'adding' episodic knowledge of the narrative to form a coherent whole. Nodes frequently raise ideas without developing them any further. Neither do they provide satisfying answers to questions arising during the reading process. Especially when perceived in a nonsequential order, the non-paragraphic nature of nodes becomes strikingly and often painfully obvious to readers, whose major task is to form their own mental plot from their individualized reading sequence, which changes upon every revisitation of the hypertext. Problems such as 'cognitive overhead' (Conklin, 1987: 40), disorientation ('getting lost in hyperspace', see Edwards and Hardman, 1989) and 'informational short-sightedness' (Conklin, 1987: 40) are generally caused by associative browsing mechanisms, which are considerably more randomized in literary than informational hypertext, as the reader does not read with a specific informational aid in mind. As I discussed earlier, such 'indeterminacy' (I use the term deliberately to allude to Iser's concept) forms an essential part of hypertext aesthetics. Therefore, its effects on the reader must be taken as necessary elements of the hypertext reading experience. Cognitive overhead, disorientation and informational short-sightedness arise from hypertextual poetic licence. Coherence is deliberately undermined by the elision of cohesive markers or other means of helping the reader form a uniquely reliable, coherent mental model of the text.

Instead, on a macrostructural level, the hyperlink serves as a major cohesive element. From the vantage point of the reader, this requires a continual decision-making process, which becomes increasingly random if the chosen path does not exhibit any logically structured sequence of events or if it does not provide answers to hypothetical questions that motivate the reader's choice. From the perspective of the hypertext author, links are conventionally used to illustrate connections between ideas. These connections have to be most transparent and intersubjectively predictable in factual hypertexts. Authors of literary hypertexts, on the other hand, tend to subvert the transparency of interconnectedness deliberately to achieve certain aesthetic effects. However, most literary hypertexts are situated on a continuum between those two poles. Thus, the linking of character names to lexias which provide direct or indirect characterizations is a widespread structural device, which is used, for instance, by Ruth Nestvold in *Cutting Edges, Or, A Web of Women*, by Stefan Maskiewicz in *Quadrego*, and, as the dominant navigational device, by Geoff Ryman in *253*. Linking names to characterizations or biographical background is, in fact, one

of the few commonly applied strategies that aid the reader in making sense of the text and creating an at least partly cogent mental model of the relationships between characters.

The main difficulties with links are decisions relating to their number, distribution, transparency and location. These decisions reflect the writer's idea of textual synthesis, involving the level of complexity and playfulness, as well as the question regarding which lexias he or she considers to be key. Such lexias may be worked into loops, which cause the reader to revisit them on a frequent basis. As Duguay (1999) points out, decisions pertaining to linking strategies present an additional challenge to conventional decisions, which are mostly to do with the inclusion and elision of information, as well as their spatial arrangement.

In sum, what the user needs in order to tackle hypertext effectively is an extended media competence profile, which takes into account the distinctly low level of macro- and microstructural predictability and conventionality of the textual genre. Such a profile needs to exhibit specifically versatile receptive and productive strategies, as well as the ability to create coherence more independently from surface structure clues than in the case of linear print text. That these skills can indeed be learned by repeated exposure and regular practice, which help users develop procedural and receptive strategies, has been shown by numerous empirical studies (summarized in Hammond, 1993).

Yet another decisive component of hypertext, which comes into play particularly with second-generation hypermedia, is the interplay between different semiotic systems. William Blake, one of the pioneers of intermediality, combined word and image to produce complementary levels of meaning. Vaughan (1999: 27–8) writes that his:

> own position as being equally gifted in both [media] enabled him to explore the interchange in a unique manner. For with him painting was not simply the illustration of poetry, or even its rival. It was a counterpart, a genuine other half. Indeed, one might see the relationship as that of two voices singing a duet.

Most hypermedia artists pick up this convention and explore it by adding sound, animation and film in multifarious ways. Hence, hypertexts cannot be 'read' and interpreted solely on a graphemic basis. The competent reader has to take into account those various interacting symbolic levels, their weighting in the context as a whole, and the extent to which text in the traditional sense is supplemented or complemented by other semiotic systems.

To sum up, in order to develop a hypertext-specific form of media competence, learners need to:

- become aware of the potentially discouraging effects caused by associative browsing, which I consider the most common manner of navigating other than sequential proceeding

- develop accessing and reading strategies which take account of such adverse effects and integrate them into their reading experience, which eventually results in an aesthetics of revis(itat)ion (see Chapter 1.5)
- incorporate considerations of hypermedia synaesthetics in their interpretive strategies, i.e. they need to be sensitized to the aesthetic interplay between various semiotic systems in order to include it in their interpretation of hypermedia artefacts
- develop an awareness of the vast diversity of linking types and strategies, which form the foundation of a distinctly hypertextual reading experience, and take them into account when interpreting hypertexts
- enter the paradigm of 'productive reception' as the foundation of aesthetic pleasure, for which the physicality of hypertext, which, due to its virtual nature, can only be of an abstract kind, only serves as the building blocks or the 'raw material' for individualized, autonomous understanding (Kuhlen, 1991: 43).

In conclusion, to fit into a hypertextual paradigm, literary competence needs to be revisited. In the age of hypermedia, literary competence must be perceived to include creative interaction with the New Media, collaborative projects, and productive transformation of knowledge (subject-oriented). Add the recent developments in the realm of cybertext, and one has to include the willingness to give in, at least partly, to the stylized control mechanisms of the empowered machine and to 'play along' as human constituent of a remotely controlled performance. Given that hypertext, hypermedia and cybertext are based on a variety of symbolic levels, which continuously create new forms of representations, it may hence be argued that it is 'necessary for users to develop new areas of [literary] competence' (Heibach, 2004: 49). Literary education cannot content itself with the conventionalities of verbal art, but has to incorporate aspects of multimodal, as well as 'code' education. Finally, the nature of the *medium* itself has to be taken into consideration on a synchronic, diachronic and contrastive basis.