Published on *the living handbook of narratology* (http://www.lhn.uni-hamburg.de)

Cognitive Narratology (revised version; uploaded 22 September 2013)

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Created: 7. July 2011 Revised: 24. December 2013

1 Definition

Approaches to narrative study that fall under the heading of cognitive narratology share a focus on the mental states, capacities, and dispositions that provide grounds for—or, conversely, are grounded in—narrative experiences. This definition highlights two broad questions as centrally relevant for research on the nexus of narrative and mind: (1) How do stories across media interlock with interpreters' mental states and processes, thus giving rise to narrative experiences?; (2) How (to what extent, in what specific ways) does narrative scaffold efforts to make sense of experience itself? The first question bears on stories viewed as a target of interpretation; it concerns ways in which interpreters use various kinds of semiotic affordances to engage with narrative worlds (or "storyworlds"). The second question concerns how narrative constitutes a resource for interpretation, providing a basis for understanding and characterizing the intentions, goals, emotions, and conduct of self and other. Thus, research on the mind-narrative nexus encompasses not only how stories can be used to build worlds but also how such acts of narrative worldmaking are themselves mind-enabling and mind-extending.

2 Explication

Still an emergent trend within the broader domain of narratology, research on the mind-narrative nexus encompasses multiple methods of analysis and diverse corpora. Relevant corpora include fictional and nonfictional print narratives; computer-mediated narratives such as interactive fictions, e-mail novels, and blogs; comics and graphic novels; cinematic narratives; storytelling in face-to-face interaction; and other instantiations of the narrative text type. By the same token, theorists working in this area have adapted descriptive and explanatory tools from a variety of fields—in part because of the cross-disciplinary nature of research on the mind-brain itself. Source disciplines include, in addition to narratology, linguistics, semiotics, computer science, philosophy, psychology, and other domains. Making matters still more complicated, narrative scholars working on issues that fall within

this area do not necessarily identify their work as cognitive-narratological, and might even resist being aligned with this rubric.

It should therefore not be surprising that, given the range of artifacts and media falling under its purview, the many disciplines it involves, and the multiplicity of projects relevant for if not directly associated with it, research at the intersection of narrative theory and the sciences of mind at present constitutes more a set of loosely confederated heuristic schemes than a global framework for inquiry. Nonetheless, a number of key concerns cut across the various approaches to the mind-narrative nexus; these concerns can be linked to the two broad lines of inquiry mentioned above, i.e. (1) research on narrative as a target of interpretation and (2) scholarship on stories as a resource for sense making. On the one hand, what mental states and processes support narrative understanding, allowing readers, viewers, or listeners to navigate storyworlds to the extent required for their purposes in engaging with a given narrative (Herman 2013a: chaps. 1, 3)? How do they use medium-specific cues to build on the basis of the discourse an interpretation of what happened when, or in what order; a broader temporal and spatial environment for those events, as well as an inventory of the characters involved; and a working model of what it was like for these characters to experience the more or less disruptive or non-canonical events that constitute a core feature of narrative representations (Herman 2009: chap. 5)? On the other hand, insofar as narrative constitutes a way of structuring and understanding situations and events, still other questions suggest themselves for researchers working in this area. To what domains are stories especially suited as instruments of mind (Herman 2013a: chaps. 2, 6)? Is it the case that, unlike other such instruments (stress equations, deductive arguments, graphs and scatterplots, etc.), narrative is tailor-made for gauging the felt quality of lived experiences (Fludernik 1996; Herman 2009: chap. 6; 2013a: chaps. 2, 7)?

Arguably, questions such as these could not have been formulated, let alone addressed, within classical frameworks for narrative study (but cf. Barthes [1966] 1977 and Culler 1975 for early anticipations). The mind-narrative nexus can thus be thought of as a problem space that opened up when earlier, structuralist models were brought into dialogue with disciplines falling under the umbrella field of the cognitive sciences.

3 History of the Concept and its Study

3.1 A Partial Genealogy of the Term “Cognitive Narratology”

The field of inquiry that has come to be called cognitive narratology can be

characterized as a subdomain within “postclassical” narratology (Herman 1999; Alber & Fludernik 2010). At issue are frameworks for narrative study that incorporate the ideas of classical, structuralist narratologists but supplement their work with concepts and methods that were unavailable to story analysts such as Barthes, Genette, Greimas, and Todorov during the heyday of the structuralist revolution. In the case of scholarship exploring the nexus of narrative and mind, analysts have worked to enrich the original stock of structuralist concepts with research on human intelligence either ignored by or inaccessible to the classical narratologists; they have thus built new foundations for the study of basic and general principles of mind vis-à-vis various dimensions of narrative structure, as well as the various uses to which stories can be put.

That said, the term “cognitive narratology” itself carries connotations that it might be better to avoid by using other descriptors for this area of inquiry. In particular, it is important to avoid any conflation of research on the mind-narrative nexus with what some scholars have characterized as “cognitivism,” or the view that the mind can be reduced to disembodied mental representations that are disattached from particular environments for acting and interacting (Noë 2004, 2009; Varela, Thompson & Rosch 1991; Thompson 2007). As argued in Herman et al. (2012) and Herman (2013a), a focus on the way the mind works with and through stories need not entail a cognitivist separation between mental representations and the social and material environments that help shape—indeed, partly constitute—the mind itself. Instead, research on storytelling and the mind can investigate how a culture’s narrative practices are geared on to humans’ always-situated mental states, capacities, and proclivities.

However it is conceptualized and defined, the term cognitive narratology has been in use for only about fifteen years. As Eder (2003: 283 n.10) notes, the term appears to have been first used by Jahn (1997). Yet the questions and concerns encompassed by the term can be traced back to earlier research. In the domain of literary studies, and in parallel with a broader turn toward issues of reception and reader response (Iser [1972] 1974; Jauss [1977] 1982; Tompkins ed. 1980), studies by Sternberg (1978) and Perry (1979) highlighted processing strategies (e.g. the “primacy” and “recency” effects) that arise from the situation of a given event vis-à-vis the two temporal continua of story and discourse, or fabula and sujet. Events that happen early in story-time can be encountered late in discourse-time, or vice versa, producing different reading experiences from those set into play when there is greater isomorphism between the time of the told and the time of the telling. A still earlier precedent in this connection is Ingarden’s ([1931] 1973) account of literary texts as heteronomous vs. autonomous objects, i.e. as schematic structures the concretization of whose meaning potential requires the cognitive activity of readers.

Meanwhile, in the fields of cognitive psychology and Artificial Intelligence (AI) research, analysts began developing their own hypotheses about cognitive structures underlying the production and understanding of narrative. Psychologists such as Mandler (1984) postulated the existence of cognitively based story grammars or narrative rule systems. Such grammars were cast as formal representations of the cognitive mechanisms used to parse stories into sets of units (e.g. settings and episodes) and principles for sequencing and embedding those units (cf. Herman 2002: 10–13). Roughly contemporaneously with the advent of story grammars, research in AI also began to focus on the cognitive basis for creating and understanding stories. Schank and Abelson's (1977) foundational work explored how stereotypical knowledge reduces the complexity and duration of many processing tasks, including the interpretation of narrative. Indeed, the concepts of script and frame, or types of knowledge representations that allow an expected sequence of events or an activity setting to be stored in the memory (cf. Bartlett [1932] 1995; Goffman 1974), suggested how people are able to build up complex interpretations of stories on the basis of very few textual or discourse cues. Although subsequent research on knowledge representations suggests its limits as well as its possibilities (Sternberg 2003 provides a critical review), this early work shaped research on storytelling and the mind from the start, informing the study of how particular features of narrative discourse enable particular kinds of processing strategies.

Thus, theorists have explored how experiential repertoires, stored in the form of scripts, enable interpreters of stories to "fill in the blanks" and assume that if a narrator mentions a masked character running out of a bank with a satchel of money, then that character has in all likelihood robbed the bank in question. For his part, Palmer (2004) discusses how readers' world-knowledge allows them to build inferences about fictional minds by bringing such knowledge to bear on various textual indicators, including thought reports, speech representations, and descriptions of behaviors that span the continuum linking mental with physical actions. Other analysts have explored how literary narratives, by presenting atypical, norm-challenging, or physically impossible fictional scenarios, intermix processes of script recruitment, disruption, and refreshment (Alber 2009; Herman 2002: 85–113; Stockwell 2002: 75–89).

Jahn (1997) and Emmott (1997) likewise employ the frame concept but in effect shift the focus from issues of semantic memory to issues of episodic memory. Jahn's (1997) foundational essay draws on Minsky's (1975) account of frames (among other relevant research) to redescribe from a cognitive perspective key aspects of Stanzel's ([1979] 1984) theory of narrative. In Jahn's proposal, higher-order knowledge representations or frames enable interpreters of stories to disambiguate

pronominal references, decide whether a given sentence serves a descriptive or a thought-reporting function (e.g. depending on context, “the train was late” might either be a thought mulled over by a character or part of the narrator’s own account of the narrated world), and, more generally, adopt a top-down as well as a bottom-up approach to narrative processing. A frame guides interpretation until such time as textual affordances allow for a modification or substitution of that frame. In a similar vein, drawing on ideas from cognitive psychology, psycholinguistics, and text-processing research, Emmott investigates how what she calls *contexts*, or spatiotemporal nodes inhabited by configurations of individuals and entities, constrain pronoun interpretation. Information about contexts attaches itself to mental representations that Emmott terms “contextual frames.” An action performed by (or on) a given configuration of participants is necessarily indexed to a particular context and must be viewed within that context, even if the context is never fully reactivated (after its initial mention) linguistically. For example, if a character in a short story begins walking along a wooded path, then even if elements of the setting are not mentioned again, readers can assume that subsequent actions performed by the character continue to take place in that same locale—until such time as linguistic signals facilitate a frame-switch (e.g. “Several days later […]”).

To extrapolate: although some of the work just described post-dates the period at issue, a cluster of publications appearing in the 1990s added impetus to the “cognitive turn” in narrative studies that had been prepared for by research conducted in the 1970s and 1980s and heralded by Turner (1991) in a book subtitled “The Study of English in the Age of Cognitive Science.” Fludernik’s richly synthetic account of natural narratology, appearing in 1996, integrates ideas from literary narratology, the history of English language and literature, research on natural-language narratives told in face-to-face communication, and cognitive linguistics to isolate “experientiality,” or the felt, subjective awareness of an experiencing mind, as a core property of narrativity. Turner’s (1996) own extrapolation from cognitive-linguistic models of metaphor to account for human intelligence in terms of parabolic projections, or the mapping of source stories onto target stories to make sense of the world, was also published in 1996. The year before, the influential volume *Deixis in Narrative* had appeared (Duchan et al. eds. 1995); contributions to this volume characterize narrative comprehension in terms of deictic shifts, whereby interpreters shift from the spatiotemporal coordinates of the here-and-now to various cognitive vantage-points they are able to take up because of textual signals distributed in narrative discourse (see also Werth 1999). In addition, although the studies just mentioned fall within the first broad strand of inquiry into the mind-narrative nexus—i.e. the strand concerned with stories viewed as a target of interpretation—during the same period researchers in fields such as sociolinguistics,

discourse analysis, and social psychology were building on the insights of Labov (1972) to contribute to the second broad strand of inquiry, investigating how narrative constitutes a resource for sense making across a variety of communicative settings and activity types (Bamberg ed. 1997; Bruner 1991; Linde 1993; Ochs et al. 1992).

This spate of publications helps explain why the inaugural 2000 issue of the online journal *Image & Narrative* focused on cognitive narratology. It also helps account for the organization, just after the turn of the century, of a number of edited volumes, special journal issues, and conferences exploring intersections among cognition, literature, and culture as well as approaches to the mind-narrative nexus in particular (e.g. Abbott ed. 2001; Richardson & Steen eds. 2002; Herman ed. 2003; Richardson & Spolsky eds. 2004). At the same time, theorists formulated pertinent objections to (or at least reservations about) what Richardson and Steen termed a "cognitive revolution" in the study of literature and culture (Jackson 2005; Sternberg 2003). Specifically, scholars who remained skeptical about cognitive approaches to literature and culture in general, and about research on narrative and mind specifically, questioned the degree to which work of this kind represents true cross-disciplinary or rather "transdisciplinary" convergence—as opposed to the selective and sometimes haphazard borrowing of ideas and methods tailored to problem domains in other areas of study (see section 4 below).

3.1 Focal Areas for Research

Approaches to narrative and mind continue to emerge, evolve, and cross-pollinate, and it is difficult to predict which of these approaches will be the most generative going forward, let alone what impact they will ultimately have on the broader field of narratology. Spanning research on narrative viewed as a target of interpretation as well as scholarship on stories taken as an instrument of mind, relevant studies include:

> (a) inquiry into the range of mental states and processes that support inferences about the ontological make-up, spatiotemporal profile, and character inventory of a storyworld, and also about the degree to which a given text or representation can be assimilated to the category "narrative"—i.e. assigned at least some degree of narrativity—in the first place (Doležel 1998; Fludernik 1996; Gerrig 1993; Herman 2002, 2009, 2013a; Hogan 2003b: 115–39; Jahn 1997; Ryan 1991, 2001; Sanford & Emmott 2013);

(b) cognitively inflected accounts of narrative perspective or focalization in fictional and nonfictional texts (van Peer & Chatman eds. 2001; Dancygier 2011: 87–116; Grishakova 2002; Jahn 1996, 1999; Herman 2013a: chap. 4);

(c) attempts to formulate what Eder (2003) terms "cognitive reception theories," including research on the effects of narrative suspense, curiosity, and surprise (Gerrig 1993; Keating 2013; Perry 1979; Sternberg 1978, 1990, 1992) as well as studies of specific storytelling strategies that can foster, amplify, or inhibit empathetic responses by interpreters (Keen 2007);

(d) empirical studies that, relying on techniques ranging from the measuring of reading times to methods of corpus analysis to the elicitation of diagrams of storyworlds, seek to establish demonstrable correlations between what Bortolussi and Dixon (2003) term "text features" and "text effects" (Emmott, Sanford & Alexander 2013; Sanford & Emmott 2013; Gerrig 1993; Ryan 2003; Herman 2005; Salway & Herman 2011);

(e) transmedial studies suggesting that narrative functions as a cognitive "macroframe" enabling interpreters to identify stories or story-like elements across any number of semiotic media—literary, pictorial, musical, etc. (Gardner & Herman 2011; Herman 2004, 2013a: chap. 3; Ranta 2013; Ryan ed. 2004; Ryan & Thon eds., 2014; Wolf 2003);

(f) research on characters and methods of characterization in fictional as well as nonfictional narratives; this work includes studies of specific techniques used by storytellers to figure forth their characters' mental lives and also studies of how interpreters' encounters with such individuals-in-storyworlds shape and are shaped by broader understandings of persons (Cohn 1978; Eder et al., eds. 2010; Fludernik 2003; Herman 2011a, 2013a: chap. 5; Herman ed. 2011; Jannidis 2004, 2009; Palmer 2004, 2010; Schneider 2001; Zunshine 2006);

(g) relatedly, research on narrative vis-à-vis folk-psychological reasoning, or the everyday heuristics that people use to make sense of their own and others' conduct; at issue is how stories provide a means for evaluating the conduct of self and other, as well as the folk-psychological abilities bound up with narrative comprehension (Butte 2004; Herman 2010, 2011a, 2013a : chaps. 2, 8; Hutto 2008).

(h) studies of emotions and emotion discourse in narrative contexts;

relevant work includes inquiry into the way emotional responses undergird the telling and interpretation of stories (Burke 2011; Hogan 2003a, 2011; Miall 2011; Oatley 2012) and also research on how narratives at once reflect and help shape "emotionologies," or systems of emotion terms and concepts deployed by participants in discourse to ascribe emotions to themselves as well as their cohorts (Herman 2010, 2013a).

(i) research drawing inspiration from developments in the theory of evolution and also evolutionary psychology, including Easterlin's (2012) hypothesis that "narrative thinking arose [...] because it facilitated interpretation of events in the environment and consequently promoted functional action" (47) and Boyd's (2009) argument that narrative fiction and other forms of make-believe link up with an evolved human predisposition to engage in play (177–87, 192–93; see also Abbott 2000; Austin 2010: 17–40; Dissanayake 2001; Mellmann 2010);

(j) work exploring how narratives about counterfactual scenarios support efforts to negotiate experience (Dannenberg 2008; Doležel 1999: 265–67; 2010: 101–26; Herman 2013a: chap. 8);

(k) studies of the structure and uses of autobiographical accounts vis-à-vis memory processes and their potential disruption by dementia or other debilitating diseases or injuries (Brockmeier & Carbaugh eds. 2001; Damasio 1999; Eakin 2008; Medved & Brockmeier 2010; Hydén 2010); and

(l) research on narrative engagements with nonhuman phenomenology, or the way stories across media can be used to model what it might be like for nonhuman animals to encounter the world—and thereby reshape humans' own modes of encounter (Herman 2011b, 2013c; Irvine 2013; Nelles 2001).

The following subsections hone in on focal areas (a) and (f) to highlight some of the strategies for inquiry that have been developed by analysts exploring the mind-narrative nexus.

3.1.1 Narrative Ways of Worldmaking

Using semiotic affordances to construct and imaginatively inhabit storyworlds is a fundamental aspect of interpreting narratives—and also a precondition for leveraging narratives to construe what's going on in wider environments for sense making. Work on deictic shift theory (Duchan et al., eds. 1995), contextual frame theory (Emmott 1997), text-world theory (Werth 1999), possible-worlds theory

(Doležel 1998; Pavel 1986; Ronen 1994; Ryan 1991), and the fiction/nonfiction distinction (Cohn 1999) helps illuminate the mental processes underlying narrative ways of worldmaking. This work suggests how interpreting narratives entails mapping discourse cues onto storyworlds more or less analogous to contexts in which that mapping process takes place.

What is more, reconsidered from a perspective that foregrounds issues of worldmaking, earlier narratological scholarship can be read anew, providing further insight into the mental states, capacities, and dispositions underlying the (re)construction of narrative worlds. Genette's ([1972] 1980) influential account of time in narrative, for example, can be motivated as a heuristic framework for studying the WHEN component of world creation. Thus Genette's concept of narrative order suggests how a narrative world is "thickened" by forays backward and forward in time, raising questions about the processing strategies triggered by such temporal agglutination (cf. Abbott [2002] 2008: 163–65; Sternberg 1978, 1990, 1992).

The approach to narrative worldmaking outlined in Herman et al. (2012) and Herman (2013a, 2013b) focuses on the way specific discourse patterns enable narrative experiences; suggesting how ideas from psycholinguistics, discourse analysis, and related areas of research can be integrated with scholarship on stories to characterize processes of narrative understanding, the approach starts with the hypothesis that engaging with stories entails mapping textual cues onto the WHEN, WHAT, WHERE, WHO, HOW, and WHY dimensions of mentally configured worlds. By using textual affordances to specify or "fill out" these dimensions in more or less detail, interpreters can frame provisional answers to questions such as the following—to the extent required by their purposes in engaging with a given text:

> i. How does the time frame of events in the storyworld relate to that of the narrational or world-creating act?
>
> ii. Where did/will/might narrated events happen relative to the place of narration—and for that matter, relative to the interpreter's current situation?
>
> iii. How exactly is the domain of narrated events spatially configured, and what sorts of changes take place in the configuration of that domain over time?
>
> iv. During a given moment of the unfolding action, what are the focal (foregrounded) constituents or inhabitants of the narrated domain—as

opposed to the peripheral (backgrounded) constituents?

v. Whose vantage point on situations, objects, and events in the narrated world shapes the presentation of that world at a given moment?

vi. In what domains of the storyworld do *actions* supervene on *behaviors*, such that it becomes relevant to ask, not just what cause produced what effect, but also who did (or tried to do) what, through what means, and for what reason?

The interplay among the dimensions at issue—the specific pattern of responses created by the way an interpreter frames answers to these sorts of questions when engaging with a narrative—accounts for the structure as well as the functions and overall impact of the storyworld at issue. Hence, whereas the questions just listed concern what kind of world is being evoked by the act of telling, those questions connect up, in turn, with further questions about how a given narrative is situated in its broader discourse environment—questions concerning why or with what purposes that act of telling is being performed at all. To reiterate, stories do not merely evoke a world, and thereby constitute a target of interpretation; they also afford resources for sense making by intervening in a field of discourses, a range of representational strategies, a constellation of ways of seeing—and sometimes a set of competing narratives, as in a courtroom trial, a political campaign, or a family dispute (see Abbott [2002] 2008: 175–92).

3.1.2 Characters and Categorization Processes

Many analysts have laid groundwork for an exploration of characters (and techniques of characterization) vis-à-vis the broader categorization processes by means of which people structure and comprehend elements of experience. Barthes ([1970] 1974) suggested that, in conjunction with four other "codes for reading," a *semic* code governs the process by which story recipients identify and interpret characters and their attributes, enabling semantic features of the text (e.g. lists of character attributes or descriptions of the places they inhabit) to be categorized as information relevant for understanding individuals-in-narrative-worlds, fictional and otherwise. Taking inspiration from Barthes, Chatman (1978) described characters as paradigms of traits. According to this analysis, a character is a "vertical assemblage of [a set of traits, or more or less enduring qualities or dispositions] intersecting the syntagmatic chain of events that comprise the plot" (127). Chatman thus explores how interpreters rely on their knowledge of culturally and historically variable trait-codes to map textual cues onto individuals-in-storyworlds (123–26; cf. Culler 1975: 236–37). These repertoires of trait-names derive from a variety of sources,

including specialized domains such as psychoanalysis, jurisprudence, and literary history (*she was neurotic*; *he acted with malice aforethought*; *he had the fiery temperament of a Heathcliff*) as well as the broader domain of folk psychology (*he's not a resentful person*; *she couldn't let well enough alone*).

More recent work by theorists such as Eder, Jannidis and Schneider (Eder et al. 2010), Gerrig (2010), Jannidis (2004, 2009), and Schneider (2001) likewise stresses the way understandings of persons arising from social norms, from specific narrative texts, or from embodied interactions with others structure and mediate encounters with characters in stories—indeed, make them recognizable as such (cf. Margolin 2007: 78–79). In his account of how "understanding literary characters requires [...] attributing dispositions and motivations to them [and] forming expectations about what they will do next and why, and, of course, reacting emotionally to them," Schneider (2001) argues that "all this happens through a complex interaction of what the text says about the characters and of what the reader knows about the world in general, specifically about people and, yet more specifically, about 'people' in literature" (608). On the textual side, Schneider identifies several sources of characterizing information: "(1) descriptions/ presentations of a character's traits, verbal and nonverbal behavior, outer appearance, physiognomy and body language made by the narrator, character himself/herself, or other characters; (2) the presentation of character's consciousness and mind-style; (3) inferred character traits mapped metonymically from the presentation of fictional space to the character" (2001: 611; see also Gorman 2010: 171–73; Jannidis 2004: 195–237; Jannidis 2009: 21–23). On the interpretation side, story recipients bring to bear on this information prior knowledge about categories or types of individuals—categories derived from social, literary, and also text-specific knowledge (Schneider 2001: 617–27). Hence, one's assumptions about members of different social classes or holders of various occupations, about protagonists or villains across narrative genres, and about characters previously encountered in a particular text will mediate one's engagement with the demeanor, conduct, and typical settings of the intelligent agents featured in any given narrative.

But the interplay between characterizing information and categorization processes is more complicated than the previous paragraph would suggest. Interpreters bring to bear on characters not only socially grounded, literature-based, and text-specific categories of individuals, but also the more fundamental concept of person itself—that is, ways of engaging with persons that emerge over the course of ontogenetic development and that continue to support practices of embodied interaction later in life (Herman 2013a: chap. 2; cf. Jannidis 2004: 195–237; Trevarthen 1993). In turn, some narratives (e.g. Djuna Barnes' *Nightwood* or Neill Blomkamp's *District 9*) are purposely designed to cut against the grain of available

person-oriented models, thereby holding those models up for conscious scrutiny and inviting a reconsideration of their scope and limits. In such contexts, the process of making sense of a narrative begins to overlap with that of using stories to make sense of the world, since interpreting the text entails reassessing what entities belong in the category of person and, by extension, the relationship between persons and nonpersons. In other words, some narratives invite interpreters to probe the nature and boundaries of the person concept itself by suggesting more or less extensive parallels between members of the category of persons and beings that have been excluded from that category; by underscoring the phenomenological richness of nonhuman experiences and showing how they too emerge from intelligent agents' interactions with their surrounding environments; or by portraying literally hybridized beings who combine the traits of persons and nonpersons and thus cross over a boundary that can then be recast as both historically and culturally variable (Herman 2013a: chap. 5).

4 Topics for Further Investigation

Since important contributions and refinements continue to be made to the focal areas for research listed in section 3.2, all of these areas also constitute, in effect, topics for further investigation. In addition, several other, overarching issues warrant further consideration when it comes to study of the mind-narrative nexus.

A first key issue is how best to foster genuine dialogue or interaction between scholarship on narrative and the sciences of mind—as opposed to a unidirectional borrowing, by narrative scholars, of ideas from the cognitive sciences. To this end, Herman (2013a) proposes a "transdisciplinary" approach to studying stories vis-à-vis the cognitive sciences. The argument is that the mind-narrative relationship cannot be exhaustively characterized by the arts and humanities, by the social sciences, or by the natural sciences taken alone; hence genuine dialogue and exchange across these fields of endeavor, rather than unidirectional borrowing from a particular field that thereby becomes dominant, will be required to address how mental states, capacities, and dispositions provide grounds for or, conversely, are grounded in narrative experiences. Instead of there being any subordination of humanistic vocabularies and methods to those of the social or natural sciences, or vice versa, in a transdisciplinary approach different frameworks for inquiry will converge on various dimensions of the mind-narrative nexus.

A second key question is how to take into account the relationship between theory and corpus—that is, the way one's understanding of the mind-narrative nexus will be shaped by the kinds of narrative practices one considers. How might the choice of stories from different periods, genres, or cultural traditions affect the way theorists

characterize the mental states and processes associated with narrative experiences? And how do issues of medium-specificity come into play in this same connection?

A third important issue is the difference this area of research might make when it comes to interpreting particular stories. The structuralists claimed that, just as the Saussurean linguist studies the system of language (*langue*) rather than the individual messages made possible and intelligible by that system (*parole*), narratologists should study *how* narrative in general means, rather than *what* particular narratives mean. In the years since structuralism, however, convergent research developments across fields such as ethnography, sociolinguistics, and narrative analysis itself have revealed the importance of studying how people deploy various sorts of symbol systems to refer to, and constitute, aspects of their experience. Thus, although Saussure emphasized code over message, a key question for future inquiry is how a focus on the mind-narrative nexus might illuminate the structure and functions of situated storytelling acts. Multiple issues are at stake in this connection, including the way in which story designs allow for tentative, defeasible ascriptions of authorial intention—ascriptions to story creators of the reasons for acting that (probabilistically) account for why a given text has the structure it does (Herman et al. 2012; Herman 2013a: chap. 1).

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To cite this entry, we recommend the following bibliographic format:

Herman, David: "Cognitive Narratology (revised version; uploaded 22 September 2013)". In: Hühn, Peter et al. (eds.): *the living handbook of narratology*. Hamburg: Hamburg University. URL = http://www.lhn.uni-hamburg.de/article/cognitive-narratology-revised-version-uploaded-22-september-2013
[view date:12 Feb 2019]