**Summary and Keywords**

Northrup Frye expressed a scholarly impatience with what seemed to him the inconsequentiality of literary study, asking if criticism might provide “a coordinating principle, a central hypothesis, which, like the theory of evolution in biology, will see the phenomena it deals with as parts of a whole” (1957). Cognitive literary theory did not actually answer to Frye’s scientism until almost fifty years later, and when it did, it moved quickly in many directions. But it did not (and still has not) coalesced into a unified theory. The vigor and excitement of the field derive from its openness to many different areas of brain science, the wide reach of its attention to so many varieties of works of imagination—their production, their reception, and their history—and its resistance to a centralizing dogma. In her introduction to the *Oxford Handbook of Cognitive Literary Studies*, Lisa Zunshine, scholar in the field and its best historian, describes cognitive literary critics as working “not toward consilience with science but toward a richer engagement with a variety of theoretical paradigms in literary and cultural studies” (2015). Scholars from most traditional humanities fields: philosophers (both analytical and phenomenological and philosophers of mind and of language), cultural, literary, and art historians, literary critics and linguists, for example, and social scientists as well (anthropologists, archaeologists, and ethnologists), have found the various fields of brain science to offer new perspectives on some persistent questions. Studies by developmental psychologists have made major contributions. And as brain imaging has become more powerful and widely used, the hypotheses of neurophysiologists and neurobiologists have come into the picture. Evolutionary biology has made perhaps the largest contribution by providing the overriding argument in the field—namely that human potential, individual behavior, and group dynamics can be studied as emerging phenomena. This begins with bodies that have over the millennia grown into worlds in which competition and cooperation have built and continue to build cultural life.

Keywords: fiction, embodiment, fit, relationality, social contracts, mirror neurons, evolution of culture, play, Theory of Mind, genres

*Play* has at least as many meanings as Wittgenstein found for games, but *playing around* excludes some of them. Playing around is spontaneous and not strongly goal directed, if at all. It doesn’t require concentration and is relatively stress free. One might play around with a small unfamiliar object but playing around does not need an object; it can be day-
dreaming, or mind-wandering. While in the playing around mode, one might be cheerful or just calm, waiting for something unknown but unthreatening to reveal itself. In part because playing around seems to be only weakly restrained, intrinsically satisfying, and requiring no external reward to motivate it, it has long been thought to describe the experience of the pleasure derived from the arts as entertainment. An analogy with the ephemerality of pleasure, however, should not distract from ongoing attempts in biology, social science, and the humanities to account for the enduring value of play and art. The question is still alive: when we play with fictions what work is done that can explain its ubiquity in a world where human survival and flourishing is not child’s play?

Cognitive literary scholars, from evolutionary and biological perspectives, have been asking what it is about the many forms of creative acts that would have made them worth the expenditure of energy and attention of artists audiences in early human history. Wouldn’t it have been better to study which mushrooms are poisonous than to chant and dance, relate the adventures of impossible monsters, contrive rhymes, or paint faces? There must have been a trade-off between calories spent for survival, such as in hunting, and those invested in playing around. How is playing expedient action? Where is its value? Anthropologists talk about the four f’s—feeding, fighting, fleeing, and mating. Scherazade’s contrivance suggests a fifth f: survival by fiction (i.e., storytelling). The king, like the rest of us, wants to know what happens next. The argument here is that human survival indeed feeds on our hunger for prediction, and that the kinds of playing around that produce and consume works of art and fiction are part of the unremitting effort to find the needed nourishment. If creating and audiencing fictions and arts are universal, it has to be because somehow they are no less self-preserving than eating or raising an arm to ward off a blow.

Although the rules for deriving usable truths in and from fictions are always culturally specific, everyone does it. All groups produce, appreciate, and encourage members to infer meaning from a variety of forms of elaborated activities such as narrating, dancing, or painting. Everywhere, the performances of art form a continuum with the rest of life; works of imagination rely on the same human brain, the same neuronal powers that subserve the other aspects of cognition, all having evolved to prepare people for future action by predicting what will be needed. Converging theoretical claims and empirical evidence are beginning to demonstrate how fiction boosts the prospects of survival by prediction. And it is the freedom of playing around that underwrites its predictive power.

In their search for evidence that creative texts can indeed make a difference to the survival of individuals and groups, cognitive literary scholars have taken a range of interdisciplinary paths. Liza Zunshine’s *Oxford Handbook of Cognitive Literary Studies* is a good survey of many of these. Although they take many directions, all share a commitment to the recognition of the embodiment of cognition. With some variation, we use the concept of embodiment and the complementary notion of fit as we try to articulate what it is about fiction that warrants a claim for its value beyond its evanescent pleasure. In this, cognitive literary theorists join other students of culture in recognizing that early singers of tales were acting; that is, they were using their bodies, including the body parts inside
the skull just as hunters, sculptors, and drummers would. Mark Johnson describes the linkage:

In order to have human meaning, you need a human brain, operating in a living body, continually interacting with a human environment that is at once physical, social, and cultural. Take away any one of these three dimensions, and you lose the possibility of meaning: no brain, no meaning; no body, no meaning; no environment, no meaning.\(^6\)

Assuming this dynamic and multidirectional interchange, cognitive literary theorists recognize what Susan Oyama calls the process of “constructivist interactionism.” People have evolved their many cultures in a dynamic of need and possibility. Human life is not unidirectionally reactive but circularly regenerative. Homeostatic processes sense imbalances, make repairs, and improvise adaptive improvements—stopping only at death.

Literature and the plastic arts play out in similar circularity, according to genre contracts that evolve within groups. Since meaning must be shared to be functional, the rules that guide the production and understanding of creative work are constructed and revised by communal and public negotiation. People not only infer, or symbolize, not only make inferences and understand indirection, they also communicate inferences and inscribe them for others and for future others to consider. Meaning relations that are given material form as sentences, laws, rituals, equations, poems, and pictures are available for our continued consideration, and also to others, for reflection, elaboration, and revision. There is no need to start from scratch; in every generation, speaking and writing, we build texts and pictures into libraries and museums that in turn encourage the production of more texts and pictures. Here is Andy Clark, describing the compounding interest of cultural cognitive achievement:

Courtesy of all that material public vehicling in spoken words, written texts, diagrams, and pictures, our best predictive models of the world (unlike those of other creatures) have thus become stable, reinspectable objects apt for public critique and systematic, multi-agent, multi-generational test and refinement.\(^8\)

But embodiment is also vulnerability. Human survival depends on fitting within a common environment no less than animal survival does. Herbert Spencer was the first to use the phrase, “survival of the fittest,” to describe Darwin’s theory of natural selection.\(^9\) A longer formulation is now required: The evolutionary success of a group depends on its being able to learn to cooperate sufficiently so as to manage its environment and to adapt as it changes. And the group must pass on that knowledge. Humans have evolved, in short, to build and live in cultures.\(^10\) Kin groups build these cultures, over time, as a set of mostly unarticulated agreements that guide expectations and beliefs.
Genres as Social Contracts: Encouraging Fit, With Flexibility

The genres of storytelling, in their diversity, can be thought of as social contracts that function in ways parallel to those of language, law, kinship, religion, and money. Each is a set of rule-guided abstractions encouraging a shared playing around within tractable but recognizable bounds. Each has developed a way of contributing to the building of culture, of helping people to fit together sufficiently and maintain the species. New genres are easily constructed for new purposes. This is a cognitive (if clunky) way of restating Horace’s recognition that poetry both pleases and instructs. Both assert not only that pleasure makes the learning go down easy, but that we experience learning as a pleasure because it is good for us. Recent descriptions of the advantages of playing around have been articulated by Hans-Georg Gadamer, Wolfgang Iser, and Jacques Derrida, among others. In their demonstrations of the dependence of meaning on its fit in context, the deconstructionist critics of the late 20th century seemed to be courting a dangerous indifference to truth. Indeed, their recognition of the impossibility of locking in a literal meaning for any word or text seemed, to some, to produce a pyrrhonist skepticism, as in Montaigne’s “Que sais-je?” What may seem like danger, however, actually provides the plasticity necessary to any dynamic system, biological or cultural, to both stabilize itself in context and adapt when the context changes. We are well served by the flexibility and relationality of words. We are satisfied when a fit is found; as from a satisfying meal or sexual pleasure. Fit or appropriateness, rather than truth or falsity, is often the more useful way of describing large swathes of human meaning and performance. It is often (not always) the case that the truth of something doesn’t matter as much as its being the right action or representation in the right time and place.

J. L. Austin used the adjectives “felicitous” and “infelicitous” rather than true or false to describe the distinction most important to cooperative conversation. Speech acts are felicitous within the context and among the speakers for whom the conventions of language provide support. They are meaningful as they are situated and only as such can they be judged as cooperative, appropriate, and effective (or not). In the face of this apparent abandonment of truth, some literary scholars argued that a turn to empirical science would strengthen the claims of literary studies to be a serious business. This claim, however, is undermined by the scientists themselves who have been uncovering and describing the importance of fit to function in context. Biology, neurobiology, and the various branches of psychology that depend on them, have been demonstrating the many ways in which life sustains itself through the play of interrelationality.

Fitting in for survival emerges as error tolerance and correctability. Organisms must be able to recognize a problem and adapt, to separate what is important in the context from what is not; then they must act to influence the environment. Using its own processes to survive and reproduce, life is an open and an ecological system, able to make use of what is outside itself. Success is optimal fit, often achieved as a result of serendipitous random mutation or play. At all levels of description, living communities thrive when playing...
around is allowed to produce just what’s needed to encourage the emergence of a configuration that can critique and enhance current understanding and practice. The claim, then, for the theoretical power of a biological understanding of the notion of embodiment and fit within a cognitive literary criticism is that it answers the worry that skepticism closes down inquiry by displaying the value of ambiguity. The abstract uncertainty of language, including the language of science and philosophy, is shown to emerge from a biological grounding that, at many levels, keeps life going under both constructivist and deconstructionist descriptions by being open to corrective, adaptive, re-use. Furthermore, the claim goes both ways. The recognition of the part that imaginative, indeed fictional, work contributes to the stability of social groups and to the group’s ability to adapt to changing circumstances contributes a human perspective to the biological and social scientific view of cultural life. Cognitive literary theorists are working to make these various levels of investigation fit together. Recognizing our overwhelming need for reliable accounts of the future, brain scientists have caught up with the poet, Sir Philip Sidney, who begins his Arcadia of 1580 describing his protagonist, Basilius, as vainly “desirous to know the certainty of things to come, wherein there is nothing so certain as our continual uncertainty.”

We have been learning that the brain itself not only affords but guarantees the cognitive creativity of prediction out of the uncertainty that Basilius bemoans. We now call it serendipitous plasticity and recognize its connection to play.

Play: Learning About Uncertainty and Coping With It

Gregory Bateson described the play of puppies as a metacommunication within a framework agreement: animals at play apparently signal each other at the start that no harm is intended. Bateson saw this signaling as analogous to other kinds of symbol use, for example, metaphor. More recent hypotheses about the uses of play, as surveyed by Gordon Burghardt, suggest that children’s play trains resiliency and flexibility and that adult play keeps up competence. Paul L. Harris’s review of studies of children’s imagination emphasizes the importance of pretend play as children learn to distinguish and use counterfactual alternatives. Patrick Bateson and Paul Martin, having studied animals and humans at play, argue that the activity “is about breaking away from established patterns and combining actions or thoughts in new ways. Playfully rearranging disparate ideas into novel combinations is a powerful means of gaining new insights and opening up possibilities.” Arguing for the adaptive value of art as play, Brian Boyd suggests that art trains our brains in pattern recognition, and then the best of it produces “unpredictable combination of patterns [that repay] intense attention and yield rich inferences.” Works of imagination, on this view, using standard cognitive equipment, bridge gaps and uncertainties with new hypotheses, presenting new patterns as possibilities. The provision of alternatives contributes to the survival of the species by providing warning messages about dangers and misfittings; playing around with the old and new alternatives, on this
view, keeps the players in practice, ready to hone predictive powers and make appropriate adjustments.

Tracking metacognitive possibilities and recognizing the uncertainty of interpretation is not a novel activity for literary scholars. Artists themselves often explicitly request that their audiences acknowledge the play of possibilities. Varying values are often taught by the texts themselves. Chaucer’s Nun’s Priest defends his fable of talking animals—Chanticleer and the fox—citing the apostle Paul. Concluding, Chaucer has the priest admonish his pilgrim audience:

Ye that holden this tale a folye,
As of a fox, or of a cok and hen,
Taketh the moralite, goode men.
For seint Paul seith that al that writen is,
To oure doctrine it is ywrite, ywis;
Taketh the fruyt, and lat the chaf be stille.²³

That the tellers of tales felt the need to remind their audiences that even an apparently fantastic story can be fruitful is itself evidence that fictions do not immediately speak for themselves. To put it sternly: if you want results, do some work. Conclusions reached are not tightly restrained. Chaucer’s audiences hear three different morals following the same events: one each from the Nun’s Priest, the fox, and Chauntecleer the cock.²⁴

More recently, Elena Ferrante reminds her readers of the need to play. In the first of her Neapolitan quartet, *My Brilliant Friend*, the narrator describes her own process of learning how stories work via the history of her friendship with Lila, joint protagonist, from the time they were both children playing with dolls.²⁵ In the first pages, she asserts that now at the age of sixty-six she will tell “all the details of our story.” By the end of the fourth book, *The Story of the Lost Child*, she has indeed told her story of becoming a writer. She begins the last of the four books reiterating her hope that writing will bring clarity. “I want to seek on the page a balance between her and me that in life I couldn’t find even between myself and me.”²⁶ By the end, she has, finally, found an image that makes the story reflect on its own work. Her narrator-protagonist has just received in the mail, anonymously, a package containing the two small dolls that had been hers and Lila’s—the same dolls that were lost down a cellar grate early in their story.

I examined the two dolls carefully. I smelled the odor of mold, I arranged them against the spines of my books. Seeing how cheap and ugly they were I felt confused. Unlike stories, real life, when it has passed, inclines toward obscurity, not clarity.²⁷

In these last sentences she acknowledges the precariousness of the work of fiction. Throughout, she has explicitly illustrated the importance of books and their power to change the direction of individual lives: school books, library books, books lent or even written by adults in their world, newspapers, periodicals, and also a story written by Lila as a schoolgirl, which is valued differently by different characters. Not just the books but literacy itself has helped her recover from her early painful childhood, as represented by the disappearance of the dolls. Experienced readers of fiction recognize the power of
closing lines as an author’s last offer of “moralite.” The recovered dolls, once beloved but now seen as “cheap and ugly,” unsettle her adult trust in the power of her novel writing. Postmodern writers, apparently, cannot be as certain as was Chaucer’s Priest of the value of fictions.

The claim for fiction, nevertheless, from Chaucer to Ferrante, is that imagined stories nourish our search for the invisible patterns that structure our social and material environment and that reward consideration. Our cognitive systems are evolved, it seems, to infer the meaning of signs—insubstantial, fictional as those signs may seem. They produce neural (i.e., chemical/electrical) reality: what else? We learn by indirections to find directions out. Growing children in all cultures are taught by example and explicitly how to produce the kinds of meaning valued by their elders. But if they are to use what they learn predictively, they must also learn that the words and actions of others can be misleading and that they must judge the trustworthiness of sources. In complex texts for adult readers, inferring the lies beneath the fictions—the inaccuracies, irrelevancies, or deceptions—is crucial to the value and the pleasure the text provides.

What Does Cognitive Literary Study Add?

Even though few cognitive literary scholars actually work in labs, we have added several additional levels to the investigation of how these various aspects of metacognition get done and how readers play with fictions to uncover intentions, judge deception, and assess reliability. Learning from cognitive philosophers, evolutionary anthropologists, and brain scientists, we have found some new cognitive/phenomenological and neurological perspectives. It has been possible to add another level of analysis, derived from work on the neurophysiology of brain processes and connectivity, to the work of developmental psychologists on children’s growth in understanding others, in particular to their studies of how making meaning varies among heterogeneous readers and audiences. My example here concerns the process of inference, an activity so fundamental, as Hugh Mercier and Dan Sperber have recently written, that people “cannot spend a minute of their waking life without making inferences.” Their claim is that in spite of how the term inference is used in logic, most inferencing is non-conscious and thus does not manipulate reasons in a logical way. Based on a combination of gut feeling and past experience, it is hardly watertight, but it’s what we mostly use as a guide for ordinary behavior, for better or worse.

Necessitating and driving inference at all levels is what Andy Clark and Josefa Toribio call “representation hungry problems.” Narratives and the allegories and metaphors within them belong to a class of problems (challenges, riddles) that “involve reasoning about absent, non-existent, or counterfactual states of affairs.” They are difficult because the relevant features are not open to surface inspection but must be inferred. If you are asked to identify all the red objects in the room, your response might be uncomplicated. If, however, you are asked to identify all the valuable objects in the room, the relevant regularities have to be inferred. Cognitive scientists take this ability to infer the unseen as so axiomatic that it usually isn’t even mentioned. Language itself could not have evolved with-
out the brain’s being able to recognize that a sound can stand for something not present to sight or that may not exist; learning to read performs the same trick: marks on paper stand for the sounds of a language we know. Linguists and anthropologists refer to this as symbol use. In our discussion, symbol use is functionally the same as inferring, metaphorizing, and making use of fictions. They all rely on a brain operation that is indirect and insecure but constantly needed and always turned on, and always, of course, working in a limiting context.

The Constraints of Context

Cognitive literary theory can offer newly embodied insight into a situation that has always been recognized, namely that communities judge, often actually enforce, interpretations in ways that satisfy inherited ideas of acceptability. What is the story of Jonah about? It’s about a man swallowed by a whale. But since its value cannot be to incite action—no need to run down to the shore and help the sailors—we recognize it as representationally hungry. We search for its value in further abstraction, to be arrived at by inference. This searching is playing around, mind wandering of a sort that is not very strongly restrained, looking for the catalyst that will turn the images into a reading acceptable to local interpretive contracts. The rabbis of the Mishna provided several ways to read the story of Jonah. One describes Jonah as a man who flees from God’s instructions but ends by learning about God’s power and mercy, inferring further that God’s commandments should be respected and obeyed. For another, the lesson is that repentance is always acceptable. The same inferential procedures, in a different population, produce a parable that prefigures Jesus’s three days in the tomb, Jonah’s emergence from it alive being a sign of Jesus’s promise of resurrection. Part of growing up into a culture is learning how local contracts of interpretation nest within larger ones. Our human brains actually can’t avoid making inferences about the intentions and beliefs of those who tell us stories, but the elders within your community will let you know how they expect you to use them. And with or even in rebellion against the guidance of communal models of interpretation, our human minds produce interpretations of intention by making assumptions and guesses, trying out patterns, and searching for representations that might satisfy. We make a lot of mistakes. But for just that reason, we continue working at it.

Description at the Psychological Level

Cognitive developmental psychologists have been studying the ways people infer the beliefs, desires, intentions, emotions of other people under the headings of Theory of Mind or mindreading. Because the hunger for clarity about the contents of other minds had and has survival value, mindreading, as a default reaction to the words and actions of other people is one of the most important uses of our evolved ability to predict what is about to happen around us. It is another way of talking about the brain’s search for explanatory regularities we need to take account of, when direct evidence is not available, which means—in the case of other people—almost always. Even very young children construct,
evaluate, and navigate their social environment. Neurotypical children practice everyday inferential processes not only on siblings and parents but on the characters in stories, even when they are animals (Peter Rabbit), stuffed toys (Hobbes), or machines (Thomas the Tank Engine). Children’s stories, like adult narratives, are often built around misunderstanding; like readers, characters within stories misread signals. Lisa Zunshine described readers’ understanding of fictional characters as engaging their everyday Theory of Mind, including their ability to keep track not only of what characters think, believe, and intend, but how these fictional beings recognize (or not) and assess the beliefs of the other characters as well.

**Description at the Neurophysiological Level**

The hypotheses about Theory of Mind were enlivened in the last years of the 20th century by discoveries by brain scientists. Working with macaque monkeys, researchers were surprised to observe that the motor neurons activated during the monkeys’ performance of an action are also activated when the same or similar action is merely observed in others. They demonstrated that these same neurons, named mirror neurons, “map a given motor content like “reach out,” “grasp,” or “hold” not only when controlling performance, but also during perception when performed by someone else, when imitating it, or when imagining performing it while being perfectly still.” This work provides, according to Vittorio Gallese, nothing less than an empirically grounded notion of “intersubjectivity . . . as intercorporeality—the mutual resonance of intentionally meaningful sensorimotor behaviors.” Some of these scientists have attempted, through further experimentation with animals, to demonstrate that the mirror neuron system supports the understanding of inference about the contents of other peoples’ minds as well. It certainly sounds like the physiology of the mirror-neuron system might be what drives the Theory of Mind. But since the empirical work that has been conducted thus far has been only on animals, further empirical evidence will be needed. Help is available, in the meantime, from the predictive processing hypothesis.

**Predictive Processing Hypotheses**

The predictive processing hypothesis comes in several varieties, all of which attribute human survival to the neural attunement of behavior to future challenges and possibilities. People must make predictions allowing appropriate action, a large part of which must be guessing the intentions of others. Lacking direct connectivity between minds, of course, these intentions are rarely transparent. We learn early that it is a good idea to keep one’s thoughts and beliefs to oneself, or even to lie about them. The cognitive system, however, is always at work. Based on past regularities and estimates of the probability of their recurrence, neural networks produce predictions from innate and grown connectivity among sense receptors and processors at different internal levels of abstraction. The present, however, is almost never exactly like the past, so that a system relying on old or obsolescent information is regularly and predictably going to get things wrong. A mis-

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match between expectation and the current situation produces an error message, which prompts a revised signal: that is, another attempt to bring the prediction into attunement with the current stimulus. The system is continually predicting, judging, rejecting, and reconstructing inferences on the basis of images and data from as many sources as are available. Success is not measured by accurate representation but rather by the emergence of a pattern that meets immediate needs for action.

The cognitive system takes new information and calibrates or calculates according to the perceived strength of the prediction working to identify it. In biological terms, it is a metabolic system; in computational terms, a Bayesian system, that “trades in probabilistic predictions, inflected at every level by changing estimates of our own uncertainty.”

In a physicist’s view (Schrödinger’s) brains make “order from disorder.” Each person does this according to the experiences that have trained his or her brain; the world, then, is exploited, time and time again, to reduce the complexities of neural processing by means of canny action routines that alter the problem-space for the embodied, predictive brain . . . [At the same time, the brain is learning] how to predict our own evolving sensory states—states that are responding both to the body-in-action and to the world. A good way to predict those changing sensory states is to learn about the world (including our own body and actions) that is causing the changes. The attempt to predict the play of sensory stimulation can thus itself be used gradually to install the very models that will enable the predictions to succeed. The prediction task . . . is thus a kind of ‘bootstrapping heaven.’

Individual performance plays out differently, depending on the connectivity with other neuronal systems, the strength of available neurotransmitters, and other aspects of the internal environment such as available nourishment, but since the species has survived (so far), the system is apparently good enough. Failures, error messages, and speedy self-correction, rather than patient data collection and considered judgment, are the ingredients of successful brain work. The view of the brain as curator of a memory museum and processor of perceptions gives way to a dynamic picture of a relationship between internal and external images/memories. Our past experience is a storehouse of reusable parts, all available for further exploitation by reconnection. But it is the error messages that drive the system. The closer the prediction is to the percept, the weaker the signal: thus, the mismatches are what command attention. They are what provoke a search for something better. Epistemic success, on this view, depends on the surprise of an error message, provoking a stronger signal and a revised response. It is error that is news—and worth noticing.

Of further interest to us is the work of Rebecca Saxe at MIT. Working with Jorie Koster-Hale, Saxe has sought the connection between mirror neurons and Theory of Mind. She argues that since the internal models that provide the predictions are constructed out of “the individual’s beliefs, personality traits, and social norms,” the speed of a satisfying response to a stimulus, object, or person, then, is a measure not of universal value but of fit
or attunement of the parties to the transaction.\textsuperscript{43} Attunement, here, is a complex state, involving not only familiarity from past history but a current level of attention, arising from interest and/or immediate need. It is hard to resist seeing this as a job description of a 19th-century novel: like the brain, the novel produces and manipulates available information, adjusting and reassembling it in context for the desired outcome. The readers' pleasure arises from the surprises, the news, the error messages.

Taken together, then, the entailments of both the psychological level and the neurological level allow us to rethink an issue that has been recently contentious in literary theory, and that is how much and what kind of attention should be paid to the intentions of artists and writers. Although Basilius laments our failures to predict, we see wide agreement that we predict constantly. The neurological work provides both a useful distinction and an important link between the biology of bodies and the meaning of behavior. First, we see that the neural circuits are the embodied platform on which the structure of our human intercommunication with the world of objects and people has been built over the millennia of evolution. The scientists identify the mirror neurons and the error messages as serving the cognitive processes philosophers talk about as intentionality. Being able to separate the physiology that underlies the process of inference from the second and separate issue, namely, the ways in which various aspects of social evaluation makes use of that potential gives us, as literary theorists, the advantage of being able to talk about their different claims on our attention.

\section*{How Does This Fit with Current Literary Theory and Criticism?}

Cognitive literary theory offers an enlarged perspective on why it is that artists and audiences are attentive to what is new and different. Picking up a pen, opening a book, or entering a theater or a museum, one steps into a circle dance, holding out hands to others already engaged, signaling an interest in further stimulation, and ready to adapt to find satisfying attunement. We are ready to play: to convey or receive news. The analogy between a neurological error message and a surprisingly creative text, picture, or performance is irresistible, and the parallelism is another demonstration that everyday cognitive processes are not turned off for fiction, especially when the fiction is new, and may be hard to understand. A social group that is provided with a constant supply of fictions is, on this view, furnished with a constant supply of error messages, a to-do list of rearrangements to be considered. An echo is heard here of Karl Popper’s advice to make the mistakes as fast as possible, and even of Aristotle’s explanation of our enjoyment of tragedy and catharsis.

With so many kinds of fictional stimuli available, and so many different degrees of surprise as ways of delivering news, it’s hard to understand what the argument could ever be for restraining play by limiting one’s consideration to attempts to recover authorial intention.\textsuperscript{44} But the answer, which has already been given, is that it is easy for us to meet new forms of communication since our inference/intention antennae are always on the

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alert. But fiction offers more: additional meaning in metaphors and analogies, additional depth in the story of Jonah or of the small dolls that have been returned. Why would one say no when works of imagination offer the opportunity to play around with something new? And since our human brains cannot help producing inferences of intentionality, as literary historians we surely will continue to investigate the author’s loops of experience and context. Here, too, however, we would be attending to something rather more complex than the recovery of intention—something salient to our own current interest.

Consider, for example, the implications of literary critical assertions from the last quarter of the 20th century, of our right to remain uninterested in the intentions of a faraway or dead author. What if we consider them as error messages rather than as assertions? Judith Fetterley, in 1978, was one of the first readers to set childhood’s dolls on her bookshelf, reconsidering the work of several canonical American authors. Women readers of Hawthorne, Fitzgerald, James, Hemingway, Mailer, she observed, had taken base metal for gold in agreeing that authorial intentions were determinative and had allowed these authors’ images of passive, naïve, and foolish women to shape their own self-understanding. They had put themselves in danger, thereby, and had indeed been damaged by their reading instead of informed. Almost forty years before Zunshine and before Mercier and Sperber published their claims about the mind’s constant, inevitable, but not necessarily reasoned production of inference, Fetterley called on readers to notice the ease with which they fell in line with these men, failing to resist them. Women’s interests, in Hemingway’s *A Farewell to Arms*, for example, had not only been ignored but actually silenced by death, such that the voice of the male protagonist—in her resisting reading—could be preserved as the tragic hero. Fetterley was rapidly joined by others in noting that the dangers of these assumptions were kept hidden by the failure to understand the nature of the distinction between the neurological facility of inference making and their culturally shaped content.

Developments in other communities of readers expanded these insights, describing the danger of such suppressions. These biases had been taught, it was argued, and could be unlearned: the distinctions between fruit and chaff aren’t universal or permanent. Recognizing that intentions are entangled with social agendas was more than half-way toward recognizing what the neurology has documented, namely that even if indeed the potential and the motive for discovering intentions are universals, there is a liberating difference between the evolved connectivity that contributes to the survival of the species by producing an unending supply of predictive inferences and the cultural systems that teach how to make them meaningful within a local context. Chaucer knew this. The contrast we need, then, is not between everyday language processing and a special kind of understanding for imaginative work but rather a distinction between levels of processing from different sources and sources that almost always connect insecurely. What appears on a page of *Pride and Prejudice* as Elizabeth Bennet’s recognition of her mistaken assessment of intentionality results from the connections and reconnections of an equally wide array of sensory messages read as her own feelings and fed into a wide array of social signals, many of which ordinary language philosophers have described. The connectivity being so complex and particular to each individual, it would be impossible for any
such circuit, even though it emerges from common human biology, to be singular. It’s the flexibility itself, including its uncertainty, that is so valuable. As infants and then as adult readers we learn how to use what we’ve got to discover new patterns that will let us cope with—maybe even welcome and enjoy new experiences and surprises—but also recognize potential threats. As children we have learned that there are times and places—assigned contexts that encourage the re-use and reconnection of current experience and the playful exploration of new possibilities. On the alert for intimations of intentionality, we become sensitive to potential realignment; we may like or dislike this one, accept or reject that one. The cognitive perspective has provided a theoretically significant distinction between potential and performance. And it is the very gaps—the places for slippage between potentially connected parts—that afford the possibilities of creative realignment.

Conclusion

The answer to the question, then, of how playing around with fictions can animate and encourage communal flourishing is that playing can provide creative disruption. The contribution of cognitive literary theory is to expose the relations between the formal and thematic interpretations of these works on the one hand, and on the other, the biological analogues that support them. In the example of the predictive processing hypothesis, the neurology distinguishes two aspects of inference: the potential and the cultural. This is a difference that describes the turn among literary theorists on the issue of deference to authorial intention. It provides a new description of how people manage the linkage among individual minds, communal contracts, and creative texts. Cognitive hypotheses describe the physiology that affords the loosening restraints on interpretive procedures that cultural shifts have been encouraging.

In my own work, I have encouraged literary scholars to recognize evidence of useful disruption—one that signals hunger and initiates a metabolic response that affords a satisfying replenishment. Evidence of creative disruption is detectable throughout the history of literary forms and popular taste. Understanding how brains meet and work with fictions, we can ask how audiences including scholars and critics play around with Philip Roth’s novels, Coen Brothers movies, Super Bowl advertisements, the mosaics in Ravenna, Shakespeare’s sonnets, and an everyday run of political slogans, jokes and riddles, re-using them for current use—or not. At the same time, however, we surely notice that the openness of fictions to playing around also underwrites their negative uses. We connect here to the study of rhetoric with its awareness of the public power of patterned language to persuade and propagandize by directing our making of inferences. Maybe we need to keep looking in both directions at once.

Further Reading

Cognitive Poetics


Notes:


Cognitive Poetics


(18.) Clark, *Surfing Uncertainty* reviews this work.


(27.) Ferrante, Lost Child, 473.


(30.) Hugo Mercier and Dan Sperber argue that reasons follow (rather than precede) intuitive guessing; what seems like reasoning is “opportunistic” exploitation of regularities already grasped. See The Enigma of Reason (Cambridge, MA: Harvard University Press, 2017), 55.
Cognitive Poetics


(32.) Matthew 12: 40-41.


(39.) Clark, *Surfing Uncertainty*, xv.


(41.) Clark, *Surfing Uncertainty*, xv–xvi.


(44.) To be fair, here is the argument of philosopher Joseph Margolis comparing the perception of artwork to the perception of speech in one’s native language: “Artworks possess, where ‘mere real things’ do not, Intentional properties . . . And . . . in perceiving artworks we do perceive them as possessing intentional properties.” See Joseph Margolis, *What, After All, Is a Work of Art?* (University Park: Pennsylvania State University Press, 1999), 35, 37.


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