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Cognitive Literary Studies: A Conversation with Marco Caracciolo, Monika Fludernik, Patrick Colm Hogan and Karin Kukkonen

Chiara Mutti

Università degli Studi di Milano

Abstract – The article proposes a conversation on Cognitive Literary Studies with Marco Caracciolo, Monika Fludernik, Patrick Colm Hogan and Karin Kukkonen. Starting from a methodological reflection on the interdisciplinarity of this field, the scholars were asked to consider its foundations by focusing on the relationship between science and literature, and lastly to ponder the prospects of narrative theory, cognitive narratology and literary universals. The interview is preceded by a brief introduction which attempts to outline its purpose.

Keywords – Cognitive Science; Literary Theory; Narratology; Literary Universals; 4E Cognition.

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Chiara Mutti Università degli Studi di Milano

Introduction

Over the last thirty years, scholars in the humanities have integrated findings from cognitive sciences into their research. However, the pluralism that chacracterizes cognitive literary studies undoubtedly challenges any attempt at mapping its outcomes. Introductions to cognitive approaches to literature (see, e.g., Richardson; Zunshine "Introduction to Cognitive Literary Studies") generally call the reader's attention to a multiplicity of instances and levels. On the one hand, insights from psycholinguistics and cognitive psychology to neuroscience, have opened new perspectives in multiple domains within literary studies—especially in narratology, stylistics and reader-response theory. On the other hand, a significative shift that took place within the cognitive paradigm allows to identify "first-generation" and "second-generation" approaches, which differ greatly in terms of philosophical and methodological assumptions.

Second-generation approaches—which are nowadays commonly referred to with the "4E Cognition" label—emphasize the interaction between the human mind-body and its natural and cultural environments. Moreover, they foreground the centrality of emotions and affect in analyses of cognition. Consequently, the compatibility between some features of cognitive sciences and the interests of literary studies has increased, and a rising number of literary scholars is therefore drawing on research produced in the context of e-approaches to discuss literary concerns and theories (see Kukkonen and Caracciolo, "What Is the 'Second Generation'?'). Hence, rather than focusing on the boundaries within cognitive literary studies, it seems more suitable to embrace the diversity and the dynamicity of this growing field.

The ambition and the purpose of the present article is therefore twofold: firstly, it aims to enliven the current debate on cognitive literary studies, and secondly it purports to suggest potential directions in this area of enquiry. For this reason, four international scholars from narrative and cognitive studies and literary theory accepted our invitation to be interviewed on this broad set of concepts and theories. They are Marco Caracciolo (Ghent University), Monika Fludernik (University of Freiburg), Patrick Colm Hogan (University of Connecticut) and Karin Kukkonen (University of Oslo)—to whom I would like to express my gratitude for their willingness and their enlightening contributions.

Far from being exhaustive, this conversation aims nonetheless to address some core topics, which we gathered in five sections. The first section deals with a primary aspect of cognitive

¹ This is the terminology coined by Lakoff and Johnson in *Philosophy in the Flesh* (1999): first-generation cognitive sciences take cognition to be defined in representational terms (drawing on a computational conception of the mind), while second-generation approaches insist on the embodied nature of cognition. However, the authors point out that this distinction "has nothing to do with the age of any individual or when one happened to enter the field" (78).

² The term '4E' was coined by Shaun Gallagher at a conference in Cardiff and stands for the embodied, embedded, enactive and extended nature of mind. Nevertheless, it should be noted that the same proponents of 4E Cognition do not share the interpretations of these E's. For an in-depth analysis see *The Oxford Handbook of 4E Cognition* (2018), edited by Newen et al.

literary studies, that is interdisciplinarity, and reflects on the methodological concerns it can raise. For instance, in "How many Turns' does it take to change a discipline?", Paul Dawson underlined that, despite it recently seems to have become axiomatic that "narrative theory is inherently interdisciplinary" (Dawson 414), the potential of cross-faculty interdisciplinarity is rarely realized in practice. Crucially, one could argue that this is even more problematic for those (such as cognitive literary scholars) working at the intersection of the sciences and the humanities—the so-called "two cultures" (see Snow)—which constitute the two terms of the traditional dichotomy between *Naturwissenschaften* and *Geisteswissenschaften* (see Dilthey; see also Gadamer's "truth and method" distinction). According to Tony E. Jackson, at the beginning of 21st century this split was still in place, so he warned against ignoring the epistemological divides by asking: "how can cognitive science be blended with the study of literature in such a way to preserve the dialectical meaning of literary interpretation?" (Jackson 204).

In the second section, the conversation leads us to focus on the relationship between science and literature, attempting to outline the continuities and/or discontinuities between the cognitive approaches to literature and the 20th theoretical canon. This issue not only alludes to the project of the "science of literature" of Russian Formalism and of Structuralism, but it also recalls the concerns and the skepticism with which many scholars look at the *cognitive turn*, denouncing what they perceive as a neopositivistic drift, which relies on rigorous scientific models and empirical methods in order to overcome the legitimacy crisis of the humanities.

Lastly—to underline the plurality of this field of study—, one 'individual' question was posed to each scholar, with the aim of shedding light on their recent research projects and/or on their areas of expertise. Thus, with Marco Caracciolo and Karin Kukkonen we reflected on the 4E's perspectives within the narrative theory; then Monika Fludernik gave us her insights on the emerging vectors of cognitive narratology and eventually, literary universals and cognitive cultural studies were the issues addressed with Patrick Colm Hogan.

The format of the interview allowed the four scholars—each bringing his/her own distinct viewpoint and background to the discussion—to engage with the queries rapidly and to highlight some issues. Although this was not a 'real' conversation, as their answers were collected at a later stage and grouped together by subject, the authors did not proceed on parallel paths, but they unwittingly managed to intertwine their argumentations and to focus on pivotal points and common issues. To name but a few: the difficulties of interdisciplinary work in the humanities; the frequent metaphorical applications of cognitive concepts and their dissociation from their encompassing theories; the lack of common terminology and the damage of alleged technical language; the science/interpretation difference; the need for stronger empirical foundations to be built in cross-faculty dialogue.

Overall—despite some differing opinions—the main intention seems that of looking at cognitive research as an opportunity to be explored within literary studies both with optimism and caution, also assuming that neither can every literary question be addressed with cognitive tools nor should cognitive narratology necessarily overshadow more traditional forms of literary study. As a result, the readers may benefit from these unaligned perspectives and the consecutive reading of the text will provide stimulating reflections—other than a dialectical movement—which I hope will be kept alive by the readers and will foster new conversations.

1. A matter of method

Chiara Mutti – Assuming a cognitive lens in literary studies involves a particular placement in the theoretical field. On one hand, Porter Abbott compared cognitive literary scholars to "pirates who plunder for their purposes troves of hypotheses, bright ideas, and rigorous scientific work." On the other, Lisa Zunshine exhorted students of cognitive cultural studies to think of themselves as "bricoleurs who reach out for the best mix of insights that cognitive theory as a whole has to offer". In a similar manner, Marie-Laure Ryan qualified cognitive narratology as an "interdisciplinary bricolage." The blurring of boundaries between different domains seems therefore to foster methodological eclecticism. What are the implications of such epistemological foundations? To what extent does this interdisciplinary dialogue entail risks? Also, how can a student juggle in this vast context of theories and statements?

Marco Caracciolo – The word "bricolage" tends to have negative connotations, but I don't see the eclecticism of cognitive approaches to literature as a problem, as long as we keep in mind that cognitive literary study is not *one* project, but an assemblage of projects with very different assumptions and methodological tools, all brought together under the same (loose) "cognitive" heading. (The exact meaning of "cognitive" is often left vague or unclear, but that's a question for another interview.) What I call the "processual approach" (Caracciolo 2016), for example, is fundamentally a reader-response project that extends current work on the psychology of reading. It has more stringent methodological standards than "thematic" or "analogical" approaches, which look at how literature engages with and represents mental functioning.

Thematic and analogical ways of practicing cognitive literary study rely on literary interpretation far more than processual approaches, which are fundamentally a branch of psychology invested in how flesh-and-blood readers read and respond to literary texts. This doesn't mean that literary scholars cannot contribute to processual approaches, but they must comply with scientific standards of knowledge production (primarily, empirical verification and the need to develop hypotheses that are narrow and concrete enough to be methodologically viable). That's something that scholars in the empirical literary studies community have done for a long time.

Literary interpretation—as it is practiced in the thematic and analogical strands of cognitive literary study—is much more flexible than the scientific method, and there are advantages and disadvantages to that flexibility. Nancy Easterlin (2012, 20), drawing on Marcus Nordlund's (2002) work, talks about the "unimaginable complexity of interpretation," and one way of understanding that phrase is to refer to the considerable *freedom* that the interpreter enjoys. When approaching a certain text, we can build on any kind of concept that appears to resonate with the text, and that of course includes concepts from the cognitive sciences. However, the results of that interpretive act may *not* reflect scientific standards: a 'good' interpretation is a compelling reading that offers an adequate and stimulating perspective on a text, but it doesn't really matter whether that interpretation is based on scientific evidence or not.

There is no reason why literary interpretation would want to bend to scientific standards. The value of interpretation—for instance, as a way of cultivating nuance and appreciation of cultural or interpretation—simply cannot be shoehorned into the scientific method. So, while literary interpretation may seem epistemologically weaker than scientific knowledge (certainly in the current cultural climate), it should not be dismissed as irrelevant or unimportant. This is a very long way of saying that, while I'm all for dialogue between literary studies and the (mind) sciences, I do think there should be a recognition of the different ways in which these disciplines operate, and that neither should be simply subsumed by the other. "Consilience" is a good idea in principle (Wilson 1998), but in practice—if it means a scientific takeover of the humanities—then it's an unhelpful goal.

So, to return to the question of eclecticism, that judgment seems to depend on the fact that cognitive literary study is actually built on different ways of talking to the sciences, with different conceptual and methodological commitments. But that diversity is an opportunity, as long as scholars remain aware of, and make explicit, the rules of the game they are playing: for example, an interpretation is not superior to another interpretation just because it is based on more up-to-date scientific models; but if one is trying to say something about reader response, then the rules of scientific knowledge production *do* apply. Speculation is important, too, of course, as a heuristic tool or for theory-building (see Caracciolo 2014, 11–16): but a truly "processual" approach cannot do without some form of empirical corroboration and ideally verification.

Monika Fludernik – I think that there are different areas of the application of cognitivist thinking, some more eclectic than others. When Manfred Jahn started applying insights from cognitive studies to narratives, he—like Moshe Ron or myself—focused on general principles relevant to the workings of the mind, for instance the primacy or recency phenomenon (how readers either continue a frame that has been introduced initially until a reorientation to a different frame becomes necessary; or that what has been the most recent frame is taken up again/continued). The Schank/Abelson delineation of frames and scripts has been extremely influential in the 1990s, as has been the concept of prototypes. These terms and the concepts behind them can be applied to literary texts on a variety of levels, for instance in terms of genres, but also in application to the use of anaphors in narrative texts (continued use of he or she until new characters or new focalizations emerge). One of the most exciting aspects in narratology for me was the fact that Stanzel's organically conceived narrative situations turned out to be actually prototypes, with fuzzy edges and gray areas in which they merge into one another. From the other side, I find Mark Turner's analyses of storytelling as based on conceptual integration theory entirely convincing and fascinating. In fact, blending processes in narrative are an area that still has a great deal of potential for development.

I think the problem that you have mentioned is particularly pronounced for second-generation cognitivists and 4E-cognitivism because these studies have tried to immerse themselves into cognitive science and terminology, taking their interdisciplinarity seriously. However, between various concepts in cognitive studies based on brain research and the literary texts to which they are being applied there is a huge gap—mostly because cognitive science is looking at the brain and brain performance, and literary texts (and the literary critics studying them) are focusing on words on the page, sentences, language, grammar, but also on represented fictional worlds. The application of cognitive concepts therefore often tends to be more metaphorical than is being acknowledged; or it may be less successful in really explaining how the text works or in providing new or worthwhile readings of a text.

There is a third mode of approach, namely the empirical one, and that has taken huge strides since the 1990s. I am very impressed by scholars like Jan Alber who are now doing research together with cognitive scientists. In this area, too, there are problems because the kind of experiments one can set up are usually not complex enough to really explain how literary texts work. But the field is evolving very fast, and having literary scholars participate in the generation of experiments is very important because they are aware of all the complexities of literary texts and can help to avoid reductive views of narratives and overly simplistic patterns.

Patrick Colm Hogan – All three of the scholars cited in this question are writers who have contributed valuably to narratology and cognitive literary study. Moreover, if one interprets their claims as descriptive, they do seem to reflect common practice reasonably well. Students of literature often pick up a few ideas from cognitive science (or other technical fields) and

link them with apparently parallel phenomena in literature, even if the parallel goes little beyond a coincidence in the use of one or two terms. For example, I was in a seminar on cognitive approaches to literature at a Shakespeare conference a few years ago. One of the participants explained to me that he worked on performance and was therefore most interested in theories of embodied cognition. True, theater performance involved actual bodies in a way that a printed text does not. But it seems that, for example, emotions are fundamentally relatively abstract appraisals of value or (alternatively) concrete, embodied experiences, whether one is trying to explain a character's emotion in a text or in a performance. (I realize that this oversimplifies both appraisal theory and embodiment theory. The point is merely that both theories apply to both reading a text and watching a performance). The latter does, of course, involve visual cues to the characters' emotions, but those too are treated by both approaches.

Consider a widely familiar case, not from cognitive science, but from the partially related field of Analytic philosophy of language. Judith Butler has taken up the idea of performativity in part from Speech Act theory. There, it refers to utterances that create the named condition rather than merely describing it. Many academics are enthusiastic about the idea that gender is "performative." As Butler puts it, acts which supposedly express a gender "are *performative* in the sense that the essence or identity that they otherwise purport to express are *fabrications*"; thus, "the gendered body . . . has no ontological status apart from the various acts which constitute its reality" (173, italics in the original).

It seems likely that the actual situation is roughly as follows: There are (1) some (in my view, very limited and merely statistical) gender differences in capacities and inclinations given by genetic endowment and intra-uterine environment. There are also (2) early, enduring differences in "critical period" socialization or enculturation, and (3) later, more changeable dispositional differences produced by training (e.g., in a given society, adult women come to have skills doing things that adult women generally do, but adult men usually do not do). There are also (4) differences that are not a matter of disposition or training, but of self-conscious conformity, in response to social penalties associated with gender non-conformity. Finally, there are (5) common descriptive beliefs about gender differences, with no basis in fact, and (6) commonly accepted norms about gender—all of which we commonly refer to as "gender ideology." As far as I can tell, the very loose analogy between speech acts and gender serves merely to occlude these distinctions in the extremely vague notion of performativity, reducing the alternatives to 1) there is a genetically defined gender essence or 2) there is only "performance" (which is, again, hopelessly vague). Though Butler is far from a cognitive literary critic, she is engaging in the sort of bricolage—or piracy in Porter Abbott's engaging metaphor that all too often characterizes interdisciplinary work in the Humanities.

As the preceding comments obviously suggest, I am unenthusiastic about bricolage and piracy as *norms* for (rather than descriptions of) literary theory, whether cognitive or not. Indeed, I believe these practices constitute one of the main problems with literary theory in recent years. As just indicated, one of the likely consequences of plundering a theory for its "bright ideas" is that the theory will actually be discarded. Theoretical concepts can only rarely be detached from the encompassing theory while preserving their technical specificity, thus their descriptive precision and explanatory rigor. Indeed, dissociating concepts from their encompassing theories is largely a matter of plundering these theories, not for concepts at all, but merely for words. We tacitly use these technical words in vague and inconsistent ways, giving our claims an air of profundity, which is in fact just obscurity (on the benefits of [pseudo-profound] obscurity in academic publication, see Armstrong; see also Mahoney 33).

Karin Kukkonen – Interdisciplinarity is a difficult but rewarding endeavour. I think literature is a subject of investigation that is particularly well-suited for an interdisciplinary approach,

because it touches in one way or another on all aspects of human experience. From this perspective, cognitive narratology is only one possible way to realise the interdisciplinary potential embedded in literature. Cognitive narratology has now pursued research at the interface between cognitive sciences, psychology and philosophy of mind for decades. It has engaged in early enthusiasms, criticized its own beginners' mistakes and, multiple times, reinvented itself. This is a strength of cognitive narratology, I think. The repertoire of research on cognition, emotions and the mind that cognitive narratology engages in is broad. We have approaches from psychology and the neurosciences, of course, but also philosophy of mind and anthropology play a role. This diversity also has the potential to contribute to a productive dialogue between different approaches within cognitive narratology.

I don't think this is methodological eclecticism. Instead, it means that you have a choice. For analysing narrators or character relationships in literature, for example, you have a broad range of models on offer: Lisa Zunshine's (2007) "mind-reading," for example, is well-suited for narrative deceptions and sleights of hand. Yana Popova's (2015) enactive understanding of the narrator provides tools for analysing how narrators coordinate with narratees. Merja Polvinen's (2013) model derived from "joint attention" foregrounds the doubleness of literary attention, where the pointing gesture of the narrator and the events she is pointing to always both remain in view. Joint attention, then, also merges immersion and self-referentiality in literature. These are just three examples from a plentiful offer for theorizing a single element of literature, namely, the narrator. As a literary scholar pursuing cognitive narratology you need to make your choices consciously and listen to what the literary text demands.

I know that this doesn't make life any easier for students. I can recommend the Cognitive Classics website (https://cognitiveclassics.blogs.sas.ac.uk/) for a first orientation. They have a bibliography for "cognitive humanities," where both scientific and literary approaches for topics such as "attention" or "embodiment" are listed and introduced with short abstracts. It's a very handy website.

In choosing the method that the text demands, you might find yourself devising a new theoretical approach because none of the existing ones allow you to capture the aspect of the text you are interested in. This happened to me when I wanted to think about the ways in which embodied aspects of literary language do not just contribute to a static sense of presence, but also to movement, speed and the drive of plot. Here, predictive processing offered itself as a theory, because it thinks of bodily experiences and movements in terms of expectations of how, where and when we *should* find ourselves in the world (Kukkonen, *Probability Designs*). It wasn't possible to simply apply the theory from psychology and philosophy to literary texts, however, because literary texts function differently from bodily experience that isn't mediated to letters on a page. Engaging with that challenge allowed me to see more clearly what (I think) is special about literature: it designs a sensory flow for us, and thereby can appear as a realistic mirror of the world or as a strange, unnatural spotlight.

2. Science and literature

Chiara Mutti – Some scholars support the idea that the cognitive turn will finally lead to the development of a "scientific theory of narrative" that could provide a solidly established discipline with its own set of problems. Could we identify some continuities or discontinuities with the project of a "science of literature" outlined first by Russian formalists and then by structuralist theorists? Are second-generation cognitive approaches to literature grounded on the revision of the twentieth-century theoretical canon?

Marco Caracciolo – Yes, I do think one way of understanding second-generation cognitive approaches to literature would be to say that they are a revision and an extension of the theories formulated by the likes of Wolfgang Iser (see Bernaerts et al. 6). The revisions are highly significant: Iser paid very limited attention to affective or embodied patterns in reading, concentrating instead on more abstract (interpretive and cultural) dynamics, whereas it seems self-evident now that emotions are central to how fiction works. This is not to say that the cultural evaluations Iser focused on are unimportant, but they are steered by affective evaluations emerging at multiple levels in reading (see Oatley chap. 5; Hogan, *Affective Narratology*) and grounded in the body.

It's vital to keep in mind, though, that the presumed "scientificity" of cognitive literary studies is very different from the presumed "scientificity" of structuralism. When structuralist narrative theory positioned itself as a science, its primary model was Ferdinand de Saussure's structural linguistics, not the hard sciences. This means that structuralist thinkers like Algirdas J. Greimas or the early Roland Barthes saw *systematicity* as the main criterion for a truly "scientific" theory of narrative—hence the focus on comprehensive taxonomies ranging from the semiotic square to Gérard Genette's *Narrative Discourse*. In today's poststructuralist landscape, the dialogue with the cognitive sciences brings in a very different way of thinking about science, one founded more on empirical validation than on the possibility of systematic knowledge. In that respect, then, cognitive literary study—or at least what I call its "processual" strand—is not merely extending the structuralist project but doing something profoundly different.

Monika Fludernik - Reading the first sentence of this question, I immediately was on the point of saying: But a science of literature is an age-old utopia that was already in full swing with the Russian Formalists. In fact, narratology itself has often been seen as a science of literature, especially in its discourse grammar phase and in the manifestations of 'classical' structuralist narratology (Propp, Bremond, Lévi-Strauss). One of the problems about conceiving of a science of literature (and of narratology as supplying one) is that literature is always transgressive, it always exceeds the norms that are current. The norms or rules need to be there, but they are most often bent or creatively undermined and revised. What narratology has been very good at is in proffering an inventory of concepts and terms for the description of narrative phenomena. However, if one takes a scientific understanding of science as one's criterion to talk about a science of literary studies, there is little that could be called scientific in narratology, whether cognitivist or not. Narratology does not usually make predictions which can be falsified. Instead, if at all, one can project likely tendencies that may be observable, but there is no foolproof 'rule' that could be established. Thus, one could for instance argue that if a text has large quantities of free indirect discourse, it will most likely be written in internal focalization (Stanzel's figural narrative situation); but of course there may be extensive tracts of ironic free indirect discourse that showcase an aloof and sarcastic narrator persona.

What the 'scientific' approach is really aiming at is literary analysis that depends on more objective descriptive categories and avoids emotional gush or biographical preoccupations. To the extent that linguistics has played a crucial role in some narratological models (like mine or David Herman's), the descriptions of the textual surface structure or also of plot, focalization and style may be less impressionistic than they used to be in more traditional literary studies before the advent of structuralism. However, with literary theory gaining ground in the 1970s and 1980s, emotional and biographical bias was replaced by ideological bias. Reading literary texts symptomatically is theoretically much more respectable perhaps, but it also takes a very particular vantage-point: reading narratives in order to critique their unacknowledged collusion with patriarchy, their imbrication with capitalism or their complicitness with racism and/or

imperialism may end up doing much the same thing as New Criticism—instead of concentrating on the unity of the poem or short story and on the formal balancing in the text, one ends up implementing comparable interpretative schemas (how does the text deconstruct itself, find binary oppositions and invert them). This procedure resembles Kuhn's "science as usual," i.e. it follows a particular well-honed practice that is applied to the text (just like a familiar formula or analysis that is now applied to a new set of materials in biology or physics or chemistry), but the procedure as such is not more or less 'scientific' than applying linguistic analysis. What cognitive studies are doing is interdisciplinary work, but simply because it is interdisciplinary and because the source science is cognitive studies rather than history or archaeology or philosophy, this does not make the result of such research more 'scientific'. Particularly so because most such cognitive narratology does not take the principles of the natural sciences as their ideal model, but uses terms, concepts and insights from a particular empirical science. Adopting the notion of the black hole into the analysis of a literary text does not make that analysis more 'scientific', and one can see how any such use would necessarily have to be metaphorical. There is a closer correlation between narrative texts and cognitive science simply because narratives are products of human mental creativity, and cognitive studies deals with the human mind, but still there is no necessary scientificity to the use of cognitive studies per se.

What one would really need is a philosophical analysis of how cognitive studies can be married to hermeneutics. Perhaps this already exists, but I am unaware of the research, except perhaps in the work of Liesbeth Korthals Altes.

Patrick Colm Hogan – It is certainly the case that a science of narrative is possible—a science based on empirical study, with experiments designed to control variables, and so on. Of course, I am in favor of such a science, but with a few qualifications. First, I would not want such a project to eclipse more traditional forms of literary study, principally aesthetic and thematic (ethical or political) interpretation. I do not believe that science and interpretation are opposed. For example, both involve the same logical principles and depend on the evaluation of alternative hypotheses relative to data. Moreover, our interpretations are in part based on categorizations and associated properties, which may be developed through scientific research, and our scientific generalizations are reliant on interpretations of data. However, the two are different in their precise targets and concerns. Though the difference is not absolute, science may be said to be concerned with patterns across broad sets of data, patterns instantiated in many distinct particulars. In contrast, interpretation is concerned with the complex specificity of particulars, perhaps especially the deviations from general patterns that mark particulars as unique.

For example, when I consider Ngũgĩ wa Thiong'o's A Grain of Wheat as a sacrificial narrative, in a study of recurring story structures, I am concerned with what it has in common with other sacrificial narratives (e.g., the imagery of drought, then rain signaling national restoration) or with sub-genres of the sacrificial structure (e.g., those treating the death of an innocent character versus those treating the condemnation of a guilty character). However, when I interpret the play's political themes, I am concerned with what Ngũgĩ has to say about independent Kenya and the way the new government should treat the former revolutionaries and the former collaborators.

Moreover, I have some qualms about the development of a science of literature as it appears likely to proceed at this time. Specifically, it seems that we have not really overcome some of the basic problems with the development of such a science. For one thing, the idea of a scientific theory of narrative might be too general, something like seeking a scientific theory of the human mind. If we want to make substantive, explanatory claims about the mind, we need to specify systems of the mind, such as memory, and within those systems, we need to isolate subsystems, such as working memory. Of course, the delimitation of systems and

subsystems is part of any scientific undertaking and thus it is necessarily part of a science of narrative. But we need to recognize the limitations of our current knowledge, rather than committing ourselves to explanatory or other claims that may appear obvious only because our understanding of the alternatives is so limited. Such limitations exacerbate our ordinary inclination toward confirmation bias (see Nisbett and Ross 181–82) and result in part from our inadequately differentiated knowledge of the object of study.

As it happens, I feel that some of the possible problems facing a science of narrative at this time arise due to the continuing impact of Formalism (mentioned in the question). For example, Formalists stressed the idea of "foregrounding" as distinctive of literary language. David Miall and his collaborators have taken up this idea in an influential research program. Miall is one of a handful of pathbreaking researchers in the scientific study of literature. His work, including that on foregrounding, has been tremendously valuable. However, it has, I believe, been more limited than enabled by this reliance on Formalism. Specifically, he has argued for an analysis of literary experience along the following lines. Literary language involves a distinctive use of "features . . . such as alliteration, metrical effects, and figurative expressions" (194). These foreground the language of the text and therefore promote "a familiar experience to the status of being special"—that is, this foregrounding "dehabituates" us to the experience—"and opens it to the possibility of being re-evaluated" (196). He cites empirical support for this analysis, including extended reading time for foregrounded passages (193).

It is not at all clear that the various properties that putatively comprise "foregrounding" constitute a consistent concept of how one might have one's attention drawn to a work's language or that they in any way foster non-routinized reflection. Indeed, it is not even clear that being aware of language has much to do with literature as such; after all, we are likely to be aware of language in anything written in a foreign tongue we understand only partially, anything spoken so softly that it is difficult to hear, words printed in an unusual way (as in the Stroop test), and in many other contexts. It seems far more likely that readers' experiences are roughly of the following sort: Poetic traditions make use of alliteration, assonance, and other features because we encode them already and, as part of our general cognitive operation, we are sensitive to and enjoy the experience of novel patterns to which we are not habituated (see chapter one of my Beauty). Thus, there is no "dehabituation" here; rather, there is actual novelty, the presentation of something to which we are not yet habituated. (The idea of "habituation" here is drawn from cognitive science, not Formalism). A similar point may be made about novel metaphors (e.g., those so well analyzed and explained by Lakoff and Turner). The extended reading time, noted by Miall, is then predicted by the novelty of the various figures of sound, figures of meaning, and so on, as well as our enjoyment of novel pattern isolation and tendency to linger over whatever affords us enjoyment. Finally, this "foregrounds" literature only in the banal sense that these figures, etc., serve as cues for us to categorize the work as literary, as when we think of poetry on hearing a pattern of rhymes. (Since I do not see a literary work as more likely to lead us to rethink past beliefs, I will leave that aside. For example, the simplistic, 'broken' English of African Americans or Native Americans in some literary works will foreground language, but seems much more likely to reinforce biases than lead readers to reconsider racist stereotypes.)

To return more directly to our initial problem, one way of specifying the object of study begins with determining the degree of autonomy of the target relative to current disciplinary divisions. By "autonomy," I mean the degree to which we need to discuss something (e.g., language) in its own terms, as opposed to the terms of another discipline. For example, an autonomous account of language might isolate just what patterns of head-complement order are possible in language and what their relative frequency might be. A "heteronomous" account, in contrast, would not include categories proper to linguistics, but (say) categories of psychology or social interaction, such as "communication." If we draw a broad distinction

between descriptive autonomy and explanatory autonomy, it seems clear that language requires the establishment of a fundamental, descriptive set of properties and relations on an autonomous basis. In other words, we need to establish just what specifically linguistic patterns there are within and across languages. Rather than beginning with such vague notions as "language communicates" we need to establish a foundational knowledge about the constituents of languages, what they are, how they are arranged, what functions they contribute to (e.g., do they only serve communication or do they, for example, also expand working memory?). Once set out descriptively, our explanation of these phenomena may be largely heteronomous, which is to say, largely a matter of recruiting psychology, neuroscience, sociology, evolutionary biology, and so on, to supply explanatory principles. The same points hold for narrative.

In my view, one of the problems faced by any attempt at formulating a science of narrative today is that we do not have an adequately systematic and extensive catalogue of the sorts of patterns to be found in narrative, considered autonomously. I am not at all denying the value of earlier developments of narratology. Works by a range of influential theorists (from Aristotle through Genette and beyond) have distinguished aspects of narrative study that are essential for guiding further research. But they have not specified narrative patterns in adequate detail, by reference to a sufficient range of sources (or data), and in a format that lends itself to plausible psychological or other explanation. For example, Northrop Frye based his enormously valuable work on Western literary traditions, often relied on evocative but imprecise metaphors (such as the seasons) for organizing that data, and spoke in terms of archetypes, thus inclining the account toward the at best problematic theories of Carl Jung.

As to the heteronomous explanations, *cognitive narratology* can refer to either an interpretive approach to individual works or to the formulation of broader theories applying across sets of such works. As a collection of theories, it is simply the segment of a (nascent) science of narrative that focuses on the patterns of narrative that are amenable to psychological explanation; in connection with these, it takes up what are currently the most scientifically plausible principles of human psychology (except in cases of mere pirating, as discussed above). A full science of narrative would include not only the most plausible mental architectures, but also the most compelling accounts of relevant forms of social interaction, as well as even more encompassing principles of political economy, complex systems dynamics, and so on.

Karin Kukkonen – What would a "science of literature" entail? Empirical methods appear to have dominion over the term "science." However, I think this is too narrow an understanding of the term "science." We can understand science as an approach to an object that formulates a hypothesis, chooses its methods consciously and performs an analysis that can be traced step by step. Such an approach then can take the shape of an experiment, as in empirical literary studies, but I don't see why a "scientific" approach to literature should not also take the shape of textual analysis.

At first glance an important difference between literary studies and the traditional sciences lies in the nature of what Hans-Jörg Rheinberger calls "epistemic things," that is, the tools and instruments that scientists use. Telescopes, microscopes and test tubes are classical examples for such "epistemic things." But we can also think of the literary text itself as an "epistemic thing" that give us insight into human thought, feelings and society. The maxim, for example, can turn into a scalpel for working out the paradoxical entwinements of public image and private self-love. La Rochefoucauld cuts to the bone (if you allow for this metaphor), both when it comes to how he presents psychological biases and when it comes to our own reactions to such daredevilry with moral precepts that we don't tend to question. The ways in which Ariosto's narrator guides readers' attention or how Jane Austen navigates social expectations, and thereby, toys with predictive processing, are only some further examples for how literary texts can work as "epistemic objects" in cognitive literary studies.

It seems to me that a "science of literature" would approach texts as "epistemic objects" and then pursue a principled and consistent programme of analysis and theorizing. From this perspective, arguably, one can include Wolfgang Iser's Act of Reading (1978; tracing readers' inferencing processes to make sense of the "blanks" [Leerstellen] that can be found in the text) or Shklovsky's "Art as Device" (1915/2016; identifying elements in literary texts that break with the automatization of perceptual processes and thereby "defamiliarize" then) in the larger project of a "science of literature." It is no coincidence, I think, that both Iser and Shklovsky also draw on psychological research in their theory-building. Iser does this in particular in The Fictive and the Imaginary (1993) while for Shklovsky we can already see it in "Art as Device," which received a review from none other than Lev Vygotsky in Art and Psychology (1974). Vygotsky is one of the founding fathers, intellectually speaking, of the extended mind and therefore crucial for 4E cognition.

Perhaps one of the key distinctions between "science" in the traditional sense and the "humanities" lies in the way in which each approach treats its traditions. While science tends to seek new knowledge in order to discard old knowledge, the humanities draw on old knowledge to frame new questions. Cognitive literary studies has had the tendency to argue for an overturn of older theoretical canons, along a general science rhetoric of casting aside old knowledge from the theoretical canon of literary theory in the name of progress towards a general "science." This strikes me as a short-sighted and non-sustainable approach.

We have literature from antiquity through the Middle Ages and the Early-Modern period that still has powerful effects. Read about how Diomedes or Achilles slaughter their way through the battlefield in the *Iliad* and try not to twinge. At the same time, older literature remains strange and leaves us with a strong sense that we are living in different times now. Maylis de Kerangal describes a morgue nurse washing the body of a dead surfer in terms of Achilles tending Patrocles' dead body in *Réparer les vivants* (2014), and the scene gains real salience through the utterly different historical and social contexts. It is navigating this historical difference where the "science of literature" that does not delete old knowledge but revisits it in light of new knowledge taken from other disciplines really comes into its own. I've tried to do this in particular in my work on the novel when it invented itself as a genre in the eighteenth century (Kukkonen, 4^E Cognition and Eighteenth-Century Fiction). Cognitive literary studies has the potential not only to use literary texts as "epistemic objects" for general mental functioning, but also for probing and plumbing historical depth in human thought.

3. Narrative theory and embodied cognition

Chiara Mutti – Professor Caracciolo and Professor Kukkonen, in your recent *With Bodies* you expressly claimed to draw on the research field of 4E approaches to cognition in order to carry out a "reframing of the language of narrative theory" and to inject new ideas into narratology. Back in 2014 you talked about the "promise of an embodied narratology": has this promise been fulfilled? To which blind spots can this new language, together with empirical models and conceptual tools, be addressed? What are—in your opinion—its most salient points and its shortcomings?

Marco Caracciolo – Literary scholarship and science seem to have at least one thing in common: they are both fundamentally asymptotic in their logic. So any given research question generates new research questions, which in turn call for new frameworks and approaches (reflecting larger cultural dynamics). That means also that no scholarly promise can be truly or fully fulfilled, including the promise of an embodied narratology. (That's the fun of it, I think—but only if you have a taste for partial answers.) More concretely, though, I am quite happy with the way Karin Kukkonen and I address that promise in *With Bodies* (2021). There is plenty

of evidence for the role of embodied experience in reading: focusing on that bodily "share" seems to be the main way in which second-generation cognitive literary study overcomes blind spots existing in earlier approaches to fiction reading. The body shapes multiple aspects of the cognition and experience of reading, from empathy for characters to the perception of narrative "rhythm." Also, individual variation can be as important as a background of shared embodiment—although the cognitive setup does seem to be skewed towards the latter, in a way that should be supplemented. (I'm thinking in particular about disability or queer studies as important and even essential counterpoints to a cognitive framework.)

There is, of course, still plenty of work to do, on two levels: I think the second-generation approach needs stronger empirical foundations, to be built in dialogue with scholars in the empirical literary studies community (and psychology itself); second, we need more dialogue between cognitive literary scholars and researchers active in other areas of the humanities. The body, it turns out, is an established concept in fields ranging from affect theory to cultural studies, and cognitive literary studies should confront that legacy directly instead of merely working alongside (or around) it. The "Entanglements" chapter that closes *With Bodies* is intended to foster that second kind of dialogue, discussing the nexus of embodied cognition and concepts such as gender, posthumanism, computer technology, literary history, and so on.

As we point out, though, this is only a starting point, and there is undoubtedly much more to be said about each of these issues. That's also something that requires active collaboration between cognitively oriented scholars and scholars in other areas of the humanities. That's ambitious, and so is the more empirical program I hinted at. But ultimately, to my eye, cognitive literary study should take advantage of every opportunity of engaging in broader conversations within the humanities, even if that involves a recognition of the *limitations* of any given way of approaching literature cognitively. (That's what I am trying to do with my current work on contemporary narrative and the ecological crisis, incidentally; see Caracciolo, *Narrating the Mesh.*) If cognitive literary studies positions itself as the *definitive* literary framework through its presumed scientificity (as in stronger versions of evolutionary approaches to literature; see Carroll), the field is likely to remain on the margins of literary scholarship more generally. By contrast, epistemological modesty can go a long way. Surely, not every question can be addressed with a cognitive or even an empirical toolbox, but if some concept or approach from cognitive literary studies makes its way into larger discussions in the humanities, that can be considered a victory for the field.

Karin Kukkonen – Our article on "the promise of an embodied narratology" in fact goes back to the conference of European Narratology Network in 2013 in Paris, where Marco Caracciolo, Cécile Guédon, Sabine Müller and I formed a panel on embodied approaches to narratology. We each had our individual papers, but it became clear that the shared approach of 4E cognition not only changed the ways in which we as individual scholars analysed narrative but holds the potential to provide a new framework, that is, an "embodied narratology." We therefore decided to write one joint article outlining a possible research programme rather than individual contributions to the conference volume.

Many elements of the framework we sketched in 2013 stayed with Marco and me on the intellectual journey to writing *With Bodies*. The approaches of 4E cognition foreground the immediate embodied experience (Embodied), the ways in which perception is linked to action (Enactive), how thought is situated in material environments (Embedded) and amplified by materials in the environment and cultural technologies, like for example, reading and writing (Extended). In the 2013 article, we highlighted how embodied cognition runs across immediate perception and movement into more abstract meaning-making through the ways in which language uses conceptual metaphors and situated conceptualisations. The "promise" we saw here lay in coming to grips with the ways in which literary texts similarly work on immediate

and on more reflective and explicit levels. We also foregrounded that 4E approaches are always situated in historical contexts of media environments, material contexts and cultural practices (that is, Embedded and Extended). The "promise" of this aspect of 4E approaches we defined as the potential to devise a cognitive narratology that is sensitive to literary history and media developments.

With Bodies, I would argue, takes both these "promises" from 2013 seriously. We trace embodied aspects of narrative across multiple levels from very concrete perceptions of elements of the storyworld to the rather abstract elements of narrative plots. We also foreground the historically and socially embedded aspects of narrative, in particular in the final section, where we make links between embodied narratology, literary history and current concerns from non-human narrators to AI.

In *With Bodies* we survey the psychological and linguistic research on embodied cognition, as well as the growing body of work in 4E approaches to narrative and literature. Conceptual metaphors, that is, metaphors that map concrete embodied things or actions on abstract concepts, are a central theoretical contribution of 4E approaches. And many of the concepts that narratology works with draw on conceptual metaphors, such as "storyworlds" or "plot paths." We therefore turned to the theoretical concepts of narratology through conceptual metaphors and re-visited them through embodied approaches to language, cognition and narrative. This bit of disciplinary self-analysis hopefully contributes to showing that (1) embodied approaches indeed can address all central concepts from narrative studies are not limited to the analysis of immersion, for example, and that (2) embodied approaches are ready to enter into dialogue with other approaches to narrative.

Whether the "promises" have been fulfilled in *With Bodies* will be for others to judge. I would like to think that we haven't said everything there is to say about embodied narratology and embodied approaches in literary studies. If my engagement with cognitive theories, in particular predictive processing, has taught me anything, it is that you cannot avoid blind spots. What we perceive depends profoundly on what we expect to find. Literary texts as "epistemic objects," I think, have the potential to redirect our expectations and draw our attention to blind spots, or, at least help us perceive that we have then. I, for my part, look forward to reading new novels that show me what blind spots I had when writing *With Bodies*.

4. Narratology

Chiara Mutti – Professor Fludernik, you were the first to underscore the embodiedness of what you called "narrative experientiality" in your seminal *Towards a 'Natural' Narratology*. In the wake of your work, important progress has been made in the attempt to rethink the foundations of narratology. How do you evaluate the emerging vectors of narratology? Do you think that 4E approaches to cognition provided us noteworthy heuristic tools?

Monika Fludernik – I am of course delighted that *Towards a 'Natural' Narratology* has found such an enthusiastic following and that it has inspired very exciting work, especially by Marco Caracciolo. My insights regarding embodiment were actually based on *Women, Fire and Dangerous Things* and cognitive metaphor theory. So my own source of cognitivism has come from cognitive linguistics; I am after all a person who has been concentrating on the linguistic analysis of literary texts, especially narratives, and this is where my inspiration has come from throughout my career. Due to this linguistic bias, I must say that my own favourite line of development for the application of cognitive studies to literature and narrative tends to associate with Mark Turner and Gilles Fauconnier rather than 4E approaches. I have so far not been entirely convinced that 4E—beyond a most basic level of acknowledging the bodily nature of human cognition—can be applied to literature in a more than metaphorical manner.

This is not to say that I have not found work by 4E scholars very impressive and have appreciated individual readings of particular texts, but I do not see myself using that paradigm and I am not sure whether it is likely to yield any sustained future programme of research beyond the very excellent results already produced by its current proponents.

As is well known among narratologists, I have meanwhile turned (back) to diachronic narratology as my main field of interest, which is an area that raises questions of cognition—why do narratives change over time?—but these questions are not apt to be treated within a model of cognitive studies of the 4E type. In diachrony, the questions that emerge are, rather, how to find a balance between social and historical developments, genre developments, the history of ideas, narrative and linguistic forms and their evolution, and cognitive apprehension of narrative as an affordance in communication and the entertainment industry, to use a very modern and anachronistic term. This kind of research faces the problem of the various functions of narrative in a variety of contexts. I do not see either the very specific issues studied in cognitive science or the very high-level theoretical issues treated in current cognitive 4E narratology being applicable to the kind of concerns that I am concentrating on in the framework of diachronic narratology.

5. Literary universals

Chiara Mutti – Professor Hogan, you gave fundamental and pioneering contributions to cognitive literary studies, focusing, in particular, on emotions and narrative. At the University of Connecticut, you have been working on the interdisciplinary research program "Literary Universals Project": What do you expect from this? Why are the study and the description of literary universals pivotal in cognitive cultural studies?

Patrick Colm Hogan – Thanks for your kind words.

As to my expectations from the Literary Universals Project (https://literary-universals.uconn.edu)—in the short term, I can't say that I really anticipate much furthering of the project in the current academic climate, at least in the U.S. I of course hope for more robust cooperation from a range of scholars with knowledge of different traditions of literature and orature. Ideally, the project would inspire scholars to propose previously unnoticed cross-cultural patterns or to qualify or extend prior hypotheses. This sort of cooperative enterprise, whereby the articulation of universals could be rendered more precise and better supported, should in principle be possible now. But so few literary critics and theorists are focused on commonalities that this seems highly unlikely at the moment. Even so, the project has encouraged some work on cross-cultural patterns in literature and/or orature and it has made the idea of literary universals more salient and more comprehensible than it was previously. In consequence, it may help to foster more work, even if that occurs only in the distant future.

As to the place of literary universals in the program of cognitive narratology, my answer is probably more or less clear from what I have already written. Literary universals define the most consequential categories for the explanation of literary phenomena, for they are the categories that define the most widespread patterns in the autonomous descriptions of various areas of literature, including narrative. Again, these patterns may be explained at various levels. I have been particularly interested in psychological explanations, thus those invoking cognitive and affective science. But explanations can derive from other types of causal relations as well.

Consider, for example, what patterns of event types recur in particular stories, across genetically and areally unrelated traditions. I have argued that there are four story genres that recur with particular frequency and/or salience, and another three that turn up less prominently, but more than one would expect from chance occurrence. (I began articulating these

ideas in *The Mind and Its Stories*, then developed them further in *Affective Narratology*.) For example, love stories are particularly evident, especially in written traditions. In a prototypical love story, two people fall in love, but cannot be united due to social (often familial) interference. They are separated, with one frequently sent into exile, before they are enduringly united (in the more usual, comic version).

Having isolated these patterns, I set out to explain them in parallel with one another, drawing on affective science. (Note that no part of the following explanation posits any innate process or structure specific to story genre; it draws only on processes and structures that are already widely accepted for other reasons.) Each story genre is marked by a particular type of goal sought by a protagonist (or protagonists). For example, the romantic genre has union with the beloved as a goal. That goal is generated by one emotion system or some combination of emotion systems. For example, romantic love is (in part) a combination of attachment and sexual desire. When activated and integrated appropriately (which occurs in what we call 'falling in love'), these conjoined systems generate the goal of union with the beloved. The prototypical trajectory of each genre—for example, apparent loss of the beloved before the lovers are finally united—is produced by the usual procedures of emotion intensification. For instance, an outcome emotion (such as joy) is intensified by the gradient of change from a prior, contradictory emotion (such as despair).

This is often misunderstood as a theory that all stories are instances of one of these seven genres. But that is untrue. The theory does say that stories are about the pursuit of goals and that goals are generated by emotion systems, alone or in combination. That, in turn, does suggest a limit to the possible story genres. However, that limit is quite large. It allows stories for any emotion—from a single system or some complex of systems. Moreover, it allows almost infinite instantiations of such goals. Indeed, given this array of possibilities, we still might ask how stories end up being very similar so frequently.

The answer to this question has two parts. The first part is that stories are in fact quite variable, as seen in daily life. The convergence of story-defining goals is not a matter of what stories are told, but of what stories are preserved, repeated, and disseminated. This is not simply a matter of 'cream rising to the top' or the superior work succeeding in the marketplace. I take it to be in part a process of roughly the sort suggested by Marxist analyses. Though often tacitly interpreted as a theory of motives, Marxist economic determinism is best understood as a theory of functions or systemic constraints. Products of a given type may be made for a wide range of reasons. But to be preserved and circulated, they must succeed in the relevant system of political economy. For example, Smith and Jones produce stories. Some of Smith's works provoke enthusiasm among their initial readers, while Jones's do not. This leads to network effects, whereby more people read Smith's works, but not Jones's, and so on. This is not a simple, democratic matter, where everyone evaluates the work and each person's response counts equally. The responses of some groups count more than others. Indeed, some groups in effect determine which stories are read widely, and how they are read. One result of this is that there are likely to be some correlations between narrative patterns and political economy (e.g., differences between market-based systems and patronage-based systems [see Hauser, 47-48]). There are also effects of other sorts of hierarchy, such as patriarchy. These all tend to be associated with cross-cultural patterns that recur in particular contexts. For example, it may be the case that specific forms of political economy (perhaps market-based) foster the predominance of romantic stories, while others (perhaps patronage-based) foster the predominance of heroic stories. These patterns are, then, in some degree a function of what we commonly refer to as the ideological function of (literary) narrative.

On the other hand, even after we take account of ideological distortions, we find that a few emotion systems and limited range of particular goals still appear to greatly dominate socially successful storytelling across traditions. This suggests that those systems and goals may be

fundamental for the quality of life. The emotion systems and goals at issue are as follows: 1) attachment, with the goal of establishing security and accessibility in the attachment relation (as in the romantic and family separation and reunion genres); 2) guilt (in the sense of remorse), with the goal of freeing oneself from the feeling of responsibility for other people's (unmerited) pain and/or punishing others for their culpability (as in the sacrificial genre); and 3) pride, both individual and collective, with the goal of establishing oneself and one's identity group in a position of prestige and dominance (as in the heroic genre). Isolating such 'quality of life' emotions and goals, though related to a science of narrative, also reflects the sort of insight that we often take to be a special province of the wisdom of literature. On the other hand, this returns us to the science/interpretation difference. Specifically, the valuing of these emotion systems and goals develops as wisdom bearing on the quality of life most fully in the elaboration of specific stories, explored through interpretation—a point that holds for the critique of ideology as well. Both forms of interpretation (that concerning wisdom and that involving critique) point toward the existential implications of literature for human flourishing, as distinct from, but not entirely unrelated to, scientific knowledge.

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