Toward Apperception Theory. A Cognitive Approach to the Fantastic as Linkage. Definition and Examples from Edgar Allan Poe

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I present here a new theory concerning fantastic literature—which I have called apperception theory—by connecting two distinct scientific dialogues. Taking into account research in recent decades in the epistemology of complexity, cognitive science and Cognitive Literary Studies—embodied simulation, mirror neurons, intersubjectivity—I define the fantastic as the linkage that can emerge from a modification of our linguistic, narrative and paradigmatic apperceptions either as an anomaly or through the alteration or transgression of at least one of the cognitive levels that operate in any narrative experience. Therefore, I offer an interpretive alternative in the polarised debate between the fantastic as a literary genre (Todorov 1970) and the fantastic as a narrative mode (Bessière 1973). Also, through the analysis of specific stories by Edgar Allan Poe, I develop an analytic model to identify the degree and depth of fantastic linkages that emerge from apperceptive connections.

Keywords: fantastic literature; apperception theory; embodied simulation; cognitive literary studies; Edgar Allan Poe.

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Hacia la teoría de la apercepción. El enfoque cognitivo de lo fantástico como vínculo. Definición y ejemplos de Edgar Allan Poe

Presento aquí una nueva teoría relativa a la literatura fantástica—denominada teoría de las apercepciones—conectando dos diálogos científicos distintos. Tomo en consideración las investigaciones de las últimas décadas en epistemología de la complejidad, ciencias cognitivas y estudios literarios cognitivos—simulación encarnada, neuronas espejo, intersubjetividad—y

defino lo fantástico como el vínculo que puede surgir de una modificación de nuestras apercepciones lingüísticas, narrativas y paradigmáticas como anomalía, alteración o transgresión de al menos uno de los niveles cognitivos que operan en toda experiencia narrativa. Por ello, ofrecemos una alternativa interpretativa en el debate polarizado entre lo fantástico como género literario (Todorov 1970) y lo fantástico como modo narrativo (Bessière 1973) y, a través del análisis de algunos relatos de Edgar Allan Poe, un modelo analítico para identificar el grado y la profundidad de los vínculos fantásticos que emergen de las conexiones aperceptivas.

1. Introduction

Fantastic literature has always provoked an intense and fruitful debate regarding its identity within literary systems and its scope within (or outside, or both) narrative texts. The work that has dominated this debate over the past half-century is the *Introduction à la littérature fantastique* (1970) in which Tzvetan Todorov proposed the hesitation theory, according to which the fantastic lasts only for the moment of cognitive doubt that afflicts a character in a narrative when faced with an unusual fact or an event that cannot be explained through the system of knowledge elaborated by human wisdom. Based on this theory, Todorov defines the fantastic as a literary genre that is autonomous but always poised between two options: if the event is passively accepted by the character, we enter the marvelous; if, on the other hand, an explanation is provided, we are in the domain of the strange.

All subsequent critics have had to come to terms with Todorov's theory of hesitation (Pacheco Soares 2019), either accepting its methodological approach and attempting to widen the scope of the narrow framework attributed to the fantastic genre (Barrenechea 1972; Carnevale 2019; Zenkine 2021; among others) or adopting different perspectives that could better account for the varied appearances that the fantastic can take on, thus defining it as a narrative mode—no longer a literary genre—that uses certain formal and thematic choices which may recur across a wider range of narrative texts (Bessière 1973; Jackson 1981; Lugnani 1983; Ceserani 1996; Roas 2011; Mesárová 2014; Zangrandi 2017; among others). The aspect that unites most contemporary critics and is emphasized in all studies, is the transgressive character of fantastic literature, its ability to cross narrative boundaries, challenge reality and alter hermeneutic processes (Gil Guerrero 2006; Roas 2011; Carnevale 2019; among others).

The present study enters into this debate by drawing on hypotheses and postulates from the cognitive sciences and cognitive literary studies (Mutti 2022)—such as embodied simulation, intersubjectivity narrative as a complex system and the Proteus principle—to offer a new definition of the fantastic as a link that can emerge from a mismatch of our apperceptive connections.

2. Epistemology of Complexity and Intersequentiality

This paper draws on contributions from two major areas of study. The first concerns the epistemology of complexity, whose paradigmatic implications have strongly influenced physics, biology, mathematics, social sciences and the philosophy of science (Grishakova 2020, 492). Starting with John Pier's work in particular and his dictum that "narrative is a complex system" (2017, 560), narratologists have applied some of their theoretical approaches to the study of literary works.

A particular case in point is dynamic systems theory outlined by Hollenstein (2012)—which deals with *adaptive complex systems* that exchange energy and information with the external environment on the basis of a fundamental quality called *self-organization*. A system is defined as complex when it is *dynamic*—that is, it is constituted by and exists through the continuous interaction of its elements—*emergent*—it is a whole identified by a constitutive property that emerges from the interaction of its elements—and *nonlinear*—characterized by nonlinear interactions among constituents. An adaptive complex system can undergo first order—conservative—and second order—transformative—changes.

The linearity of the sequential reading of a text—also proposed by Richard Walsh's definition of fiction, when he writes that "[n]arrative is the semiotic articulation of linear temporal sequence" (2018, 12)—interacts with other elements that constitute the narrative in a dynamic whereby the relationship between the components is more important than the components themselves, given that none, individually, is sufficient in itself. Narrative sequentiality is in fact, as Pier points out, an one-way process—one of the dissipative thermodynamic systems studied by Prigogine (1984)—in which "sequence operates within states near equilibrium and far from equilibrium in an irreversible process from past to future. This occurs probabilistically […] rather than in a linear trajectory" (2017, 555).

Narrative is not an intrinsic property of the text, but rather one that emerges from the organization of a system comprised of interdependent components that interact with the environment over time in a nonlinear way (Pianzola 2018, 101). Narrative experience, then, is the product of the reader's interaction with the text, not the individual elements. During reading there is a continuous exchange between the text and our internal apperceptions—inferences about how the story and narrative discourse will continue—and external apperceptions—pre-readings, moods, etc. Links that are decisive for the aesthetic act and the reshaping of our cognitive schemas are continuously made and recreated. Narrative sequences, according to Meir Sternberg's studies (1982), later echoed by Pier, enjoy a property—called intersequentiality—which produces probabilistic inferences about the next sequence. Viewed intersequentially, the sequence is the product of the relationships between the absolute dynamics of causal action and the variable dynamics of the reading process, that is, "it is generated in the spaces or gaps opened up between the actional and the communicative" (Pier 2016, 32).

Apperceptive connections result in the intersequential linking of the sequences that follow one another in the irreversible process of reading in order to create universal aesthetic effects such as suspense, curiosity, and surprise. It is from this that the Proteus Principle emerges, a norm introduced in narratology by Sternberg (1982) and also studied by Jahn (2011) and Pianzola (2018) and defined by the former as "the many-to-many correspondences between linguistic form and representational function" (1982, 112). Based on the idea that a given function can be performed by different forms, and a given form can perform different functions, the Proteus principle can play a role in formulating theories where the object of study is the interactions among all the components that enable narrative experience (Pianzola 2018, 110).

The profound scientific paradigm shift brought about by relational and complexity theory in all fields of science is increasingly evident. In physics (Rovelli's *Relational Quantum Mechanics* 1996), chemistry—Prigogine's dissipative structures—psychology—apperceptive connections—neuroscience—embodied simulation, mirror neurons—and narratology—the Proteus Principle—every phenomenon emerges from relations.

3. Embodied Simulation as a Space of Intersubjectivity

The second major area of study this paper draws on concerns the cognitive sciences, which since the second half of the last century have provided unexpected insights and decisive contributions to the development of new fields of investigation. Think, for example, of the growing influence in neoliberal societies of neuromarketing within the current sociocultural paradigm of digital hyperconnectedness, which led Floridi to coin the term "Onlife", and whose effects on everyday life pollute our life, economic and ethical decision making (2015). We can see the prolific influence that findings from studies of the mind have on the study of economics, moral philosophy, aesthetics and even narratology and literary theory, where the cognitive approach has given rise to new disciplinary branches, cognitive narratology and cognitive literary studies.

Our understanding of how our beliefs are created and the brain mechanisms through which we are able to attribute specific mental states to ourselves and others has increasingly benefitted from empirical evidence showing that our biology and our sensory and neuronal organization determine our relationship to the reality around us. For example, in *simulation theory*, Gallese explains that access to the inner world of others comes through an embodied dimension that relates our sensory and bodily experiences to the experiences we have of others (2019, 659). In this way, embodied simulation is also configured as the factual space in which intersubjectivity materializes (Gallese et al. 2006, 558). Wojciehowski and Gallese (2022) have recently applied notions of embodied simulation to delve into the relationship between the social bonds that each of us creates in our interpersonal relationships and the bonds, albeit fictional, that we establish with the characters in the stories we read. In the same study they also highlight how it is our prior social life experiences that allow us to fill in and give

depth of meaning to the small number of traits that fictional characters are inevitably characterized by. It is, they claim, embodied simulation that operates the necessary modification of the frames and apperceptions with which we immerse ourselves in the reading and interpret the text:

> When we navigate the parallel world of fictional narrative, we basically rely on the same brain-body resources shaped by our relation to mundane reality. These resources provide the functional scaffold and the building blocks that our engagement with fictional characters rearranges by means of different forms of framing. [...] [C]ognitive narratology reveals that readers make sense of complex narratives by relying on very few textual or discourse cues. These cues, which fiction creatively reconfigures, are the expression of social practices that readers recognize because they are part of readers' lives. (2022, 62)

However, each reader will undergo an embodied reading experience that is entirely personal, as also pointed out by Patoine (2019, 212-213). Gallese is in agreement and highlights that just as cognitive-social abilities are different for each of us and are determined largely by our past experiences, similarly the embodied responses of our mirror mechanisms vary from person to person (2019, 124). Direct influences on reading may include, for example, the paratext in its broadest sense—peritext and epitext—which contributes to mediating aesthetic and hermeneutic expectations and perceptions about the text in an important way (Remorini 2022).

4. THE SEQUENTIALITY OF THE ACT OF READING AND THE COGNITIVE PROCESSES INVOLVED

In the context of the processes involved in reading, more specifically the decoding of letters and their encoding into meaning, I need to highlight certain aspects that have a profound impact on my theory of the fantastic. First, although from a mechanical point of view the reading process involves visual alternation between fixational and saccadic eye micromovements (Kliegl et al. 2006, 12), from a neural point of view it must be regarded as a process of extreme complexity (Dehghani et al. 2017). Reading activates not only the Broca and Wernicke areas of the brain, but also other areas that until recently were not considered functional for language and cognitive comprehension (Binder and Fernandino 2020). As such, research has moved beyond the idea of reading as a serial activity to considering it inseparable from emotions. In a holistic view, reading depends on the interaction between cognition, emotion, memory and physiology (Kweldju 2015, 129).

Second, we must consider the numerous studies showing that certain areas of the brain are activated in sequential order during the reading process, establishing the sequence of the various stages of linguistic comprehension of texts, namely: the decoding of phonemes, the recognition of groups of phonemes as morphemes, the structuring of morphemes into syntagmata and finally the process of appreciating the

semantic meaning of the sentence. Specifically, orthographic/phonetic decoding occurs in the first 400 milliseconds after starting to read a sentence. Immediately after that there is morphemic recognition and then a coherent sentence structuring and meaning attribution. Processing of reading is completed about 200 milliseconds after phonetic recognition (Gwilliams 2019, 3).

Third, research into the bidirectional neural process between the eyes and the brain has radically changed how we conceptualize it. It would seem natural to think that receptors detect light reaching the retina of our eyes and transform it into signals that travel to our brains, where groups of neurons process the information in increasingly complex ways until it is interpreted and able to identify objects. But actually, most of the time exactly the opposite happens. As Clark's work argues, most signals travel not from the eyes to the brain, but in the opposite direction, from the brain to the eyes (2013, 185). It is the brain that predicts to the eyes what they should see, activating the neural visual process only when faced with some anomaly that results in an adjustment of the image already present in the brain (2013, 181). The human brain seems to have adopted this system as a means of energy conservation, following the laws of thermodynamics. It spends less energy adjusting and shaping an already stored image, than if it has to constantly create a complete image from nothing (Clark 2013, 186). This is what happens when we return to a city, to a street, to a place we visited long ago, and we feel almost alienated because we perceive that what is before our eyes does not match the detail of the mental image so familiar to us. The same happens when we enter a familiar room and instantly perceive a change—a piece of furniture moved, an extra object on the table, a new picture, etc. Perception is an inference problem solved by the brain (Friston and Kiebel 2009). Carlo Rovelli points out the revolutionary implications of eyes-brain neural process studies:

> What happens is that the brain *expects* to see something, on the basis of what it knows and has previously occurred. The brain elaborates an image of what it *predicts* the eyes should see. This information is conveyed *from* the brain to the eyes, through intermediate stages. If a discrepancy is revealed between what the brain expects and the light arriving into the eyes, *only then* do the neural circuits send signals toward the brain. So images from around us do not travel from the eyes to the brain—only news of discrepancies regarding what the brain expects do. […] What I see, in other words, is not a reproduction of the external world. It is what I expect, corrected by what I can grasp. The relevant input is not that which *confirms* what we already know, but that which *contradicts* our expectations. (2021, 105)

Thus, if our brain works through predictive processes (Kukkonen 2019) that serve as compasses and interpretative frameworks (van Elk 2021), the anomaly becomes the truly relevant information. It is therefore of particular interest to understand the relationships that may arise, even with respect to the act of reading, between our apperceptions—determined primarily by our past experiences—and the anomalies, alterations, and possible transgressions present in a specific text.

5. Apperception

As briefly pointed to at the end of the last section, in the neural reality I have outlined, and within the context of linguistic expectations—phonological, morphological, syntactic and semantic—the notion of apperception is of fundamental importance. Although its antecedent is René Descartes's analysis of the verb *apercevoir* in his 1649 treatise *Les Passions de l'âme*, where he considers it a volitional element (called passion) within the cognitive process, the term as it pertains to the current study turns to the 18th century and the concept of *Apperzeption* first coined in the treatise *Principes de la nature et de la grâce fondés en raison* (1714) by the German mathematician and philosopher Gottfried Wilhelm Leibniz with the meaning of an act of the mind by which it becomes aware of its ideas as its own: "So it is well to make a distinction between perception, which is the inner state of the monad representing external things, and apperception, which is consciousness or the reflective knowledge of this inner state itself and which is not given to all souls or to any soul all the time" (1989, 637).

The concept was taken up by Immanuel Kant as identifying the supreme transcendental principle that directs cognition (Gentry 2022, 37). In the 19th and early 20th century, the concept of apperception was further developed, first in the speculative sphere by philosopher Franz Brentano in terms of his conception of the internal perception that accompanies every mental act, even though they are distinct phenomena (Fréchette 2011, 5) and later in psychology and education, which became interested in its possible practical applications. On the one hand, psychologist Johann Friedrich Herbart points to apperception as a process of assimilating different and often divergent ideas (Kim 2015), while on the other, Wilhelm Maximilian Wundt—the father of experimental psychology and founder of the first psychological laboratory—emphasizes what he calls apperceptive connection: "It is apperception, in accordance with its own laws, that 'decides' which of these possible connections are realized in consciousness" (Kim 2016). The laws of apperception guide the agglutination of representations according to bonds of compression (*Verdichtung*) or displacement (*Verschiebung*) until a representational synthesis is achieved (Kim 2016).

The definitions we encounter in dictionaries reflect the semantic evolution of the concept of apperception, which has shifted to indicate a process of the assimilating and placing a new experience within the context of past experiences. Thus, for example, the Merriam-Webster dictionary states that apperception is: "mental perception, especially: the process of understanding something perceived in terms of previous experience"; while Collins English Dictionary notes that it derives from the term *apperceive*: "to comprehend by assimilating (a perception) to ideas already in the mind". These are the same definitions taken up by Manfred Jahn, one of the few narratologists to devote attention to this issue. Jahn sifts through the cognitive implications of the term, highlighting the fact that "our necessarily indirect perception of reality is the product of a good deal of personal interpretive processing. Apperception is the mental

construct that makes us see (or from an interestingly different perspective: *allows* us to see) the world and what's in it *as* something" (2011, 90).

Apperception is the embodied cognitive link with which we relate to the world and also to narrative texts in the territory of intersubjectivity. As we have observed in relation to embodied simulation and intersubjectivity, our past mental constructions directly influence the cognitive, hermeneutic and aesthetic processes of narrative experience. Apperceptive connections allow us to process and insert new perceptions and experiences into the flow of past experiences (Remorini 2023).

6. Apperception Theory: the Fantastic as a Link

Applying the results of all the above research to the reading and interpretation of fantastic texts, I can develop my theory of apperceptions. We have definite expectations when we read narrative texts. We have already pointed out the transgressive nature of fantastic narrative texts (Gil Guerrero 2006; Roas 2011; Carnevale 2019) in that the fantastic is based on the violation of prior expectations which may materialize, following the reading order, at the linguistic level—phonemes and morphemes—at the narrative level—syntactic—and at the paradigmatic level—semantic.

Apperception theory posits that when we are confronted with a narrative text our body already has concrete expectations about what it is going to read, apperceptions derived from many different factors that concretize the space of intersubjectivity (previous reading experiences, personal biography, mood and emotional state, paratext, etc.) as well as frame and channel subsequent reading. It also assumes that if no anomalies are found in any of the operative levels in the act of reading, our cognition and apperceptions remain unchanged, that is, they change only in the presence of fantastic links that relate our previous experiences to the alterations we find in the text.

Here I therefore define the fantastic as the link that can emerge from a mismatch of apperceptions in the form of an anomaly, alteration or transgression of at least one of the cognitive or hermeneutic levels operating in any narrative experience—linguistic-morphological level, narrative-syntactic level and paradigmatic-semantic level. The link is a force that emerges from the apperceptive connections between the reader, the text and all possible relationships between the two. The occurrence of the transgression involves an adjustment of cognitive schemata that must adapt to the newly created apperception and depends on the reader's ability to recognize the transgression. If it is not recognized as such, there are no apperception changes.

If the fantastic emerges as a link, then the question of whether or not a narrative is fantastic is relativized. In this sense, rather than elucidating the limits of an alleged fantastic genre (Todorov 1970; Barrenechea 1972; Carnevale 2019; Zenkine 2021) or the formal and thematic characteristics of an alleged fantastic mode (Bessière 1973; Jackson 1981; Lugnani 1983; Ceserani 1996; Roas 2011; Reza 2015), it becomes important to ascertain the degree of the fantastic link with respect to the text in which it arises.

To this end, I propose an analytic model (figure 1) for investigating the fantastic link based on the sequentiality of narrative texts according to three possible levels of anomaly:
- L: linguistic (phonetic/morphological)
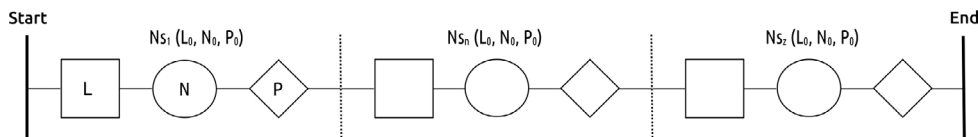- N: narrative (syntactic)
- P: paradigmatic (semantic)

FIGURE 1. Analytic Model

(Ns= narrative sequence. Ns_n and Ns_z indicate any one or more sequences and the last sequence of the text, respectively. L_0, N_0 and P_0 indicate the absence of fantastic links).

A fantastic link can be *nuclear*, that is, it remains within a certain sequence (see figure 2), in which case I call it an *anomaly* (1 level / 1 sequence).
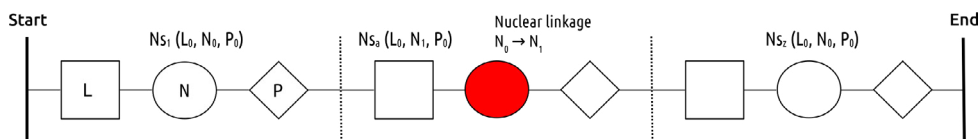

FIGURE 2. Nuclear link (anomaly)

(Ns_a indicates the sequence where the anomaly emerges).

In figure 2, the nuclear fantastic link establishes a narrative anomaly that remains within the second sequence, without affecting other levels or other sequences. N_0 becomes N_1 only in that sequence, returning to N_0 in the next.

Fantastic link can be *transformative*, i.e., it changes the level itself and moves from one sequence to another (figure 3), and then I define it as *alteration* (1 level / n sequences).
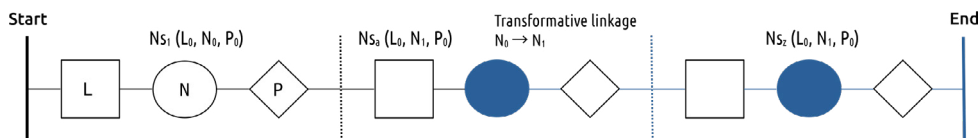

FIGURE 3. Transformative link (alteration)

Here the transformative fantastic link establishes a narrative alteration that changes the same level in successive sequences. N_0 becomes N_1 until the end of the narrative.

The link can also be *expansive*, meaning that it affects other levels and other sequences (figure 4), when it is defined as *transgression* (n levels / n sequences).
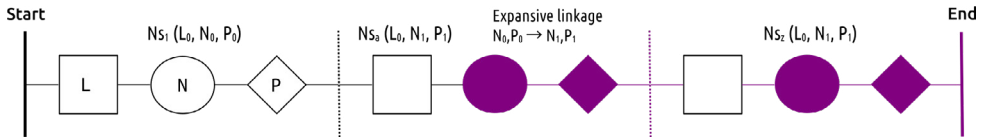

FIGURE 4. Expansive link (transgression)

In this example, the expansive fantastic link establishes a narrative transgression that also affects the paradigmatic/semantic level and extends to other sequences. N_0 and P_0 become N_1 and P_1 until the end of the narrative.

It should be noted that all three types of links can appear in the same text, alternating within the narrative. It is therefore necessary to analyze each sequence independently and determine the type of relationship that is being established. I should also highlight how the three sequential levels correspond to the three operational fields reported by Peter Stockwell in studies of cognitive narratology: world schemas, text schemas and language schemas (Stockwell 2002, 80). The world schemas field includes schemas related to content. It represents the semantic and paradigmatic level of texts. The text schemas field represents our expectations of how the world schema appears to us in terms of sequence and structural organization. It represents the syntactic and organizational level of narrative structures. The language schemas field contains our idea of the appropriate forms of language pattern and style. It represents the morphological and linguistic level. Shen draws from Stockwell when he emphasizes the distinction between story—the content area—and discourse—the two areas of presentation which must be kept in mind because "since the level of presentation contains both organizational (narratological) and language (stylistic) choices, focusing only on one aspect will result in a partial picture of 'how the story is presented'" (Shen 2005, 142). I can account for this in my analytic model (figure 5):
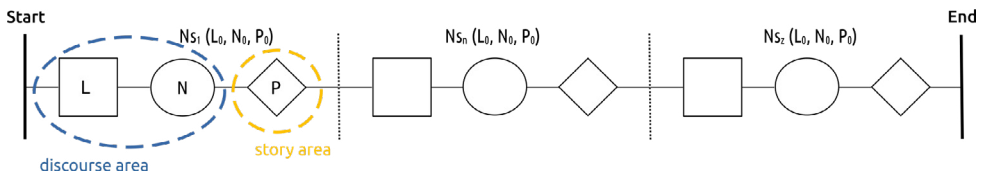

FIGURE 5. Analytic model with story and discourse areas

I now move on to put this model into practice by analyzing some of Edgar Allan Poe's short stories to introduce the case studies of each link. The basis for choosing Poe as a case study is twofold. On the one hand, it is motivated by the enormous influence the American writer had on developments in the fantastic throughout European

and American national literatures (Roas 2011, 73). On the other, it is intended as a small reparation for the exclusion of any of his short stories in Todorov's canonical categorization (Todorov 1970, 48).

7. Nuclear Link: the Fantastic as an Anomaly

If the fantastic element appears in a given sequence without affecting the narrative text as a whole, I say it creates a nuclear link, and remains an anomaly. The readjustment of apperception is momentary, merely changing shape over the course of a sequence to accommodate the anomaly, but returning to its previous configuration by the next sequence and without changing apperception for the rest of the narrative. It is an accommodation that follows the process of compression described by Wundt (Kim 2016), i.e., a first order change.

In Poe's comic tale "X-ing a Paragrab" (published on May 12, 1849 in *The Flag of Our Union* in Boston), two rival newspaper editors—Mr. Touch-and-go Bullet-head, editor of *The Teapot*, and Mr. John Smith, editor of *Alexander-the-Great-o-nopolis Gazette*—engage in petty journalistic warfare. After Bullet-head publishes a boastful editorial claiming the superiority of *The Teapot*, Smith decides to retaliate through mischief rather than argument. He breaks into Bullet-head's office during a storm and replaces every letter "o" in the editor's newest editorial with an "x." Completely unaware of the sabotage, Bullet-head proudly prints the ruined, nearly unreadable article. The public ridicules him, and his attempt at journalistic triumph collapses into embarrassment— an ironic punishment for his vanity and bluster.

We can consider the published, sabotaged version of Bullet-head's editorial, with all o's changed to x's, an anomaly on the linguistic level—see the analytical diagram in figure 6: "TX be sure, TX beg everybxdy's paxden, TX can't exactly say that TX mean tX be persXnal; but TX dX mean tX say that TX have always xn my private Xpinixn cXnsidered Mr. S—— a remarkably weak and particularly silly sxrt Xf persXn. NXX dX TX mean tX be utterly understdXxd as saying that TX dXn't believe him a knave; but TX dX mean tX say that TX dX think, and always did think him, at best, a cxntemptible cXxard."
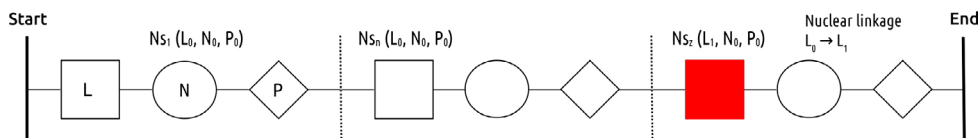

FIGURE 6. Analytic schema "X-Ing a Paragrab"

On the narrative level, anomalies are related to the narrator's fulminating intrusions into the development of the action or with direct appeals to the reader, a device which is often used in a variety of text types to make alterations at the narrative level. Of particular interest in this sense is Poe's story "The Black Cat", first published on August

19, 1843 in *The Saturday Evening Post* in Indianapolis. In three separate sequences, three different narrative anomalies appear, always linked to the cat's presence in the protagonist's life. The first is when among the rubble of his burned house, the night after hanging his cat Pluto, the narrator/protagonist sees a daguerreotype of the hanged cat: "I approached and saw, as if graven in *bas relief* upon the white surface, the figure of a gigantic *cat*. The impression was given with an accuracy truly marvellous. There was a rope about the animal's neck" (2014, 566). The second is when he realizes—and the reader with him—that the black cat he has met "in a den of more than infamy" (2014, 567) and which has taken Pluto's place in the protagonist's house has a white spot that over time becomes a reminder of the symbol of Pluto's hanging: "It was now the representation of an object that I shudder to name—and for this, above all, I loathed, and dreaded, and would have rid myself of the monster had I dared—it was now, I say, the image of a hideous—of a ghastly thing—of the GALLOWS!—oh, mournful and terrible engine of Horror and of Crime—of Agony and of Death!" (2014, 571).

The third narrative anomaly appears at the end of the story, when the unexpected caterwauling of the new cat results in the discovery of the corpse of the protagonist's wife and his subsequent arrest: "I [the protagonist] was answered by a voice from within the tomb!—by a cry, at first muffled and broken, like the sobbing of a child, and then quickly swelling into one long, loud, and continuous scream, utterly anomalous and inhuman—a howl—a wailing shriek, half of horror and half of triumph, such as might have arisen only out of hell, conjointly from the throats of the dammed in their agony and of the demons that exult in the damnation" (2014, 577). In light of these three anomalies, let us refigure the story in the following analytical diagram (figure 7):
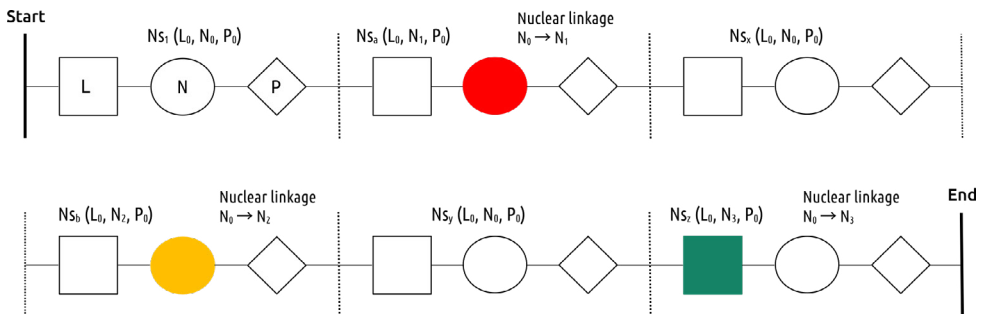

FIGURE 7. Analytic schema "The Black Cat"

On the paradigmatic level, I must point out an issue that needs to be investigated further in as much as it undoubtedly deserves separate and more comprehensive treatment. If I consider anomalies as nuclear links that modify only one given sequence, I can speculate that it is precisely these anomalies, applied at the paradigmatic level, that contribute to the construction of the texts of so-called magical realism. The difference between fantastic narratives and those defined as magical realism lies

precisely in the fact that, in the latter, the fantastic constructs only nuclear links, which do not affect the narrative as a whole. According to our apperception theory, what characterizes magical realism is not the acceptance by both the characters and the reader of an unusual event, but rather the fact that in this type of narrative the presence of the unusual event does not produce a modification of our apperceptions. Thus, the bonds that are created in such situations can only ever be nuclear, and never become transformative or expansive.

8. TRANSFORMATIVE LINK: THE FANTASTIC AS ALTERATION

If the fantastic element produces a change at any level that affects the same level in subsequent sequences, I say that it creates a transformative link, that is, it transforms that same level until the end of the narrative, and is thus considered an alteration. It is an accommodation that follows the process of displacement described by Wundt, i.e., a second order change.

It is worth noting that this group includes all texts with a surprise ending that retroactively changes the interpretation of the entire narrative. Take as an example Poe's short story "Berenice" published in March 1835 in Richmond's *Southern Literary Messenger*. The narrator, Egaeus, a young scholar, grows up in a large, gloomy mansion with his cousin Berenice, though the conditions of their childhood experience differ: "Yet differently we grew—I, ill of health, and buried in gloom—she, agile, graceful, and overflowing with energy; hers, the ramble on the hill-side—mine the studies of the cloister; I, living within my own heart, and addicted, body and soul, to the most intense and painful meditation—she, roaming carelessly through life, with no thought of the shadows in her path, or the silent flight of the raven-winged hours" (2014, 848). Egaeus suffers from a type of obsessive-compulsive disorder that makes him fixate on objects with a "nervous *intensity of interest*" (2014, 850). Berenice, on the other hand, suffers from an unspecified degenerative disease, where periods of catalepsy are a symptom, though she prefers to refer to such episodes as: "a species of epilepsy not unfrequently terminating in *trance* itself—trance very nearly resembling positive dissolution, and from which her manner of recovery was in most instances, startlingly abrupt" (2014, 849). They will, however, get married. One afternoon, Egaeus sees Berenice sitting in the library. When she smiles and thus shows her teeth to him, Egaeus develops an obsession with them which envelops him for days, leading him to drift in and out of delirium:

> And the evening closed in upon me thus—and then the darkness came, and tarried, and went—and the day again dawned—and the mists of a second night were now gathering around—and still I sat motionless in that solitary room—and still I sat buried in meditation—and still the phantasma of the teeth maintained its terrible ascendancy, as, with the most vivid hideous distinctness, it floated about amid the changing lights and shadows of the chamber. (2014, 858)

Two incidents awoken him from this delirium, and it is in these that the plot development takes place. In the first he is brought back to reality by the moans he hears outside the library, where he has fallen asleep: "At length there broke in upon my dreams a cry as of horror and dismay; and thereunto, after a pause, succeeded the sound of troubled voices, intermingled with many low moanings of sorrow or of pain" (2014, 858). A maid subsequently enters and informs him of Berenice's death following one of her attacks. The second incident happens at an unspecified, and unknown to the protagonist, time after Berenice's burial: "of that dreary period which intervened I had no positive, at least no definite comprehension. Yet its memory was replete with horror—horror more horrible from being vague, and terror more terrible from ambiguity. It was a fearful page in the record my existence, written all over with dim, and hideous, and unintelligible recollections" (2014, 859). Egaeus is once again drawn back into reality by the screams of a maid. In front of him in the library he sees a box and recognizes it as familiar, but also that it should not be there: "how came it *there*, upon my table, and why did I shudder in regarding it?" (2014, 859). A servant enters the library and acts as speaker of the atrocity committed by Egaeus during his delirium while he stood over his cousin's still-living body. The box on the table, inside which are Berenice's teeth, represents the mediating object that certifies the threshold passage: "thirty-two small, white and ivory-looking substances that were scattered to and fro about the floor" (2014, 861). I can thus provide the following analytic schema:
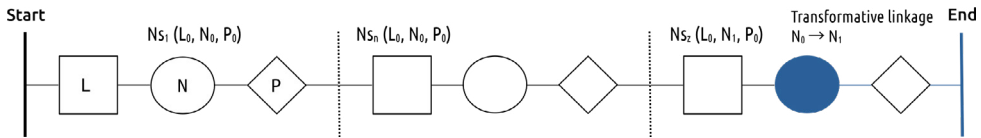

FIGURE 8. Analytic schema "Berenice"

The threshold crossing results in a narrative alteration whereby the reality/ madness fields are marked by the presence of precise objects indicative of the tragedy that has occurred.

9. Expansive Link: the Fantastic as Transgression

I denote as transgression the expansive link that emerges at a given level and ends up expanding to another—or more than one—level and another sequence/other sequences. As we saw for transformative link, transgression is also an accommodation that follows the process of displacement described by Wundt, i.e., a second order change.

To illustrate the expansive link, we shall consider Poe's "The Oval Portrait", published in April 1842 in *Graham's Magazine* in Philadelphia. The protagonist spends the night in an apparently recently uninhabited castle. After reading for a long time, he notices a painting: "the portrait of a young girl just ripening into womanhood" (2014, 398), which results in him experiencing a sense of the uncanny,

"[a portrait] which had so suddenly and so vehemently moved me" (2014, 399). He then reads the story of the girl's life in a volume "which discussed the paintings and their histories" (2014, 400). Married at a very young age to a painter she loved deeply, and endowed as she is with a very rare beauty, she agrees for her husband to paint her likeness. Slowly, week after week, the artist created a masterpiece: "And in sooth some who beheld the portrait spoke of its resemblance in low words, as of a mighty marvel" (2014, 401). He does not realize, however, that he is transferring the young girl's very rare beauty into art. But then, the day after the last brush stroke, "for one moment, the painter stood entranced before the work which he had wrought; but in the next, while he yet gazed, he grew tremulous and very pallid, and aghast, and crying with a loud voice, 'This is indeed Life itself!' turned suddenly to regard his beloved:—She was dead!" (2014, 402).

The final sequence, where the woman passes into the painting, involves a narrative transgression that explains the uncanny feeling experienced by the protagonist, which can be expanded into the paradigmatic level (figure 9):
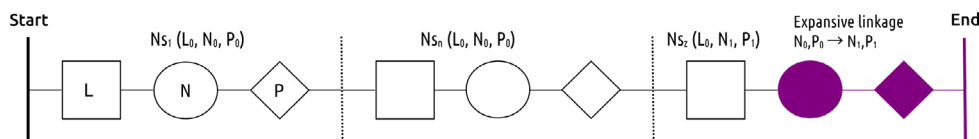

FIGURE 9. Analytic schema "The Oval Portrait"

The portrait is the mediating object in the transition within the framework of the young woman's life, an emblem of the Life-Art exchange that represents at least two different levels of interpretation: on the one hand, the aesthetic beauty of the works of art from which life is born; on the other, the toil and labor involved in artistic creation along with the giving up of much of her life time.

10. CONCLUSION

In this article, I sought to show how epistemology of complexity and neuroscientific advances in terms of embodied simulation and mirror neurons relate to social cognitive abilities with respect to interpreting and interrelating with others. In addition, the hypotheses of cognitive narratology and cognitive literary studies imply the configuration of the space of intersubjectivity where the act of reading materializes and where the apperceptions previously conditioned by multiple different factors are actualized. The decoding and recoding sequence of graphic signs and the surprising evidence of the bidirectional eye-brain visual process have highlighted the cognitive importance of linguistic and paradigmatic anomalies.

As such, I put forward my theory of apperceptions of the fantastic being a link that can emerge through anomalies, alterations and transgressions at any cognitive level involved in reading, while also offering an analytic schema of inquiry that allows us to

analyze narrative texts. Through the analysis of some specific cases, I consider that the role apperceptions play in the creation of fantastic links has been demonstrated.

There is no doubt that the various issues raised in this article—which is only a first approach—will need to be explored further, but I believe that the proposed cognitive approach allows us, through sequencing the texts and analyzing the kind of links that are established as changes in apperceptions between the reader and the text, to overcome and constructively channel the debate about the status of the fantastic as genre or its configuration as a narrative mode, a debate that has engaged criticism about the fantastic for the past fifty years. Further analysis of other texts is, however, certainly necessary to be able to establish how fantastic links shape the reading and interpretation of different narratives, just as the possible cognitive differentiation of links between magic realism and fantastic narratives remains open for future research.

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