The purpose of this study is to analyse how James Joyce builds a large part of his narrative through a verbal tissue that is born from the cognitive experience, from the deep interaction between mind and environment. Beyond the psychoanalytic approach or Psychological realism, Joyce, particularly in *Ulysses*, displays this reading of reality in which a series of cognitive events form a narrative continuum. Reality appears before us through the perceptions of the protagonists, and that is the reason why we only access an incomplete view of reality itself. Partiality or incompleteness is a fundamental characteristic of *Ulysses*. However, Joyce aspires to build up a coherent and solid universe. Joyce creates a continuous reality through the semantic flow, often chaotic and blurry. Joycean language reveals the inconsistencies and instabilities of one's life, when it is impossible to transmit what cannot be apprehended completely, whether due to mental dysfunctions, hallucinations or other causes, as in *Finnegans Wake*. In this study, we also consider etymology as a tool that provides stability and linguistic richness to Joyce's narrative, although subjecting it to hard transformations or mutation processes. Joyce finds great stylistic possibilities in the words used as semantic repositories that come from the past, and, with his passion for language, is able to build cognitive moments that rely on etymology. In the light of the most recent cognitive theories applied to Joyce's work, this study shows how the combination of mind, body and environment builds reality in Joyce, especially in *Ulysses*, overcoming traditional analyses around the inner monologue or the individual mind. Confirming previous studies, we consider that Joyce builds reality through microhistories, sketches, discursive or introspective cognitive events. However, to form a continuous substrate, that contributes to the construction of identity in *Ulysses*, Joyce deploys strategic frameworks, such as paternity or adultery.

Keywords: James Joyce; *Ulysses*; *Finnegans Wake*; cognition; analysis of the discourse
Almost a hundred years later, the universe of James Joyce’s Ulysses (1922) appears before us as a verbal tapestry woven from the cognitive experience, from the deep interaction between mind and reality. Apparently, it is just the result of Joyce’s use of a very literary and complex language, derived from the application of avant-garde aesthetics and experimentalism. However it could also be considered (without losing its aesthetic intention) as the reflection of the semantic formulation of the world, a reflection often imperfect, fragmentary, full of incomplete acts, which are interrupted by others, invaded by tangential meanings or etymological fallacies, by suggestions and emotions caused by the presence of certain objects inserted in cognitive frameworks. Syntax, according to this criterion, is not just the result of a serialized construction of thoughts in a literary fabric like the one that Joyce creates in Ulysses, but rather the accumulation and selection of meanings, the result of the mental process of information by the acquisition and storage of knowledge from material interactions, which includes “the scope of parallelism”.

As Belluc and Bénéjam state, taking Turner’s ideas (1996) into account: “In a thought-provoking demonstration that places reading and literary thinking at the core of cognitive sciences, Turner envisages language itself as born from storytelling” (2018, 8). Following this idea, the cognitive reading of reality implies, apparently, the succession of cognitive events that are gathered together as a continuum, or else shown in apparent isolation, although still being part of the narrative whole. These cognitive events depend on the repertoire of knowledge accumulated or stored, on the emotions that they provoke, but if we play close attention to, for example, Ulysses’ plot, these events tend to be brief narrative units, which function as cognitive instances that ultimately constitute the elements of the work’s tapestry. That is, the speech itself creates reality and it occurs in a simultaneous way; talk becomes as important as thought, discursive events imply the use of an observable mind in which brain, body and environment must be taken into account. This is a fundamental fact in Joyce’s literary conception. Joyce’s argumentative reality in Ulysses, for example, is fictional, but it works as an artefact, absolutely designed to blend with physical reality, which is capable of naturally settling into the reader’s cognitive ability. It is therefore, an artefact that works with all the elements of human perception, an artefact which is derived, for instance, as Kerri Haggart says, citing Clark, from “the relationship between the user and the object” (2014, 348), and this is the reason why Ulysses has always been considered an extraordinarily realistic book in which death and sex predominate as the two fundamental categories.

Haggart affirms that for a long time Joyce’s emblematic work has been analysed by means of a psychoanalytical approach, leading to an understanding that Ulysses reflected, fundamentally, the workings of the internal minds of; above all, two individuals, during a single day of their existence. Interpretative thinking allowed us to access a particular vision of experience, in this case, an experience based on their wandering the streets of Dublin. The day in which Ulysses takes place, is nothing but an ordinary day, and that is precisely why it becomes the most important of all days.

However, Joyce’s work, and particularly Ulysses, is not just a detailed exploration of the psychology of some characters, nor a manifestation of their thoughts and opinions about the world, of their desires or their intentions, but rather the result of the interaction of Joyce’s characters with reality (even if it is fictitious) and their attempts to configure it through the use of language. In fact, that is what we all do, because language (speech) is finally the actual builder of reality. In Ulysses, what we see (or read) is being built before us just as it is formulated linguistically. Moreover, it takes the form of those words, which corresponds to the cognitive approach of Bloom and Stephen, not just as an interpretation of their thoughts, but rather as the elaboration of reality from the mental interaction of the characters with their external physical experience. As Beckett pointed out, Joyce’s literature “is not about something; it is that something itself” (1929, 14).

This interpretation of how the narrative fabric is constructed in Ulysses (as well as in other works by Joyce, to a greater or lesser extent), appeared in some of the first critical articles. Thus, Collins, cited by Belluc and Bénéjam in the introduction to their recent book on Joyce and cognition, concludes in an article in The New York Times (1922), collected in Joyce, The Critical Heritage by Robert H. Deming, that Joyce has the ability to “let flow from his pen random and purposeful thoughts just as they are produced” (1970, 224). It should be noted that Collins was a neurologist and his interpretation of Joyce’s literature appeared, as we say, at a very early date: in 1922. That approach to his literature is known as Psychological Realism.

Joyce, therefore, influenced by the important psychological theories of that time, was offering the reader a narrative mostly based on the psychoanalytical study of the characters who, of course, had a personal interpretation and a particular conception of the world. In the words of Holbrook Jackson (1970), also collected in Joyce, The Critical Heritage Vol. I, and also cited by Belluc and Bénéjam (2018, 5),

[I]t is a day of the most embarrassing intimacy. You live with him minute by minute; go with him everywhere, physically and mentally; you are made privy to his thoughts and emotions; you are introduced to his friends and enemies; you learn what he thinks of each, every action and reaction of his psychology is laid bare with Freudian nastiness until you know his whole life through and through. (199)

The day in which Ulysses (that specific fragment of reality) is developed is not seen as an ordinary day by Jackson. However, the truth is that it could be just the same as any other day. It is by no means a particularly significant day in the life of Bloom or Stephen. There is nothing to indicate otherwise: what is significant is our access to their interpretation of reality, to their mental construction of events, no matter how insignificant they might turn out to be. It seems, therefore, that Joyce’s narrative construction goes far beyond a psychological interpretation, since it is not exactly about knowing the concrete thinking of the characters (interior monologue or stream of consciousness) but rather about understanding how they build their world through the interaction with the environment, and through the storage of sensations, perceptions, knowledge and experience. As Haggart points out, “Joyce’s Ulysses resonates with recent cognitive theory blurring the boundaries between inner and outer – breaching the divide between public and private” (2014, 343).
Etymological fixation and unstable language

Joyce understands that the construction of reality from the cognitive functions of the characters’ brain (but also from the reader’s brain) has to do with building it over and over again, using new and old words, popular and unexpected words, since language is unstable and variable, as life itself. The question of the instability of real existence and its perception by the mind is one of Joyce’s great themes, related to the question of identity, as Fran O’Rourke has pointed out, among others. Inconsistency stems from multiple sensory experiences, thousands, or millions, throughout the day. The fluid and unstable character of reality is represented in Joyce through a changing language, a semantic flux. Christopher Hutton emphasizes “the centrality of etymology and etymological word-play within literary modernism (Joyce, Eliot, Pound)” (1998, 199), and, in fact, Joyce interprets the words as capsules that contain meaning from a diachronic point of view, such as he makes Stephen say: “receptacles for human thought” (Joyce 1963, 27). Sylvain Belluc has no doubt about the relevance of diachronic meaning in Joyce:

A fundamental characteristic of Joyce’s aesthetics is its reliance on the diachronic dimension of language. More than any other writer of his time, Joyce is constantly striving to make the fullest use possible of the literary and semantic past of words. (2018, 83)

And in the same paragraph he emphasizes the importance that etymology has in Joyce “to open our eyes to the myriad information locked up within language” (83).

Joyce addresses on numerous occasions the supposed etymological fixation of words, while subjecting them to hard transformation or mutation processes, looking for a better and more sophisticated way to build reality. The growth and death of words (or their meanings) is a process that resembles that of human cells: it is, therefore, a physiological view of language. By doing so, Joyce is showing language in a diachronic way, demonstrating the ability of some words to survive within or without the lexical paradigms, while others disappear or become useless. Joyce finds great stylistic possibilities in the words used as semantic repositories that come from the past, and, with his passion for language, is able to build cognitive moments that rely on etymology, favoured by the progressive metaphorical expansion of words from the first ideas of sensation. Joyce contemplates the return to the etymological truth as a way to gain power from the speakers, but, at the same time, he is aware of the infinite possibilities of language in its various evolutionary moments, as a cognitive and stylistic tool, and as a rhetorical strategy. The etymological use that Joyce (or Stephen) makes of dictionaries like Skeat’s does not matter so much; what matters are the etymologies, real or not, that can be found in words that arise on the streets, in stores, in advertising, everywhere, as we read in Stephen Hero.

The etymological trace of words seems to represent not only a return to the original terms that explained the world, that is, historical knowledge, but is also a remote sign of stability in the description of reality, considering that everything changes, everything is subject to a flow, and that the identity of everything is mutable, as is the case with language itself. The search for identity is a constant in Joyce’s work: indeed, it is perhaps his most relevant theme. In Ulysses, Stephen and Bloom continuously analyse the stability of their identity in the face of the various situations they go through during the day.

Apart from the use of language, instability can sometimes be controlled by using ritualistic scenes or gestures (often associated with epiphanies), or by insisting on the daily and domestic liturgies, either in solitude or combined with social interaction. On some occasions it is also subject to a provocative reading (the liturgy of the first chapter of Ulysses, for example). Food, breakfast, organic functions (the body in strict connection with the mind), are of great importance in Joyce, as is the very productive sequence of the funeral in “Hades” (where death takes the stage, although it has not ceased to be present through the constant remembrance of Rudy, Bloom’s dead son), which has been profoundly analysed by Kerri Haggart, in the aforementioned article, from a cognitive point of view. Rudy’s non-existence invites Bloom to fantasise about another possible or alternative reality (although physically impossible), as he does in many moments of the novel. But the most important ritual implemented by Joyce is, without a doubt, the hypothetical construction of reality based on suggestions, stimuli, sensations, memories, intuitions, partial observations, microhistories, etc (not just in “Hades”, but in the whole book). Thus, we see Dublin’s landscape grow through the interaction of two characters with material reality, which indicates the fragmentary and never complete nature of our knowledge of the world. Partiality or incompleteness is a fundamental characteristic of Ulysses: we never have a total observation, only a limited part of reality can be constructed by using different elements of perception, as in the pieces of a jigsaw.

Etymology shows how throughout history, for multiple reasons, words have been supplanted and transformed, causing them to lose their primary meaning and turning them into something else. Joyce knows that a word, as he said, is after all a small capsule of thought. As Belluc points out, “[etymologies have] the potential role as a door of access to the historical knowledge” (2018, 83). Joyce was attracted at a young age by the etymologies, and especially by the studies of philologists such as Trench (1890), who identified a sensory past for all words, which, from the physical world they alluded to, would have evolved to multiply the metaphoric terms we have today. Again, in Belluc’s words: “The cognitive value etymology holds in Joyce’s aesthetics thus lies in its capacity to shed light on the readers’ minds which, in turn, add meaning to the text” (2018, 98).

Although Sylvain Belluc acknowledges that “Joycean criticism, over the last decades, has shown etymology to be an essential tool to which Joyce constantly resorts to build the symbolic or metaphoric architecture of his work” (92), he alludes, however, to a change in the conception of etymology in Joyce’s work, based essentially on Dubliners. On the one hand, Joyce activates the etymological repository, but on the other, in Dubliners’ stories he begins to use the words as a sign of the characters’ inability to properly recognize the world they live in (the city of Dublin), or to communicate effectively. Instead of looking for the original truth of the words, Joyce intends to activate the reader’s storehouse of knowledge, placing strategic words on the textual tapestry that will produce special connections in the reader’s mind.

Ulysses verbal tapestry is populated with expressions and words that take the reader to different contexts, either within...
the novel's own text (connections that evoke certain perceptions, objects, memories, images, including, as noted above, parallels of difficult serial or linear expression), or with other external contexts, such as those in which intertextuality operates. Evidently, Joyce achieves that, almost systematically, the reader has to contrast his cognitive ability to that shown by the protagonists of the story. At the same time, as Lucia Boldrini points out, the reader must be attentive to the numerous processes of intertextuality, as in the case of Dante, which enrich the meaning, but which tend to be veiled or erased from the surface, though, Boldrini explains, “vestigial traces [...] can be recovered by careful textual archaeology” (1998, 242). Etymology, revealed through allusions or intertextuality, is, no doubt, very productive in Joyce, and sometimes one has the feeling that it produces effects (that is, it produces meaning) that go beyond what is intended by the author himself. As a whole, Joyce puts into operation a complex verbal machinery that identifies very productive semantic extensions either from etymology, intertextuality and metaphors, or wordplay and puns, that pose a challenge for translators (as they often encapsulate several semantic levels). Joyce designs a powerful verbal system that contains a deep substrate of meaning, which is not always easy to detect by the reader; so that, as Belluc points out, the words display a great energy as “rhetorical tools” (2018, 91).

However, on many occasions, the semantic diversity that can be produced by the use of etymologies is outside the reader's storehouse of knowledge, and that occurs very specifically in *Finnegans Wake* (FW). In this work, the effect of 'reverie (what can be called half-sleep literature) produces access to a number of semantic categories that are represented by continuous verbal distortion. What Volpone calls “contemporary medical-cultural discourse” (2018, 231) implies that Joyce uses here a language affected by reverie, hallucination, the inability to adequately relate meaning and significance, or by mental problems derived from brain or psychological damage. Reverie and brain disorders result in a fuzzy but effective linguistic production. The fluctuation of the sign, with the breakdown of both signifier and meaning, leads to multiple connections in the storage of knowledge of the characters, and also of the readers, and produces a sensation of circular, never-ending narration. Joyce manages to convert all these elements into a new and surprising narrative modality, what Volpone calls “a new order of speech” (232).

If we accept, as noted by Volpone herself, citing Samuel Orton and Edward Travis, that “stuttering is the result of a conflict between the left and right cerebral hemispheres” (230), it is very possible that the representation of reality in *Finnegans Wake* (Joyce 2000) responds exactly to that conflict. Thus, that reality, being constructed by language (which mediates between mind and matter), is subject to the same effects of stuttering, and therefore the stories that run as meanders in the great plain of the textual fabric present that sense of failed, interrupted or blurred construction. We can conclude that Joyce achieves here an innovative and provocative narrative model in which the meanings are concealed or encapsulated in hesitating voices and verbal instability. It is not that reality is not cognitively apprehended, but that it cannot be properly formulated from the mind. This destroys the possibility of showing reality itself, at least in a stable way. Reality is presented through a speech affected by physical and psychological disorders (which is the stylistic basis of Joycean narrative in FW and a clear creative source), but in fact it is nothing other than the result of the construction-destruction binomial of verbal production, cyclically and continuously. This is the reason why reality is also built and destroyed here incessantly, or, at least, takes various forms, as in dreams. This hesitant language offers Joyce extraordinary possibilities, despite its inability to represent reality, or to do so, at least, in a monolithic way.

**Extended mind and enacted approach**

It is obvious that language acts as the most important intermediary between experience and mind. Reality is created through the mind, as Jonah Lehrer (quoted by Van Hulle) indicates: “[r]eality is not out there waiting to be witnessed; reality is made by the mind” (2018, 97). In the case of Joyce's characters, they are not constructing an entirely subjective reality, within an internal mind, but rather they produce a linguistic framework that really makes reality appear before us. Reality which is born from experience and at the same time makes experience exist on paper, can be read and also cognitively apprehended. In Herman's words, “[t]he mind does not reside within; instead, it emerges through humans' dynamic interdependencies with the social and material environments they seek to navigate” (2011, 254).

In her inspiring interpretation of the episode “Hades”, Kerri Haggart emphasizes the need to overcome the traditional analyses of Joyce's prose, and particularly of his vision of the mind, systematically referring to concepts such as the inner monologue, the individual mind or the interpretation of the unconscious through the theories of Freud, Jung or Lacan. Haggart believes that, in the light of the second cognitive revolution, analyses of traditional narratology can take new directions. Haggart introduces concepts that seem to explain very well that necessary interaction between the mental and the physical (or the social) when it comes to constructing specific situations of the narrated reality:

> Situated cognition is a research approach interested in the treatment of cognitive phenomena as the joint product of “brain, body, and environment”. While the internal mind in *Ulysses* has been thoroughly investigated, the situated mind has not. And what better way to discover more about Joyce's characters than to re-examine their situated minds and directly question how they engage with and enact their social and material environment. (2014, 340)

In her analysis of “Hades”, Haggart exposes this approach, according to which, the mind operates through bodily manifestations and the connection with the environment. The issue of adultery, which deeply involves the action in “Hades”, and in particular in the carriage scene, serves Haggart to emphasize these interactions, thus demonstrating Joyce's ability to reflect through the altered language (once again, the presence of the hesitant voice) physical or bodily actions (like shutting the carriage door twice).

Adultery, in fact, emerges as a kind of transversal element in *Ulysses*. It can be detected in multiple situations, which models Bloom's many cognitive approaches, producing alterations in speech acts, or providing emotional content (and meaning) to certain objects or, for example, some very significant songs, such as “The Croppy Boy”. Thus, the extramarital relationship...
works as something like a thematic frame that runs through the narration as a substrate. Joyce also takes advantage of the ritual elements of loving attitudes, courtship and conscious or unconscious inhibition by Bloom, (for example, Boylan’s obsessive mental and even visual presence), and uses them to show the mutability of reality due to the implicit alteration of the system (moral, religious, etc.), and, of course, also due to the cognitive approach of the characters to the environment. Parallel to this, the issue of paternity appears, as Haggart also points out. The use of the hat by some characters can be taken as a cognitive marker of paternity. According to Haggart, paternity also runs through the novel as a thematic frame, although wearing a hat in Ulysses was traditionally identified as a symbol of phallic nature. As with “The Croppy Boy” in “Sirens”, Haggart reminds us that the issue of the hat is linked to a song, The Hat Me Father Wore, by Fergus McCarthy. The hat functions as a marked element of paternity and sexuality, surrounded by the thematic framework of adultery, because Boylan also participates in Bloom’s perception.

The connection of the crustcrumbs that Bloom, and the other characters, find in the carriage with the thematic substrate of adultery, exemplifies the interactivity between the mind and the storyworld. Thus, objects, powerfully loaded with meaning, produce cognitive connections and emotional manifestations along the narrative tissue. The symbolic nature of the crumbs in the carriage, which recalls the crumbs in Molly’s bed, directly associated with extramarital sex that functions as a thematic substrate, goes much further when interpreted as the result of a cognitive process, not just as a symbol.

The marked objects of some microhistories actually respond to a general plan that discovers emotions associated with the physical world, be they the crustcrumbs of the carriage or the Plumtree Potted Meat. Both are sexually marked, just as it happens, as we said, with “The Croppy Boy” in “Sirens”, a chapter of great cognitive complexity, as Patrick Hogan has demonstrated.

As Haggart remarks in her “Hades” analysis, “the relationship between Bloom and the objects within his immediate environment can reveal new patterns in addition to strengthening claims made previously, both about his character and about the underlying thematic frame” (2014, 347). The description of the knowledge of the world through mental interaction with the physical environment, is also identified with the term coined by Andy Clark, action loop (or flashback loop), according to Herman:

[W]hat is distinctive about modernist methods […] is the explicitness with which […] writers like Joyce anchored worlds-as-experienced in what Clark (1997) terms “action loops” that “criss-cross the organism and its environment” (39), thereby calling into question Cartesian geographies of the mind. (2011, 260)

The importance of taking into account the interaction between the mind and the body leads Clark to consider, as we say, that a cognitive experience goes far beyond a mere analysis of the inner mind. It implies that contact, although it may be minimal, with external factors induces us or leads us to direct the semantic production (and therefore the use of words, the connections between them, etc.) in a specific direction at a specific time. The interconnectivity proposed by Clark, in his revealing 1997 publication, implies the presence of the mind, the body and the environment or the world around us, the environment or external scaffolding. As Antonio Chemero points out, in a review of Clark’s text:

Clark’s picture of the embodied, active mind has metaphysical consequences […]. The first of these, which Clark embraces, is that the mind is not confined to the brain, or even the body. Since the agent’s body and normal environment (including, especially, external scaffolding) are crucial to cognition, these should be considered part of the mind. As Clark puts it, “… it may for some purposes be wise to consider the intelligent system as a spatio-temporally extended process not limited by the tenuous envelope of skin and skull.” (p. 221) The mind, this means, is ontologically complex, spreading out over space and time and including bits of the world, language and social structures, along with the brain and body. (1998, n. pag.)

Epiphany and beyond

Epiphany has been considered as one of the most inspiring concepts in Joyce’s narrative. Although the treatment of epiphanies changes throughout the whole of Joyce’s literary production, it is true that in them we can find an explanation for the construction of the outside world, although always in a discontinuous way. As Fournier points out, he finds a similarity in the physical construction of the Joycean world with Husserl’s phenomenology, although with notable differences. Stephen teaches us to distinguish between the normal perception of the world and that special or specific one, which only occurs in certain circumstances, and which refers to the almost mystical essence of things. That essence, that can rarely be accessed, is what epiphany reveals. Fournier remarks that “[e]piphanies, like intentionality, are the bridge between our consciousness and reality. The difference is that intentionality is an essential and continuous structure of consciousness, whereas epiphanies are evanescent, discontinuous, and mysterious” (2018, 63). The continuous or discontinuous construction of Joyce’s universe is a very important matter, because it has to do with the work of the conscious mind. In the case of Ulysses, it is not so oriented to the construction of a world, but to the characters whose thoughts, desires, dreams, interactions with the environment, discursive events, speech acts, epiphanic revelations, etc., are going to build the surrounding reality and the conceptual map of the city. The vision of Dublin is built in this manner in Ulysses. Dublin is perhaps the most important intentional cognitive object of the novel, however, as Fournier points out, it doesn’t deserve much attention from the characters, but a lot of intention: “Joyce’s elaboration of the city of Dublin in Ulysses does not belong to such a natural description. Indeed, the city itself is not the background of a plot fixed beforehand, it is on the contrary elaborated at the same time as the plot” (53). As a result, the idea of Dublin is constructed through discontinuous fragile elements, which gradually become more solid and produce, through their connections, the necessary, sometimes almost unnoticed, narrative continuity.
Simultaneity in the process of creating the city or the environment, as a result of the itinerant process of the main characters of Ulysses, has to do with the constitution of the object itself (Dublin), which shows a fragmentary, discontinuous aspect, although as a whole it is represented with great consistency. Our perception of the environment is incomplete, despite the enormous complexity of mental processes. The fragmentary narrative, which reminds Fournier of Husserl’s phenomenological definition, “donation of an object by sketches or adumbrations” (52), is inherent to Joyce’s literature, and yet his writing conveys that feeling of wanting to capture the essence of the world, the total vision of reality.

In Ulysses the construction of reality from the characters’ cognitive process is, of course, incomplete, although it aspires to build up a coherent universe in which all the information is necessary. Indeed, the itinerant attitude of the characters produces a constant narrative fabric, which, however, is based on perceptions and epiphanies that come from the environment and that constitute that outside world. It is very true that Dublin, the geographical map of the novel, does not seem to interest the characters that roam its streets. Dublin is only discovered through their interactions or perceptions, only through their thoughts, their vital concerns, their wishes, memories or intentions.

Fournier explains that the constitution of the world as an object, from consciousness, can only be discontinuous, due to the characteristics of the human mind. This means that, in order to apprehend the world, we need a direct connection with bodily experiences, with the human factor, and that is exactly what happens in Ulysses, and this is how the world is constituted, through the cognitive awareness of the characters. This is confirmed by Fournier:

> A human consciousness simply cannot achieve a continuous constitution. Indeed, our conscious life is bound by our bodily life; our apprehension of the world is not free from the influences of our desires, our hunger, and so on. The pure interiority of consciousness is not free from the interiority of the body, of the stomach, of sex, and so on. (60)

These are the reasons why the constitution of reality in Joyce, and particularly in Ulysses, is fragile and discontinuous, and depends decisively on the moments of enlightenment, desires and intentions, oriented verbal acts, social connection, historical and cultural aspects, and all the significant materials that accumulate in the process of cognition of the world. This instability is characteristic of human life: in fact, this is how reality is shaped. Joyce turns the common facts of life into the most revealing and characteristic of human life: in fact, this is how reality is shaped. Indeed, the itinerant attitude of the characters produces a constant narrative fabric, which, however, is based on perceptions and epiphanies that come from the environment and that constitute that outside world. It is very true that Dublin, the geographical map of the novel, does not seem to interest the characters that roam its streets. Dublin is only discovered through their interactions or perceptions, only through their thoughts, their vital concerns, their wishes, memories or intentions.

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> This “spiritual manifestation” only Stephen can discern because he “strove to pierce to the significant heart of everything” (SH 33) including everyday chat. His mind “was often hypnotized by the most commonplace conversation. People seemed to him strangely ignorant of the value of the words they used so glibly” (SH 26). As James told his brother Stanislaus, he wanted above all to show “the significance of trivial things” that others had overlooked. (2007, 1)

An important aspect, which comes into direct contact with the essence of what we call extended mind, is what Tondello points out: “[e]piphanies open up a space for the reformulation of the relationship between the human body and its environment” (2018, 1). Beyond the sketches that Joyce wrote between 1898 and 1904, the presence of epiphany (in a broad sense) is constant in his work and can be considered one of the keys to his literary approach. Tondello finds in the gestures that accompany words and epiphanies not only a theory of rhythm, which seems to interest Joyce very much, but also an evidence that gestures expand the usual meaning of words. The existence of numerous moments of simulation and performance in Ulysses, for example, make the gestures that accompany the word even more important: “[g]estures are not seen as an additional support to a meaning already defined by language, but actively help to constitute such meaning” (3). Again, the load of meaning can appear in Joyce through very different channels, and the verbal and visual combination of epiphany with gestures seems to be one of them. The construction of rhythm in Joyce through the placement of words is also a generator of meanings. Tondello concludes that “Joyce creates a particular correspondence between written words and the human body” (4).

**Conclusion**

In Ulysses, but also in a large part of his work, Joyce seeks narrative continuity through the recursive discontinuity of phenomenological experiences. These depend on the interaction with the environment, sometimes punctual, almost mystical, as in the epiphany, sometimes extended by cultural, social or linguistic factors, or by the use of images (as in the case of Molly in “Penelope”). The mind uses concepts of the storehouse of knowledge and those that come from the mind-body-language relationship in order to interpret reality, which, despite the chaotic or fuzzy appearance, offers recurring guides that the characters learn as role models.

The cognitive approach builds the world based on microhistories (Mark Turner) or sketches, through the characters’ verbal representation that produces the semiotic fabric of reality, that is, their own interpretation of the world. The continuous interactions of the characters with each other or with the outside experience creates a map that is physically limited to the city of Dublin, which Joyce unfolds indirectly, activating thousands of small physical details that for various reasons (cultural, social, historical, emotional, by chance) acquire relevance in the cognitive approach of the characters. This literary map, a spatial and temporal environment, allows us to travel within the enormous density of meaning offered to us, not always with certainty, because Ulysses, for example, is populated with ambiguities, unexpected or unknown meanings, complex cognitive connections, masks and disguise, etc. The reader manages to visualize a world that closely resembles the real world but that is logically constructed from the sensory perceptions of the characters.

Some elements (objects, music, colours, specific words or their etymologies), which have been loaded with meaning...
that the characters in Ulysses. The selection of these fundamental thematic frames demonstrates various times.

great thematic frame is that of paternity, which also extends as a continuum throughout the text. The third time to time, although they are not often directly verbalized, a very powerful way. However, they may become visible from since they operate as a substrate that orients their minds in concern of the characters, although they are often not visible, very stable in the unstable narrative flow, and constitute the main Ulysses. Love and sex are a kind of substrate. Death (references to Bloom’s son, Stephen’s and Bloom, and, therefore, circulate throughout the novel as real foundations of his literary discourse. They have to do with emotions generated in certain situations, Joyce manages to create or activate certain places of memory (involuntary memory and frustration, from an incompleteness of identity, and from a certain nostalgia. However, Joyce extends this interpretation from Stephen and Bloom to the entire city of Dublin (its cognitive approach reveals a vision of paralysis), to Ireland and to all mankind, through some procedures such as references and historical and cultural discursive events, or intertextuality.

The selection of these fundamental thematic frames demonstrates that the characters in Ulysses cognitively read reality from conflict and frustration, from an incompleteness of identity, and from a certain nostalgia. However, Joyce extends this interpretation from Stephen and Bloom to the entire city of Dublin (its cognitive approach reveals a vision of paralysis), to Ireland and to all mankind, through some procedures such as references and historical and cultural discursive events, or intertextuality.

It is important to note that, despite the apparent chaos that derives from the mind interpreting the world through very different perceptions, with their corresponding linguistic formulations, Joyce maintains the sense of everyday routine and the relevance of ritual elements, sometimes with a satirical or ironical tone, at other times ritualizing daily domestic situations, all of them important in a novel whose journey through Dublin finally represents the construction of reality anchored in the cognitive-experiential approach of its characters.

or extra meaning at other times of the speech, appear recurrently in the narrative fabric to provoke new sensations or activate certain places of memory (involuntary memory and intertextual memory). More than a symbolic interpretation, we must apply to them a cognitive interpretation, which, in a specific context, leads the characters to connect with other moments of narration, or to perform actions caused or induced by those thoughts, thus contributing in said manner to help us as readers to understand the chessboard arranged by Joyce. Therefore, the crustcrumbs of the carriage, in “Hades”, to which we have referred above, following Haggart’s analysis, acquire that fundamental significance in the narrative construction and also in the creation of the characters’ identity, provoking a long chain of mental processes. The representation of the human mind in the literary language operates through many different strategies. Joyce speaks from the mind of his characters, from his own mind, and asks the reader to complete that great cognitive building, but this great literary endeavour is carried out through numerous techniques, some of them very sophisticated.

However, beyond the concrete discursive events, beyond the emotions generated in certain situations, Joyce manages to create certain narrative structures of great solidity that seem to be the real foundations of his literary discourse. They have to do with great issues that involve the whole vital experience of Stephen and Bloom, and, therefore, circulate throughout the novel as a kind of substrate. Death (references to Bloom’s son, Stephen’s mother, Dignam, etc.) is obviously omnipresent. Love and sex are also very persistent themes in Ulysses. These thematic frames are very stable in the unstable narrative flow, and constitute the main concern of the characters, although they are often not visible, since they operate as a substrate that orients their minds in a very powerful way. However, they may become visible from time to time, although they are not often directly verbalized, acting instead like a continuum throughout the text. The third great thematic frame is that of paternity, which also extends as a narrative substrate, giving rise to important cognitive events at various times.

The selection of these fundamental thematic frames demonstrates that the characters in Ulysses cognitively read reality from conflict and frustration, from an incompleteness of identity, and from a certain nostalgia. However, Joyce extends this interpretation from Stephen and Bloom to the entire city of Dublin (its cognitive approach reveals a vision of paralysis), to Ireland and to all mankind, through some procedures such as references and historical and cultural discursive events, or intertextuality.

It is important to note that, despite the apparent chaos that derives from the mind interpreting the world through very different perceptions, with their corresponding linguistic formulations, Joyce maintains the sense of everyday routine and the relevance of ritual elements, sometimes with a satirical or ironical tone, at other times ritualizing daily domestic situations, all of them important in a novel whose journey through Dublin finally represents the construction of reality anchored in the cognitive-experiential approach of its characters.
According to Hogan, “one may be inclined to conjecture that at least linguistic or verbal processing must be serial. But, in fact, there is evidence that there is at least some degree of semantic parallelism. […] Interior monologue, constrained by subvocalisation, is necessarily serial. Stream of consciousness includes a serial element – whatever is subvocalised. At the same time, it necessarily extends to parallel processes of perception (including internal perception, thus memory and emotion) as well as semantic association” (2014, 106–8). He concludes that “strict serial processing may be confined to syntactically-based subvocalization” (213).

Fran O'Rourke mentions the Joycean interest in “reliability of knowledge” (2018, 31) and adds that it is one of the most common philosophical themes in Joyce's literature: “Joyce's concerns must be viewed within the context of modern philosophy, which questioned the stable existence both of the world and the knower” (31).

Patrick Hogan (2013) has often referred to simulation as a fundamental issue in Joyce's strategy in Ulysses. The idea of performance is also associated to daily life as it is represented in Ulysses, sometimes in conflict with more spontaneous attitudes. Ritualistic and theatrical patterns must be associated to the so-called performative orientation that we can find in very concrete episodes, often reflected by a ritualistic language or by means of a theatrical scene. As Derek Attridge points out, "drama originates in ritual, and for this reason it preserves the magical power to present rather than explain" (2004, 88). I think that spatiality and orientation also are fundamental in Joyce's cognitive approach to reality.


Alonso-Giráldez refers to the cognitive implications of music, songs, and “The Croppy Boy”, in particular in “Sirens”, in an article published in 2017 (40–51). The song offers parallels to Bloom's position in his relationship with Molly and his adulterous behaviour. The song tells Bloom about his virtual execution and the uselessness of his semen (although apparently Molly values his more than Boylan’s), as in the case of the execution of Emmet by hanging. Bloom seems to compensate his lack of sex with the consumption of meat and offal, reminiscent of the tribe's predatory instinct.

"Like the "crumbs", hats are an important marker both within this particular passage and in Ulysses as a whole. But, as Clark argues, it is the relationship between the user and the object that demonstrates the mind as integrated in a process of offloading onto external props" (Haggart 2014, 348).

Boylan's hat closes the circle of production of meaning and emotions suggested by hats: “Significantly, it is only the hat that Bloom sees. Bloom views Boylan's hat as a white flash, effectively granting it a radiant appearance. In a later encounter, Bloom again recognises primarily Boylan's "straw hat in sunlight" (Joyce 1992, 234). Bloom seems dazzled by this hat and displays a sort of
reverence for it.” (Haggart 2014, 349). However, hats also prove a good solution for concealing his love affair, what demonstrates that Bloom is associated to secrecy and masking, as part of simulation performances. Haggart emphasized this: “The hat, for Bloom, is not only associated with paternity, it also acts as a protector. It covers the evidence of Bloom’s epistolary fantasies, indirectly protecting his paternal purity and decency through the concealment of his less virile ventures” (350).

8 Joyce defines epiphany, as is well known, in *Stephen Hero*: a “sudden spiritual manifestation, whether in the vulgarity of speech or of gesture or in a memorable phase of the mind itself” (211).

9 My emphasis.

10 Tondello, citing Bolens, considers that the same relevance of gesture and rhythm can be found in both *Ulysses* and *Finnegans Wake*: “In Joyce’s novel, gestures continue to be associated with the idea of rhythm, and with a mutual collaboration between language and body. In her analysis of gestures in *Ulysses*, Guillemette Bolens refers to the mode and style of the novel as “corporeal” and “kinetic” (2018, 12). And adds: “A similar fascination for the relationship between language and gesture continues during the time of composition of *Finnegans Wake*, as Joyce attends at least one lecture by French anthropology Marcel Jousse, who considered gesture to be at the origin of language” (12).

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### Título:
La construcción mental de la realidad en James Joyce

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