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## “The ‘Janus Hypothesis’ in Don Quixote: Memory and Imagination in Cervantes”

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## COGNITION AND POETICS

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*Cognitive Approaches to Early Modern Spanish Literature*  
Isabel Jaén and Julien Jacques Simon

# COGNITIVE APPROACHES TO EARLY MODERN SPANISH LITERATURE

Edited by Isabel Jaén and Julien Jacques Simon

## CHAPTER 4

# The Janus Hypothesis in *Don Quixote*: Memory and Imagination in Cervantes

JULIA DOMÍNGUEZ

The memory of the past is not made to remember the past; it's made to prevent the future. Memory is a prediction instrument.

Alain Berthoz

The autobiographical self is built on the basis of past memories and memories of the plans that we have made; it's the lived past and the anticipated future.

Antonio Damasio

Ausente, en la memoria la imagino;  
Mis espirtus, pensando que la vían  
Se mueven y se encienden sin medida

Absent, I image her in my memory;  
my spirits, imagining seeing her,  
move and turn without measure

Garcilaso de la Vega

I will start this essay with suggestive and thoughtful parting words by Daniel Schacter at the end of his book *Searching for Memory*: "Our memories are the fragile but powerful products of what we recall from the past, believe about the present, and imagine about the future"

(308).<sup>1</sup> Upon reading this quote for the first time, I immediately recalled how Cervantes' *Don Quixote* unfolds time and again: the protagonist's memories are created from his past chivalric readings and are the essence of his beliefs, actions, and desire to seek adventures. Those memories also guide his decisions and actions, becoming the principal subject written by the fictional historian, Cide Hamete Benegeli, who immortalizes the knight's adventure. Based on his reading experience, Don Quixote relives the past throughout the novel in order to construct an imagined future.

In Cervantes scholarship, studies abound on the "diseased" mind of the knight caused by humoral imbalances. Less studied, however, is the relevance of memory in the novel, and even less its relationship to imagination or the symbiotic workings between memory and imagination. In this essay, I argue that the intimate link between these two internal senses is central to Cervantes' novel. Following both the ancients and such early modern thinkers as Juan Huarte de San Juan in his *Examen de ingenios* [The Examination of Men's Wits] (1575), Cervantes came to realize how memory is not separate from present or future creative processes. The novel tells the story of a gentleman who goes mad from reading too many chivalric romances and whose actions seemingly pit his imagination against his bookish memory. However, the source of Alonso Quijano's problem is embedded in imagination and its relation to memories that are rooted in the past but available for future recall. I base my suppositions on Yadin Dudai and Mary Carruthers' "The Janus Face of Mnemosyne," which explores the latest scientific advances related to memory's capacity to both record the past and imagine the future—an idea somehow intuited in ancient and medieval times. Cervantes' character, Don Quixote, exemplifies that idea, as it embodies the characteristics of the Janus face, a visual representation of one who looks at the past and the future simultaneously, thereby intertwining seemingly dissimilar timeframes into a continuum. Using this metaphor as a point of departure, I will discuss how memory was believed to function in early modernity. I aim to provide a unique perspective on how the past directs Don Quixote's future. Close examination of the nuances between early modern ideas and recent scholarship on memory helps us understand more deeply Cervantes' contemplation of the human mind.<sup>2</sup>

1. I would like to express my sincere gratitude and appreciation to Isabel Jaén and Julien Simon for believing in this project when it was only a very abstract idea.

2. My study does not seek to connect the early modern ideas about the mind with the mechanics of what we know about the brain today, nor do I intend to compare them, which would be impossible. Instead, I seek to use the latter as a starting point to appreciate the former.

## THE JANUS HYPOTHESIS IN THE TWENTY-FIRST CENTURY

Recent research in cognitive neuroscience strongly suggests that past recollection and future prospection are closely related functions. Neuroimaging studies indicate that when a subject recalls the past and considers the future, similar networks in the brain are activated simultaneously, a phenomenon also known in scientific circles as the “Janus hypothesis.”<sup>3</sup> Those neuroimaging studies also reveal that future event simulations are constructed by “extracting and recombining stored information into a simulation of a novel event” (Schacter, Addis, and Buckner 660). As Schacter and Addis note, the memory system is built based on constructive principles: “it can draw on the elements and gist of the past, and extract, recombine, and reassemble them into imaginary events that never occurred in that exact form” (27). Hence, memory serves as a simulator in that the core network used to recall past experiences can create future scenarios based on those past experiences.

Cognitive neuroscience has come to treat retrospection and prospection as twin functions of the same neural system, and they are closely related to episodic memory—in our ability to imagine nonexistent events and future happenings: “Important in this planning effort is not *accuracy of reproduction*, but the *act of imaginative recreation itself* as a totally sensed and felt experience” (Dudai and Carruthers 567; my emphasis). Some researchers tie prospective thinking to very specific brain functions involving memory. Ironically this new line of research in memory science manifests what Alan Richardson has called “a remarkable deficit in long-term (historical) memory” (673) as such theories regarding “mental time travel” have been around since ancient times.<sup>4</sup>

3. Currently researchers, after focusing entirely on the role of memory to preserve and recover the past, are trying to understand memory’s errors by looking at its adaptive and constructive nature, as argued by Daniel Schacter and Donna Rose Addis: “There is also another important function for constructing memory, one that emerges from an idea that a growing number of researchers are embracing—that memory is important for the future as well as the past . . . people draw on past experiences in order to imagine and simulate episodes that might occur in their personal futures” (27).

4. As Richardson has pointed out, current memory researchers have begun to use the word “imagination” to express this ability of the mind to construct future scenarios (out of memories) and project itself “into other times, places, perspectives, and even invented worlds” (666). However, as Richardson notes in his reading of Daniel Gilbert’s *Stumbling on Happiness*, the term “imagination” has been part of history since antiquity: “By imagination, cognitive psychologists and neuroscientists do not intend some highly specialized sense of the term, remote from common usage . . . rather they mean roughly what philosophers, poets, and literary theorists have meant by imagination and its equivalents since Plato” (665) or, as Gilbert puts it, “[the unique human] ability to imagine episodes and objects that do not exist in the realm of the real” (qtd. in Richardson 665).

Such figures as Hippocrates, Galen, and Aristotle (and their medieval commentators) as well as Renaissance scholars who studied the mind (Huarte and Juan Luis Vives in Spain) were quite aware of the important role of memory and its relation to imagination. To further grasp this intrinsic connection, it is imperative to understand two notions: since ancient times until the seventeenth century, first, it was believed that memories were formed out of *phantasms* (*imagines* in Latin), which originated in the complex process of perception; and second, there existed mechanisms that converted memory into an active player in the role of imagination and simultaneously in the construction of future scenarios.

## JANUS HYPOTHESIS IN HISTORY: MEMORY AND IMAGINATION

hacer memoria de las cosas y acordarse dellas después de sabidas es obra imaginativa, como el escribir y tornarlo a leer es obra del escribano, y no del papel

to remember things and recall them afterwards is a work of imagination just like writing and returning to read it is a work of a writer and not of his page

Juan Huarte de San Juan

In his *Margarita Philosophica* (1503), a compendium of grammar, science, and philosophy, Gregor Reisch included what later would be one of the most popular portrayals of the brain and its functions. Reisch was following the ideas of Hippocrates, “The Father of Medicine,” Herophilus of Chalcedon, Erasistratus of Ceos, and other important figures of the School of Alexandria (300 B.C.). Hippocrates’ ideas were later followed by Galen. According to the Greek tradition and the Galenic anatomical description, memory (in the posterior ventricle of the brain) was believed to be a part of the internal senses along with imagination and intellect.<sup>5</sup> It was thought that through the physiological process of perception, the information entering the brain derived from the external senses through different channels—whether tactile, olfactory, visual, or auditory—ended up in the form of an image in memory (a copy or *eikon* in the words of Aristotle)

5. For more information on internal and external senses, see Wolfson’s “The Internal Senses in Latin, Arabic, and Hebrew Philosophic Texts” and Summers’ *The Judgment of Sense*. See also my forthcoming article “The Internal Senses in *Don Quixote* and the Anatomy of Memory,” where I describe in greater detail the inner senses within the framework of the psychological model of Cervantes’ time.

that could be visualized in the act of retrieval by the eye of the mind. The Spanish humanist and philosopher Juan Luis Vives also developed this idea in his writings:

La sede de la memoria, a modo de taller, la ha colocado la naturaleza, con admirable previsión en el occipucio, por cuanto ve las cosas pasadas; de este modo tenemos allí una especie de ojo mucho más excelente que un ojo material que allí se hubiera podido incorporar, como el de la frente que en la fábula se atribuye a Jano. (II.2)

Memory's workshop-like home was placed by nature with admirable anticipation in the occiput [the posterior part of the head] through which one sees past things; in this way, there we have a sort of eye which is much better than a physical eye that could have been placed there, like an eye embedded on the forehead attributed to the fable of Janus.

The information gathered by the external senses was received in the *sensus communis* (or common sense area) and transformed into images in the *imaginativa*. Simultaneously, the experience was also "estimated" emotionally (like an instinct) in the *cogitativa*, where it was considered as benevolent or malevolent (Dudai and Carruthers 567). The final resulting image was then considered a product of the imagination charged with emotional overtones. Thought was therefore an activity of the imagination since memory inventoried these products in a way that made them accessible to the recreative action of remembering (Dudai and Carruthers 567). Consequently, a memory was considered a mental picture, a *phantasm* or image previously created by the *imaginativa* and stored in memory for future recall that had come about in the first place as a result of the process of sense perception. Hence, remembering was seen as a mental process by which one could visualize or "read" those images.

As Guillermo Serés reminds us in his edition of *Examen*, according to Huarte, imagination is in charge of creating the image in memory: "La memoria está directamente relacionada con la imaginación: es la que guarda los 'fantamas' con los que ha de 'hacer figura' la imaginación" (568n122) ["Memory is directly related to imagination: it is what stores the images that will be used by imagination"].<sup>6</sup> Huarte was clearly indicating that memory and imagination rely on one another, an idea that was shared by Plato, Aristotle, Avicenna, Albertus Magnus, and Roger Bacon.<sup>7</sup>

Consider, for example, Aristotle's thoughts on the proximity of memory to imagination in the soul:

It is apparent, then, to which part of the soul memory belongs, namely the same part as that to which imagination belongs. And it is the objects of imagination that are remembered in their own right, whereas things that are not grasped without imagination are remembered in virtue of an incidental association. (450a 22)<sup>8</sup>

For Aristotle, a past action is an interior object that is not absent but rather one that is imprinted upon us forever, and it has the power to resurface in future creation or in imagination, and to foresee the future. In connection to this idea Galen similarly argues in his Book II *De motu muscularum* that, "The part of the soul that imagines, whatever it is, is the same that remembers."<sup>9</sup>

## MEMORY AND IMAGINATION IN *DON QUIXOTE*

Cervantes wrote *Don Quixote* during a period that saw the continuation of the Galenic understanding of the brain and was familiar with the scientific and medical literature of his day. Among the 214 books that the writer owned in his personal library, there were well-known medical treatises from the period, including Huarte's *Examen*.<sup>10</sup> The writer also was aware of the influence of popular medical treatises and manuals related to the mind science of the time, fashionable reading during that era in Spain. Among these, it is worth mentioning, for example, Antonio Gómez Pereira (1500–1588) and his *Antoniana Margarita* (1554) and Miguel de Sabuco y

8. Translation by Richard Sorabji in *Aristotle on Memory* 49.

9. Cited by Huarte in Latin and translated by Serés in Spanish: "La parte del alma que imagina, cualquiera que sea, es la misma que recuerda" (363n46). My English translation.

10. Among the medical treatises that Cervantes owned were also the *Libro de las quatro enfermedades cortesanas* [Book of the Four Courtly Diseases] (1544) by Luis Lobera de Ávila (1480?–1551), the *Práctica y theórica de cirugía en romance y latin* [Practice and Theory of Surgery in Romance and Latin] (1584) by Dionisio Daza Chacón (1513–1596), the *Practica in arte chirurgica copiosa* [Practice in the Abundant Surgical Art] by Giovanni da Vigo (1450–1525), the *Dioscórides* (1555) commented by Andrés Laguna (1499–1560), and the *Tratado nuevamente impreso de todas las enfermedades de los riñones, vexiga, y carnosidades de la verga* [Newly Printed Treatise on All the Diseases of the Kidneys, Bladder and Fleshiness of the Penis] (1586) by Francisco Díaz. For a full listing of the texts kept by Cervantes, see Eisenberg, "La biblioteca de Cervantes."

6. Unless otherwise noted, translations are mine.

7. See Bundy.

Álvarez (1525–1588) and his study about emotions in *Nueva filosofía de la naturaleza del hombre* [New Philosophy of Human Nature] (1587). Of special mention is *De anima et vita* (1538) by Juan Luis Vives (1492–1540) in which the author considers the emotions as possible sources of instability in the judgment.

Cervantes was witness to a growing interest during his time in human psychology and the composition of the human wit. Based on the books he possessed and his own writings, in which references to medical topics of all sorts appear, there is little doubt that he was familiar with the humoral theories and the ideas about the mind that characterized the period. The depiction in some cases of mental insanity along with the imbalance of humors and the different types of melancholy (*Don Quixote*, *El Licenciado Vidriera*) indicate that Cervantes had good knowledge of medicine.<sup>11</sup> It is important to remember that he came from a family in which several members worked in a medical profession, including his father, who was a barber-surgeon.<sup>12</sup>

The word *memory* appears 134 times in *Don Quixote*, and this frequency should not be surprising if one considers that nearly everything the protagonist does is drawn from his memory of reading. In Cervantes' time memory had long been a valued and honored faculty, and that characterization changed only slightly between ancient times and the early modern period. Cervantes seemed to realize that memory's philosophical value had great potential in literary creation, especially through the literature-distorted mind of a character like Don Quixote. By considering the *Quixote* in relation to some of the scientific ideas of the period, especially Huarte's most important work, one can see the impact of these writings on the author.<sup>13</sup> In the *Examen*, Huarte summarizes the memory process (with a clear Aristotelian influence) by using the wax tablet metaphor described in Aristotle's *De anima*, where sensory impressions are imprinted like a stamp in the wax once they become images:

Porque así como el escribano escribe en el papel las cosas que quiere que no se olviden y después de escritas las torna a leer, de la misma manera se ha de entender que la imaginativa escribe en la memoria las figuras de las cosas que

conocieron los cinco sentidos y el entendimiento y otras que ella misma fabrica. Y cuando quiere acordarse de ellas, dice Aristóteles que las torna a mirar y contemplar. . . . Esto mismo hace la imaginativa: escrebir en la memoria y tornar a leer cuando se quiere acordar. (363)

Just as the scribe writes on paper the things he does not want to forget and reads them again (to remember), in the same way it is understood that the imagination inscribes in memory the visualization of things that the five senses realize and the intellect and other things that imagination itself creates. And when one wants to remember them, according to Aristotle, one should return to contemplate them and consider them anew. . . . Imagination does this, too: inscribing in memory and returning to read when one wants to remember.

A similar process plays out in *Don Quixote*. It is important to remember that *Don Quixote* is a novel about reading, remembering what was read, and acting upon reading by imposing oneself into a narrative that exists only in imagination. Memories for the knight are not just signatory traces of the past precisely because they are also closely connected to the faculty of the imagination. According to Huarte:

El hombre . . . tiene tres potencias para conocer todas tres diferencias de tiempo: memoria para lo pasado, sentidos para lo presente, imaginación y entendimiento para lo que está por venir. Y así como hay hombres que hacen ventaja a otros en acordarse de las cosas pasadas, y otros en conocer lo presente, así hay muchos que tienen más habilidad natural en imaginar lo que está por venir. (317)

Man . . . possesses the possibility of knowing three differences about time: memory for what has passed, senses for the present, imagination and understanding for what is to come. Hence, there are those who take advantage of the senses in remembering the past and others who do so in understanding the present while still there are many more who have a natural ability in imagining what will come.

The protagonist of the novel is who he is because of his constant retrieval of his bookish memories. His memories define him, they belong to him, they shape his knowledge; and he makes them his because they are rooted in his everyday life, they are part of his personal history, and each episode is related to the stories he has read and that he has made his own. His memory is what gives him a sense of personal identity, of self-awareness. In fact, everything he does depends on his bookish memory, and that is how he builds his identity.

11. See Soufas; Palma and Palma; López-Muñoz, Álamo, and García-García; García Barreno; and Peset.

12. Barber-surgeon was a medical profession of low prestige.

13. On the relationship between Huarte and Cervantes, see the works by scholars and scientists such as Iriarte; Jaén; Salillas; and López-Muñoz, Álamo, and García-García.

It is necessary to keep in mind how important a book and the act of reading was in an early modern culture still rooted in the oral tradition that was itself dependent upon memory. The process by which one reads and imagines, or one listens and imagines, is a process that shapes the story, as Mary Carruthers indicates in *The Book of Memory*: "Whether the words come through the sensory gateway of the eyes or the ears, they must be processed and transformed in memory—they are made our own" (14). Later on, she explains, "What is read as well as what is seen is transformed into a mental signal that is read by the eye of the mind" (34). Reading was therefore considered a way of transferring the text into memory by means of images. In fact, the Latin verb *lego* ("to read") means to collect or gather, which has a fairly obvious connection to memory as the recollection of gathered material (Carruthers 11). If one considers the value of books in the early modern period, it should come as no surprise that some of the most used metaphors to describe memory were those linking memory to writing, such as a wax tablet, a written page, an inventory, or a library, among others.<sup>14</sup>

Don Quixote constructs himself as a character through the memories of what he remembers of chivalric novels. His life is composed of bits and pieces of reading memories that he subsequently uses to imagine future scenarios, and this process of memory retrieval and construction of self dictates how the novel unfolds. For example, he constantly uses his memories to justify his behavior and guarantee his future as a knight. In this sense, and remembering Schacter's words at the beginning of this essay, his memories are the fragile and powerful product of the past, they represent beliefs about the present, and they express an imagined future.

Don Quixote's knowledge base is derived from his close readings. The associated images he creates have been filtered, mediated, and influenced by a psychological imbalance that leads the knight to relate his circumstances to his personal situation, willfully leaving aside all objectivity. In moments when there is an unbalance in the hierarchy of the functions of the brain, the senses too are disordered, which leads to the protagonist's confusion, as the narrator indicates: "Siendo, pues, loco, como lo es, y de locura que las más veces toma unas cosas por otras y juzga lo blanco por negro y lo negro por blanco" (II.10.703) ["Then, being crazy, which is what he is, with the kind of craziness that most of the time takes one thing for another, and thinks white is black and black is

white" (515)].<sup>15</sup> Some of this can be accounted for by keeping in mind the principles of the Galenic humoral theories. According to the Galenic tradition, the melancholic humor is a product of the black bile that attacks the brain, affecting especially the internal senses such as memory and its functions. When this imbalance appears, the power of imagination increases while the intellect suffers dysfunction. Such a scenario would explain Don Quixote's heightened use of perception and the senses as well as his exalted imagination, often to the detriment of his intellect. For example, Aurora Egido writes that Don Quixote forcibly adjusts reality to his memory, and she explains the process in the following manner:

No se trata, por tanto, de que el proceso de percepción de la realidad sufra una tergiversación posterior en la imaginativa, sino que ésta actúe sobre el presente en una permanente adulteración de lo percibido, por obra y gracia de la omnipresente memoria y del ejercicio de la fantasía. La memoria hace de filtro constante entre la percepción sensitiva y la imaginativa, obligándola a representar lo recordado y no aquello que captan los sentidos en el momento presente. (12)

It has nothing to do, therefore, with the process of the perception of reality which suffers a posterior distortion in the imagination, but instead imagination acts upon the present in a permanent adulteration of what was perceived, by force and grace of memory's omnipresence and by fantasy's imposition. Memory becomes a constant filter between sensitive perception and imagination, obliging it to represent what was remembered and not what the senses capture in the present. (12)

In other words, as Don Quixote processes reality, memories stored from his readings are activated and his imagination runs wild, as if the process of perception and cognition inverted the traditional order. Although imagination is often valued more than memory, without memory imagination simply does not work, since the former provides the material for the latter. Huarte, among others, believed that in human psychology memory played a significant role: "el entendimiento no puede obrar sin que la memoria esté presente (representándole las figuras y fantasmas conforme aquello: *oportet intelligentem phantasmata speculari*) ni la memoria sin que asista con ella la imaginativa . . ." (325) ["The intellect

14. For more information on metaphors of memory and memorial objects, see Carruthers 44–54.

15. All English translations of *Don Quixote* come from Grossman. For the Spanish text, I use Rico's edition.

cannot work without memory's presence (representing the conforming figures and images: *oportet intelligentem phantasmata speculari*) nor can memory function without the imagination"]. To this, Huarte adds that memory "sólo sirve de guardar y tener en custodia las formas y figuras que las otras potencias han concebido" (195) ["only serves to store and have in its custody the forms and figures that other faculties have conceived"]. Indeed, for him, the principal function of memory is "guardar estos fantasmas para cuando el entendimiento los quisiere contemplar; y si ésta se pierde, es imposible poder las demás potencias obrar" (336; my emphasis) ["to store the images for when the intellect needs to contemplate them; if memory is lost, it is impossible for the other faculties to work correctly"].

Don Quixote's memory is connected to experience. As his story unfolds, individual experiences immediately connect to a similar image he has already stored in memory. The process connects experience and memory in interesting and novel ways, but such a process can cloud, even shape, reality. Don Quixote is therefore subject to the past since his memories override his perceptions—suggesting, as Egido has stated, that without memory, there cannot be invention: "La imaginativa del héroe opera siempre a partir de la memoria que es continuo pasto de sus invenciones. Memoria e imaginación trabajan conjuntamente a la hora de recrear las lecturas" (10) ["The hero's imagination always operates from memory, which is a continuous product of his inventions. Memory and imagination work together when recreating readings"]. The words "memory" and "imagination" often appear in tandem throughout *Don Quixote*, as if Cervantes understood that both faculties needed to coexist and that their interdependence was so well regarded in literary and scientific circles during the period. At other points in the work, "imagination" is a substitute for "memory": "Llenósele la fantasía de todo aquello que leía en los libros . . . y asentósele de tal modo en la imaginación que era verdad toda aquella máquina de aquellas soñadas invenciones que leía" (I.1.39) ["His fantasy filled with everything that he read in his books . . . and he became so convinced in his imagination of the truth of all . . . he read that for him no history in the world was truer" (21)]. The interconnectedness of imagination and memory in *Don Quixote* clearly coincides with Huarte. For him, memory stores information, but it is imagination that imprints upon memory and then recalls "De manera que hacer memoria de las cosas y acordarse dellas después de sabidas es obra imaginativa" (364) ["In such a way that making a memory and storing it afterwards is a work of imagination"]. As one recollects a past experience, one is also reconstructing such an experience and imagining

future ones: "Reminiscence is an act of interpretation, inference, investigation, and reconstruction, *an act like reading*" (Carruthers 29; my emphasis). Memory serves as a filter for Don Quixote's sensory perception, representing the recalled object instead of what his senses capture in the present:

y como a nuestro aventurero todo cuanto pensaba, veía o imaginaba le parecía ser hecho y pasar al modo de lo que había leído, luego que vio la venta se le representó que era un castillo con sus cuatro torres y chapiteles de luciente plata, sin faltarle su puente levadiza y honda cava, con todos aquellos adherentes que semejantes castillos se pintan. (I.2.49)

and since everything our adventurer thought, saw, or imagined seemed to happen according to what he had read, as soon as he saw the inn it appeared to him to be a castle complete with four towers and spires of gleaming silver, not to mention a drawbridge and deep moat and all the other details depicted on such castles. (26)

Don Quixote's dominant memory supersedes everything in his present. The images that he perceives and the places he visits are immediately identified with, and subsumed by, the places and images stored in his memory (Egido 11). As Aristotle pointed out long ago in his writings on reminiscence, memory leads to a representation of something that is not present (50–51 in Sorabji's translation; originally appears in Aristotle, *De memoria* 450b 11–20), implying that association and recollection can be intimately linked. In fact, recollection is therefore subordinate to the associational character of memory. As in the earlier example from chapter II, the knight arrives at the inn and immediately converts what he experiences into something else, which he draws from memory. Whatever he touches, sees, hears, eats, or drinks is subservient to what he imagines those objects should be: the inn and its welcoming prostitutes become a castle governed by a warden with damsels who welcome him with music and a scrumptious meal befitting his status. His judgment is warped by memories drawn from his readings, which he then endeavors to imitate at all times. When his external senses permit him to see, smell, hear, and touch, he does not conceive what is before him but rather retrieves a mental image stored in his memory. The resulting action is therefore a product of the images formed from his readings and subsequently used to create imagined scenarios.

Arguably the most symbolic episode of the novel—the one featuring the adventure of the windmills—is a fitting example, among so many



others, to demonstrate the deformation of reality due to the knight's recall from memory. When Don Quixote sees the windmills, their enormous size and quick-moving blades are not an example of an early modern technology that dotted the landscape of central Spain but rather dreadful giants derived from the phantasmagorias he created when reading his books. He is incapable of differentiating between what he sees before him and what his readings have long told him they should be. This is essentially Don Quixote's foremost problem throughout the text. The objectiveness of memory is lost and the knight becomes unable to discriminate between his past and his present. He does not accurately see, hear, smell, or touch whatever appears before him, but rather these external sensorial images direct his future, a future distorted by the past.

Several other examples throughout the text emblemize the interchangeability of memory and imagination, and the two concepts even appear together often as if distinguishing between them were impossible. An example of the substitution at a lexical level can be found in the second part of the novel when Sancho responds to the fantastic tale of Don Quixote's adventure in the Cave of Montesinos by equating imagination ("magín") with memory: "Creo—respondió Sancho—que aquel Merlín, o aquellos encantadores que encantaron a toda la chusma que vuestra merced dice que ha visto y comunicado allá bajo, le encajaron en el magín o la memoria toda esa máquina que nos ha contado, y todo aquello que por contar le queda" (II.23.825) ["I believe, responded Sancho, that Merlin, or those enchanters who enchanted that whole crowd your grace says you saw and talked to down there, put into your mind or memory the whole story that you've told us, and the rest that you will have to tell" (611)]. As Sancho points out, on a very basic level, imagination and memory are the same—here used as synonyms.

Other instances in the story likewise indicate this close relationship between memory and imagination. In the opening chapters, Don Quixote spends a great deal of time creating a name for his lady and himself, and even longer coming up with a name befitting his steed: "Y así, después de muchos nombres que formó, borró y quitó, añadió, deshizo y tornó a hacer en su memoria e imaginación, al fin le vino a llamar Rocinante: nombre, a su parecer, alto, sonoro y significativo de lo que había sido" (I.1.42) ["And so, after many names that he shaped and discarded, subtracted from and added to, unmade and remade in his memory and imagination, he finally decided to call the horse Rocinante: A name, in his opinion, that was noble, sonorous and, reflective of what it had been" (22)]. At another point, during his first adventure, when the innkeeper reminds the knight of the necessity of carrying money and clean undergarments, the

suggestion triggers recollection of also needing a squire, just as he read in his books: "Mas, viniéndole a la memoria los consejos de su huésped cerca de las prevenciones tan necesarias que había de llevar consigo, especial la de los dineros y camisas, determinó volver a su casa y acomodarse de todo, y de un escudero, haciendo cuenta de recibir a un labrador vecino suyo" (I.4.62) ["But calling to mind the advice of his host regarding the necessary provisions that he had to carry with him, especially money and shirts, he resolved to return to his house and outfit himself with everything, including a squire, thinking he would take on a neighbor of his, a peasant" (35)]. The laborer in question of course is Sancho Panza, who will act as Don Quixote's squire for the remainder of both parts of the novel. Here, the espousal of this particular squire corresponds more to his present than to his bookish past: Sancho is a somewhat dimwitted man of humble origins unable to read or write and who has absolutely no experience in the world of knight-errantry—but he is available and up to the task at hand. However, he is nothing like the typical young apprentices in the chivalric romances who are plucked from the nobility to serve great knights before becoming one themselves. Moreover, Sancho's physical presence—he is nearing middle age, short and stout, and driven by life's simple pleasures such as eating and sleeping—compares with Don Quixote's advanced age and frailness, but neither of them compares favorably to their models. Don Quixote even searches his memory for a previous instance in which a squire rode an ass: "imaginando si se le acordaba si algún caballero andante había traído escudero caballero asnalmente, pero nunca le vino alguno a la memoria" (I.7.92) ["wondering if he recalled any knight-errant who had with him a squire riding on a donkey, and none came to mind" (56)]. Here and elsewhere, composite memories serve as a reference point to recontextualize the present and shape the future.

Other examples likewise bear this out. After Don Quixote is knighted by the innkeeper and returns home to employ his squire, he confronts a group of travelers who refuse to admit that his lady, Dulcinea, is the most beautiful in the world. A fight ensues and Rocinante trips, leaving Don Quixote badly hurt and senseless on the path. His physical inability to get up does not impede his rather active imagination and he quickly compares his plight to what he once read—except that he gives the story a new context in which he is now the unfortunate star:

Viendo, pues, que, en efeto, no podía menearse, acordó de acogerse a su ordinario remedio, que era pensar en algún paso de sus libros; y trújole su locura a la memoria aquel de Valdovinos y del marqués de Mantua, cuando Carloto le

dejó herido en la montiña, historia sabida de los niños, no ignorada de los mozos, celebrada y aun creída de los viejos; y, con todo esto, no más verdadera que los milagros de Mahoma. (I.5.71)

Seeing, then, that in fact he could not move, he took refuge in his usual remedy, which was to think about some situation from his books, and his madness made him recall that of Valdovinos and the Marquis of Mantua, when Carloto left him wounded in the highlands, a history known to children, acknowledged by youths, celebrated, and even believed by the old, and, despite all this, no truer than the miracles of Mohammed. (41)

These examples illustrate how Don Quixote's entire profession depends on what was read, stored, and then recalled. However, his present circumstances drive his interpretation of these memories so that they become relevant to the situation at hand.

## CONCLUSIONS

Recent research in cognitive neuroscience indicates that remembering the past and imagining the future are linked ("Janus hypothesis") and helps us understand how early modern thinkers viewed this connection.<sup>16</sup> I have discussed early theories of memory and imagination and their central role in Cervantes' conception of narrative as can be seen in Don Quixote's actions. Following both the ancients and such contemporaneous thinkers as Huarte, the novelist seemed to understand that retained memory is not separate from present or future creative processes. In the novel, Don Quixote goes mad from reading too many chivalric romances. However, time and again, the source of his problem is embedded in imagination, a memory-bound construct rooted in the past but available for future recall. Through his creation of Don Quixote, Cervantes puts a human face on this clinical problem. Memory dictates how the knight will carry out his adventures, and his imagination adapts his literary models to his present and future circumstances, such as in his depiction of Maritornes: "y finalmente, él la pintó en su imaginación, de la misma traza y modo, lo que había leído en sus libros de la otra princesa" (I.16.173) ["in short, he depicted her in his imagination as having the form and appearance of another princess he had read about in his books" (113)].

16. For other examples of the connection between current technology-based research and prescientific views, see Herrmann and Chaffin 5; Morris; and Tulving.

I would like to finish with the words of a great admirer of Cervantes' work, Jorge Luis Borges, from his essay "El libro" [The Book]:

De los diversos instrumentos del hombre, el más asombroso es, sin duda, el libro. Los demás son extensiones de su cuerpo. El microscopio, el telescopio, son extensiones de su vista; el teléfono es extensión de la voz; luego tenemos el arado y la espada, extensiones de su brazo. Pero el libro es otra cosa: el libro es una extensión de la memoria y de la imaginación. (177)

Of all man's instruments, the most wondrous, no doubt, is the book. The other instruments are extensions of his body. The microscope, the telescope, are extensions of his sight; the telephone is the extension of his voice; then we have the plow and the sword, extensions of the arm. But the book is something else altogether: the book is an extension of memory and imagination.

And this is how *Don Quixote* unfolds: by swinging back and forth between memory and imagination, Cervantes weaves the structure of the novel, of a book that departs from the bookish memory of its protagonist: "Dichosa edad y siglo dichoso aquel adonde saldrán a luz las famosas hazañas mías, dignas de entallarse en bronce, esculpirse en mármoles y pintarse en tablas, para memoria en lo futuro" (I.2.47) ["Fortunate the time and blessed the age when my famous deeds will come to light, worthy of being carved in bronze, sculpted in marble, and painted on tablets as a remembrance in the future" (25)].

## WORKS CITED

- Borges, Jorge Luis. "El libro." *Obras completas 1975-1988*. Madrid: Emecé, 2005, 177-84.
- Bundy, Murray Wright. *The Theory of Imagination in Classical and Mediaeval Thought*. Urbana: U of Illinois P, 1927.
- Carruthers, Mary. *The Book of Memory*. Cambridge: Cambridge UP, 2008.
- Cervantes, Miguel de. *Don Quijote de la Mancha*. Ed. Francisco Rico. Barcelona: Crítica, 1998.
- Cervantes, Miguel de. *Don Quixote*. Trans. Edith Grossman. New York: Ecco-HarperCollins, 2003.
- Domínguez, Julia. "The Internal Senses in *Don Quixote* and the Anatomy of Memory." *Beyond Sight*. Ed. Ryan Giles and Steven Wagschal. Toronto: U of Toronto P, 2016. Forthcoming.
- Dudai, Yadin, and Mary Carruthers. "The Janus Face of Mnemosyne." *Nature* 434 (March 2005): 567.
- Egido, Aurora. "La memoria y el Quijote." *Cervantes: Bulletin of the Cervantes Society of America* 11.1 (1991): 3-44.

- Eisenberg, Daniel. "La biblioteca de Cervantes: Una reconstrucción." *Studia in Honorem prof. Martín de Riquer*. Vol. 2. Barcelona: Quaderns Crema, 1987, 271–328.
- García Barreno, Pedro. "La medicina en *El Quijote* y su entorno." *La ciencia y El Quijote*. Ed. José Manuel Sánchez Ron. Barcelona: Crítica, 2005, 155–80.
- Herrmann, Douglas J., and Roger Chaffin. "Introduction." *Memory in Historical Perspective*. Ed. Douglas J. Herrmann and Roger Chaffin. New York: Springer-Verlag, 1988, 1–15.
- Huarte de San Juan, Juan. *Examen de ingenios para las ciencias*. Madrid: Cátedra, 1989.
- Iriarte, Mauricio de. *El doctor Huarte de San Juan y su Examen de ingenios: Contribución a la historia de la psicología diferencial*. Madrid: C.S.I.C., 1948.
- Jaén, Isabel. "Cervantes and the Cognitive Ideas of His Time." *Cognitive Cervantes*. Ed. Julien Simon, Barbara Simerka, and Howard Mancing. Spec. cluster of essays of *Cervantes: Bulletin of the Cervantes Society of America* 32.1 (2012): 71–98.
- López-Muñoz, Francisco, Cecilio Álamo, and Pilar García-García. "Locos y dementes en la literatura cervantina: A propósito de las fuentes médicas de Cervantes en materia neuropsiquiátrica." *Revista de Neurología* 46.8 (2008): 489–501.
- Morris, Peter Edwin. "Theories of Memory: An Historical Perspective." *Theoretical Aspects of Memory*. Ed. Peter E. Morris and Michael Gruneberg. New York: Routledge, 1994, 1–28.
- Palma, José Alberto, and Fermín Palma. "Neurology and Don Quixote." *European Neurology* 68 (2012): 247–57.
- Peset, José Luis. "Melancólicos e inocentes: La enfermedad mental entre el Renacimiento y el Barroco." *La ciencia y El Quijote*. Ed. José Manuel Sánchez Ron. Barcelona: Crítica, 2005, 181–8.
- Richardson, Alan. "Defaulting to Fiction: Neuroscience Rediscovered the Romantic Imagination." *Poetics Today* 32.4 (2011): 663–92.
- Salillas, Rafael. *Un gran inspirador de Cervantes, el doctor Juan Huarte y su Examen de ingenios*. Madrid: E. Arias, 1905.
- Schacter, Daniel. *Searching for Memory: The Brain, the Mind and the Past*. New York: Basic Books, 1996.
- Schacter, Daniel, and Donna Rose Addis. "The Ghosts of Past and Future." *Nature* 445 (January 2007): 27.
- Schacter, Daniel, Donna Rose Addis, and Randy Buckner. "Remembering the Past to Imagine the Future: the Prospective Brain." *Nature* 8 (2007): 657–61.
- Serés, Guillermo, ed. *Examen de ingenios*. By Juan Huarte de San Juan. Madrid: Cátedra, 1989.
- Sorabji, Richard. *Aristotle on Memory*. Chicago: U of Chicago P, 2004.
- Soufas, Teresa S. *Melancholy and the Secular Mind in Spanish Golden Age Literature*. Columbia: U of Missouri P, 1990.
- Summers, David. *The Judgment of Sense: Renaissance Naturalism and the Rise of Aesthetics*. Cambridge: Cambridge UP, 1990.
- Tulving, Endel. *Elements of Episodic Memory*. New York: Oxford UP, 1983.
- Vives, Juan Luis. *El alma y la vida*. Valencia: Biblioteca Valenciana Digital, 1992.
- Wolfson, Harry. "The Internal Senses in Latin, Arabic, and Hebrew Philosophic Texts." *Harvard Theological Review* 28.2 (1935): 69–133.

## SECTION III

### *Embodied Cognition and Performance*