MIRROR NEURONS, THEATRICAL MIRRORS
AND THE HONOR CODE

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Don Gutierre
Mira que médico he sido
de mi honra: no está olvidada
la ciencia... (El médico de su honra)

As Gutierre obeys King Pedro’s command to give Leonor his blood-bathed hand in marriage at the end of Calderón’s version of El médico de su honra, he reminds both the king and his new wife that he is a practicing surgeon of honor, that he does not forget his devotion to that «science». Certainly our understanding of «science» has evolved over the centuries, but the definition that Covarrubias gave the word in 1611 is still pertinent: «Ciencia. Scientia. es el conocimiento cierto de alguna cosa por su causa»¹. As readers or spectators of Calderón’s

¹ Covarrubias Orozco, 1995, p. 308.
tragedy, we know that the ‘certain knowledge’ on which Gutierre has operated is counter-factual, a personal virtual reality he has forged and suffered in his own imagination. My objective in this article is to link the theatrical power of Gutierre’s purported ‘science’ of the laws of honor to recent discoveries in neuroscience. More specifically, I will connect the discovery of mirror neurons in the human brain to Lacanian theories of subjectivity, to the honor code and to the nature of the theatrical mirror in which it operated.

One could say that explaining the nature of virtual reality in Baroque theater is exploring a tautology, since a theatrical work is by definition a virtual world, one in which actors and spectators cohabit for a few hours. The audience accepts the representation on stage as a possible reality — not that of the actors who have their own existence as Cosme Pérez or Manuel Vallejo — but as another ‘possible world’, as Keir Elam and Umberto Eco term it, ‘a spatio-temporal elsewhere’ represented as if actually present for the audience’². The possible world of drama is accessible to spectators by its overlap, however partial, with their actual world³. Hence, it is an evolving art that changes as it travels through time and across cultures, adjusting its codes to keep its ‘possible world’ in contact with the particular experience of the spectators in whose minds it is constructed⁴.

When Lope de Vega was ordered four hundred years ago to explain to a poetic academy of Madrid his own departure from classical theatrical codes in the comedia nueva, he justified it as appropriate to cultural evolution and as an economic necessity: ‘como lo paga el vulgo / es justo, hablarle en necio para darle gusto’⁵. In his 1609 Arte nuevo de hacer comedias en este tiempo for that public, Lope counseled that, ‘Los casos de la honra son mejores / porque mueven con fuerza a toda gente’⁶. He spoke on the basis of his own experience and practice in writing a huge number of plays over almost three decades, and closely observing the reactions to them of the ‘vulgo’ in the corrales.

² Elam, 1980, p. 99
⁴ Eco, 1977, 115–117.
⁵ Vega Carpio, 2009, p. 75.
⁶ Vega Carpio, 2009, p. 88.
In the tragicomedy *Los comendadores de Córdoba* (c. 1596-1598), Lope had already formulated the now-classic definition of honor as: «aquélla que consiste en otro». In the play, the Venticuarto Fernán is on his way from Toledo to Córdoba because the king has suggested that in his absence his wife Beatriz has been unfaithful with her cousin, the comendador don Jorge. He asks his faithful slave Rodrigo, «¿Sabes qué es honra?»:

Rodrigo  
Sé que es una cosa,  
que no la tiene el hombre,

Venticuarto  
Bien has dicho.  
Honra es aquélla que *consiste en otro*;  
ingún hombre es honrado por sí mismo,  
que del otro recibe la honra un hombre,  
ser virtuoso hombre, y tener meritos,  
no es ser honrado; pero dar las causas  
para que los que tratan le den honra;  
el que quita la gorra cuando pasa,  
el amigo o mayor, le da la honra,  
el que le da su lado, el que le asienta  
en el lugar mayor; de donde es cierto  
que la honra está en el otro, y no en él mismo.⁷

The key concept that Lope sets forth in this exchange is that of the intersubjective nature of honor: that honor is not an essential quality or possession of any one human subject, but rather one that is attributed or conceded by others of his society. Rodrigo supports his conclusion that his honor resides in another, saying:

Bien dices, que consiste la honra en otro,  
porque si tu mujer no la tuviera,  
nó pudiera quitártela, de suerte,  
que no la tienes tú [...]⁸

The Venticuarto, like many jealous comedía husbands, launches into an attack on «la honra ... sofistica inventora / de tantas ceremonias y

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⁷ Vega Carpio, *Comendadores*, p. 1120.
⁸ Vega Carpio, *Comendadores*, p. 1120.

locuras» which not only inscribes the fame of «los césares altos y sus triunfos» on civic and sacred walls, but also unjustly entrusts man’s honor to a creature as fragile as woman. Rodrigo, who is also suffering because Beatriz’s slave Esperanza prefers don Jorge’s boozing, braggart lackey Galindo to him, then shows his master letters he wrote discreetly warning him of the danger to his honor, producing the explosion:

Reventaré como preñada víbora!

[…]

¿Cuál fue el villano que la honra santa
que es de los hombres el mayor tesoro—
[… ] la puso en vasos de sutiles vidrios
que con cualquier golpe que dan quebran?
La honra se derrama como el agua...
¡Que dije bien del matrimonio!10

A lengthy misogynist litany in Juan Rufo’s 1596 «Romance de los comendadores», Lope’s source for the play, places the blame on Eve and original sin and Adam’s weakness in being led into violating a «precepto divino», thus becoming «cómplice de su delito»11. Lope, instead, has Rodrigo remind his master that marriage is always praiseworthy, a fact he concedes, saying that God invented it and the Church made it a sacrament, that bad women enhance good ones as lead does gold.

The Venticuatro does not observe that discretion in action, however. When he arrives home and catches his wife Beatriz and her niece Ana in bed with their cousins, the comendadores, he kills not only the four guilty parties but all the living creatures in the house—servants, dogs, cats, and even a monkey and a parrot that didn’t warn him of the dishonor. The slaughter that Rufo celebrates and Lope dramatized had an historical basis, the Venticuatro Fernando Alfonso’s murder in Córdoba in 1449 of the two Comendadores, his wife, and two serving women. He was pardoned for it in accordance with a privilege granted by king Juan II that granted pardon for any murder to

9 Vega Carpio, Comendadores, pp. 1120-1121.
10 Vega Carpio, Comendadores, p. 1122.
11 Rufo, Apoteosia, p. 255.

those who served more than a year in Antequera, a Muslim stronghold conquered by Ferdinand I of Aragon in 1410.12

Juan Oleza considers the fusion of pathetic and comic elements in Los comendadores Lope’s «primera cristalización plenamente lograda de la trágicomedía»13. Antonio Rey Hazas adds that it also proffers the definitive formulation of one of the two basic axes of the comedia, that of honor14, and thus joins a long list of critics who consider honor one of the two fundamental codes of the comedia, alongside Catholic faith and / or support of the monarchy. Rey Hazas even suggests that honor was «el verdadero sustituto trágico del destino en el teatro barroco español», a force against which any individual struggles in vain, a sweeping and highly debatable generalization15.

My intention in this essay is not to offer another reading of Los comendadores, nor to enter into the lengthy debates, stretching from Américo Castro and Menéndez Pidal to current historians like Renato Barahona and Scott Taylor, about the role of honor in life and in drama in sixteenth- and seventeenth-century Spain. My interest herein is to recount the discovery of certain brain cells known as «mirror neurons» that help explain the biological basis of the intersubjective nature of honor that Lope describes, and that make it such an effective theme in Baroque theater. Calderón wrote no poetics equivalent to Lope’s Arte nuevo, but his plays give honor as much importance, as is evident in his early play, Amor, honor y poder, and in certain elements of his and Lope’s versions of El médico de su honra16.

Lope says that honor cases «move» his public. Henry Sullivan, from the perspective of Lacanian theory, has questioned what it means to «move» spectators of a play. They are not moved physically, but rather, dislodged from the position of the Master discourse, the presumed self-mastery of the Cartesian speaking subject, they are shifted to the position of the «Hysteric», the discourse of the subject who im-

12 Lope de Vega, Los comendadores de Córdoba, Introducción, p. 1027.
15 Rey Hazas, 1995, p. 316.
16 Güntert, 2004, rightly observes that they treat honor somewhat differently; Lope usually resolves the dilemma immanently, with royal intervention, whereas Calderón, despite apparently immanent solutions, displays human misperceptions and imperfect justice.

plicitly recognizes his / her own alienation and division. What is moved is the unconscious affect awakened by the mimetic representation of human culture, Sullivan argues. In this process, spectators open up at least partially to the normally repressed Other, the place of the Signifier, where not only honor but all the key signifiers of their culture reside; to the Real suffering of the lack in being, expressed involuntarily in skin prickling or muscles tense with fear, spontaneous tears or nervous laughter; and then formulated consciously in a demand for knowledge: questions about the cause of desire, and the reasons for the conflicts the drama has staged.

As Lacan’s Schema L represents graphically, Cartesian speaking subjects (S) who presume self-mastery and the adequacy of language believe themselves to be speaking truth and imparting knowledge when they addresses others (a’), as does the Venticuatro when he praises marriage. What they do not acknowledge is that it is really the Other (A) that speaks through them. Lope puts the praise of marriage as God’s command and the Church’s institution in the mouth of the slave Rodrigo. But the Other is the polar opposite of a slave, unless like Hegel, we imagine that the slave is ultimately the master. This mastery operates on two fronts: 1) the subject’s formation in and through the Other of the complex of signifiers that make up the Symbolic order; and 2) in the Imaginary realm of the identification of the Ideal Ego (a) with others. Even aside from the notorious difficulty of Lacanian theory and the tendency of Lacan’s followers to adopt simi-

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17 Sullivan, 1992, pp. 45-47. I thank him as well for his generosity in reading this essay and for suggesting improvements in its expression.


larly technical if not Baroque language, the reality of this grounding of our being is hard for most of us to accept, precisely because it is pre— or unconscious and so contrary to the dominant assumptions about human nature since Descartes. However, the recent discoveries of the operation of mirror neurons have now demonstrated the biological roots of its operation.

Since the 1980’s, a group of neurophysiologists in Parma, Italy, have been studying cellular activity in the cerebral cortex, to help patients with serious brain injuries. To do so, they conducted experiments at the unicellular level with macaque monkeys, inserting electrodes in the brain, something one cannot do with human beings, except in grave cases of epilepsy. About 1990, while recording the cerebral activity of a monkey in the brain areas involved in planning and carrying out physical movements, observers were surprised to see that when a physically motionless monkey saw a laboratory assistant take a banana from a plate of fruit, the same cells activated as would have fired had the monkey itself picked up the banana. Then they learned that the same cells activate when a monkey hears another monkey crack a peanut shell as when he himself does so to eat it. It took researchers several years to believe what they were seeing—that the monkey’s brain contained a special class of cells, now named mirror neurons, that fire when an animal hear or sees an action and when the animal carries out the same action himself. There is not, as had been previously been thought, a strict differentiation, localized in different zones of the brain, between perception, cognition and motor skills, but rather a mosaic of connections between the motor system and visual, auditory and tactile zones, yielding a whole equipped to carry out acts based on understanding. It is, say Giacomo Rizzolatti and Corrado Sinigaglia, two of the scientists central to the research, «a pragmatic, pre-conceptual, and pre-linguistic form of understanding, but is no less important for that, because it lies at the base of many of our celebrated cognitive abilities»19.

Subsequently, non-invasive methods such as magnetic resonance imaging (MRI), and magnetoencephalography (MEG) in human studies, combined with unicellular experiments in monkeys, have demonstrated that much more intelligent and flexible mirror neuron cells

19 Rizzolatti & Sinigaglia, 2008, p. XI.
are at work in the human brain, a finding that reflects and supports the evolution of our sophisticated social capacity. «We are exquisitely social creatures» said Rizzolatti; «our survival depends on the understanding of actions, intentions and emotions of others»20. Mirror neurons allow us to comprehend the mind of others not only through conceptual analysis, but by direct simulation. They activate in response to a chain of actions linked with intentions. Certain cells fire when someone kicks a ball, sees another person kick a ball, hears the sound of a ball being kicked, or hears the word «kick»21. Another circuit, not yet well understood, arrests movement while we read the intentions of the other by means of simulation. As Marco Iacoboni says, the mirror neurons «are at the heart of how we navigate through our lives. They bind us with one another, mentally and emotionally»22. Tests in several laboratories on those who suffer from various degrees of autism indicate that it may be due to a «primary dysfunction of mirror neurons»23 and Iacoboni believes that such cells may also play a role in imitative violence stimulated by media violence24.

Mirror neurons begin to function as soon as we are born. A newborn baby will stick out its tongue when he or she sees an adult do it. The cells are fundamental to our capacity to learn from other human beings, and essential to the acquisition of language. Rizzolatti and Michael Arbib suggest that they are precursors to the neural elements that make human language possible, since by coding both movement and the observation of movement, they seem to create a common code—a kind of parity—between individuals that is necessary to the production and reception of a message25.

Most importantly for the operation of honor and shame, mirror neurons are also vital to emotional empathy. The studies of Dr. Christian Keysers demonstrate that social emotions—guilt, shame, pride, disgust and desire—are based on a system of mirror neurons unique to human beings and located in a part of the brain called, ironi-

21 Iacoboni, 2008, pp. 11-12.
22 Iacoboni, 2008, p. 4.

cally, the insula\textsuperscript{26}. Dr. Keysers found, for example, that when a subject watches a hand extend as if to caress someone and then sees another hand push it away roughly, the insula registers the social pain of rejection. Humiliation seems to be engraved on the brain by the same mechanisms that register physical pain. This, I believe, largely conforms to the Lacanian explanation of desire; as the incorporation of the gaze of the Other, desire always seeks the recognition of the other who is both the cause and object of desire\textsuperscript{27}.

Conflicts over honor in early modern Spain certainly involved much more than sexual purity — political power, prestige, blood purity, class, family ties, economic interests and more. But the obsession with honor based on the fidelity of a woman was a particularly effective literary structure. It continues exercising a similar power in cinematic (and political) narratives of our own day. Because as Jacques Lacan observed, «There is no such thing as a sexual relationship [between speaking beings]» — in the sense that two human beings who love each other never fit together perfectly like the halves of a divided jewel\textsuperscript{28}. Whether one is woman or man, heterosexual or homosexual, the desire to be loved by the other who is the object of our desire is always a highly vulnerable emotional point. Therefore questions of sexual honor create an emotional bond with very diverse publics, in comedias and contemporary movies. The Venticuatro's humiliation is double, both in the intimate and public sphere; intimately, in his wife's infidelity, and publicly in the fact that it was the king who informed him of it.

\textsuperscript{26} New York Times 10 January 2006; Iacoboni, 2008, pp. 106–129.

\textsuperscript{27} Other aspects of Lacanian theory, however, would seem to need adjusting in the light of mirror-neuron discoveries. The mirror stage, classically understood as beginning about 18 months and being closely linked to the acquisition of language that enables the child to negotiate primary «castration», the realization of its separateness from the mother or primary nurturer, now has been shown to begin at birth, to precede the acquisition of language, and to function first, reflexively, in the imaginary order. On the other hand, as far as I know, mirror neuron experiments have yet to help explain the complex nature of gender identification and sexual object choice, or solve the nature-nurture debate on the topic. Limited work does show some differences in the mirror-neuron activity of masculine and feminine subjects, but the experiments are based on self-identified adult heterosexual subjects.


The great English dramatist Peter Brook said in an interview that with the mirror neuron discoveries, neuroscience has begun to understand what theater people have always known: that the efficacy of drama depends on the public’s capacity to share, by means of an internalized comprehension of the meaning of the actors’ sounds and movements, the emotions they try to communicate with that performance. We can therefore think of a double, or two-level mirror at work in the theater. The first level functions between characters in the on-stage fiction, who respond to each others’ actions and words first through a pre-conscious response to others’ intentions awakened by the operation of each one’s individual mirror neuron system; only thereafter do they formulate in apparently rational discourse their understanding (or misunderstanding) of those actions. The second level operates similarly, between the on-stage characters and the audience that observes their interactions, Like the on-stage characters, the spectators first pre-conscious understanding derives from mirror-neuron stimulation. But because spectators are privy through dramatic irony to more information than any one character possesses, their awareness of the motives of other characters allows them to foresee the consequences of the characters’ understanding or miscomprehensions, and to formulate their own understanding rationally, either during or in post-performance reflection. Lope, both in the Arte nuevo and in the words of the Duke of Ferrara in El castigo sin venganza, cites the image that Donatus attributes to Cicero, that of the comedia as a mirror of human customs. And now we know With the help of mirror neurons, we can further appreciate the accuracy of this description of theater as a mirror; we can see that there is, at this second level, another intersubjective mirror at work in the interior of spectators at a play. Therefore, although they remain physically immobile, watching an honor drama can quite literally «move» its public, as Lope said four centuries ago.

Studies of these neurons demonstrate a symbiosis between human biology and the cultural transmission that helps us understand the persistent power of aspects of the honor code and its functional importance in the theater of early modern Spain. In those transitional centuries between feudalism and capitalism, when an increase in

29 Rizzolatti y Sinigaglia, 2006, p. 11.
urbanization and physical mobility had weakened traditional ties, when inquisitorial pressures guarded against any religious or sexual deviance, and an economic crisis that became endemic at the end of the sixteenth century made almost everyone vulnerable, we can understand why there was a hyper-sensitivity to "el qué dirán" and any sign of disdain on the part of others. Mirror neurons exercise some power in the virtual reality of videos—from which derives the pleasure some people take in pornography, as well as the short- and long-term effects of violent media programs on children. But they function much more forcefully face-to-face between flesh and blood human beings. Knowing that, and transporting ourselves imaginarily to the relative intimacy between public and actors in the corrales or in palace theaters, we can well understand why honor plots move their spectators powerfully. Furthermore, defense of honor could stand in for topics such as sexuality, desire, and blood purity that a combination of social codes and censorship of theatrical texts restricted to indirect reference and allusion on stage, as Melveena McKendrick and Alfonso de Toro point out.

The king stood at the pinnacle of the socio-political hierarchy in early modern Spain, so any sign of his displeasure constituted a grave threat to noblemen, as Gutierre instantly registers when Pedro I, having heard doña Leonor’s complaint, turns his back on him in Calderón’s El médico. Thanks to mirror neuron research, we now know why and how we—and Lope and Calderón characters—can read much less dramatic evidence. As Iacoboni observes, mirror neurons permit us to interpret other’s intentions constantly on the basis of facial expressions and other corporeal signals. In the Médico version attributed to Lope, doña Mayor reads the first signs of don Jacinto’s jealous suspicions of Enrique in his paling face, telling her maid, «Mira a mi esposo, y verás cómo roban / las colores de su cara / algunas pasiones locas». Her husband don Jacinto, who enters calling

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31 McKendrick, 1984, cited in de Toro, 2004, p. 325. Censorship undoubtedly played a larger role following the 1608 institution of requiring censorial approval of texts prior to licensing them for performance.
32 Iacoboni, 2008, pp. 3-4, 110-120.
Mayor the crystalline mirror his soul adores, has registered alarm at the mere sound of Enrique’s angry voice before he saw him or heard the prince’s words: «fueron las voces roncas / de Enrique más descompuestas / que requiere, más furiosas / que graves». Dramatists play, however, on possibilities for dramatic irony in understanding that mirror neurons give no guarantee of a correct interpretation. Jacinto and Gutierre judge Mayor / Mencia’s faint when caught in the act of writing the prince as final proof she is guilty of adultery. Jacinto, even before seeing her unfinished plea to the prince, concludes, «Derribe esta bala inmensa, / de mi honor, el fuerte muro. Si culpada no estuviera, / aquí no se desmayara» 34.

Not all honor plots end in bloodshed, however. One of Calderón’s first plays. Amor, honor y poder, ranks with El médico de su honra in reiterated references to honor and honra, along with similarly key signifiers in his dramatic vocabulary, amor and poder. Yet as in most other Calderón (and Lope) comedias with honor plots involving unmarried women, it ends more or less happily in marriage. Usually, resourceful and resolute women and /or the gracios resolve the honor crux. Mirror neurons may some day explain why this plotting is socially accurate as well as audience- pleasing. Thus far, I find Lacanian theory of gender identity more helpful. Because women —and gracios as lower-class men— are less fully «castrated» within the Symbolic order, less fully integrated in the social hierarchy of patriarchal culture and the conflicting demands it places on noble males who would retain their status, they are more free to maneuver around those demands. Jacinto in Lope’s Médico reacts to the king’s disfavor by calling the monarch a «vicedios en la tierra», but also says the king is human and vulnerable to calumny of false friends, and compares his own loyalty to that of El Cid 35. Calderón’s Coquin, in contrast, tells the monarch he will be whoever the king wants him to be, then tells Gutierre he will not return with him to prison, because «el honor de esa ley / no se entiende en el criado» and asks «¿heme de dejar morir / por sólo bien parecer?» 36.

34 Calderón, El médico de su honra, 2007, p. 607.
35 Calderón, El médico de su honra, 2007, pp. 556.
36 Calderón, El médico de su honra, pp. 378, 408-409.
Amor, honor y poder, performed at the palace during the Prince of Wales’s 1623 visit to court the Infanta María, is built on a story told about the countess of Salveric (Salisbury)\(^{37}\). Countess Estela resists the king’s seduction with a combination of will and tactical industria; the infanta Flérida defies social codes and the king’s will to free Estela’s imprisoned brother Enrico and marry him rather than the Hungarian prince Teobaldo who courts her.

The industria that both Estela and her brother Enrico employ to deflect the king’s pursuit of her is a metatheatrical deployment of theatrical mirroring to «move» the royal audience within the plot, and perhaps in the audience as well. When the king hides in a garden to waylay her, first Estela and then Enrico communicate their opposition to him through the fiction of addressing a work of art: Estela a fountain of Venus, and Enrico a retrato or statue of king Edward that is in fact the king himself. Enrico tells him that Christian kings should not break the limits of that law, and that nobles such as he defend his blood and realms. Within the plot, this mirroring is not sufficiently distanced, nor is the king physically constrained or controlled by Spanish protocol for palace performances, which dictated that monarchs remain absolutely impassive\(^{38}\). The enraged king slaps Enrico. He, unable to retaliate against his king, turns his drawn sword on Teobaldo instead and then throws it at the king’s feet, saying that the «thunder» of the king’s slap has made him a lightning bolt in defense of his honor: «Diste a mi rostro el fuego / y reventó por los sentidos luego»\(^{39}\). Teobaldo later pleads for Enrico’s life, telling the king:

Una cólera, señor,
nunca previene razones,
ni son suyas las acciones
y más tocando al honor.
Cuando está más disculpado,
si de sentimiento lleno,
vive a la razón ajeno
y a la prevención negado.

\(^{38}\) Greer, 1991, p. 175.
\(^{39}\) Calderón, Amor, honor y poder, 2007, p. 80.
These apparently irrational explanation for his deflected revenge make sense in light of the role mirror neurons play in the pre-cognitive/reflective nature of our actions and perhaps in “imitative violence”. Our religious—or philosophically—based belief in free will and the rational adequacy of the Cartesian speaking subject notwithstanding, mirror neuron research, like Lacanian psychoanalytic theory, demonstrates that, in Iacoboni’s words:

we are not rational, free-acting agents in the world. Mirror neurons in our brains produce automatic imitative influences of which we are often unaware and that limit our autonomy by means of powerful social influences. We humans are social animals, yet our sociality makes us social agents with limited authority.\(^40\)

Accepting such evidence does not mean that we are biological automatons, however, as Calderón’s own dramatic craft demonstrates /monstrates. While his Enrico is so driven by love, jealousy, and concern for his honor that his drama before the «statue» of the king draws a royal slap and imprisonment, Calderón knew how to make plots of court plays at once relevant to political concerns of the moment and sufficiently discrete. In this case, the relevance is at least double: to the amorous pursuits of the young Philip IV, and to the suggestion that perhaps the princess María should marry a Spanish noble, not a foreign prince, Hungarian or English.\(^41\) His theatrical service to the monarchy would bring him not a slap but the honor of a hábito de Santiago little more than a decade later.

\(^{40}\) Iacoboni, 2008, p. 209.

\(^{41}\) Cruickshank, 2000, pp. 95-99.
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