Clueless in *Don Quixote (1615)*: Sancho Panza and Game Theory

Matthew A. Wyszynski
(The University of Akron)

With the success of the first part of his soon to be masterpiece in circulation, Cervantes set about to write an even wittier and arguably more narratively complex second part. The first part was itself an intricate invention, with authors and historians and translators mixed into different levels of narration, a technique that served to keep the reader on his or her toes as well as proving to be an entertaining aspect of the text in itself. With the second part, however, Cervantes upped the narrative ante, producing an even more sophisticated interweaving of narrative levels, not least of which was the characters' recognition of the first part of the novel as a historical fact, the inclusion of vaguely veiled historical and contemporary figures, and even a vituperation of a spurious continuation of the first part. Cervantes the author integrates this first part of his work into the second in various ways and in order to achieve various effects: sometimes to respond to critiques of the *Quixote* of 1605, other times to produce adventures for his protagonists, often time for humorous effects for the reader, and finally to challenge those authors, such as Avellaneda, who tried to usurp Cervantes fictional hero and make him their own.

To achieve each of these ends, Cervantes made strategic decisions about what to include, the manner in which to use it, and to anticipate how his readers would react to the text. The study of strategic thinking is today called game theory (GT), and Cervantes' use of some aspects of GT in his novel predates the formal articulation of the theory by nearly 350 years. This fact does not undermine the use of GT to analyze the novel; rather, it demonstrates that the principles of GT have been active and employed for much longer than thought, perhaps even for time immemorial.

Both parts of *Don Quixote* are rife with strategic interactions among the characters. Sancho manipulates his master, Don Quixote continues to attempt to suborn his squire into behaving in a manner appropriate to a world of knight errantry, and Don Quixote's friends use stratagems to convince him to return home safe and sound. The strategic behavior in the second part becomes especially complex with the inclusion of the first part of the novel as relevant information for characters as they make decisions, especially for the Duke and the Duchess. Two moments in the novel illustrate well how important strategic thinking can be: the "enchantment" of Dulcinea outside of El Toboso by Sancho, and Sancho's tenure as governor of Barataria. In both episodes, we see the mechanics of strategic thinking in operation, but just as importantly, we observe *cluelessness* in one or more characters because they fail to consider those with whom they interact as strategic players.

Game theory has been applied to literary studies only recently, and so it is appropriate to explain briefly what it is: a method of analyzing the ways in which two (or more) people or groups interact with one another and the study of the strategies they use, the "mathematical study of interaction among independent, self-interested agents" (Leyton-Brown 1). At the heart of GT is rational choice theory (Chwe 9). Rational choice theory, in turn, is the belief that people will behave rationally; that is, they always seek to maximize their payoff, however that payoff is defined:

> Rational choice theory also does not care about what the alternatives actually are; all that matters is that a person chooses among them in a way consistent with the model. A person with one hundred dollars might choose between getting a fancy haircut, donating the money anonymously to the local food bank, giving the money to his itinerant brother, or buying a handgun and shooting himself. A vain person, a generous person, a family-minded person, and a suicidal person can all be described by payoff maximization. (Chwe 11-12)

The payoff maximization in GT is not linked in the analysis to an ethical or moral stance. Rational choice does not assume or preclude an ethical standard, but posits that agents or individuals will always seek to achieve the "best" outcome for themselves, however that is defined. In the context of *Don Quixote*, the eponymous hero is a crazy old man who has decided to live out a bizarre and anachronistic dream, and such behavior may seem completely irrational. However, in the context of GT, rational choice means consistently seeking payoff maximization. In the context of any decision, a person, or in this case character, will make choose the alternative that he values as most desirable among the other choices available.

Traditionally, GT has been used to analyze economic behavior, but it has developed and been applied to political science, biology, computer science, philosophy, and more recently, fiction.[1] A game, as used in GT, consists of player, actions, payoffs and information, all of which can be mathematically modeled. This type of game differs from the subset of play that Huizinga outlines (196), although "fun" is not necessarily excluded from the games that are the subject of GT. Relatively simple games are typically modeled with either a game tree or a matrix, both of which we will use to analyze a few episodes of *Don Quixote*. A game tree has various nodes, points at which a player makes a decision, which then branch off into further notes (see Figure 1 for an example of a game tree). A payoff matrix represents payoffs in a different way. Values for various outcomes are assigned to show relative values of combinations of strategies that players may choose to follow individually (see Figures 2, 3 and 4 for examples of matrices).[2] Participating in these games effectively and strategically requires players to form a Theory of Mind (ToM) for the opponent; each player must have the ability to imagine the options that his opponent might have and to take them into consideration when determining his own best strategy. As we will see in the case of Sancho, "Coming up with effective plans involves creativity and ingenuity and is not so easy to teach." (Chwe 19) and is often formed by native ability and experience.

One of the pillars that supports GT is the fact that strategic thinking involves not only being able to come up with ToM for other players, but that "without speculation, fancy and imagination, strategic thinking is impossible" (Chwe 58). Of course, imagination and cognitive processes are not the invention of twenty-first century psychology. In the Renaissance, imagination was an important topic of inquiry, though it is often an understudied aspect of Scholastic and Renaissance philosophy by today's scholars.

[1] See Brams for examples of the GT applied to fiction.

[2] Chew observes "Assigning payoff numbers to outcomes might seem artificial and crude, but this is merely a convenient way to notate a person's rancing from best to worse" (11). The difference in payoff numbers can also reflect the relative payoff of an option (values of 10, 5, 0 and -10, for instance), and so may not be simply in rank order (4, 3, 2, 1).

Imagination (*imaginatio* and *phantasia* are used synonymously in Aquinas) is crucial for most of the medieval Scholastics—and even the Renaissance philosophers of the non-scholastic stripe who followed them—as a means of expressing the analogical relationship between the sensible world and transcendent reality. For Aquinas, *imagination* is a "storehouse of forms received through the senses" (395). But Aquinas goes even further in stating that the human being has an estimative power, in effect, this power of the soul is used for "the apprehension of intentions which are not received through the senses" (395). In effect, both the imagination and the estimative power can be understood to form what a modern psychologist might call Theory of Mind when these faculties are applied to other individuals.[3] It is a way in which we attempt to know what is ultimately either difficult or impossible to know, including the possible thoughts and ideas of another individual. The Renaissance theory of imagination draws heavily from Scholastic philosophy and especially the Aristotelian tradition as filtered through Aquinas. Imagination, along with cogitation, memory, fantasy and common sense, are classified as perceptual faculties of the sensitive soul (Park 466). Interestingly, this Renaissance concept of the process of imagination is in some ways similar to the modern ToM:

> Imagination stored these data [perceptions] before passing them on to fantasy, which acted to combine and divide them, yielding new images, called phantasmata and the reactions of estimation;…Because the internal senses [like imagination and fantasy] were less bound to the actual experience, they acted to bridge the gap between external sensations, limited to the knowledge of particulars and the highest cognitive operation of intellection, which dealt with universals (and hypotheticals). (Park 471)

Farrell makes this connection even stronger:

> There is no chasm between the intellect and the sensible works; rather there is identity. To know is, in a sense, to become the thing known; it is to have one's own form physically and the forms of the known things intentionally. Knowledge is a vital action, not a mere passive reception or an automatic response. (I. 333)

This type of active identification with another agent is fundamental to ToM, and the character who perhaps best embodies Renaissance psychology (Jaén "Cognitive Ideas" 94-95) and who clearly uses ToM is Sancho Panza.

One of the most enjoyable scenes that the reader of the second part reads about is Don Quixote sending his squire off into El Toboso to find Dulcinea and take to her a message from the knight. In this scene the reader sees clearly how the both Renaissance ideas of knowledge and ToM come into play in the Cervantine text. Sancho knows perfectly well who this Dulcinea is, because he has already led an embassy to her in the first part of the novel, but in this instance the squire has matured and is able to anticipate his master's reaction to any negative news or the proposition of a world view that does not

[3] Lisa Zunshine, in her study of ToM and the novel, also calls ToM "mindreading" and defines it as "our ability to explain people's behavior in terms of their thoughts, feelings, beliefs, and desires… Attributing states of mind is the default way by which we construct and navigate our social environment, incorrect though our attributions frequently are" (6).

conform to Don Quixote's chivalrous construction of the world that surrounds him. Critics have not failed to recognize this marked change in Sancho. Typical of this type of critical observation is Jaén's summary of Sancho's development:

> "Hypnotized" by the carrot of prosperity, Sancho participates in all the adventures that don Quixote designs for their chivalric universe. However, between the "simple-minded" Sancho that first warns his master about the windy lack of agency of the giants, and the cunning Sancho who enchants Dulcinea in DQ part two there is a fundamental difference: the development of a machiavellian [sic] intelligence. ("Consciousness" 4)

Jaén characterizes this new intelligence as one that is capable of reason. In effect, Sancho is able to construct a ToM for Don Quixote and anticipate his reactions (Jaén 7-8). The reader observes that Sancho uses his past experiences with Don Quixote to imagine what his master's future reactions will be:

> 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, como se pareció cuando dijo que los molinos de viento eran gigantes, y las mulas de los religiosos dromedarios, y las manadas de carneros ejércitos de enemigos, y otras muchas cosas a este tono, no será muy difícil hacerle creer que una labradora, la primera que me topare por aquí, es la señora Dulcinea; y, cuando él no lo crea, juraré yo; y si él jurare, tornaré yo a jurar; y si porfiare, porfiaré yo más, y de manera que tengo de tener la mía siempre sobre el hito, venga lo que viniere. (II, 10, 703)

Such evolution of thought is recognized by game theorists as being important to the strategies that the players develop: "People find their way to a solution by some evolutionary process of trial and error" (Binmore 14). Sancho Panza has learned from his errors up to this point in his relationship with his master, and is now a much better player in their games. And like many players in a game, Sancho will use his knowledge of Don Quixote's thought process to his own advantage. The squire has invented a plan to make his master think what Sancho wants him to think so that Sancho himself will win the game. In other words, the squire wants to maximize his own payoff. He twists his master's logic for his own ends, illustrating that "rationality is really a function of one's ability to make decisions. As such it can be, to some extent at least, manipulated at will" (Swirski 138). Don Quixote's gullibility is due to Sancho's parody of his master's rhetorical excesses, but also because near the end of the first part, Don Quixote has seen how enchanted things can be turned into everyday ones. Don Quixote has been prepared to be taken in by Sancho's trick (Close *Companion* 106).

A game such as the one Sancho and his master participate in outside of El Toboso can be graphically represented by a game tree (see Figure 1). A player is faced with a decision to make at each node, and then the other player has to choose between alternatives. Of course, this is somewhat reductionist in that it often reduces all the possible actions to a binary choice, but in many cases, including this instance, the game tree accurately reflects

what each character can do.[4] Following the tree to the end, we can see that the only feasible choice Sancho can make—assuming that he is acting rationally according to his lights—is to lie to Don Quixote and insist on the lie until Don Quixote believes him. This is, of course, what Sancho successfully does.

As we have seen from Sancho's soliloquy cited above, Sancho knows his master well. Assuming that Don Quixote will behave rationally—that is, he will attempt to maximize his payoff according to his own lights of knight errant—Sancho can predict what Don Quixote's reaction will likely be in the case that he does not lie about his visit to El Toboso, or if Don Quixote does not believe his lie. In order to maximize his own payoff, Sancho must lie to Don Quixote and insist on that lie until his master believes him. It is both men's interest—in the sense of maximizing payoff—that Sancho act in that way. These outcomes can also be observed in Figure 2, which shows the payoff matrix for Sancho's lie game.

Sancho is successful in this strategy not only because he has chosen well to maximize his payoffs—within his world, he is *rational* because he makes choices that he believes will maximize that payoff—but also because it does not occur to Don Quixote that Sancho is engaged in a "game," understood as an "interdependent decision situation, whose outcome depends on the choices of *all* players" (Brams 30). If we compare Don Quixote's mental processes with those of Sancho, we immediately notice that the master does not even consider that his squire is a *player*. In other words, Don Quixote does not, or cannot, formulate a ToM for his squire and subsequently form a strategy to maximize his own payoffs. Had Don Quixote been able to step back and put himself in Sancho's place, he likely would have realized that if Sancho had not gone into El Toboso, the squire's best strategy would have been to lie. With such information, Don Quixote could have come up with a counter move that may have altered Sancho's maximum payoff, or would have at least changed the position of the Nash equilibrium[5] in this game. If Don Quixote had seen Sancho as a player in this game, he would have anticipated that Sancho had two choices: tell the truth or lie. Sancho, aware that Don Quixote knows of these choices, would take into account that Don Quixote could believe the tale or not. Figure 2 is a representation of the choices and the outcomes of both players. Sancho will always do worse by telling the truth than by lying.

This payoff matrix shows the strategies of a hypothetical game of complete information between Don Quixote and Sancho, [a] game

> in which each player knows the other player's preferences as well as his or her own … When players not only possess this information but also know that they know it, and so on ad infinitum, they are said to have *common knowledge*. (Brams 34).

Don Quixote has spent just as much time with his squire as his squire has with him, but as we have seen, Sancho has been able to learn and make use of what he has learned to beat Don Quixote when matching wits with him. If Don Quixote were not so involved in his

[4] Any model is an approximation of reality, often times eliminating features that are not of interest to the study at hand. Swirski, in defence of focusing on salient features when using game theory analysis, cites the Borges story "Del rigor en la ciencia" (125) as an example of the riduculousness of attempting to include everything in a model.

[5] The Nash equillibrium is "a stable strategy profile: no agent would want to change his strategy if he knew what strategies the other agents were following" (Leyton-Brown 11).

own world, if he had chosen to attempt to form a ToM for his squire, he may have been able to better play this game to a more acceptable outcome.

In this payoff matrix, it is obvious that Sancho will always do better by lying to his master. As the squire says to himself, "la gente manchega es tan colérica como honrada y no consiente cosquillas de nadie […]. Vive Dios que si os huele, que os mando mala ventura" (702). Sancho knows that if the townspeople find out his mission is to look for a princess among them, he may be in physical danger. He has experienced first hand the violence of those who misunderstand Don Quixote or think they are being made fun of by the knight errant. Further, it occurs to Sancho that if he persists with the lie, Don Quixote will not send him on further foolish errands:

> Quizá con esta porfía acabaré con él que no me envíe otra vez a semejantes mensajerías…o quizá pensará, como yo imagino, que algún mal encantador de estos que él dice que le quieren mal la habrá mudado la figura, por hacerle mal y daño. (II, 10, 703)

The worst that can happen to Sancho if he lies is that Don Quixote will not believe him, and the squire will arrive at the status quo ante. Not a great outcome, but certainly not the worst possible one either.

Consider if Sancho does indeed go to El Toboso and tells Don Quixote the truth. The very worst that can happen is he endangers himself—possibly receiving a beating for his impertinence—and Don Quixote does not believe him, probably sending him back again: insult added to injury. Marginally better is going to El Toboso, getting a beating, and having his master believe him. But as Sancho knows, payment in real money is slow in coming with his master, so while the cash may eventually materialize, it is not worth the price of a probable beating.

Don Quixote's payoffs are also noted on the matrix, but for this analysis, they are less important because Sancho realizes that they are irrelevant for this game because, in effect, there is no game. Both men are not players in the strict sense of the definition, because they both do not establish strategies by forming ToM for the opponent in order to consider the strategies available to him. However, if Don Quixote had been able to take the time and form a ToM for his squire, he would have realized that Sancho's best strategy is to lie, and would have countered that by not believing him, regardless of the squire's obstinacy in lying. By not considering the situation from Sancho's point of view, Don Quixote shows himself to be *clueless*. We note immediately Don Quixote's "conspicuous absence of strategic thinking" (Chwe 3). In this case, it is Don Quixote's self-conception of as a knight errant that leads him astray as in so many other instances. It does not occur to the knight that his squire will act otherwise than the squires in the books of chivalry of which Don Quixote is so fond.

Sancho Panza illustrates that GT, in spite of criticism leveled against it in other fields such as economics and politics (Chew 25), is a tool that is often used to advantage by the disadvantaged. Indeed, the powerless often employ the strategies described by game theory well because they need to in order to survive: "The relatively powerless need strategic thinking most and learn it best" (Chwe 29). In the fantastic feudal relationship of knight-squire, Sancho is severely confined in what he allowed to do, hemmed in by Don Quixote's reading of what a squire's role is to be. As a peasant, he is also underprivileged

with respect to the hidalgo. Nevertheless, by employing a strategy that takes into account Don Quixote's cluelessness, Sancho is able to manipulate his master and to gain successfully what he wants, at least temporarily until the Duke and Duchess embark on a new game.

The ludic aspects of knight and squire's stay with the Duke and the Duchess in second part of the novel have been repeatedly examined by critics,[6] but what has not be studied is the strategies used by players within what can be called "games." Sancho's government of Barataria constitutes a game-within-a-game, and at times it goes even one level deeper to a game-within-a-game-within-a-game. At the highest order, we have the Duke's manipulation of the circumstances that consequently place Sancho Panza in his government; through the Duke's machinations, Sancho is subjected to a series of adventures whose sole object is to amuse the Duke, the Duchess and their retinue. At this level, Sancho is an unwitting player, and so perhaps cannot be considered a player at all. The Duke and Duchess as players, in spite of their intentionality,[7] demonstrate the characteristic of *cluelessness* that we early saw in Don Quixote. At the next level of game, Sancho is called to sit in judgment. On the one hand, he becomes a player in the courtroom drama, while the litigants become the other. And finally, within these court cases, there are two players, the plaintiff and the defendant. These three levels of games neatly complement one another and demonstrate how interrelated games can be played at multiple levels of a narration. Further, by observing the processes and outcomes of these games, we again observe strategies deficiencies in the privileged classes—perhaps the reader included in this group, and the ability of the disadvantaged to use the principles of game theory in pragmatic ways.

For the purposes of analysis, we will study the levels of games in reverse order. Of the many cases that Sancho is called on to arbitrate, the last case is especially amenable to game theory analysis. A woman comes before Sancho and claims she was raped. Her putative attacker admits to having had relations with her. However, he states that the relationship was consensual and that he paid the woman after the fact. She, however, was not satisfied with they payment and thus has come before the court complaining of rape.

In Figure 3 the possible payoffs for both participants are shown, and the matrix highlights the best strategy for both players. The assumptions for the scenario that this table are that the man's object is to satisfy his lust; the woman is a virgin and wants to protect her virginity. The payoffs, as seen in the key, are 4 is the most desirable payoff, and -4 the worst.[8] So, if the man's object is to satisfy his lust, it is best for him to have relations with the woman regardless of whether or not she chooses to defend herself. If he attempts to have relations with her and she does not defend herself, he will achieve the greatest payoff because he satisfies his sexual desire at no physical cost (i.e. harm) to himself. If she does defend herself, he will still probably satisfy his lust, though this is not guaranteed. Nevertheless, the man also risks a certain amount of harm in this scenario. In

[6] See, for instance, the studies by Canavaggio, Close "Pranks", Grilli and Richter.

[7] Richter considers the Duke and Duchess' acts intentional by classifying them as "the most dominant and arguably the most defining acts of cruelty in the second volume of *Don Quixote* […] the cruelty of the ducal pair takes on an entirely new purpose and focus: providing pleasure to themselves as spectators" (47), and equates them with sadism.

[8] These values are somewhat arbitrary in this matrix and in all the others, but they numerically represent the desirability of various outcomes in relation to other outcomes possible.

short, the worst payoff the man can have in this situation is a 2, which is much better than the -4 or 0 of the outcomes if he does not attempt to have relations with her.

At the same time, the best payoff for the woman is to not have relations with the man and to not defend herself. In fact this payoff is a 4 because it maintains the status quo ante, which for a virgin is paramount. Her virginity, she says, is so valuable that she has carefully guarded and defended it for twenty-three years:

> Me ha llevado lo que yo tenía guardado más de veinte y tres años ha, defendiéndolo de moros y cristianos, de naturales y estranjeros; y yo, siempre dura como un alcornoque, conservándome entera como la salamanquesa en el fuego, o como la lana entre las zarzas. (II, 45, 996)

However, by following the non-defense strategy, the woman stands to lose much more—her virginity and her reputation, for by not defending herself, she may be liable to the charge that she is a loose woman. The next best option for the woman is to defend herself in the event of an attack and either defend her virginity or have her virginity taken from her forcefully, in which case she has a legitimate complaint before the law. In the case that she does defend herself from a non-existent attack, she stands to lose less than not defending herself against an attack. In this case, though, she may be seen as the aggressor, and may have to face some punishment for assault. Given this payoff matrix, we would predict that the woman is telling the truth when she comes asking Sancho for justice.

However, if we examine more closely the strategies involved in the scenario that the man provides, we see that the issue is more complicated than it may first appear. Figure 4 illustrates the players' strategies for the context of the incident that the man provides. In this case, according to the defendant, the sexual relations were consensual; the woman is not as virtuous as she claims to be, and is in fact greedy because after the fact she wants more than the agreed upon sum. The outcomes for this game are similar to the outcomes in the game illustrated in Figure 3. The woman will always do better by complaining, and the man will always do better by satisfying is concupiscence.

It is precisely the similarity in between these games that causes the difficulty when judging the case. In either situation, both players are following the best strategy, and there is not way to tell who is telling the truth. Sancho can see this. Yet he is also able to form a ToM for both players. If the man truly wants to satisfy his desire—substituting money for sex in this recreation of the circumstances arranged by Sancho—he will do so. Conversely, if the woman wants to protect what is precious to her—substituting again money for virginity—she will do so, as she indeed does. Based on what he has heard from the litigants as well as drawing from his own store of knowledge, Sancho is able to judge fairly and wisely, contrary to all the hopes and expectations of the Duke and Duchess:

> His [Sancho's] resolution of the "cases" presented to him by the Duke, although of popular extraction and possible known to him, are nevertheless illustrative of Sancho's consistency of view in regard to the human condition as well as his ability to see through man's trickery. (Vega Carney 590)

And part of the human condition is the ability to think strategically and interpret others' strategic action by forming a ToM for them. By inventing the test, Sancho forms a

ToM for the litigants, then tests his hypothesis by means of the experiment with the sack of coins. Due in equal parts to Sancho's astuteness and the nobles' cluelessness, the nobles' plan is foiled.

The Duke and Duchess do not expect Sancho to be able to act in the way he does because they do not see him as a strategic player. And they have no excuse for their misreading of the situation. Sancho's tormentors should have a good idea of his astuteness because they have read the first part of the novel and know that Sancho, while at times acting very foolishly, is also capable of acting strategically. Moreover, the Duchess has learned from Sancho himself about the squire's behavior in the second part—notably his "enchantment" of Dulcinea at the beginning of the novel. In spite of all this evidence of Sancho's mental adroitness, the Duke and Duchess see Sancho as puppet that can be manipulated for their own amusement. They discount the fact that Sancho Panza has demonstrated his capacity for strategic thinking; he shows the clueless nobles his inherent intelligence and sagacity.

Ironically, though, Sancho becomes a victim of his own cluelessness, albeit one different from his master. Sancho, the illiterate that he is, does not know that Don Quixote's fame has spread because of the publication of the first part of the novel. Even as a rational agent, he cannot anticipate the repercussions of his outside the town of El Toboso in the first chapters of the second part. The Duke and Duchess will take advantage of this cluelessness for their own benefit by proposing the method of liberating Don Quixote's enchanted Dulcinea. In this case, they are able to form a ToM for Don Quixote. By arranging the disenchantment of Dulcinea in the way that they do, they can anticipate Don Quixote's reaction. Sancho, far from being omniscient, or even prudent, has sown the seeds of his own destruction because of ignorance of the duchess' motives. He is incapable of forming a ToM for her and her husband, anticipating their strategies in this game of theirs, perhaps due to the lack of experience and contact he has had with high nobility. His ability to fully recognize reality, in spite of the education by experience he has earned is not fully developed. Even in the second part, in spite of his development, "Tampoco es Sancho tan selectivo como para asimilar las discreciones y descartar las locuras" (Urbina 151) in all situations. Cluelessness may inconvenience those in power, but for the disadvantaged, it can have real and often time dire consequences. The whipping is so funny to the Duke and Duchess because they have tricked the trickster, though in this case there is a double inversion; it is not the powerless that take advantage of cluelessness to gain their ends, but the powerful.

In the end, no one is completely safe from cluelessness, perhaps not even the reader:

> ¿[Q]uién al leer por primera vez el magno libre no piensa que Sancho, investido de gobernador, iba a hacer reír a carcajadas? ¿Quién dejaría de creer que este improvisado jefe de gobierno no hiciese más locuras en su ínsula que don Quijote en Sierra Morena? (Osterc 9)

The reader, like the Duke and Duchess, likely underestimates Sancho as he enters into his government. Even seasoned readers marvel at his sagacity each time they read of his judgments. Cervantes, 350 years before the formal invention of game theory, had realized what strategic thinking is, how important it is to our relationship with others, and

that we all risk being clueless when we refuse to enter the game, or even fail to recognize that there is a game to be played.

Figure 1: Game Tree for Sancho's Lie

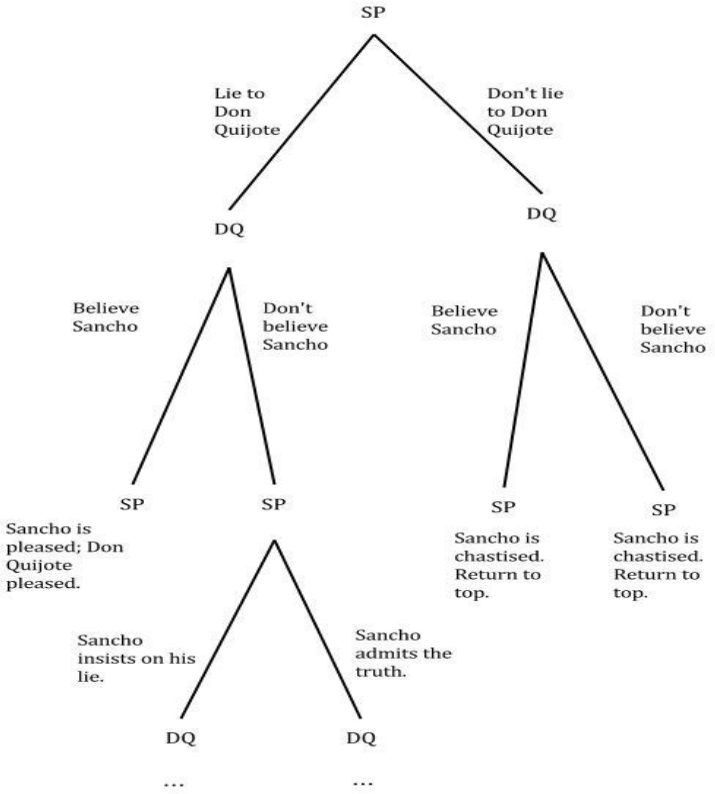

Figure 2: Payoff Matrix for Don Quixote and Sancho

	Sancho Goes to El Toboso Truth	Sancho Does Not Go to El Toboso Lie
Don Quixote Believes Sancho	4, 0	-4, 4
Don Quixote does not believe Sancho	0, -4	**2, 2**

Key
x, y = Don Quixote, Sancho
Payoff: 4 best— -4worst

Figure 3: Payoff Matrix for the Virgin Scenario

	Mujer: No defenderse	Mujer: Defenderse
Hombre: Forzar	4, -4	**2, 2**
Hombre: No forzar	0, 4	-4, 0

Key
x, y = man, woman
Payoff: 4 best— -4worst

Figure 4: Payoff Matrix for the "Yogar juntos" Scenario

	Mujer: no quejarse	Mujer: Quejarse
Hombre: Yogar	4, 0	**2, 2**
Hombre: No yogar	0, - 4	-4, 4

Key
x, y = man, woman
Payoff: 4 best— -4 worst

Works Cited

Aquinas, St. Thomas. Fathers of the English Dominican Province trans. *Summa Theologica*. 3 Vols. New York: Benzinger Bros., 1947.

Binmore, Ken. *Game Theory: A Very Short Introduction*. Oxford: Oxford UP, 2007.

Brams, Steven J. *Game Theory and the Humanities: Bridging Two Worlds*. Cambridge, MA: MIT P, 2011.

Canavaggio, Jean. "Las bufonadas palaciegas de Sancho Panza". *Cervantes: Estudios en la víspera de su* centenario. Ed. K. Reichenberger. Kassel: Reichenberger, 1994.

Chwe, Michael Suk-Young. *Jane Austen, Game Theorist*. Princeton: Princeton UP, 2013.

Cervantes, Miguel de. Francisco Rico dir. *Don Quijote de la Mancha*. Barcelona: Instituto Cervantes, 1998.

Close, Anthony. *A Companion to Don Quixote*. Woodbridge: Tamesis, 2008.

---. "Seemly Pranks: The Palace Episodes in *Don Quixote* Part II". *Art and Literature in Spain, 1600-1800. Studies in Honor of Nigel Glendinning*. C Davis and P. J. Smith eds. London: Tamesis, 1992. 69-87.

Farrell, Walter. *A Companion to the Summa*. I. Sheed & Ward: New York, 1941.

Grilli, Giuseppe. "La corte de los duques: *Quijote* II, 30-33 (al fondo el *Tirante,* el palacio de Constantinopla y sus fiestas)". *Edad de oro* 15 (1996): 41-61.1996

Huiziga, J. *Homo Ludens: A Study of the Play-Element in Culture*. Boston: The Beacon P, 1953.

Jaén, Isabel. "Cervantes and the Cognitive Ideas of His Time: Mind and Development in *Don Quixote*." *Cervantes* 31.2 (2012): 71-98.

---. "Literary Conciousness: Fictional Minds, *Real* Implications". http://www.clas.ufl.edu/ipsa/2005/proc/portillo.pdf Accessed 15 April 2015.

Leyton-Brown, Kevin and Yoav Shoham. *Essentials of Game Theory: A Concise, Multidisciplinary Introduction*. s.l. Morgan and Claypool, 2008.

Ostrec, Lúdovik. "Justicia y honradez del gobierno de Sancho Panza". *Acta Neophilologica*. 18 (1985): 3-10.

Park, Katherine. "The Organic Soul." *The Cambridge History of Renaissance Philosophy*. Eds. Charles B. Schmitt and Quentin Skinner. Cambridge: Cambridge UP, 1988. 464-484.

Richter, David F. "Don Quixote's Demise: Games, Cruelty, and the Closure of Representation on the Ducal Stage". *Confluencia* 25.2 (2010): 43-55.

Swirski, Peter. *Of Literature and Knowledge: Explorations in Narrative Thought Experiments, Evolution and Game Theory*. London: Routledge, 2007.

Urbina, Eduardo. *El sin par Sancho Panza: Parodia y creación*. Barcelona: Antropos, 1991.

Vega Carney, Carmen. "Justice in Barataria". *Romance Languages Annual* 2 (1990): 586-590.

Zunshine, Lisa. *Why We Read Fiction: Theory of Mind and the Novel*. Columbus: The Ohio State U P, 2006.