NEW APPLICATIONS OF GAME THEORY: GENET'S "*PRISONER'S DILEMMA*"

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In 1944, mathematician John von Neumann and economist Oskar Morgenstern published the seminal work *The Theory of Games and Economic Behavior* in which they proposed new problem solving techniques in economics. These theories are still very much in the news, as witnessed by the 1994 presentation of the Nobel Prize for Economics for work on game theory. The ideas set forth by von Neuman and Morgenstern have been applied in the past 50 years to many disciplines (military strategy, social behavior, product marketing, voting strategies, plea bargaining, etc.), and I find that game theory is equally effective when used in the study of drama. For instance, the pattern outlined in the famous Prisoner's Dilemma (formulated by A.W. Tucker), uncovers the central paradoxes involved in Jean Genet's character dynamics in *Les Bonnes*. It seems Genet knew that the theatre is the perfect arena for a game of scheming and dominance: the dramatic situation takes the form of a game; players are pitted against one another; and they follow strategies that lead to either a win or a loss.

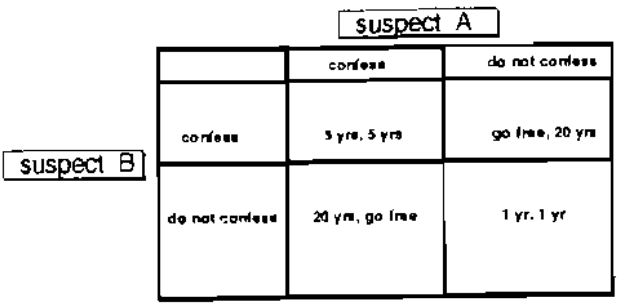
In *Saint-Genet: comédien et martyr*, Jean-Paul Sartre stresses that it is the sham, the artificiality of the theatre that seduces Genet, the artist (561). Indeed, no other medium can provide such opportunities for the master riddler: *Les Bonnes* relies solely upon theatrical techniques such as masking, role-playing, *volte-face* and *coup de théâtre* to design its puzzle, to set its trap. The reader or spectator is lured into the game. At first self-assured and eager to play from a safe aesthetic distance, the spectator soon becomes what Jeffrey Malken refers to as Genet's "betrayed victim," a contestant compelled to play opposite a self-proclaimed liar/criminal who seems to delight in his opponent's dilemma (101).

The dramatic conflict inherent in Genet's game invites comparison with the 2-person, non-zero-sum game, which proposes a complex pattern of strategies and has no single, clear-cut predictable outcome. The players pick their strategies simultaneously; neither player knows her opponent's choice. The best-known example of the two-person, non-zero-sum game is undoubtedly the Prisoner's Dilemma. In brief, Tucker's original Prisoner's Dilemma postulates the following:

> Two men suspected of committing a crime together are arrested and placed in separate cells. . . . Each suspect may either confess or remain silent, and each one knows the

possible consequences of his action. These are: (1) If one suspect confesses and his partner does not, the one who confessed turns state's evidence and goes free and the other one goes to jail for twenty years. (2) If both suspects confess, they both go to jail for five years. (3) If both suspects remain silent, they both go to jail for a year for carrying concealed weapons--a lesser charge (Davis 108).

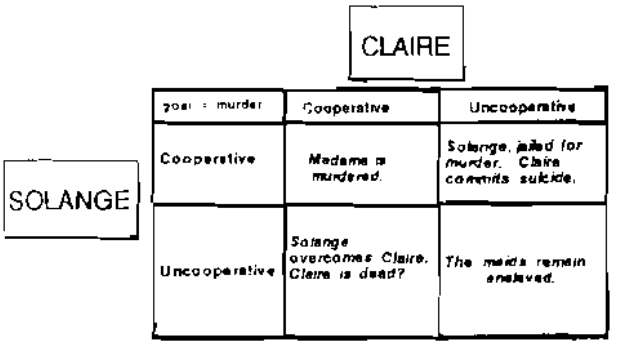
The TUCKER DIAGRAM appears thus:



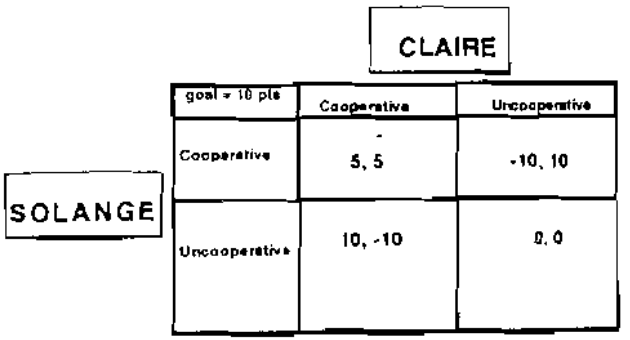
If we agree that there is no "honor among thieves" and that each man will make a choice based on his own self-interest, and if we take into account that each suspect must predict his partner's options and foresee the effect of each of them on himself, then there is only one possible answer: Each man is better off confessing so as to avoid the chance of serving the twenty-year sentence. A paradox exists, however. Consider the two naïve prisoners, too ignorant to weigh the alternatives, who remain silent and each serve one year in prison, while the more sophisticated thinkers, employing their knowledge of game theory and realizing their chance to lose their freedom for twenty years, confess and are subsequently rewarded with five-year prison terms! Clearly, the Prisoner's Dilemma reveals complications that depend upon the *ability* of the players to plot and choose. Intellectual aptitude, emotional stability, and general personality traits, all influence the outcome of a game.

The central "game" in *Les Bonnes* demands that Solange and Claire, the players, choose a strategy that will lead to a result, the players' payoff, i.e. either punishment or reward. The maids' professed goal is the murder of Madame; however, the Prisoner's Dilemma reveals the alternative, irresistible desires of the two scheming maids.

Let's examine the most favorable options, the alternatives that must be considered, and the anticipated payoffs. Start at the top left rectangle of the Genet diagram and work around it counter-clockwise.



Or, translated into more succinct numerical values, the diagram takes the following form:



If Claire and Solange work cooperatively to murder Madame, they will receive equal payoffs, sharing the possible 10 points. Let's say 5 points for Solange and 5 points for Claire. If, however, Claire cooperates but Solange double-crosses her sister, Claire will receive a negative payoff (her own death by strangulation or a negative 10-point value), while Solange will exalt in her new role as murderess (let's award her 10 points). If both maids refuse to cooperate to act against

their common enemy, neither will receive a payoff and they will continue their lives enslaved by Madame. The final scenario is an inversion of the second box, with *Solange* acting cooperatively while Claire takes control and double-crosses her sister. Solange will be condemned for a murder she does not commit. Consequently, Claire will force her sister to a negative 10-point punishment and claim a 10-point reward for herself in her glorious suicide.

It is important to remember when viewing the pattern of the Prisoner's Dilemma that neither player can possibly know her opponent's strategy while she makes her own choice. Each player must guess, based on the payoffs, the choice that her sister will make and then select either the least harmful choice for herself or risk punishment in trying to increase her payoff. The element of chance naturally lends suspense to the game.

Although it is in the interest of both Solange and Claire to cooperate to reach their goal, how can the two maids collaborate to rid themselves of Madame when their devotion and loyalty to each other is founded on hate and jealousy? Morton Davis points out that, "as a rule, when analyzing a game, you are content if you can say what rational players should do and predict what the outcome will be," (113) but what of Genet's dangerously irrational characters whose passionate obsessions drive them to find a victim? What new factors must be taken into account when examining the game of Claire and Solange?

First of all there is the unpredictable element of Madame, the intended murder victim. Madame is the chosen object of hatred, an unwitting scapegoat whose vilification by the maids condemns her for hyperbolic crimes. Paradoxically, the sisters who blame her for the sordid lives they have been born to, also deify their mistress: "...comme elle souffre en beauté. La douleur la transfigure!" (50). But the deification of the beautiful object soon turns obsessive and destructive.

Gradually taking the form of a sadist ritual, the actions of the two women reveal an uncomfortable mixture of worship with violence, and of demonstrations of love with those of hate. This combination of contradictory emotions, instead of confusing their plans, fuels their passions and fortifies their resolve to kill. The maids *seem* to be in perfect agreement: they must poison Madame. As we have learned from our examination of the Prisoner's Dilemma, the most beneficial solution for both players at this point is to cooperate, to work together to perpetrate their crime. So, what goes wrong? Why are the sisters unable choose the obvious strategy, the one that will cause them both to win? One problem is the volition of Madame. She must also

cooperate in order for the game to play out according to the strategy of its players.

Although she is oblivious to everything but Monsieur's misfortune, Madame, nevertheless, plays a pivotal role in the game. She serves as a kind of wild card, the possession of which is necessary to win the hand. Without aceess to their mistress, the maids eannot possibly choose the strategy that will yield an equally shared reward. Madame's failure to drink the poisoned tea before her departure from the scene arrests the initial scheming and forces the maids to consider alternative behaviors. Thus, Genet disallows the possibility of mutual cooperation between the sisters; they must choose another strategy. Hence, the ersatz Madame of the interrupted strangulation scene (a mere rehearsal for the up-and-coming "murder"?) is reincarnated.

In the scene depicted in the bottom left quadrant of the matrix, Claire will risk her life (as she did unknowingly in the opening of the play) if she acts cooperatively and submits to Solange's furious will that is summed up by: "Et eette fois, je veux en finir avec une fille aussi lâche" (104). Solange envisions the glory of her role as murderess: she will finally be Madame's equal and walk with her head held high. Furthermore, Solange adopts her sister's point value inasmuch as she has absorbed her sister's identity into her own: "Maintenant nous sommes Mademoiselle Solange Lemereier" (109). In her role as murderess she is so eonvineing that the audience actually concludes that Claire lies dead off-stage. Genet entices us, his opponents in the greater on-going game of the play, with a cogent bait that makes possible a second *coup de théâtre* when Claire returns to the stage. The game has not played out as we were led to expect. Once more, we (not Claire's opponent, Solange) are toppled from our assumed assurances; we have been duped by Genet the prankster.

Yet another option open to the maids is the choice to abandon the plot altogether. Although the sisters voice their frustration and fear, demonstrate their uncertainty, or show signs of hesitation at one time or another, they do so alternately. Whenever one flinches from her sworn duty to kill Madame, the other draws upon her passionate abhorrence for her mistress and all she represents to rally her sister and force the game to eontinue. Caught up in their deadly game, Claire and Solange cannot consciously elect to dissolve their pact; it has become their obsession, their *raison d'être*. They are committed to a deadly scheme to emancipate themselves, whatever the cost.

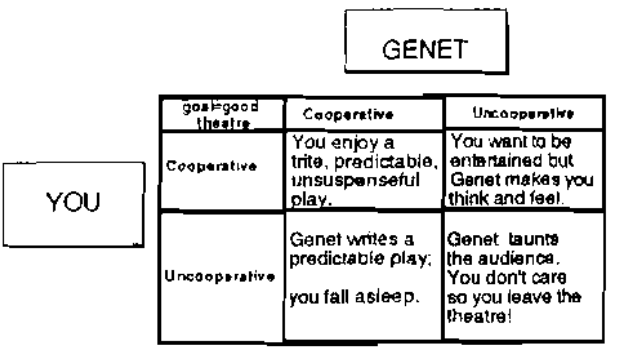
Unable to abandon their vengeful plotting and incapable of retaining Madame for the murderous "eeremony," the sisters must reexamine their options. Taking into account their behavior, we realize

that they will not *both* act cooperatively, nor will they *both* act uncooperatively; rather, as long as the sisters are lured by the promise of the larger reward, one of them will always be willing to gamble and risk punishment: One will submissively cooperate, while the other will invariably double-cross her opponent. Declarations of their growing hostility toward one other reinforce our understanding of the dilemma: "Je ne te crains pas. Je ne doute pas de ta haine, de ta fourberie, mais fais bien attention. C'est moi l'aînée" (48). Solange's threats begin to echo, this time in Claire's voice. The latter has already glimpsed the danger of cooperating with her murderous sister: "Quand nous accomplissons la cérémonie, je protège mon cou. C'est moi que tu vises à travers Madame, c'est moi qui suis en danger" (48). After this realization Claire proclaims her new-found strength: "Je suis capable de tout, et tu le sais" (56). She hints at her strategy and calls herself the winner: "J'aurais ma couronne. Je serai cette empoisonneuse que tu n'as pas su être. A mon tour de te dominer" (59). Claire, taking her cue perhaps from Solange's earlier triumphant monologue, merges the forces of the two opponents, and their point values in the game, into one "couple éternal, du criminel et de la sainte" (60). Paradox though it seems, Claire wins the game by choosing suicide.

Isn't it ironie that, simply by a shift of dominance, the same result (the death of Claire) awards the dead sister the winning points that she would have lost to her opponent had she met her death in the first scene? Opposite strategies yield truly mirror-opposite results. Finally, we comprehend that the entire plot to kill Madame was merely a disguise, a method to rehearse the main battle, the one between the two sisters. The first scene, instead of a dress rehearsal for the murder of the mistress, is truly a game of power between the maids that without the alarm clock or the intrusion of Madame's presence would have been played to the end, to the capitulation (in this case, death) of the weaker opponent.

It dawns on us, when viewing the machinations of the play in retrospect, that Genet has set up a game with us as his opponent. Genet has been, all along, the game master. He has cleverly established an adversarial relationship in which we do not have the pleasure of choosing our strategy. Genet sets up the game, invites our participation, but double-crosses us by thwarting all our efforts to play. The final matrix would include the playwright and you, the spectator. The possible outcomes include (from upper left and circulating counter-clockwise): an enjoyable unsuspenseful event; a predictable drama during which you fall asleep; an affront and challenge by Genet that you abandon out of lack of interest; and an eagerness to find

entertainment between dinner and bed that is hindered by Genet's difficult challenge.



In the final strategy the spectator remains frustratingly inconvenienced: for each chess piece Genet moves, we attempt to adjust our interpretation of the characters' motives, but the queen unmasks herself to become a pawn while the pawn reveals itself to be a queen before our unsuspecting eyes. All is illusion in Genet's game. If we choose to play opposite him, not even the wisest strategies of the Prisoner's Dilemma can assist. He will always win the game.

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WORKS CITED

Davis, Morton D. *Game Theory: A Nontechnical Introduction.* New York: Basic Books, 1983.

Genet, Jean. *Les Bonnes*. Paris: Folio, 1976.

Malkan, Jeffrey. "Aggressive Text: Murder and the Fine Arts Revisited." *Mosaic* 23 (1990): 101-15.

Neumann, John von and Oskar Morgenstern. *The Theory of Games and Economic Behavior*, 3rd ed. Princeton: Princeton UP, 1953.

Sartre, Jean-Paul. *Saint Genet: comédien et martyr*. Paris: Gallimard, 1952.

Tucker, Albert William. *Contributions to the Theory of Games*. Princeton: Princeton UP, 1959.