

## BOOK REVIEW

### PLAYING MONOPOLY The State of the Art, A Review of The Monopoly Book and 1000 Ways to Win Monopoly Games

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The official version of the creation of *Monopoly* reads like a Horatio Alger myth.<sup>1</sup> Its inventor, Charles Darrow, an unemployed salesman/fix-it man/hobbyist/inventor living in Germantown, Pennsylvania, invented the game for his own amusement in 1930, then began selling sets first to friends and then to a growing clientele who heard of the game through word of mouth. By 1934, the demand for the hand-made sets far outstripped Darrow's ability to produce them, and he sought to market the game via Parker Brothers, already well-established for half a century as a leading game manufacturer. Parker Brothers rejected the game, claiming that it contained "fifty-two fundamental errors" and "would never be accepted by the public" (Brady, 1974: 17). Among their complaints—the game rules were too complex, and it took too long to play. Parker Brothers staff thought that "the general game-playing public would be hopelessly confused trying to learn how to handle mortgages, rents, and interest" (Brady, 1974: 17).

Darrow persevered and had 5000 copies of the game produced for him. With Christmas coming, large orders came from Philadelphia, and 200 sets were ordered by the prestigious F.A.O. Schwartz in New York City. The daughter of the founder of Parker Brothers bought a set at F.A.O. Schwartz and raved to her husband about it. He happened to be the current president of the company. Shortly thereafter, the original decision to reject the game was reversed. Darrow sold the game outright to Parker Brothers, becoming a millionaire gentleman-farmer and orchid collector on his royalties.

By the end of the first year of marketing *Monopoly* in the midst of a depression, Parker had sold more than one million sets—an unheard-of phenomenon. Although in 1936 an interoffice memo from the founder of Parker Brothers ordered an end to production of *Monopoly* sets in

anticipation of there soon being a glut on the market, *Monopoly* defied this prediction of its imminent doom. Unlike previous game fads (e.g., Mahjong), *Monopoly* sales failed to fade. Americans have now bought over 80 million *Monopoly* sets, and the game continues to sell to new generations. If Americans could only pay for Arab oil in *Monopoly* money there would be no energy crisis. Since 1935, over a trillion *Monopoly* dollars have been minted.

*Monopoly* and its Atlantic City place names have become imbedded in American folklore. Atlantic City is a once posh and now faded seaside resort in New Jersey at which Darrow and his wife had spent a pleasant holiday. All the place names in *Monopoly* come from Atlantic City except for Marvin Gardens, which comes from Marvin Garden in a neighboring community (see Reinen and Becker, 1972: 1042). The railroads in *Monopoly* are those which served Atlantic City except for the "Short Line" which was really a freight-carrying bus company with a depot in the city. A recent proposal by Arthur W. Ponzio, the Commissioner of Public Works of Atlantic City, to rename both Baltic and Mediterranean Avenues created an international furor. Eventually, Ponzio repudiated his own proposal (Brady, 1974: 21-24).

The game is marketed in 25 countries. In most cases, the property locations take on new identities (e.g., in the British version, Marvin Gardens becomes Picadilly, while in the German edition it becomes elevated to Goethestrasse). The game is banned in the Soviet Union (Brady, 1974: 31), although presumably there is a *Monopoly* underground.

It is difficult to understand why the game exerts such a fascination for players of all ages. Dr. Joyce Brothers has claimed that the skill and luck combination in *Monopoly* is reassuring to many people. "There is enough skill so if you win you can compliment yourself on being the best player, and enough luck so if you lose you can blame it on the dice" (Brady, 1974: 33). Shelly Berman, on the other hand, claims that the real attraction of *Monopoly* is the "thrill you get when you know you've wiped out a friend" (Brady, 1974: 33).

In any case, even if we cannot account for the whys and wherefores of its continuing popularity, it is accurate to describe *Monopoly* as an important part of the socialization process of American youth. Where do many American children learn the basic facts of capitalist life—rents, mortgages, and investments? Playing *Monopoly*, that's where. The importance of *Monopoly*, it seems to me, has been overlooked by social scientists.

The two books we are reviewing differ considerably on their focus and their level of sophistication. Brady (1974) devotes one third of her

book to the history of *Monopoly*, one third to explaining the *Monopoly* rules, and another third to explaining basic ideas of investment strategy in the game. Her book is written at a level and in a style that would make it readily accessible to young adults. Walker and Lehman are college students and veterans of the intercollegiate *Monopoly* tournament circuit. *1000 Ways to Win Monopoly Games* (Walker and Lehman, 1975) is intended for players of college age or older, although younger readers would benefit from much of the book's contents. The bulk of the Walker and Lehman book concerns investment strategies and bargaining tactics for making deals with other players that seem to be in their interest but are even more in one's own. The Walker and Lehman book also has an interesting chapter on "balance of power" considerations in the game. One-third of the book is devoted to an explication of the *Monopoly* rules. The treatment of the rules of *Monopoly* in these books, particularly in the Walker and Lehman book, has much of interest in it, even to the player who thinks he knows the rules. For example, both books remind players of the housing shortage rule<sup>2</sup> and then point out that a player cannot bypass a housing shortage by building directly to hotels.<sup>3</sup> Walker and Lehman go on to point out that the player who can "soak up" houses (e.g., by converting from hotels to houses) can deprive his opponents of the ability to erect hotels, even though the Bank has hotels to sell—a point of which few *Monopoly* players are aware! However, Walker and Lehman make a mistake in discussing the rule for selling hotels. They claim that in order to reduce from a hotel to four houses on any property one must simultaneously reduce all the hotels on that color group to four houses. Thus, according to them, if all properties in a color group had hotels on them, one couldn't reduce one's holdings from one hotel down to four houses unless there were at least twelve houses in the Bank (or eight in the case of hotels on Baltic and Mediterranean). This is a misreading of the rule requiring even building and selling. Brady correctly states "if you own three hotels on one color group, and need just a little cash, you may want to sell the equivalent of one house back to the Bank. But if the Bank doesn't have *four* houses you would have to sell all your hotels back to the Bank for one-half their purchase cost" (Brady, 1974: 47, emphasis added).

The discussion in Walker and Lehman emphasizes *Monopoly* nuances which permit a far more sophisticated style of play than most players ever dreamed of, and which allow the game to remain attractive to adults. For example, although *Monopoly* rules explicitly prohibit loans from one player to another, Walker and Lehman point out that since selling property to another player is permitted, this rule may be circumvented by one player purchasing something (e.g., a "get out of jail

free" card) from another player for a consideration to be paid at a later date (e.g., Player A purchases from Player B, for the price of \$500, a "get out of jail free" card, and Player B then agrees to buy back this card for \$1000 when he next passes GO).

Walker and Lehman offer a number of other devices to enliven the game of *Monopoly*, including (1) *property trades*,<sup>4</sup> (2) *options on property* (e.g., Player A pays Player B \$500 with the proviso that if Player B ever lands on Boardwalk and it is unowned, he must buy it and give it to Player A; otherwise, he simply keeps the money), (3) *immunity schemes* (e.g., Player A sells, for some appropriate compensation, immunity from rent on some specified one or more of Player A's properties—on the next turn only [the free land], or the next occasion he lands there [the free pass], or in perpetuity [the perpetual free pass]), (4) *partnerships and other revenue sharing schemes* (e.g., Player A trades Player B a property that Player B needs to complete a *Monopoly*; in return, Player B gives Player A a perpetual free pass on all properties in that color group and pays him 50% of all revenues collected from that color group for the duration of his ownership). Walker and Lehman offer support in the *Monopoly Rules* (or at least the absence of prohibitions) for each of these devices. Moreover, they offer a quite sophisticated discussion of the hidden nuances and bargaining tactics involved in introducing these devices (and various combinations and permutations thereof) into the game.<sup>5</sup>

The Brady book is by and large concerned with *Monopoly* as it is ordinarily played, not as it might be played by sophisticated adults. She does offer some suggestions for modification of the usual *Monopoly* rules, but these are not very innovative, e.g., forfeiture of transaction and rental collection rights when in Jail, \$400 for landing directly on GO rather than simply passing it, and \$500 upon landing on Free Parking,<sup>6</sup> and so on; although she does briefly discuss immunity schemes (Brady, 1974: 79).

In *Monopoly*, under the usual rules, there are three important kinds of investment decisions. Deciding what properties to buy, deciding what trades to make, and deciding how to invest in houses. Both Brady and Walker and Lehman offer useful advice in all three areas. Each emphasizes that there are several factors in determining an optimal investment policy: (1) the amount of money you have available to invest, (2) the investment options that will be open, (3) the expected returns to investment for each available investment package. To establish these we must know the costs of purchasing property and erecting houses and the (marginal) value of each additional house. But we must also know the probability any property will be landed on in order to estimate expected

return on investment and, in the early stages of the game, to estimate the likelihood that one will be able to complete a monopoly.

In the first phase of the game, both advocate (quite correctly, I think) the strategy of buy, buy, buy. It never hurts to own property; property may turn into a monopoly, or it may keep others from acquiring one. In the early stages of the game, while there is still unowned property on the board, there is almost always enough money available to each player to buy each property he lands on.

Both sets of authors clearly recognize that the value of properties changes in the course of the game. In the early phases of the game, railroads and utilities are relatively attractive. In the later phases of the game, when players are better capitalized<sup>7</sup> and when there are properties with a number of houses or hotels on them, utilities and railroads (unless you have a monopoly) are inefficient investments, best mortgaged to release capital for other more profitable uses.

Both Brady and Walker and Lehman provide a number of useful charts on returns to investment and on the relative probabilities of landing on the various squares.

Brady (1974: 128-136) offers "Property Development Tables" which provide the average percentage of profit for each property group for each level of investment in it—calculated (for each level of investment in houses) as the total rental which can be collected from each property, divided by the cumulative investment costs (including purchase costs) to that point. She also offers a "Property Desirability Index Table" which reflects for each property group for each level of investment in houses its expected marginal rate of return to investment, taking into account the relative probabilities that each property will be landed on (Brady, 1974: 137-138).<sup>8</sup> She also lists the ten most frequently landed-on properties, although she does not provide relative probabilities for them (Brady, 1974: 92).

Walker and Lehman list exact landing probabilities for each property on the board.<sup>9</sup> They also indicate, for each property group for each level of investment in houses, in one table the expected number of turns to break even on one's investment, and in another table the expected cash output per roll.<sup>10,11</sup>

Both books point out that in all but one of the color groups (the purples), adding the third house generates the greatest marginal increase in rental income and that it is thus desirable to build quickly to three houses on each property in a monopoly. Both also point out that the return to investment offered by the various color groups varies tremendously depending upon the amount of money available for investment in them. Brady (1974: 90) suggests investment in purple or light blue if

investment capital is between \$500 and \$700; in orange or maroon with capital in the \$800-\$1500 range; investment in dark blue, yellow, red with capital of \$1600-\$2500; and investment in green with investment capital in excess of \$2500. The chart in Walker and Lehman (1975: 192, Table 3) argues for investment in the dark blues with capital under \$400; in the light blues with capital in the \$400-\$700 range; in the oranges with \$800-\$1500; in the dark blues with \$1600-\$2000; in the yellows with \$2100-\$2300; and in the greens with investment capital in excess of \$2300.<sup>12</sup> Unfortunately, however, neither set of authors ever explains for their readers the basic notion of marginal rate of return on investment. Thus, the tables offered may mislead their readers, because profitability is specified vis-à-vis a base of zero investment, rather than in terms of the best present use of capital given a previous pattern of investment. As for the difficult problem of liquidity preference, while Walker and Lehman do not have a fully satisfactory treatment, Brady's treatment is simply muddleheaded. For example, she asserts: "In your high rent district, housing costs are so high that, ideally, it doesn't pay to build any houses unless you can build many all at once" (Brady, 1974: 99). Clearly, she has never heard of the maxim that "idle capital makes no cents" (see also Brady, 1974: 101).

To sum up: while both the Brady and the Walker and Lehman books contain a great deal of helpful advice, my views on their relative usefulness may be simply described as "Buy the Brady book as a present for your children; buy the Walker and Lehman book as a present for yourself!"

## NOTES

1. I wish to emphasize that this is the official (Parker Brothers) version of the invention of *Monopoly*. Ralph Anspach, the marketer of the board game *Anti-Monopoly*, has alleged that similar games had been played widely some years before the company brought its version out, and although Anspach's use of the name *Monopoly* in his game has been "held by a San Francisco Federal District Court to be a trademark infringement," his assertions about the game's origins are "still pending" (*Simulation/Gaming Newsletter*, 1977: 2).

2. "When the Bank has no houses to sell, players wishing to build must wait for some player to turn back or to sell his houses to the Bank before building" (*Parker Brothers' Official Monopoly Rules*).

3. "[A] player may buy and erect at any time as many houses as his judgment and financial standing will allow. *But he must build evenly* (i.e., he cannot erect more than one

house on any one property of any color until he has built one house on every property of that group)" (*Parker Brothers' Official Monopoly Rules*).

4. Trades are not mentioned in the *Monopoly Rules*.

5. If one can offer immunity to another player for one's own properties, then why not offer insurance per se (e.g., Player A pays Player B \$500, in return for which Player B will pay all rents owed to Player C by Player A until such time as Player A next passes GO)?

6. Many *Monopoly* players I've met will swear that putting \$500 on Free Parking is part of the official rules, although of course that is not true. I've never met an adult familiar with *Monopoly* who hadn't played with some form of bonus for landing on Free Parking. A fascinating study of cultural diffusion would be to trace the genesis and dissemination of the \$500 Free Parking "Rule" and to look for regional and/or class-based patterns of variations in it.

7. If a player stays in jail until he throws doubles or until his third turn, then his expected net income from the Bank is somewhat over \$33 per turn. If he leaves jail immediately by paying \$50 or using a "get out of jail free" card, then his expected net income from the Bank is nearly \$35 per turn (Ash and Bishop, 1972: 2-29).

8. The probability for these calculations was furnished by Professor Irvin R. Hetzel, of the Mathematics Department, Iowa State University (see Hetzel, 1973: 44-48).

9. Calculated by the authors, using a computer program of their own devising.

10. These tables are based on the assumption that there is one other player in the game.

11. This latter table is not very useful, since knowing that, say, building one house on each green yields an *expected* return of \$10 per roll of the dice is not very enlightening. More relevant would be a table giving the expected number of rolls until another player landed on a green. Under simplifying assumptions, such a table of expected waiting times can be constructed from the landing probabilities (see Feller, 1957).

12. The differences in recommendations are, we believe, attributable to the fact that Brady counts initial purchase price in calculating return to investment, and Walker and Lehman do not.

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