

## Playing with Robots

### Part X

By pluckycat

As those of you who have been reading this series of articles know all too well, I've been assiduously trying to gain insights into how robots play so as to play better against them and, not so incidentally, learn how to play better against humans. Therefore, I was delighted to see that the Hartford Bridge Club decided to utilize robots as substitutes in several games last week. As a result, I was able to analyze both the bidding and play of the robots on every hand by going to the travelers and then the movies.

I will discuss highlights and insights from the first two sessions more specifically, but perhaps the most salient takeaways from this analysis is that the robots, not at all surprisingly, are steady, are generally good declarers, reach the right contract and play good defense. They also take very good advantage of human errors, whether by defenders or declarers. BBO states that robots on average score 55% in games against humans. They did somewhat better in games against bridge club members, scoring 63.66%, 56.82%, 56.42%, and 61.28% in the open games on 6/9, 6/11, 6/12 and 6/16. I suspect bridge club members will do better against them in the future as they get used to playing against them, e.g., go slow when the robots go fast, take advantage of the extra time they give you, and remember to consistently click on the robots' bids to see what they reveal.

So, what does the analysis of these two games reveal? Let's start with Thursday, June 11, when the robots scored 56.82%. For the most part, the robots made conservative leads. Often, if they had three to a jack, they led low; they also would lead low from three small. I didn't observe them leading away from other honors. Exactly as advertised. Their defense was typically very sound. Only occasionally did they make a defensive error and that was when under pressure to discard - the kind of error we humans also frequently make.

The robots best scores on a particular board, 90% or above, came when their opponents made mistakes; typically when the opponents misdefended. On five boards, they achieved 100%, 100%, 94%, 94% and 90% when defenders made clear-cut errors - also nothing that doesn't occur as well when humans play. Who you play and when you play them is very much determinative of your score in matchpoints. On two boards, they received 83%, one when they received a favorable lead and made an extra overtrick and another when they defended well and took advantage of a bobble by declarer.

The boards they typically did not do well on were boards that challenged them either as a result of the opponents' aggressive bidding or the odd distribution of the hand. For example, they received a zero when one of them, with seven hearts and three HCP, never bid after partner opened 1NT and RHO made a minor suit bid. Every other pair their way played in some number of hearts. They also didn't do well on occasion because their bidding was generally conservative and the cards were favorably placed. That being said, their mediocre boards - 20% to 45% - generally were the result of opponents getting to the right contracts. One poor result was as the result of faulty discarding under pressure.

Perhaps the most interesting hand of the session was when West in second seat, both non-vulnerable held ♠KQJ53 ♥J62 ♦KQ2 ♣QJ. After a pass, West opened 1NT (by no means everyone's choice). Opponents passed throughout and East bid 2♠ - minor suit Stayman -showing at least 4-4 in the minors and invitational values. West then bid 2NT. East bid 3♠, showing spade shortness, and West was happy to continue to game, making 5 for 94% after a defensive bobble. Most pairs bid 3NT with a variety of auctions, including a puppet sequence and after a 1♠ opening. The bidding and play showed that the robots have the tools to bid accurately and follow up with good play. Several pairs went down when they didn't manage the clubs well or failed to take their spades early enough. East's hand was ♠10 ♥A108 ♦9654 ♣AK986.

The first session on June 9 was very similar to the second. All four of their scores of 90% or more were the result of opponents' defensive errors or overbidding. They had four scores of 75% or more. Two were the result of good defense, one the result of declarer error, and one the result of conservative bidding to rest in 1NT when the rest of the field explored with NMF and ended in a heart contract making the same number of tricks as NT. The hand illustrates the relative conservatism revealed by scanning lots of simulations. Here, an 11 HCP hand was not worth another bid over 1NT.

Here are the robots hands, vulnerable against non: North ♠J5 ♥AQ764  
♦Q742 ♣Q10, South ♠Q106 ♥K109 ♦K85 ♣AJ95.

The bidding was P-P-1♣ (by South)-P-I♥-P-INT=All Pass

The robots' bad scores (only four below 50%) came when opponents bid a NT game when most everybody was in a suit contract making the same number of tricks (14.29%); from a badly misplayed hand on which they'd reached a good game that few others did and then incurred a ruff trying to come to hand to draw trumps and when there was a much safer way to play it (7.14%) (Apparently, simulations did not reveal sufficiently the risk of a ruff (7.14%)); and twice when opponents bid and made optimum game contracts (35.71% and 42.86%).

The robots' leads again proved interesting and as advertised. They again typically made "safe" passive leads from three-card suits. As advertised, they usually lead passively, in conformance with the book *Winning No Trump Leads*. In one example, the bidding went 1♣-P-3NT=All Pass. This was robot's hand: ♠KJ982 ♥K10  
♦964 ♣Q92. The passive diamond lead arguably cost a trick (although declarer gave it right back), while a spade lead or even club lead would arguably have been better. But who's to argue with repeated success.

Similarly, on a hand in which the opposition bidding went 2NT-3NT, our robot held ♠K10954 ♥Q10764 ♦-- ♣J52. Now knowing robot's proclivities, you won't be surprised to learn that a low club was led. No lead prevents 5NT from being made if declarer plays the hand correctly. A heart lead would actually allow six to be

made. Something perhaps to be learned here. There are likely to be more passive leads against NT in my future.

The robots' results in the third session on June 12 were similar to the second, but the fourth session, June 16, had more results that were at variance with what the field was doing. For example, against one pair, the robots bid to and made a slam that no one else reached for a near top, while on the next hand, they went down in a cold game contract for a near bottom, proving, I guess that the robots are not unlike humans. Unfortunately, at the time this article was prepared, the movies for the June 16 session were unavailable on BBO for further analysis.

Enough for now on how robots have fared in our games and what they do. We will no doubt have further occasion to analyze their proclivities and performance

### **An Instructive Hand from Last Week**

In one of your usual games with the robots, both nonvulnerable, as South, after two passes, you find yourself with ♠K106 ♥J876 ♦KJ95 ♣A3. You open a diamond. LHO passes and your partner bids two diamonds. You click and see that your robot is promising "4+ diamonds, 10-12 total points, forcing to 2NT." What do you bid? Well, you shouldn't bid. You should pass. You should disregard what your robot says. You have opened a minimal hand and game is highly unlikely. Not surprisingly, all the cards turn out to lie badly. You can make only two diamonds, so even if you get to three diamonds, you'll have a bad score, while stopping in two diamonds rewards you with 85.7%. The lesson: Don't blindly follow what your robot says. Pay attention to what they say, but use good bridge sense.

The full deal: North ♠32 ♥A103 ♦A10832 ♣Q105

♠AQ95 ♥954 ♦Q6 ♣K982.

♠J874 ♥KQ2 ♦74 ♣J764

South ♠K106 ♥J876 ♦KJ95 ♣A3

See you next week.