Which Major -- Problem

Board 1
South Deals
None Vul

♠ J 10 3
♥ J 10 8 5 4
♦ 6 5
♣ 9 4 2

West	*North*	*East*	*South*
			1 NT
Pass	3 NT	All pass	

3 NT by South

What would you lead, playing (a) matchpoints, or (b) IMP scoring?

Using methods similar to those employed by David Bird and Taf Anthias in their ground-breaking book, *Winning Notrump Leads*, I analyzed this opening lead situation. The authors make it clear that a major suit is a strong favorite against this auction, so I considered only the standard leads of the ♠ J and ♥ J.

Please turn the page to read my conclusions.

Method of Analysis, for those who care:

To start, I fired up Dealmaster Pro, entered the West hand, went into the Simulator, and specified these parameters for the North and South hands:

-------- North Definitions --------
N1 Acc HP10-14 ♠ 2-3 ♥ 2-3 ♦ 2-5 ♣ 2-5
N2 Acc HP 9-12 ♠ 1-3 ♥ 1-3 ♦ 6-13 ♣ 1-4
N3 Acc HP 9-12 ♠ 1-3 ♥ 1-3 ♦ 1-4 ♣ 6-13
N4 Acc HP10-15 Bal ♠ 3-4 ♥ 3-4 ♦ 3-3 ♣ 3-3
-------- South Definitions --------
S1 Acc HP15-17 Bal ♠ 2-4 ♥ 2-4 ♦ 2-6 ♣ 2-6
S2 Acc HP15-16 Bal ♠ 2-5 ♥ 2-3 ♦ 2-3 ♣ 2-3
S3 Acc HP15-16 Bal ♠ 2-3 ♥ 2-5 ♦ 2-3 ♣ 2-3

Bird & Anthias did not consider openings with 5-card majors, as I do.

Using these specs, I dealt 500 hands, setting South as dealer on all hands. With text editors and tools on Cygwin, I prepared two copies of the deal file for analysis, one where the SJ was always led, and one with the HJ led. I opened each file with a separate instance of Bridge Composer, which I then told to "GIB Bid and Play All Boards." (GiB is a separate product. Bridge Composer's double dummy analysis unfortunately ignores the contract and opening lead.) This is takes hours for 500 deals, so I let the two jobs run in parallel, overnight.

Back in the morning, I used this pipeline on Cygwin to create a file with the number of tricks taken for each deal in the Lead=SJ file, one per line:

```
grep Result *=SJ | tr -d "[a-zA-Z\ \"]" > SJ.txt
```

This takes each input line of the form "[Result "#"]" and produces a line in SJ.txt containing "#". (I used this method, so that the Windows CR of the CR-LF pair would be retained at the end of each line.)

It was then easy to paste the results for each file into Excel, and calculate the results given on the next page.

Which Major -- Solution

Board 1
South Deals
None Vul

	♠ K 9 8 ♥ A 9 3 ♦ K 4 3 ♣ A Q 10 7	
♠ J 10 3 ♥ J 10 8 5 4 ♦ 6 5 ♣ 9 4 2	N W E S	♠ 5 4 2 ♥ K Q 6 ♦ A J 7 2 ♣ 6 5 3
	♠ A Q 7 6 ♥ 7 2 ♦ Q 10 9 8 ♣ K J 8	

NS 5♠; NS 4N; NS 5♦; NS 5♣; NS 2♥; Par +450

West	*North*	*East*	*South*
			1 NT
Pass	3 NT	All pass	

3 NT by South
Lead: ♠ J
Made 6

Sorry, the actual opponents were playing the 1 NT opening as 12 - 14 HCP, which I did not remember until I started entering the full deal above. Bird and Anthias say the strength of the opening bid makes little difference, to the analysis. If this bothers you, swap the ♣ A with the ♣ J, for example.

My lead of the ♠ J was not a success; nor was partners return of a spade, after getting in with the ♦ A. But what was the "right" lead? That is, what lead should produce the best result over time? Here are the results of my analysis:

When the ♥ J was led, declarer averaged 10.158 tricks, and was set 49 times.

When the ♠ J was led, declarer averaged 10.040 tricks, and was set 60 times.

At matchpoints, the ♠ J saves 0.118 tricks per deal, on average, or a trick every 8.47 deals. How about an extra three tricks a session, if you had these odds on each deal!

At IMPs, the ♠ J sets the contract 60/500 times or 12% of the time. The ♥ J achieves only 49/500, or 9.8%. This 2.2% bulge on a full session is not as impressive, setting slightly more than half an extra contract, on average, over 24 boards.

As we all know, good luck trumps good play. I still like the odds for the ♠ J on my side.

- *Pete Matthews, Jr.*