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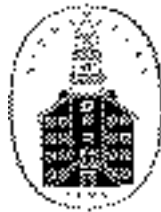
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Are U.S. Open Prognostications Going to Seed?

> You go to tournaments and you have no idea who's
> going to pop up in the finals.
>> George Vecsey
>> *Tennis*, May 1999 [1]

The U.S. Open is arguably the most important American tennis tournament of the year. The best player in this (or any tournament), namely the No. 1 seed, is placed in one half of the draw and the second best, namely the No. 2 seed, in the other half. Seeding was adopted to prevent the best players from meeting in the early rounds and from having the tournament's elite bunched into one half of the draw. In the U.S. Open, one of the four Grand Slam tournaments, there are 128 players of each sex, sixteen of whom are seeded. The purpose of this brief note is to assess how well (or poorly) the seeding committee has done at the U.S. Open between 1980 and 1999.

First, a point system was adopted as a measure of seeding accuracy. A seeded player who wins his or her first round match is awarded one point. In subsequent rounds,

point values double. A seeded player who wins his or her second (third) round match is awarded two (four) additional points. If the seedings follow form, all top sixteen players would meet in the fourth round. Any of the top eight seeded players who advances to the quarterfinals is awarded eight additional points.[1] Any of the top four seeds who advances to the semifinals receives sixteen additional points. And, if the No. 1 or No. 2 seed advances to the finals, each is awarded an additional thirty-two points. If the No. 1 seed wins his or her final match, sixty-four more points are awarded. A maximum 368 total points are therefore possible if every seed defeats a lower seed or unseeded player. Point totals for the No. 1 seed as well as the top sixteen seeds are reported in Table 1.[2]

(Table 1 about here)

Only twice in the last twenty years have all sixteen seeded men or women survived their first round match. Pre-tournament favorite men have won the U.S. Open five times (McEnroe twice, 1981 and 1984; Lendl twice, 1986 and 1987; and Sampras once, 1996). In the women's draw, No. 1 seeds have prevailed ten times (Graf five titles, 1998-89, 1993, 1995-96; Navratilova three titles, 1983-84, 1986; Seles and Hingis one each in 1992 and 1997, respectively). There have been seven different men's (women's) finalists in the 1980s and eleven (ten) different men's (women's) finalists in the 1990s.

A regression of each tournament's point total (*TOTALPTS*) for the top sixteen seeds against a time trend (*YEAR*) produced the following results for men and women:

Men:

$$TOTALPTS = 10808 - 5.33 YEAR$$
$$(2.38) \quad (2.33)$$

$$R^2 = .232$$

Women:

$$TOTALPTS = -4219 + 2.24 YEAR$$
$$(1.19) \quad (1.25)$$

$$R^2 = .080$$

where absolute t-ratios are in parentheses. Although there is no statistical evidence of a trend for the women, the point totals for men have decreased markedly since 1980 ($p = .031$ on the slope coefficient).

A series of paired t-tests reveals no difference between the point totals for men and women over the last twenty years ($p = .076$). A paired t-test for the 1980s alone again revealed no difference ($p = .94$). Yet, in the 1990s, these differences are statistically discernible ($p = .006$), with much smaller point totals for the men than for the women. A two-sample t-test comparing the men's average point total for the 1980s (238.1) to their average point total for the 1990s (166.1) [$p = .010$] underscores the difficulty the seeding committee of the U.S. Open has had with the men's draw since 1990. A comparable t-test comparing the women's average point total for the 1980s (236.2) to their average point total for the 1990s (232.3) [$p = .86$] revealed no difference. In the women's draw, there was more consistency from one decade to the next and hence the outcomes were apparently easier to predict.

The results presented here for the U.S. Open indicate the difficulty their seeding committee has had in the 1990s, especially in the men's draw. Some have described men's tennis as a democracy, with more parity now than existed in the 1980s. Others believe that the topsy-turvy results of the 1990s are the result of the U.S. Open's decision to deviate from the world rankings in its seeding process to accommodate anticipated matchups more favorable to TV ratings. Whether or not commercial interests have influenced U.S. Open seedings, the order of finish has become less predictable. The U.S. Open Men's Singles has indeed become "anyone's game".

Table 1. Point Totals for Seeded Players at the U.S. Open, 1980-1999

		Men			Women	
Year	Name of No. 1 Seed	Points No. 1 Seed	Points All Seeds	Name of No. 1 Seed	Points No. 1 Seed	Points All Seeds
1980	B. Borg	63	212	T. Austin	31	133
1981	J. McEnroe	127	299	C. Evert Lloyd	31	160
1982	J. McEnroe	31	206	M. Navratilova	15	194
1983	J. McEnroe	15	172	M. Navratilova	127	280
1984	J. McEnroe	127	304	M. Navratilova	127	269
1985	J. McEnroe	63	256	C. Evert Lloyd	31	224
1986	I. Lendl	127	251	M. Navratilova	127	290
1987	I. Lendl	127	274	S. Graf	63	243
1988	I. Lendl	63	202	S. Graf	127	247
1989	I. Lendl	63	205	S. Graf	127	322
1990	S. Edberg	0	126	S. Graf	63	186
1991	B. Becker	3	171	S. Graf	31	203
1992	J. Courier	31	231	M. Seles	127	223
1993	J. Courier	7	137	S. Graf	127	236
1994	P. Sampras	7	84	S. Graf	63	218
1995	A. Agassi	63	216	S. Graf	127	291
1996	P. Sampras	127	265	S. Graf	127	271
1997	P. Sampras	7	83	M. Hingis	127	218
1998	P. Sampras	31	127	M. Hingis	63	262
1999	P. Sampras*	0	221**	M. Hingis	63	215

 *A herniated disc forced Sampras out of the 1999 U.S. Open.
 **No. 2 seed Agassi won the tournament. Sixty-four points were added to the unadjusted 157 points
   for all seeds.

Notes

1. If, for example, in the fourth round, a No. 12 seed defeats a No. 8 seed, then no points are awarded since the No. 8 seed was expected to win.

2. All match outcomes were gleaned from final draw sheets for each of the last twenty years from the U.S. Open. The authors gratefully acknowledge the help of Sharon McGee, U.S. Open Assistant, 917-696-7248.

Reference

1.	G. Vecsey, Anyone's game, *Tennis*, May 1999, pp. 18-20.