Corrections and updates for fifth printing of
Osborne's "An Introduction to Game Theory"
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Corrections

Page, Line	*Correction*
30	Two lines above Exercise 30.1, replace "pursing" with "pursuing".
50	Replace the last sentence of the second bullet point of item *a*, on lines 15–16, with "Thus player i is at least as well off naming x_i^* as she is naming x_i."
56	On the line below (56.2), replace "$c \geq 0$" with "$c > 0$".
59, -3	Replace "$c \geq 0$" with "$c > 0$".
62, -9	Replace "firm's" with "firms'".
63	Replace the last two sentences of Exercise 63.1 with "Find the Nash equilibria of the game. Find an action profile $(x_1, \ldots, x_n)$ at which each firm's output is higher than it is at any Nash equilibrium."
67	In the third line of Exercise 67.1, insert "continuous" between "any" and "function".
69	In part *a* of Exercise 68.2, replace the first sentence with "Suppose that when the firms' prices are the same, each firm obtains a positive fraction of the demand when the common price is less than c_2, but firm 1 obtains all the demand when the common price is c_2 or more."

75 Exercise 75.2 should specify the players' payoffs when no citizen stands as a candidate and when several candidates tie for first place. Replace the fifth through eighth sentences with: "Winning confers the benefit b, and citizens care about the position of the winning candidate. Specifically, the payoff of a citizen with favorite position x who becomes a candidate is the expected value of $-|x - x_i^*| + b/k - c$ (as x_i^* ranges over the positions of the winning candidates) if she ties with $k - 1$ other candidates for first place, and the expected value of $-|x - x_i^*| - c$ if she is not one of the candidates tied for first place. (For any number z, $|z|$ denotes the absolute value of z: $|z| = z$ if $z > 0$ and $|z| = -z$ if $z < 0$.) The payoff of a citizen with favorite position x who does not become a candidate is the expected value of $-|x - x_i^*|$ if some citizen becomes a candidate, and K, with $K < b - c$, if no citizen becomes a candidate." The exercise should also include the assumption that less than one-third of the citizens' favorite positions are equal to the median favorite position.

76, 10–11 Replace "one prefers x to z and the other prefers z to x" with "both prefer z to x".

86 In Exercise 86.1, change the word "action" on lines 1, 2, 4, and 6 to "policy" (to avoid confusion with the actions in the strategic game).

91 Delete the parenthetical claim on the last line of Exercise 91.1 (which is not correct). (Probably in each case the pair of actions given is the unique equilibrium in which neither player's action is weakly dominated.)

110 Replace "left" with "right" on the second line of Exercise 110.1.

115, 1 Replace "a swimmer" with "any swimmer".

118 In line 2 of Exercise 118.2, replace "$k \leq m$" with "$2 \leq k \leq m$".

148 Line 7 of Section 4.12.2 is confusing. Replace it with "v defined by $v(x) = \sqrt{u(x)}$ for all x, for which $v(0) = 0$, $v(1) = 1$, and $v(5) = 2$, is not consistent with such a".

185 The continuity assumption in Exercise 185.2b is not stated correctly. Replace it with "Assume also that the players' preferences are continuous: if a player prefers P to its complement (the remainder of the cake), then there is a subset P' of P not equal to P such that the player prefers P' to its complement."

195, 10–11 Delete the clause "so it needs to pay each legislator more than V_Y/μ", which is not correct and not needed.

197 At the start of the penultimate line of the item *Terminal histories*, replace $y^1 + \cdots + y^T < k_2$ with $y^1 + \cdots + y^{T-1} < k_2$.

215, −12 Insert "the negative of" before "the average distance".

215, −11 Replace the first "of" with "to".

241 Modify the definition of a coalitional game with transferable payoff: A coalitional game has **transferable payoff** if there is a collection of payoff functions, one representing each player's preferences, and, for each coalition S, a number $v(S)$, such that for every action of S the sum of the payoffs of the members of S is $v(S)$ and for every S-allocation x_S of $v(S)$, S has an action that yields x_S.

254–255 The argument in the last paragraph of page 254 and the last two points in (255.1) are not correct. An owner sells her horse if and only if her index is at most k^* and a nonowner buys a horse if and only if her index is at most k^*. (A player whose valuation is p^* trades only if her index is at most k^*.) The last paragraph on page 254 should be replaced by the following paragraph.

Finally, I argue that the set of owners who sell their horses is $\{1, \ldots, k^*\}$ and the set of nonowners who buy a horse is $\{1, \ldots, k^*\}$. If $\max\{\sigma_{k^*}, \beta_{k^*+1}\} < p^* < \min\{\beta_{k^*}, \sigma_{k^*+1}\}$, this result follows immediately from the paragraph before Exercise 254.1. If $p^* = \max\{\sigma_{k^*}, \beta_{k^*+1}\}$ or $p^* = \min\{\beta_{k^*}, \sigma_{k^*+1}\}$ then it follows from that paragraph combined with the fact that every trade involves both an owner and a nonowner. (For example, if $p^* = \sigma_{k^*} > \beta_{k^*+1}$, then $\beta_{k^*} > p^*$, so that the set of nonowners who buy a horse is $\{1, \ldots, k^*\}$, and $\sigma_{k^*-1} < p^* < \sigma_{k^*+1}$, so that owners with index at most $k^* - 1$ sell their horses and owners with index at least $k^* + 1$ do not sell their horses. Consequently owner k^* must sell her horse.)

The last two points in (255.1) should be replaced by the following point.

every owner with index at most k^* sells her horse, and every other owner retains her horse; every nonowner with index at most k^* buys a horse, and no other nonowner buys a horse.

The word "four" should be deleted on the last line of page 255.

288, 8 Replace second occurrence of $q_2(P(q_1 + q_2) - c_L)$ with $q_2(P(q_1 + q_2) - c_H)$.

288 In lines 3, 11, and 13 of Exercise 288.1, replace ℓ and h with L and H.

296 Replace "the highest of the other players' bids" on line 5 with "the highest of the other players' valuations".

320–321 Replace $0 \leq \varepsilon < \frac{1}{4}$ by $0 < \varepsilon < \frac{1}{4}$ on the bottom line of the page, on the seventh line from the bottom, and on the last line of the caption of Figure 321.1.

336	In Figure 336.1, the payoff of the parent after the history $(\textit{Not hungry}, \textit{Squawk}, \textit{Keep})$ should be $1 + rV(1-t)$, not $1 + rV$.
347	In the third display, replace the second b with $4b$.
348	The point 1 on the horizontal axis should be 15mm further to the right.
350, -9	Interchange "receiver" and "sender".
353	Replace the first occurrence of $y_0 + 4b$ with $y_0 + 3b$ in the fourth line of the display.
406, 9	Change $\gamma > 0$ to $0 < \gamma < 1$.
423, -1	Replace "history" with "terminal history".
424, -11	Replace "history" with "nonterminal history".
424, -7	Replace "history" with "nonterminal history".
429	Replace $t + k + 1$ with $t + k$ two lines above the penultimate display and one line above the last display.
438, 6	Replace "player's" with "players' ".
469, -12	Change $\delta_1^2 x_2$ to $\delta_2^2 x_2$.
487	The sentence starting after the sentence containing the first display should be "Then the maximizer of $(v_1' - d_1')(v_2' - d_2')$ over U' is $(\alpha_1 v_1^* + \beta_1, \alpha_2 v_2^* + \beta_2)$, where (v_1^*, v_2^*) is the maximizer of $(\alpha_1 v_1 + \beta_1 - d_1')(\alpha_2 v_2 + \beta_2 - d_2')$ over U." In the following display, the second occurrence of d_1' should be d_2' and the second occurrence of d_1 should be d_2.
501, 10	Change $p_n x_n$ to $p_i x_i$.
505, 10	Change "all prime numbers" to "all prime numbers greater than two".
505, 11	Change "if a number is prime" to "if a number is prime and greater than two".