

Typos and Corrections for Game Theory: An Introduction

First Print

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Abstract

This document contains corrections to typos, or changes to exercises that are necessary to make them correct or manageable. If you find errors in the book that are not listed here please notify me at stadelis@berkeley.edu and I will add the corrections and recognize your input.

Acknowledgments: I appreciate the time and effort made by the following people who pointed out typos in the first draft of the book: Orié Shelef, Jingyi Mao, Joseph Hall, and Jozsef Sakovics.

1. **Page 38, exercise 2.10:** In the first line “die in 6 months” should be “die in 3 months”
2. **Page 93, Remark:** At the beginning of the 6-th line of the Remark the number should be “55” instead of “45” (should read “(equal to 55)”)
3. **Page 95, exercise 5.3:** Just before part a. add: “Assume that for each player no two payoffs in the matrix are the same.”
4. **Page 99, exercise 5.16:** At the beginning of part (a) add: “Assume that v is very large so that all the customers will be served by at least one firm, and that some customer $x^* \in [0, 1]$ is indifferent between the two firms.” For parts (c) and (d) add at the beginning “Assume that $v = 1$.” For part (d) change the variable’s assumed interval to be $\alpha \in [0, \frac{1}{2}]$. (instead of $\alpha \in [0, 1]$)
5. **Page 142, Remark:** In the 11-th line, right after “Figure 7.10.”, please insert the following text:

“Note, that the player has two pure strategies, “Exit” or “continue”. Committing to the pure strategy of “Exit” implies that he exits at the first intersection, and gets 0. If he chooses the pure strategy “continue” then he goes all the way on the long route and gets a payoff of 1. Hence, no mixed strategy will yield a payoff of 4 with positive probability. This, however, is not true for a behavioral strategy, which we’ll call a “planning” mixed strategy.”

6. **Page 150, exercise 7.10:** Delete this exercise.
7. **Page 165:** Delete footnote 3.
8. **Page 169:** The first order condition (which appears after the line “for which the first-order condition is”) should be replaced with:

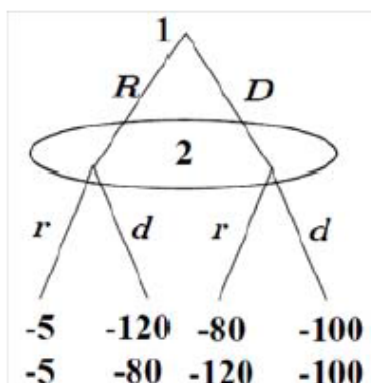
$$\frac{dv_1}{dx_1} = \frac{1}{x_1} - \frac{2}{3} \times \frac{1}{2} \times \frac{3}{2(K-x_1)} - \frac{1}{3} \times \frac{1}{2} \times \frac{3}{K-x_1} = 0,$$

and the next (and last on this page) mathematical expression should be

$$x_1(K) = \frac{k}{2}$$

(instead of $x_1(K) = \frac{2}{3}K$ as written in the text).

9. **Page 170, exercise 8.2:** Right after the statement “Consider the game in Section 8.3.3.” add the following: “Now assume that the war-stage game has the following payoffs: ” then add the following figure before part a.:



10. **Page 172, exercise 8.8 part (d):** For this part to be interesting it should be “How does your answer in (c) change for $k = 725$?” (Instead of $k = 225$.)
11. **Page 188, exercise 9.3:** The payoffs from (P, p) in the second stage game should be $(6, 6)$ instead of $(4, 4)$ so the matrix should be

		Player 2	
		<i>p</i>	<i>n</i>
Player 1	<i>P</i>	6, 6	1, 0
	<i>N</i>	0, 1	2, 2

12. **Page 188, exercise 9.4:** For part (d) add the following at the beginning: “For this part assume that if both firms choose open access, (O, o) , then the payoffs to each firm is 250 instead of 2500.”
13. **Page 219, exercise 10.10:** The end of this question should read “for any discount factor $\frac{1}{2} < \delta < 1$.”
14. **Page 244, 12-th line form top:** The line currently is “assumption, but without it we will not be able even to discuss equilibrium behavior.” Replace this with “assumption, but without it, it is more challenging to explore equilibrium behavior.” Then, insert a footnote at the end of this sentence that says “If the players do not share a common prior, that is, they have different beliefs about the world, but these beliefs themselves are common knowledge, then we can still use the tools developed here.”

15. **Page 269, exercise 12.9:** In part (b) there are two corrections: First, “when player i is the only one to grab” should be replaced by “when player i grabs”. Second, “ $\varepsilon < 1$ ” should be replaced with “ $\varepsilon > 1$ ”.
16. **Page 321, Figure 16.1:** The bottom row of numbers, the fourth entry from the left is the number ‘6’, please replace it with the number ‘5’.
17. **Page 325:** In the second equation from the top, c_1 should be c_2 so that it reads:

$$\max_{q_2^2} v_2^2 = (5 - q_1^2 - q_2^2 - c_2)q_2^2.$$

Then, 2 lines after this equation (at the beginning of the line) it writes $5 - 2q_1^2 - q_1^2 - c_1 = 0$. This is a typo and it should write: $5 - 2q_2^2 - q_1^2 - c_2 = 0$

18. **Page 358:** Delete footnote 1
19. **Page 362, 8-th and 9-th lines below Figure 18.2:** There are two equations that need to be replaced. The first, in the 8-th lines, currently is $v_2(a_2, \theta) = -(a_2 - \theta)^2$. Instead, it should be $v_2(a_2, \theta) = -(\theta - a_2)^2$. Similarly, in the 9-th line it writes $v_1(a_2, \theta) = -(a_2 + b - \theta)^2$ and instead it should write $v_1(a_2, \theta) = -(\theta + b - a_2)^2$.
20. **Page 362, equation at the bottom:** The number 2 in front of a_2 should not be there so the penultimate entry should end with $-\frac{1}{3} + a_2 - a_2^2$
21. **Page 363, proof:** In the proof after Claim 18.5 there are three equation lines. Their are two terms in each that need to be replaced. The correct version of the three equations, in the order they appear, are as follows:

$$v_1(a_2(a_1'), \theta) = -(\theta + b - a_2(a_1'))^2$$

$$v_1(a_2(a_1''), \theta) = -(\theta + b - a_2(a_1''))^2$$

$$\Delta v_1(\theta) = -(\theta + b - a_2(a_1''))^2 + (\theta + b - a_2(a_1'))^2$$

22. **Page 363, Claim 18.6:** The last term in the claim is a typo. Instead of $\frac{1-\theta^*}{2}$ it should be $\frac{1+\theta^*}{2}$
23. **Page 364, line before equation (18.1):** The last term in the math expression is a typo. Instead of $\frac{1-\theta^*}{2}$ it should be $\frac{1+\theta^*}{2}$
24. **Page 364, equation (18.1):** The last term in the math expression is a typo. Instead of $\frac{1-\theta^*}{2}$ it should be $\frac{1+\theta^*}{2}$