

CORRIGENDUM¹
compiled by Jonathan Weare
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Errata:

<u>Page</u>	<u>Line</u>	<u>Current Text</u>	<u>Correct Replacement Text</u>
26	9	x	X
	9	y	Y
34	18	0 [italic]	0 [roman]
37	14	(1.13)	(1.37)
51	17	of subsets of \mathbf{R}^N	of some subsets of \mathbf{R}^N
54	19	closedness of S	compactness of S
78	2		$p \neq 0$ [additional text]
85	22	Let X^h and	Let $X^h = \mathbf{R}_+^N$ and
91	32	Note that under C.IV and CVIII, $p^\circ \cdot \tilde{D}^i(p^\circ) > p^\circ \cdot x$.	case 1: If $p^\circ \cdot \tilde{D}^i(p^\circ) < \tilde{M}^i(p^\circ)$ then by continuity of $\tilde{M}^i(\bullet)$ and $p^v \rightarrow p^\circ$, for v large we have $p^v \cdot \tilde{D}^i(p^\circ) < \tilde{M}^i(p^v)$. In this case let $w^v = \tilde{D}^i(p^\circ)$. case 2: If $p^\circ \cdot \tilde{D}^i(p^\circ) = \tilde{M}^i(p^\circ)$ then by C.VIII $p^\circ \cdot \tilde{D}^i(p^\circ) > p^\circ \cdot \hat{x}$
96	2	Chapter 5	Chapter 4
	2	Chapter 6	Chapter 5

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97	10	Chapter 6	Chapter 5
	11	Chapter 5	Chapter 4
	17	and 6.2	and 4.1
	22	and 6.2	and 4.1
98	24	$y \in Y$	$y \in Y$
114	17	$ \tilde{y}^{0j} $	$ \tilde{y}^{vj} $
115	10	$y^v, y^{v1}, y^{v2}, ..., y^{vj}$	$y^v, y^{v1}, y^{v2}, ..., y^{vj}, ..., y^{v\#F}$
124	17	we must have $D^i(p) \succ_i \tilde{D}^i(p)$	there exists an $x^i \in B^i(p) \cap X^i$ with $x^i \succ_i \tilde{D}^i(p)$
	18	$\alpha D^i(p) + (1 - \alpha) \tilde{D}^i(p)$	$\alpha x^i + (1 - \alpha) \tilde{D}^i(p)$
	19	$\alpha D^i(p) + (1 - \alpha) \tilde{D}^i(p)$	$\alpha x^i + (1 - \alpha) \tilde{D}^i(p)$
135	18	by theorems 8.3(b) and 9.1(b)	by theorem 8.3(b)
139	5	$y^{\circ i}$	$y^{\circ j}$
139	26	$M^i(p) = (1 - \tau)p \cdot (r^i - x^i)_+ + T,$	$M^i(p) = p \cdot r^i - \tau p \cdot (r^i - x^i)_+ + \sum_{j \in F} \alpha^{ij} p \cdot y^j + T, 0 < \tau < 1,$
139	29	$T = (1/H)\tau \sum_{i=1}^H \left(p \cdot (r^i - x^i)_+ \right)$	$T = (1/\#H)\tau \sum_{i=1}^H \left(p \cdot (r^i - x^i)_+ \right)$
145	2	Assume C.IV and C.V	Assume C.I, C.II, C.IV, and CV
148	9,10	nonnegative elements of $Y + \{r\}$. We will denote this set as $B = (Y + \{r\}) \cap \mathbf{R}_+^N$, a convex set.	nonnegative elements of $Y + \{r\}$ including free disposal. We will denote this set as $B = (Y + \{r\} + \mathbf{R}_-^N) \cap \mathbf{R}_+^N$, a convex set, where \mathbf{R}_-^N is the nonpositive quadrant of \mathbf{R}^N .
148	21	Let $B = Y + \{r\}$.	Let $B = (Y + \{r\} + \mathbf{R}_-^N) \cap \mathbf{R}_+^N$.
150	3		$p_k = 0$ for k so that $\sum_{i \in H} x_k^{*i} < \sum_{j \in F} y_k^{*j} + r_k$. [additional text]
150	3	<i>holds</i>	<i>holds</i>

151	33	$M^i(p) = p \cdot \hat{r}^i - \tau p \cdot (r^i - x^i)_+ + T$
164	8	$\sum_{h \in H} \sum_{q=1}^Q x^{h,q} = \sum_{h \in H} \sum_{q=1}^Q r^h.$
164	10	$\frac{1}{Q} \sum_{h \in H} \sum_{q=1}^Q x^{h,q} = \sum_{h \in H} r^h.$
165	4	$\sum_{h \in H} \bar{x}^h = \sum_{h \in H} \frac{1}{Q} \sum_{q=1}^Q x^{h,q} = \frac{1}{Q} \sum_{h \in H} \sum_{q=1}^Q x^{h,q} = \sum_{h \in H} r^h.$
166	15	Theorem 2.14
167	4,5	(We ignore for convenience regions where Γ^i may coincide with a boundary derived from X^i)
167	15	H-Q
201	21	For functions (point-valued correspondences) they are equivalent
211	6	$\min_{y \in \varphi(x)} f^v(x) - y < 1/v$
212	7	$\min_{y \in \varphi(x)} f^v(x) - y < 1/v$
212	12-16	We have $f^v(x^v) = x^v \dots$ and we have $x^* \in \varphi(x^*)$.
214	2	semicontinuous
217	Fig 17.1	$S^v(p^v)$

$M^i(p) = p \cdot r^i - \tau p \cdot (r^i - x^i)_+ + T$
$\sum_{h \in H} \sum_{q=1}^Q x^{h,q} \leq \sum_{h \in H} \sum_{q=1}^Q r^h.$
$\frac{1}{Q} \sum_{h \in H} \sum_{q=1}^Q x^{h,q} \leq \sum_{h \in H} r^h$
$\sum_{h \in H} \bar{x}^h = \sum_{h \in H} \frac{1}{Q} \sum_{q=1}^Q x^{h,q} = \frac{1}{Q} \sum_{h \in H} \sum_{q=1}^Q x^{h,q} \leq \sum_{h \in H} r^h.$
Theorem 14.2
(We ignore for convenience regions where Γ^i may coincide with a boundary derived from X^i . A more precise statement is that -- under C.IV, C.V -- Γ^i and Γ have non-empty interiors and $0 \notin \text{interior}(\Gamma)$)
Q-H
For functions (point-valued correspondences) into a compact range they are equivalent
$\max_{x \in S} \min_{x'^v \in S, y'^v \in \varphi(x'^v)} (x, f^v(x)) - (x'^v, y'^v) < 1/v$
$\max_{x \in S} \min_{x'^v \in S, y'^v \in \varphi(x'^v)} (x, f^v(x)) - (x'^v, y'^v) < 1/v$
We have $f^v(x^v) = x^v$. Recall that there is $y'^v \in \varphi(x'^v)$ so that $ (x^v, f^v(x^v)) - (x'^v, y'^v) < 1/v$. Then $x'^v, y'^v \rightarrow x^\circ$. But by upper hemicontinuity of $\varphi(\cdot)$, the properties $x'^v \rightarrow x^\circ$, $y'^v \in \varphi(x'^v)$, $y'^v \rightarrow x^\circ$, imply $x^\circ \in \varphi(x^\circ)$. Hence, choose $x^* = x^\circ$ and we have $x^* \in \varphi(x^*)$. QED
hemicontinuous at each $x \in \mathbf{R}$
$S^j(p^j)$

221	3	$\max[ax, by]$	$ax + by$
225	22		$x' \in \text{interior}(X^i)$ [additional text]
226	8	But then by	Without loss of generality, let $x' \in \text{interior}(X^i)$. But then by

Note on sections 17.3-17.4: many of the results in these sections rely on our choice of boundary, c , and therefore require assumptions P.I-P.IV. This correction concerns Theorems 17.2-17.6, Lemmas 17.4, 17.5, 17.7, and 17.8.

Revised Assumptions:

The following results are valid as stated, but not all of the assumptions listed in the text are required.

Lemma 10.1	Can delete C.V and C.VII.
Theorem 12.1	Can delete C.V.
Lemma 12.1	Can delete C.I, C.III, C.V, and C.VI.
Theorem 12.2	Can delete P.II-P.IV, inasmuch as the Separating Hyperplane Theorem requires only that A and B be non-empty, convex, and disjoint.
Corollary 12.1	Can delete P.II-P.IV.