# Errata: A Theory of Nonseparable Preferences in Survey Responses

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# A Theory of Nonseparable Preferences in Survey Responses

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"A Theory of Nonseparable Preferences in Survey Responses" (*American Journal of Political Science* 45(2):239–258) contains several printing errors, including the omission of all "not equal to" and "greater than or equal to" symbols that were to appear in the text. The following are corrections:

On page 240, the sentence in the last two lines of the first column should read:

"To define nonseparable preferences formally, let $\mathbf{J} = \{1, \ldots, J\}$, $J \geq 2$, be a set of issues."

On page 246, in the second line after the heading "A Model of the Survey Response," the text should read:

"$\ldots\mathbf{J} = \{1, \ldots, J\}$, $J \geq 2$ is a set of issues . . ."

Also on page 246, in the sixth line after the heading "A Model of the Survey Response," the text should read:

". . . $\{o_j^1, \ldots, o_J^L\}$ is a set of possible outcomes on issue $j$, $L \geq 2$ . . ."

Also on page 246, in the second line of the second paragraph after the heading "A Model of the Survey Response," the text should read:

". . . about $M$ issues, $M \geq 2$ . . ."

Also on page 246, in the fourth line of the second paragraph after the heading "A Model of the Survey Response," the text should read:

". . . of responses $R_J = (r_j^1, \ldots, r_j^N)$, $N \geq 2$."

Also on page 246, in the second column, first paragraph after *Assumption 2*, footnote 78 should be numbered footnote 7.

On page 247, first column, the result should read:

*Result:* $r_i^*(q_j > q_k|\mathbf{r}_{ik}^*) \neq r_i^*(q_j < q_k|\mathbf{s}_{ik})$ if and only if $i$ has nonseparable preferences for issues $j$ and $k$, and $\mathbf{r}^*_{ik} \neq \mathbf{s}_{ik}$.

On page 250, in footnote 15 "(Lacey 2001)" should be "(Lacy 2001)."

On page 257, Appendix B should read:

**Proof:** Drop $i$. For sufficiency, if $i$'s preference for issue $j$ is nonseparable from issue or set of issues $k$, then there exists an $\mathbf{o}_k$ and $\mathbf{o}'_k$ such that $(o_j,\mathbf{o}_k) \succeq_i (o'_j,\mathbf{o}_k)$ and $(o'_j,\mathbf{o}'_k) \succ_i (o_j,\mathbf{o}'_k)$, which, by Assumption 3, implies $(r_j,\mathbf{r}_k) \succeq_i (r'_j,\mathbf{r}_k)$ and $(r'_j,\mathbf{r}'_k) \succ_i (r_j,\mathbf{r}'_k)$. If $q_j > q_k$, then $r^*_j = r^*(q_j|\mathbf{r}^*_k)$. If $q_j < q_k$, then $r^*_j = r(q_j|\mathbf{s}_k)$. If $\mathbf{r}^*_k \neq \mathbf{s}_k$, then $r^*(q_j > q_k|\mathbf{r}^*_k) \neq r^*(q_j < q_k|\mathbf{s}_k)$. For necessity, if $\mathbf{r}^*_k = \mathbf{s}_k$, then $r^*_i(q_j > q_k|\mathbf{r}^*_k) = r^*_i(q_j < q_k|\mathbf{s}_k)$. For the second necessary condition, if $i$'s preference for $j$ is separable from $k$, then $(r_j,\mathbf{r}_k) \succeq_i (r'_j,\mathbf{r}'_k)$ and $(r_j,\mathbf{r}'_k) \succeq_i (r'_j,\mathbf{r}'_k)$, which implies $r^*_j(\cdot) = r^*_j(\cdot)$. ■

In the context of the spatial model, the same result can be proved as follows:

**Proof:** Individual $i$'s preferences are representable by the quadratic utility function:

$$U_i(o_j|o_k) = -[a_{ikk}(o_k - \theta_{ik})^2 + 2a_{ijk}(o_k - \theta_{ik})(o_j - \theta_{ij}) + a_{ijj}(o_j - \theta_{ij})^2]$$

Maximizing this function with respect to $o_j$, dropping $i$, and rearranging terms:

$$o_j|o_k = \theta_j - \left(\frac{a_{jk}}{a_{kk}}\right)(o_k - \theta_k)$$

which is $i$'s constrained ideal point on issue $j$. Person $i$'s response on $j$, conditional on her beliefs about the status quo on $k$, substituting $s_k$ for $o_k$, is:

$$r(q_j|s_k) = \theta_j - \left(\frac{a_{jk}}{a_{jj}}\right)(s_k - \theta_k)$$

But $i$'s response on $j$ conditional on a previous response of $r^*_k$ to $k$, substituting $r^*_k$ for $o_k$, is:

$$r(q_j|r^*_k) = \theta_j - \left(\frac{a_{jk}}{a_{jj}}\right)(r^*_k - \theta_k)$$

If preferences for $j$ and $k$ are nonseparable, then $\left(\frac{a_{jk}}{a_{jj}}\right)$ is nonzero. If $(s_k - \theta_k) \neq (r^*_k - \theta_k)$ and if $\left(\frac{a_{jk}}{a_{jj}}\right) \neq 0$, then $r(q_j|s_k) \neq r(q_j|r^*_k)$. For necessity, if the respondent's preferences are separable, then $\left(\frac{a_{jk}}{a_{jj}}\right) = 0$ and $r(q_j|s_k) = r(q_j|r^*_k)$. ■

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