Errata: A Theory of Nonseparable Preferences in Survey Responses


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A Theory of Nonseparable Preferences in Survey Responses

Dean Lacy

"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 \( J = \{1, \ldots, J\}, J \geq 2 \) 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:

"... \( J = \{1, \ldots, J\}, J \geq 2 \) 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:

"... \( \{o_1, \ldots, o_J\} \) is a set of possible outcomes on issue \( j, L \geq 2 \)..."

Also on page 246, in 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 \( R_j = (r_{j1}, \ldots, r_{jN}) \), \( N \geq 2 \)."

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: \( r_j^* (q_j > q_k | r_{jk}^* ) \neq r_j^* (q_j < q_k | s_{jk} ) \) if and only if \( i \) has nonseparable preferences for issues \( j \) and \( k \), and \( r_{jk}^* \neq s_{jk} \).

On page 250, in footnote 15 "(Lacy 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 \( o_k \) and \( o'_k \) such that \( (o_j, o_k) \succ_i (o'_j, o'_k) \) and \( (o'_j, o'_k) \succ_i (o_j, o_k) \), which, by Assumption 3, implies \( (r_j, r_k) \succ_i (r'_j, r'_k) \) and \( (r'_j, r'_k) \succ_i (r_j, r_k) \). If \( q_j > q_k \), then \( r_j = r'(q_j r_k) \). If \( q_j < q_k \), then \( r'_j = r'(q_j s_k) \). If \( r'_j \neq s_k \), then \( r'(q_j > q_k r'_k) \neq r'(q_j < q_k s_k) \). For necessity, if \( r'_k = s_k \), then \( r'_j (q_j > q_k r'_k) = r'_j (q_j < q_k s_k) \).

For the second necessary condition, if \( i \)’s preference for \( j \) is separable from \( k \), then \( (r_j, r_k) \succ_i (r'_j, r'_k) \) and \( (r_j, r'_k) \succ_i (r'_j, r_k) \), 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:

\[
U_i(o_j | o_k) = -[a_{jk}(o_j - \theta_k)^2 + 2a_{jk}(o_j - \theta_k)(o_k - \theta_k)] + a_{jj}(o_j - \theta_j)^2
\]

Maximizing this function with respect to \( o_j \), dropping \( i \), and rearranging terms:

\[
o_j | o_k = \theta_j - \left( \frac{a_{jk}}{a_{jj}} \right) (o_k - \theta_k)
\]

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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