#165

***Notes for*:**

Meehl, P. E., & Yonce, L. J. (1996). Taxometric analysis: II. Detecting taxonicity using covariance of two quantitative indicators in successive intervals of a third indicator (MAXCOV procedure). *Psychological Reports*, *78*,1091-1227. (Monograph Supplement 1-V78)

***For easier handling of this large monograph, main text and appendices are in two files*:**

165_MAXCOV_text_only.pdf (pp. 1091-1139 of the publication, including References)

165_MAXCOV_Appendices.pdf (pp. 1140-1227, Appendices A–I) .

<u>TEXT</u> (pp. 1091-1139)**: *Information subsequent to the initial publication*:**

p. 1112 & 1139, "Waller, Putnam, & Carlson, in press"— published:

Waller, N. G., Putnam, F. W., & Carlson, E. B. (1996) Types of dissociation and dissociative types: a taxometric analysis of dissociative experiences. *Psychological Methods*, *1*, 300-321.

p. 1129 & 1139 , "Waller & Meehl, in preparation"— published:

Waller, N. G., & Meehl, P. E. (1998) *Multivariate taxometric procedures: Distinguishing types from continua*. Newbury Park, CA: Sage.

p. 1130 & 1138, "(Meehl, in press)"— published:

Meehl, P. E. (1997) The problem is epistemology, not statistics: Replace significance tests by confidence intervals and quantify accuracy of risky numerical predictions. In L. L. Harlow, S. A. Mulaik, & J.H. Steiger (Eds.), *What if there were no significance tests?* (pp. 393-425). Mahwah, NJ: Erlbaum.

<u>APPENDICES</u> (pp. 1140-1227)**:**

LJY, January 2020

APPENDIX A

DERIVATIONS

Proof of General Covariance Mixture Theorem

Subscripts (t, c) designate taxon and complement classes. Values without subscripts designate total (mixed) group. P = Proportion in taxon, $Q = 1 - P$ = Proportion in complement class. The grand covariance (mixed group) is

$$\mathrm{Cov}(yz) = \frac{1}{N}\sum^{N} yz - (\bar{y})(\bar{z}) \qquad [1]$$

$$= \overline{(yz)} - (\bar{y})(\bar{z}) \qquad \textit{Definition of covariance} \qquad [2]$$

The grand mean of cross-products is the weighted sum of taxon and complement components,

$$\overline{(yz)} = P\overline{(yz)}_t + Q\overline{(yz)}_c \qquad \textit{Identity (algebra)} \qquad [3]$$

The grand means of y and z are weighted sums of taxon and complement components,

$$\bar{y} = P\bar{y}_t + Q\bar{y}_c \qquad [4]$$

Identity (algebra)

$$\bar{z} = P\bar{z}_t + Q\bar{z}_c \qquad [5]$$

Substituting [3] – [4] – [5] into [2] we obtain

$$\begin{aligned}\mathrm{Cov}(yz) &= P\overline{(yz)}_t + Q\overline{(yz)}_c - (P\bar{y}_t + Q\bar{y}_c)(P\bar{z}_t + Q\bar{z}_c)\\ &= P\overline{(yz)}_t + Q\overline{(yz)}_c - (P^2\bar{y}_t\bar{z}_t + PQ\bar{y}_t\bar{z}_c + PQ\bar{y}_c\bar{z}_t + Q^2\bar{y}_c\bar{z}_c)\\ &= P\overline{(yz)}_t + Q\overline{(yz)}_c - P^2\bar{y}_t\bar{z}_t - PQ\bar{y}_t\bar{z}_c - PQ\bar{y}_c\bar{z}_t - Q^2\bar{y}_c\bar{z}_c \qquad [6]\end{aligned}$$

Subtracting and adding P to the P^2 on $\bar{y}_t\,\bar{z}_t$, and Q to the Q^2 on $\bar{y}_c\bar{z}_c$,

$$\mathrm{Cov}(yz) = P\overline{(yz)}_t + Q\overline{(yz)}_c + (P - P - P^2)\bar{y}_t\bar{z}_t + (Q - Q - Q^2)\bar{y}_c\bar{z}_c - PQ\bar{y}_t\bar{z}_c - PQ\bar{y}_c\bar{z}_t\,. \qquad [7]$$

Re-arranging,

$$\begin{aligned}\mathrm{Cov}(yz) &= P\overline{(yz)}_t - P\bar{y}_t\bar{z}_t + Q\overline{(yz)}_c - Q\bar{y}_c\bar{z}_c + P(1-P)\bar{y}_t\bar{z}_t + Q(1-Q)\bar{y}_c\bar{z}_c - PQ\bar{y}_t\bar{z}_c - PQ\bar{y}_c\bar{z}_t\\ &= P\overline{(yz)}_t - P\bar{y}_t\bar{z}_t + Q\overline{(yz)}_c - Q\bar{y}_c\bar{z}_c + PQ\bar{y}_t\bar{z}_t + PQ\bar{y}_c\bar{z}_c - PQ\bar{y}_t\bar{z}_c - PQ\bar{y}_c\bar{z}_t\\ &= P\left[\overline{(yz)}_t - \bar{y}_t\bar{z}_t\right] + Q\left[\overline{(yz)}_c - \bar{y}_c\bar{z}_c\right] + PQ(\bar{y}_t - \bar{y}_c)(\bar{z}_t - \bar{z}_c)\\ &= P\,cov_t + Q\,cov_c + PQ\bar{d}_y\bar{d}_z\,. \qquad [8]\end{aligned}$$

To indicate that this is general, that it holds for any subset of the data as well as for the total group, we write it with lower case proportions and adjust the notation

$$cov_{yz}(x) = p\,cov_{yzt} + q\,cov_{yzc} + pq\bar{d}_y\bar{d}_z\,. \qquad [9]$$

*Generalized MAXCOV Allowing Nuisance Covariance**

We start with the General Covariance Mixture Formula which says that, ignoring sampling error, for any interval x_i

$$cov_{yz}(x_i) = p cov_{yzt} + q cov_{yzc} + pq(\bar{y}_t - \bar{y}_c)(\bar{z}_t - \bar{z}_c) \quad [10]$$

where

$cov_{yz}(x_i)$	= Manifest (yz)-covariance of cases having a score x_i, hence an empirical function of x;
cov_{yzt}	= (yz)-covariance within the taxon, assumed to be a constant;
cov_{yzc}	= (yz)-covariance within the complement, assumed to be a constant;
$\bar{y}_t, \bar{y}_c, \bar{z}_t, \bar{z}_c$	= Means of the taxon and complement classes on indicators y and z, respectively;
p, q	= Proportions of the cases within an interval belonging to the taxon and complement classes, respectively.

In the original MAXCOV-HITMAX procedure on the idealizing conjecture of no nuisance covariance ($cov_{yzt} = cov_{yzc} = 0$), the first two terms on the right of Equation [10] vanish so the left-hand manifest covariance equals the third term on the right, the "validity-mixture" term. It is called the validity-mixture term because its size depends on the two "crude validities" (mean taxon/complement differences, taken as constant absent sampling error or nontaxonic moderator effects) and the taxonic mixture $p:q$. If either the y or z indicator had zero taxonic validity or if there were no taxon/complement mix, i.e., if $p=0$ or $q=0$, this validity-mixture term would also vanish in any such population or sample. Since the validity-mixture term is maximized when $p=q$, plotting the graph of the observable $cov_{yz}(x_i)$ over x_i-intervals locates the hitmax interval by finding this graph's maximum. In that interval $pq=1/4$, and knowing this allows us to solve for the mean difference product, and using that value we can write quadratics in p_i for all other intervals, solve for p_i and proceed as explained by Meehl (1973) and in the text of this monograph to estimate all of the latent values.

If sizable nuisance covariance exists, the first two terms on the right do not vanish and the hitmax interval cannot be located by finding the empirical maximum of $cov_{yz}(x)$ unless we know that the nuisance covariances are equal, whereby the sum $p_i cov_{yzt} + q_i cov_{yzc}$ is invariant over x-intervals, but even then, we cannot solve for the validity product because we cannot parse the right side into its nuisance covariance component and its validity-mixture component. We can, however, proceed as follows: Choosing a cut at sufficiently high values of x, we will have passed all or almost all of the complement cases, so that cases lying above that cut will be nearly "pure taxon."

*These equations are essentially the same as published by Meehl (1995b).

Hence, in this region the validity-mixture term vanishes, as does the complement nuisance component, and only the component $p_i cov_{yzt}$ (where $p_i \simeq 1$) remains, giving us an estimate of the taxon nuisance covariance. Similarly, we estimate the complement nuisance covariance from cases lying in the extreme low region of the x-distribution. Returning to Equation [10], designating the validity product as an unknown parameter θ

$$\theta = (\bar{y}_t - \bar{y}_c)(\bar{z}_t - \bar{z}_c), \text{ a constant} = K. \qquad [11]$$

Simplifying subscripts as $cov_{yzt} = cov_t$, $cov_{yzc} = cov_c$ and expanding [10] in terms of $p_i (= 1 - q_i)$, we have (dropping the subscript i),

$$cov_{yz}(x) = p(cov_t - cov_c) + (p - p^2)\,\theta + cov_c \qquad [12]$$

Differentiating with respect to x and setting $= 0$ for a maximum,

$$\frac{dcov(x)}{dx} = \frac{dp}{dx}\left(cov_t - cov_c\right) + \frac{dp}{dx}\,\theta - 2p\,\frac{dp}{dx}\,\theta = 0 \qquad [13]$$

Dividing by $\frac{dp}{dx}$ [$\neq 0$ in region of interest]

$$(cov_t - cov_c) + \theta - 2p\,\theta = 0 \text{ at max} \qquad [14]$$

so

$$p = \frac{\theta + (cov_t - cov_c)}{2\theta} \text{ at max}. \qquad [15]$$

At this maximum, $cov_{yz}(x)$ has an observed numerical value, $cov_{\max}$. So at that value

$$p(cov_t - cov_c) + p\,\theta - p^2\,\theta = cov_{\max} - cov_c. \qquad [16]$$

Entering Equation 15 into Equation 16 we obtain

$$\left(\frac{\theta + (cov_t - cov_c)}{2\theta}\,(cov_t - cov_c)\right) + \left(\frac{\theta + (cov_t - cov_c)}{2\theta}\,\theta\right) - \left(\left[\frac{\theta + (cov_t - cov_c)}{2\theta}\right]^2 \theta\right) + \left(cov_c - cov_{\max}\right) = 0 \qquad [17]$$

which with some straightforward tedious algebra yields

$$\theta^2 + (2cov_t + 2cov_c - 4cov_{\max})\,\theta + (cov_t - cov_c)^2 = 0 \qquad [18]$$

a quadratic in θ. Its roots are

$$\theta = (2cov_{\max} - cov_t - cov_c) \pm 2\left[(cov_t - cov_{\max})(cov_c - cov_{\max})\right]^{1/2}. \qquad [19]$$

This has the form

$$(a + b) \pm 2(ab)^{1/2}. \qquad [20]$$

Since

$$a + b + 2(ab)^{1/2} = (a^{1/2} + b^{1/2})^2 \quad [21]$$

and

$$a + b - 2(ab)^{1/2} = (a^{1/2} - b^{1/2})^2 \quad [22]$$

the roots [19] are

$$\theta_1 = [(cov_{max} - cov_t)^{1/2} + (cov_{max} - cov_c)^{1/2}]^2 \quad [23]$$

$$\theta_2 = [(cov_{max} - cov_t)^{1/2} - (cov_{max} - cov_c)^{1/2}]^2. \quad [24]$$

Root θ_1 is selected by the physical situation, that for the special case of zero nuisance covariance $cov_t = cov_c = 0$ it yields the correct value $\hat{K} = 4cov_{max}$ in the hitmax interval, whereas θ_2 gives an impermissible $\hat{K} = 0$.

Having found θ, we proceed as in MAXCOV-HITMAX, using Equation [3] in each x-interval to get the interval's taxon rate p_i, the generalized quadratic algorithm for the taxon-proportion in an interval x_i being

$$p(x_i) = \frac{(K + cov_t - cov_c) \pm \sqrt{(K + cov_t - cov_c)^2 - 4K(cov(x_i) - cov_c)}}{2K}. \quad [25]$$

Then $N_i p_i = N_{ti}$ the interval's taxon frequency, then $\Sigma N_{ti} = N_t$, and finally base rate $P = N_t/N$. The latent frequencies having been computed for each x-interval, we can obtain directly latent means, standard deviations, skewness, and kurtosis if desired. For any triad (x, y, z) of indicator-variables, three MAXCOV procedures exist (using either x, y, or z as "input" indicator) and the three inferred latent distributions are thus obtained as in MAXCOV-HITMAX.

Error Due to Intrataxon Correlation

In the basic equation used to locate the hitmax cut by finding the interval on x in which $cov(yz)$ is maximum, intrataxon independence is assumed. What is the size of error introduced if in fact $r_{yz} \neq 0$ but we proceed as if it were zero?

The nonzero covariance between y and z within taxa leads to a slightly more complicated expression for $cov(yz)$ in a mixed sample, namely, the two intrataxon covariances appear, weighted proportionally to the sample base rates.

Hence hitmax will be correctly located even if intrataxon $r \neq 0$, provided the (yz)-covariances are *equal* for taxon and complement. But even this may be impossible to achieve. How will error in locating the hitmax interval depend upon the difference between the two intrataxon covariances?

We begin with the General Covariance Mixture Theorem [Equation 9]. Then, to maximize, differentiating with respect to p (the taxon probability in an interval),

$$cov_t(yz)\frac{dp}{dp} + cov_c(yz)\frac{dq}{dp} + \bar{d}_y\bar{d}_z\left(\frac{dp}{dp}q + \frac{dq}{dp}p\right) = 0$$

$$cov_t(yz) - cov_c(yz) + \bar{d}_y\bar{d}_z(q-p) = 0$$

$$\frac{cov_t(yz) - cov_c(yz)}{(\bar{y}_t - \bar{y}_c)(\bar{z}_t - \bar{z}_c)} = p - q \, . \qquad [26]$$

That an extremum is a maximum is shown by the fact that the second derivative

$$\frac{d^2}{dp^2}\left[cov_t(yz) - cov_c(yz) + (\bar{y}_t - \bar{y}_c)(\bar{z}_t - \bar{z}_c)(q-p)\right] = K(q-p)' < 0$$

throughout the range. We note that, if intrataxon covariances are equal, even if $\neq 0$, solution is $p = q = \frac{1}{2}$.

The error in locating hitmax is that we will find an interval where $p \neq q$, the deviation from taxon : complement symmetry being proportional to the difference between the intrataxon covariances in the numerator on the left. The proportionality constant is half as large as the reciprocal of $\bar{d}_y\bar{d}_z$ (half, because the deviation from $\frac{1}{2}$ is half the $(p-q)$ discrepancy). How large is such an error?

Numerical Example

Suppose, to make the arithmetic easy, the variances are equal. Let the correlation r_{yz} be .40 among taxon members but only .20 among complement members. Assume true validities to be at a 1.00 *SD* separation of the means. Then (dividing by the geometric mean of the variances) we have

$$.60 - .40 = p - q$$

$$p = .60 \, .$$

So our maximization of *cov*(yz) has located the x-interval within which the taxon : complement ratio is 60 : 40, instead of the hitmax interval where it is 50 : 50.

Numerical Example of Error in Solving for Latent Means

Suppose we have (mis)located hitmax interval to the extent above, so the latent rates in the pseudo-hitmax interval are $p_t = .60$ and $p_c = .40$ instead of $p_t = p_c = \frac{1}{2}$.

Suppose the true latent means are $y_t = 70$ and $y_c = 60$. Let the grand base rate be $P = .80$. (We will assume this latent value to be accurately estimated, for the present purpose.)

The (observed) grand mean is

$$\bar{y}_{\text{Observed}} = P\bar{y}_t + Q\bar{y}_c = 68 \, .$$

The mean of the pseudo-hitmax interval is

$$\bar{y}_h = (.60)(70) + (.40)(60) = 66 .$$

(True hitmax interval would have shown a mean of 65, halfway between the two latent values.)

Then we solve for the latent means using an erroneous equation for the pseudo-hitmax interval, thus

$$\frac{1}{2}\bar{y}_t + \frac{1}{2}\bar{y}_c = 66$$

$$.8\bar{y}_t + .2\bar{y}_c = 68 .$$

The solution to this approximate system is

$$\bar{y}_t = 69.33 \text{ an error of } 1\%$$
$$\bar{y}_c = 62.67 \text{ an error of } 4\% .$$

Errors of this small size are quite tolerable in present circumstances. We are not, of course, asserting that the latent means are usually this accurate but merely that the expected error due to hitmax interval mislocation is negligible.

APPENDIX B

Correlations Generated by Taxon Mixtures*

While r is not an optimal descriptive statistic in this situation, the ideal conditions (linear regression, homoscedasticity, normality of marginals and within arrays) being unsatisfied, that does not, of course, prevent its being calculated, the latent equations being algebraic identities not dependent on those conventional optimality conditions. The proportion of variance "accounted for" remains correct, so long as we treat of the whole range and do not plug in the alienation coefficient to predict dispersions within x-intervals. Also the y-means cannot be unbiasedly estimated in all the x-intervals. These predictive technological tasks are not before us, as they would be in, say, personnel selection. Despite Pearson's equation for the normal bivariate surface, psychologists rarely test for linearity, etc., and in scanning a large matrix of rs for candidate taxon indicators, the mixture model is what we care about.

Considering various combinations of base rate P, mean taxonic separations $\bar{d}$ (on both indicators), and nuisance correlations r_t [$=r_c$ in complement class], we can write latent equations: If $\sigma_x=\sigma_y=1$ within classes (so that $cov_t=r_t$ and $cov_c=r_c$),

$$cov(xy) = Pcov_t(xy) + Qcov_c(xy) + PQ\bar{d}_x\bar{d}_y$$

$$= r_t + PQ\bar{d}^2 \qquad \text{since } \bar{d}_x = \bar{d}_y \text{ and } r_t = r_c$$

$$\text{var}(x) = P\sigma_{tx}^2 + Q\sigma_{cx}^2 + PQ\bar{d}_x^2$$

$$= 1 + PQ\bar{d}_x^2$$

$$\text{var}(y) = 1 + PQ\bar{d}_y^2 = \text{var}(x)$$

Then the observed r of a mixed group is

$$r_{mix} = \frac{cov(xy)}{\sqrt{\text{var}_x\ \text{var}_y}} = \frac{cov_{xy}}{\text{var}(x)}$$

$$= \frac{r_t + PQ\bar{d}^2}{1 + PQ\bar{d}^2}$$

The following table shows values of manifest correlations generated by latent taxon mixtures under various parametric situations (base rate, separation, nuisance correlations).

*This appendix is essentially the same as printed in Meehl and Yonce (1994) and is reproduced here for the convenience of readers.

CORRELATIONS GENERATED BY VARIOUS TAXON MIXTURES

P	$\bar{d}$	$r_t = r_c$				
		.00	.10	20	.30	.40
.05	.50	.01	.11	21	.31	.41
	1.00	.05	.14	.24	.33	.43
	1.33	.08	.17	.26	.35	.45
	1.50	.10	.19	.28	.37	.46
	2.00	.16	.24	.33	.41	.50
	2.50	.23	.31	.38	.46	.54
.10	.50	.02	.12	.22	.32	.41
	1.00	.08	.17	.27	.36	.45
	1.33	.14	.22	.31	.40	.48
	1.50	.17	.25	.33	.42	.50
	2.00	.26	.34	.41	.49	.56
	2.50	.36	.42	.49	.55	.62
.20	.50	.04	.13	.23	.33	.42
	1.00	.14	.22	.31	.40	.48
	1.33	.22	.30	.38	.45	.53
	1.50	.26	.34	.41	.49	.56
	2.00	.39	.45	.51	.57	.63
	2.50	.50	.55	.60	.65	.70
.30	.50	.05	.14	.24	.33	.43
	1.00	.17	.26	.34	.42	.50
	1.33	.27	.34	.42	.49	.56
	1.50	.32	.39	.46	.52	.59
	2.00	.46	.51	.57	.62	.67
	2.50	.57	.61	.65	.70	.74
.40	.50	.06	.15	.25	.34	.43
	1.00	.19	.27	.35	.44	.52
	1.33	.30	.37	.44	.51	.58
	1.50	.35	.42	.48	.55	.61
	2.00	.49	.54	.59	.64	.69
	2.50	.60	.64	.68	.72	.76
.50	.50	.06	.15	.25	.34	.44
	1.00	.20	.28	.36	.44	.52
	1.33	.31	.38	.45	.51	.58
	1.50	.36	.42	.49	.55	.62
	2.00	.50	.55	.60	.65	.70
	2.50	.61	.65	.69	.73	.77

Note.—P = Base rate; $\bar{d}$ = Mean difference in standard units of latent distributions; r_t, r_c = correlation within taxon group and within complement group.

APPENDIX C

Monte Carlo Curves for All Samples

Twenty-five samples have been generated for each parameter configuration. The first panel contains data from the first sample generated with a given configuration, the last panel contains data from the twenty-fifth sample. Panels on left-hand pages are from samples in which the latent situation is taxonic; on facing pages the latent situation is nontaxonic (factorial), with factor loadings to produce correlation in the nontaxonic samples comparable to that for the taxonic samples. To make a taxonic/nontaxonic comparison, any panel on a left page may be compared with any panel on the facing page, i.e., there is no intrinsic connection between panels with the same sample number on facing pages. Each sample has four indicators, hence there are 12 MAXCOV curves in each panel. The ordering of the input/output combinations is shown to the left of the first panel on each page. Raw data points are plotted, then they are overlaid with smoothed curves. The curves are offset within each panel (sample) for display. The configurations used for generating the Monte Carlo samples in the order they are presented are:

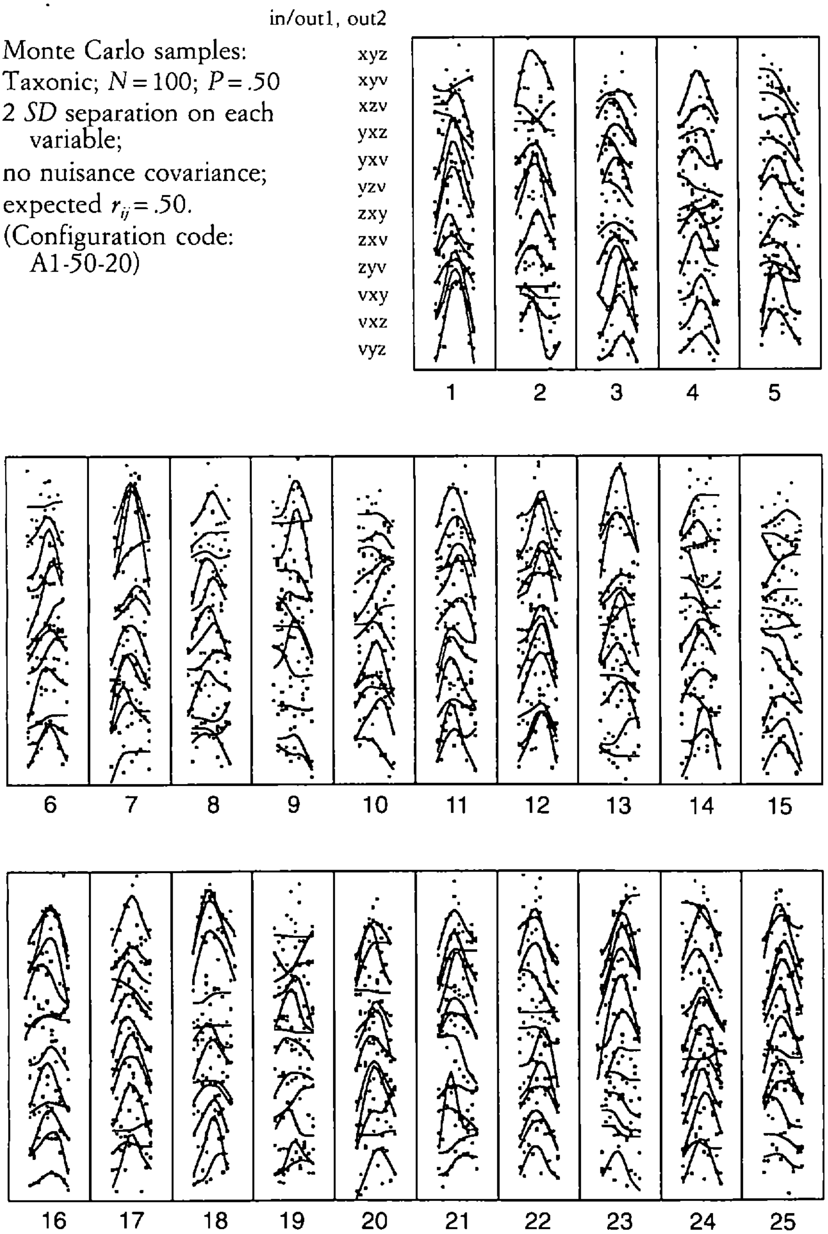
N[a]	Taxonic Configuration				Nontaxonic Comparison		Expected r_{ij}[f]
	P[b]	sep[c]	Factor Loadings[d]	File Code[e]	Factor Loadings[f]	File Code[e]	
100	.50	2.0	0	A1-50-20	.707	C100	.50
200	.50	2.0	0	A2-50-20	.707	C200	.50
300	.50	2.0	0	A3-50-20	.707	C300	.50
600	.50	2.0	0	A6-50-20	.707	C600	.50
300	.25	2.0	0	A3-25-20	.66	F300	.43
600	.25	2.0	0	A6-25-20	.66	F600	.43
300	.10	2.0	0	A3-10-20	.51	E300	.26
600	.10	2.0	0	A6-10-20	.51	E600	.26
300	.50	1.5	0	A3-50-15	.60	B300	.36
600	.50	1.5	0	A6-50-15	.60	B600	.36
300	.50	2.0	$x = .70$	N3-50-20	$x = .85$	N300	$r_{xy} = .68$ $r_{yz} = .60$
			$y = .50$		$y = .79$		$r_{xz} = .54$ $r_{yv} = .55$
			$z = .40$		$z = .77$		$r_{xv} = .57$ $r_{zv} = .54$
			$v = .20$		$v = .69$		

(continued on next page)

[a]Sample size. [b]Base rate. [c]Amount of separation in *SD* units, same for all four variables unless given otherwise. [d]Same for all variables in taxon and in complement groups unless given otherwise. [e]A filename coding used by the authors for identification of the Monte Carlo samples. [f]Same for all variables unless given otherwise.

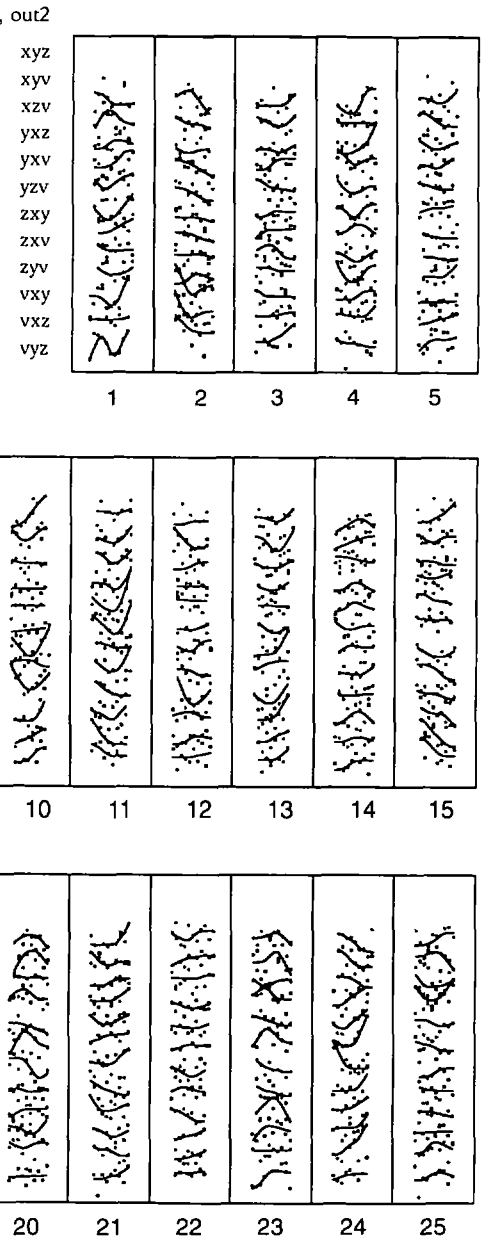
N[a]	Taxonic Configuration				Nontaxonic Comparison		Expected r_{ij}[f]	
	P[b]	sep[c]	Factor Loadings[d]	File Code[e]	Factor Loadings[f]	File Code[e]		
600		2.0	Same as for N3-50-20	N6-50-20	Same as for N300	N600	Same as for N3-50-20	
300	.50	x = 2.00	x = .70	D3-50-v1	x = .85	D300	r_{xy} = .65	r_{yz} = .52
		y = 1.75	y = .50		y = .76		r_{xz} = .58	r_{yv} = .41
		z = 1.50	z = .40		z = .68		r_{xv} = .46	r_{zv} = .37
		v = 1.25	v = .20		v = .54			
600		Same as for D3-50-v1		D6-50-v1	Same as for D300	D600	Same as for D3-50-v1	

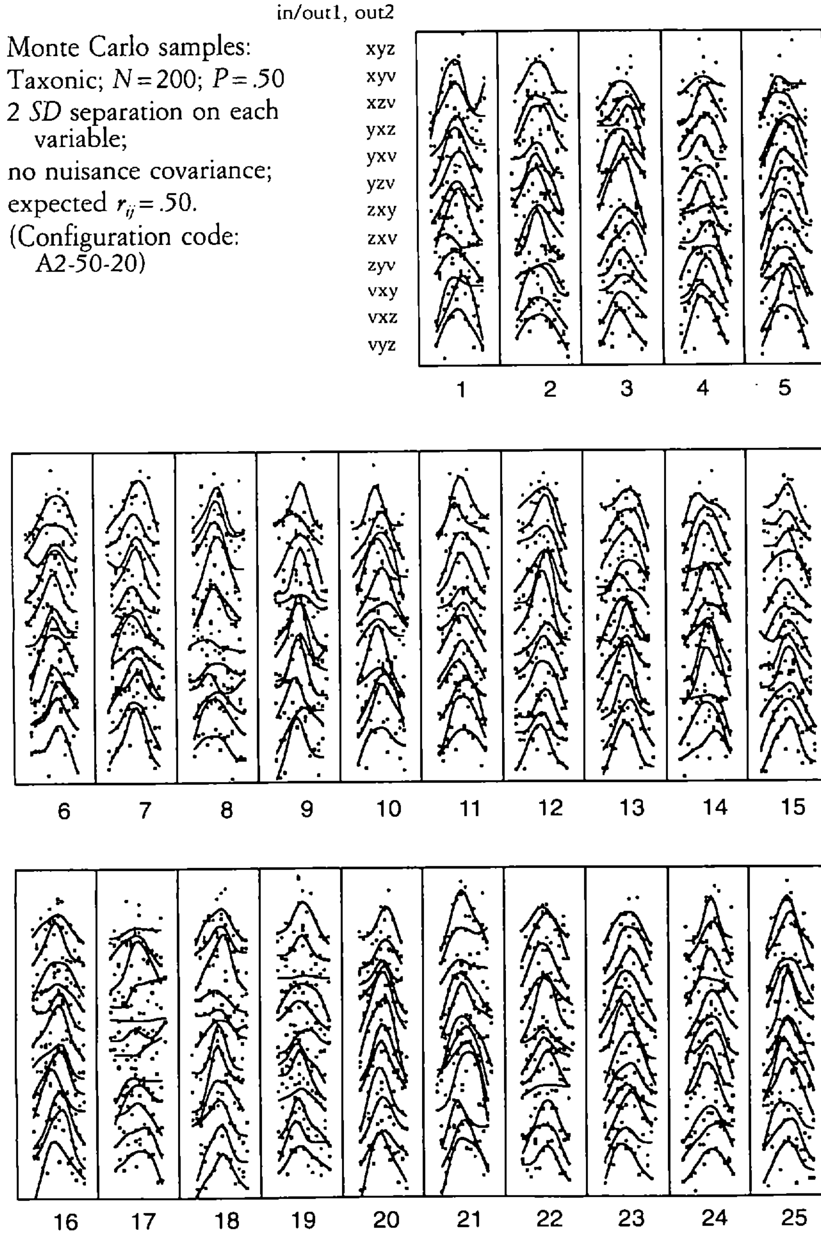
[a] Sample size. [b] Base rate. [c] Amount of separation in *SD* units, same for all four variables unless given otherwise. [d] Same for all variables in taxon and in complement groups unless given otherwise. [e] A filename coding used by the authors for identification of the Monte Carlo samples. [f] Same for all variables unless given otherwise.



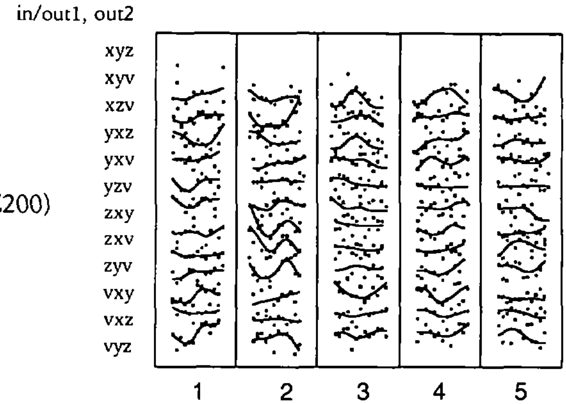
Monte Carlo samples:
Taxonic; $N = 100$; $P = .50$
2 *SD* separation on each variable;
no nuisance covariance;
expected $r_{ij} = .50$.
(Configuration code: A1-50-20)

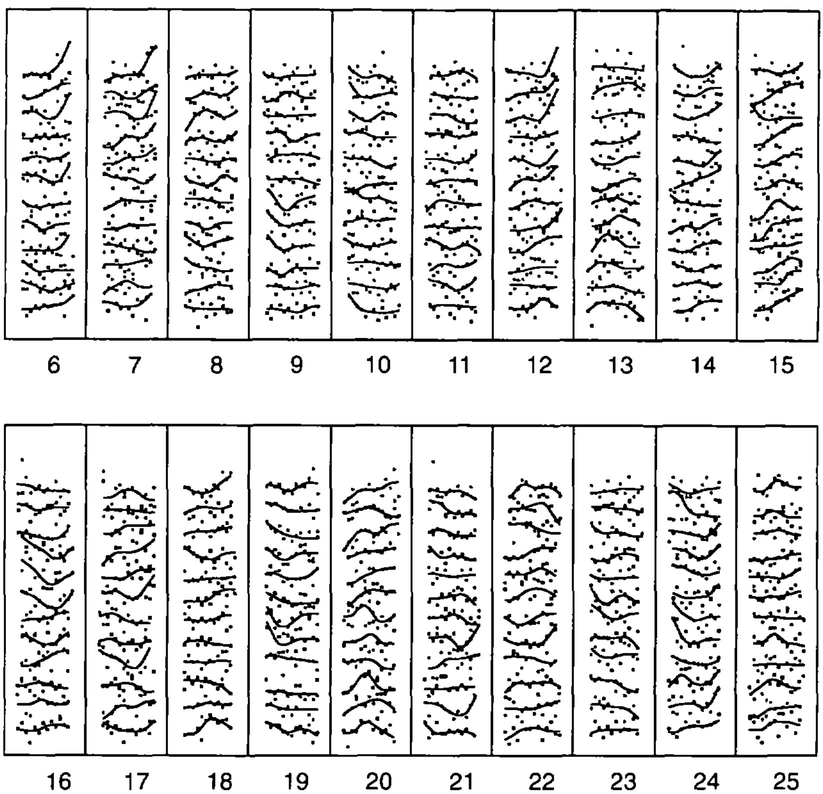
Monte Carlo samples:
Nontaxonic; $N = 100$;
factor loading .707 on each variable;
expected $r_{ij} = .50$.
(Configuration code: C100)

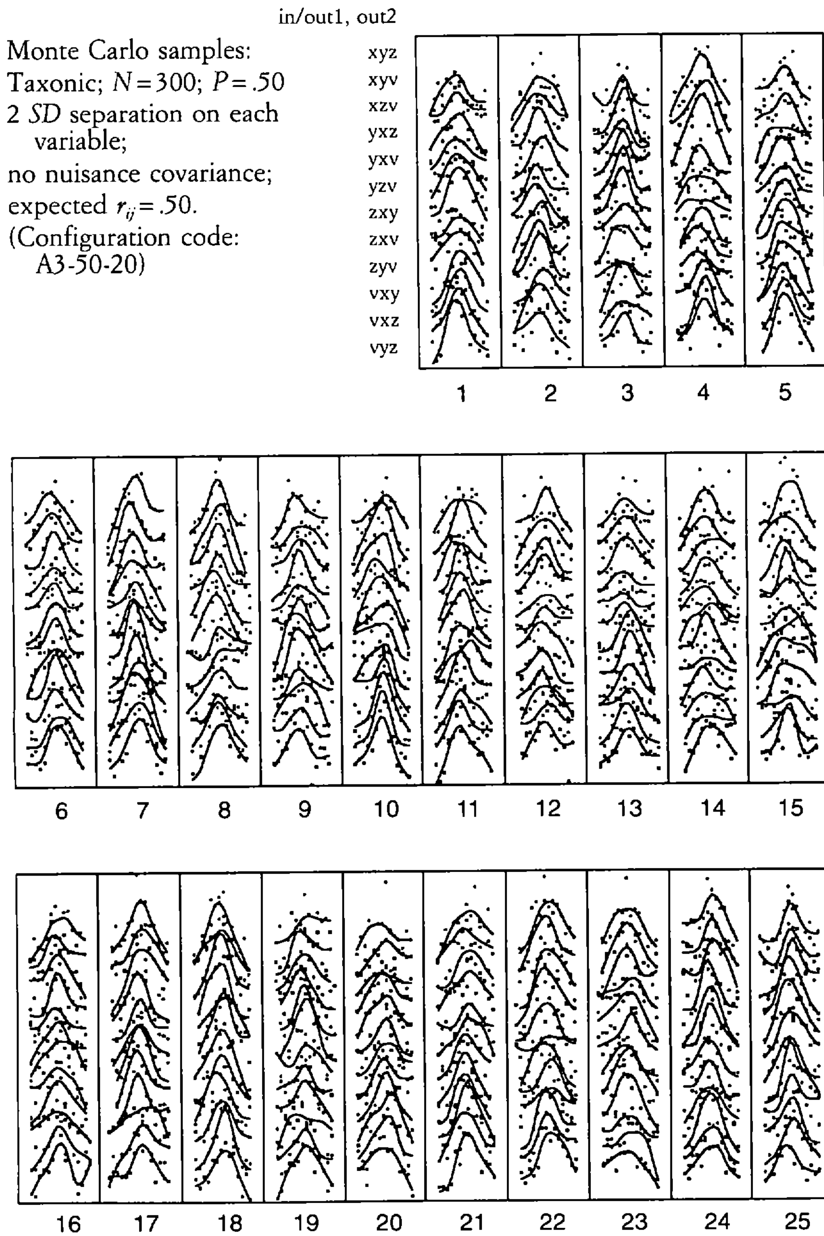



Monte Carlo samples:
Taxonic; N = 200; P = .50
2 SD separation on each variable;
no nuisance covariance;
expected r_{ij} = .50.
(Configuration code: A2-50-20)
in/out1, out2
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

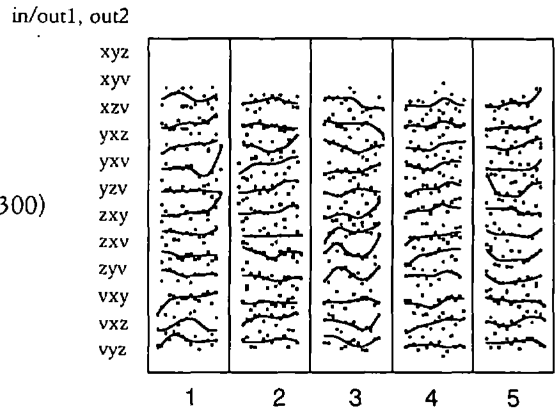
Monte Carlo samples:
Nontaxonic; $N = 200$;
factor loading .707 on
each variable;
expected $r_{ij} = .50$.
(Configuration code: C200)

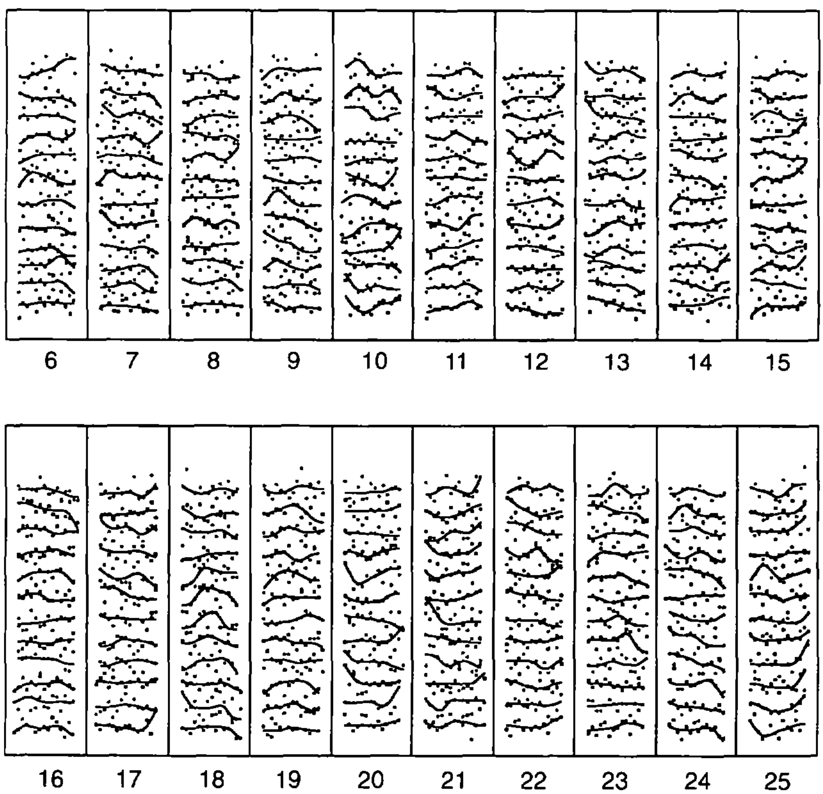


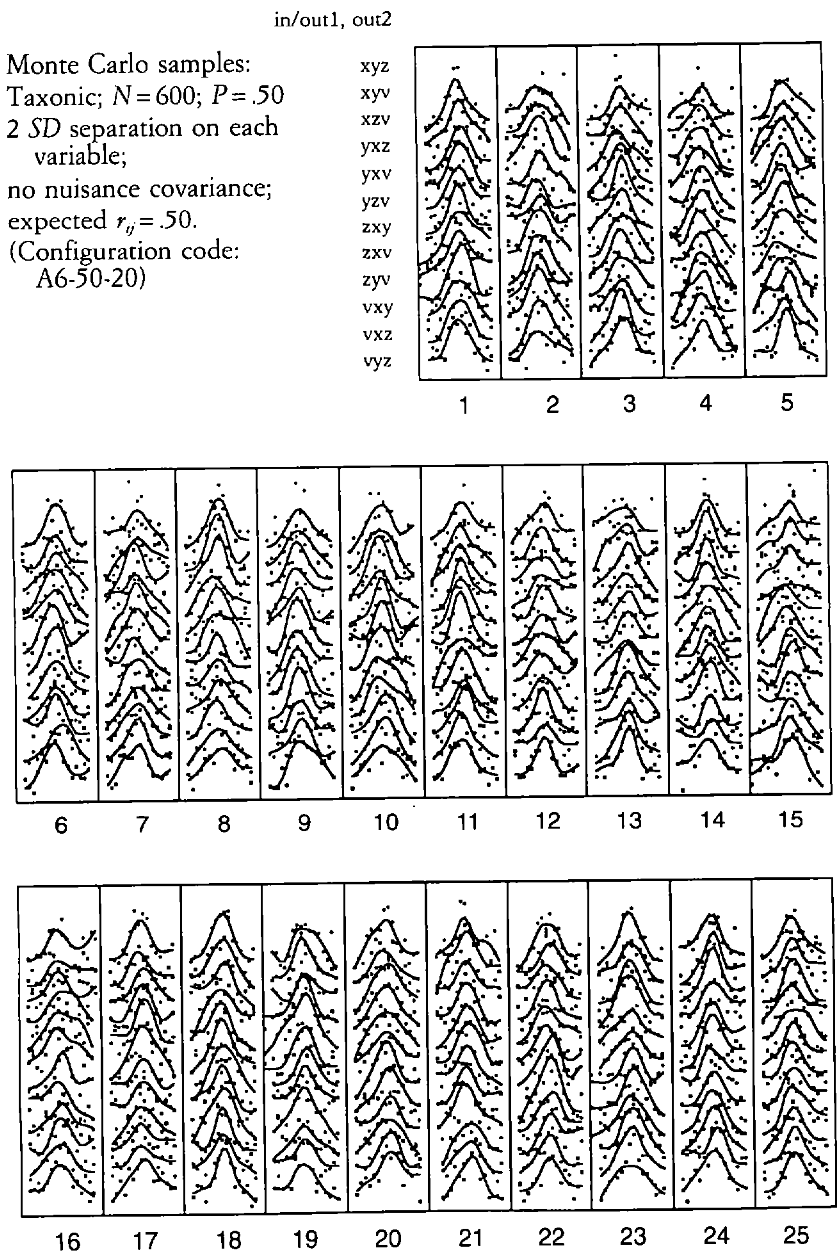



Monte Carlo samples:
Taxonic; $N = 300$; $P = .50$
2 *SD* separation on each variable;
no nuisance covariance;
expected $r_{ij} = .50$.
(Configuration code: A3-50-20)
in/out1, out2
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

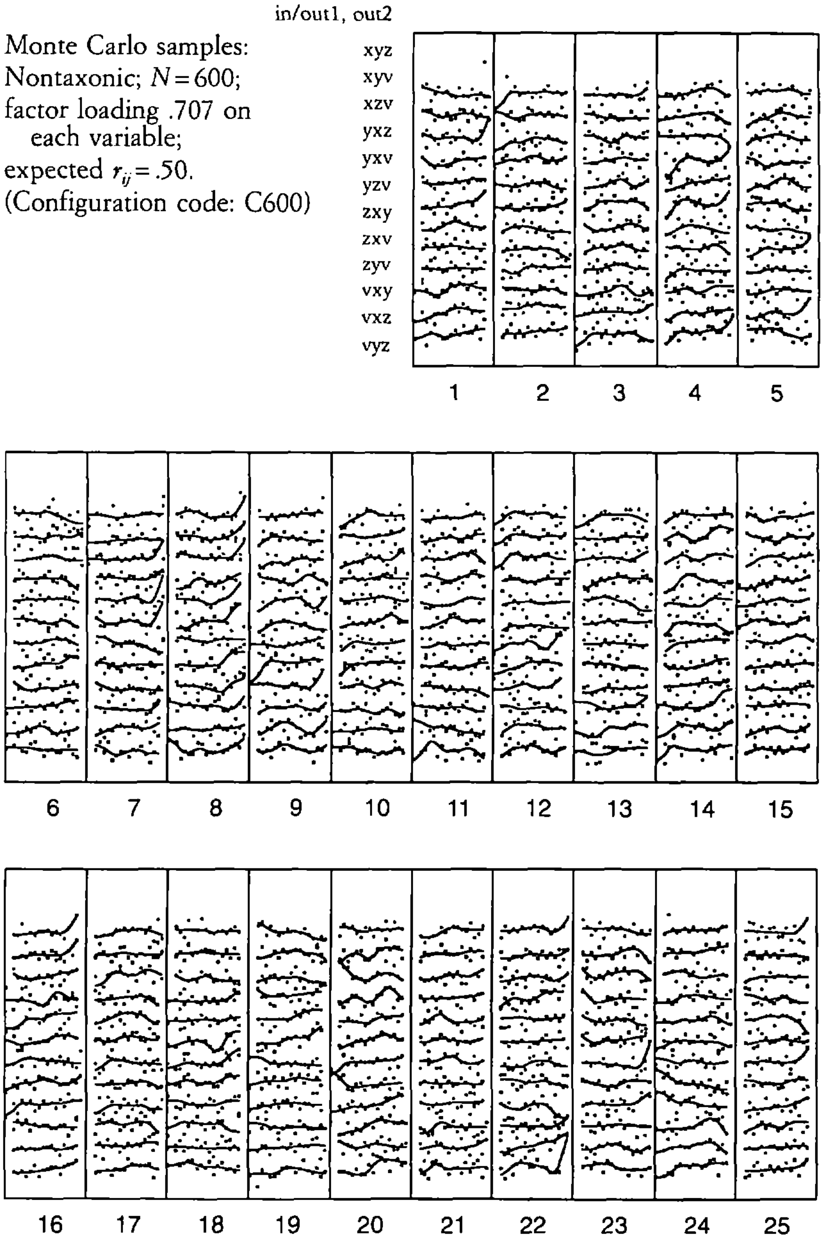
Monte Carlo samples:
Nontaxonic; $N = 300$;
factor loading .707 on
each variable;
expected $r_{ij} = .50$.
(Configuration code: C300)

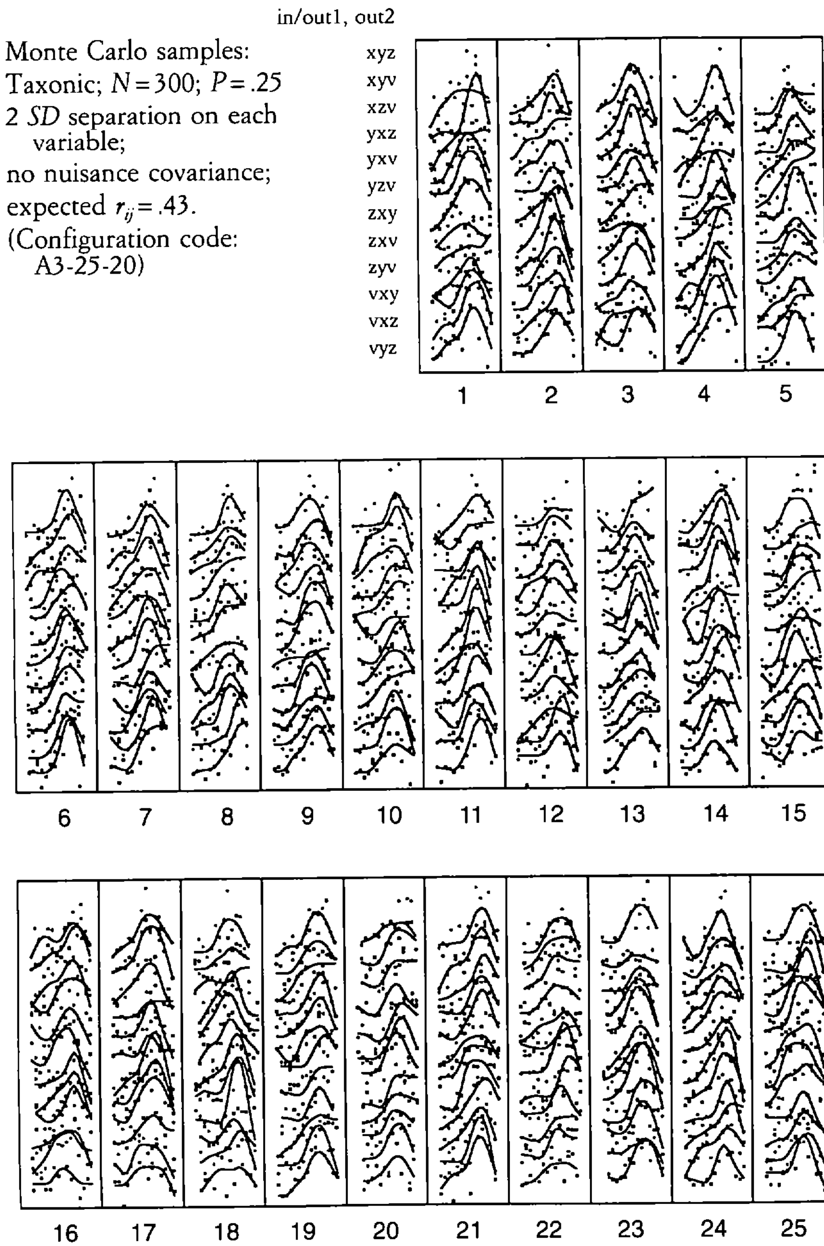




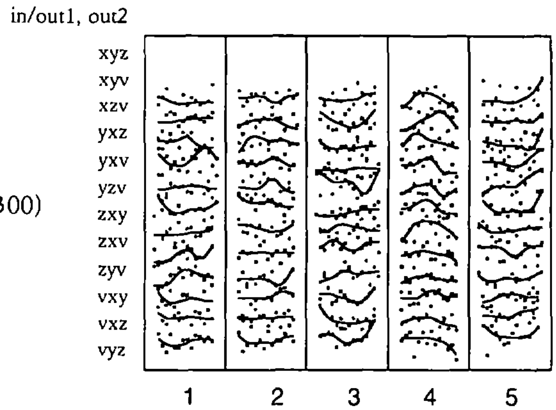

in/out1, out2
Monte Carlo samples:
Taxonic; $N = 600$; $P = .50$
2 *SD* separation on each variable;
no nuisance covariance;
expected $r_{ij} = .50$.
(Configuration code: A6-50-20)
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

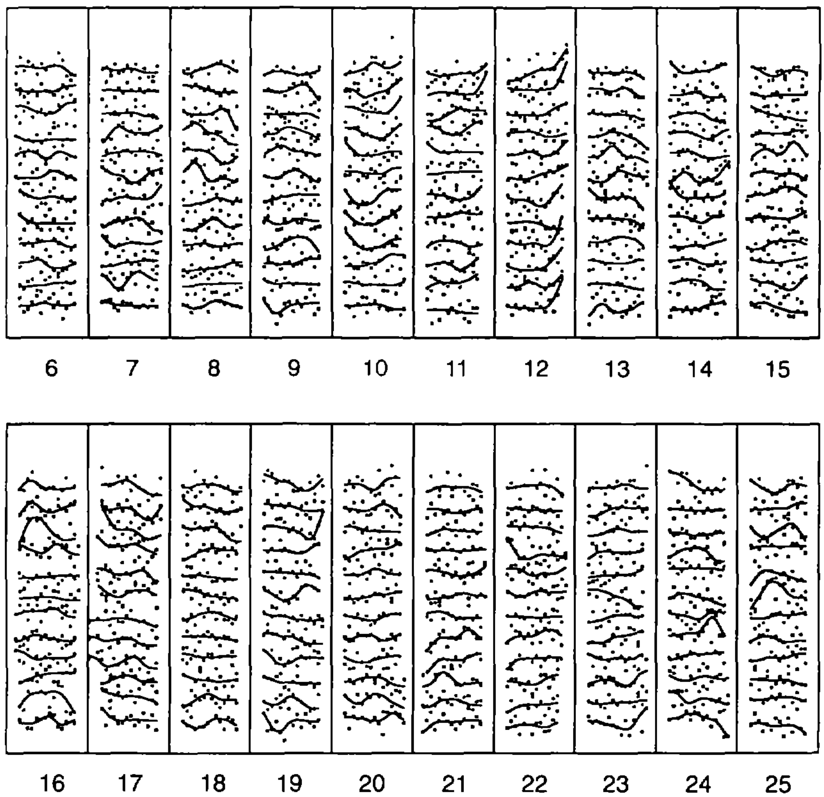
Monte Carlo samples:
Nontaxonic; $N = 600$;
factor loading .707 on
each variable;
expected $r_{ij} = .50$.
(Configuration code: C600)

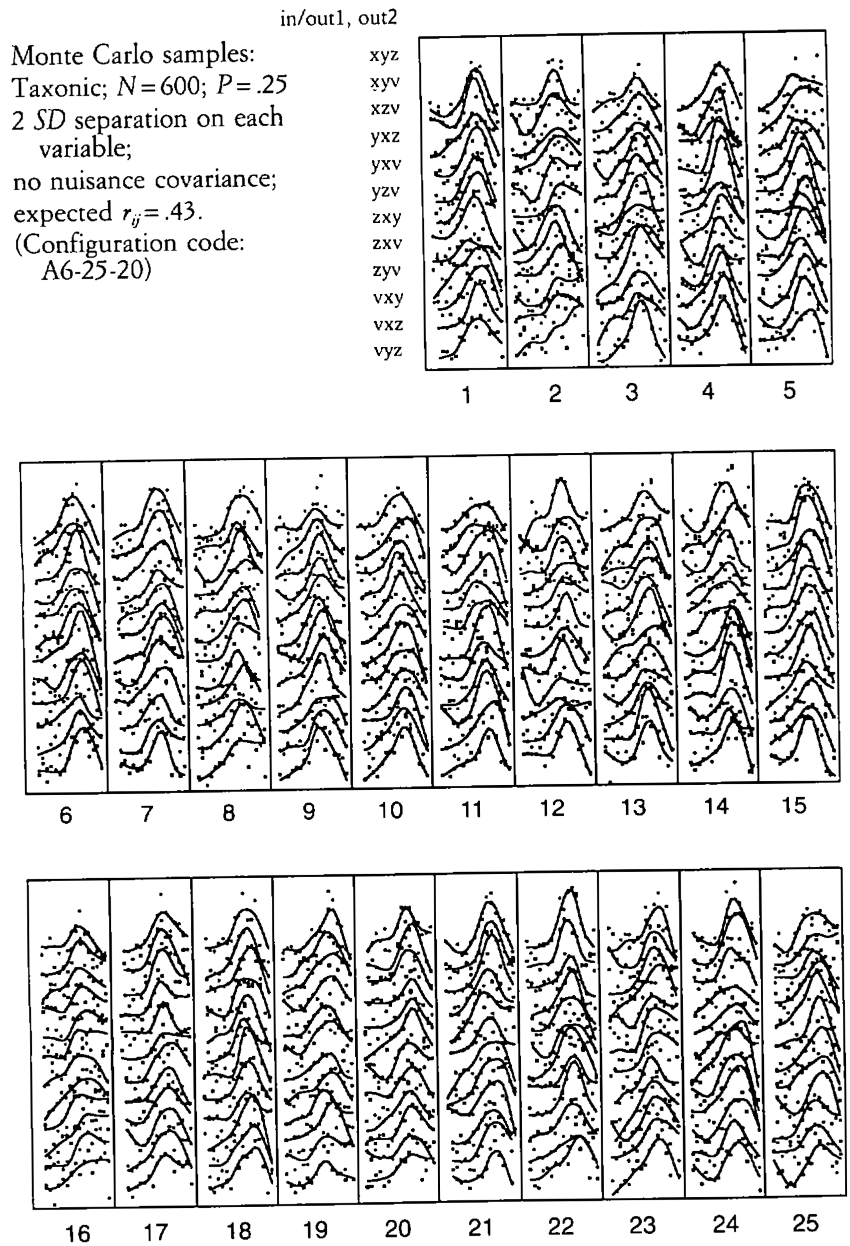



Monte Carlo samples:
Taxonic; N=300; P=.25
2 SD separation on each variable;
no nuisance covariance;
expected r_{ij}=.43.
(Configuration code: A3-25-20)
in/out1, out2
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Monte Carlo samples:
Nontaxonic; $N=300$;
factor loading .66 on
each variable;
expected $r_{ij}=.43$.
(Configuration code: F300)

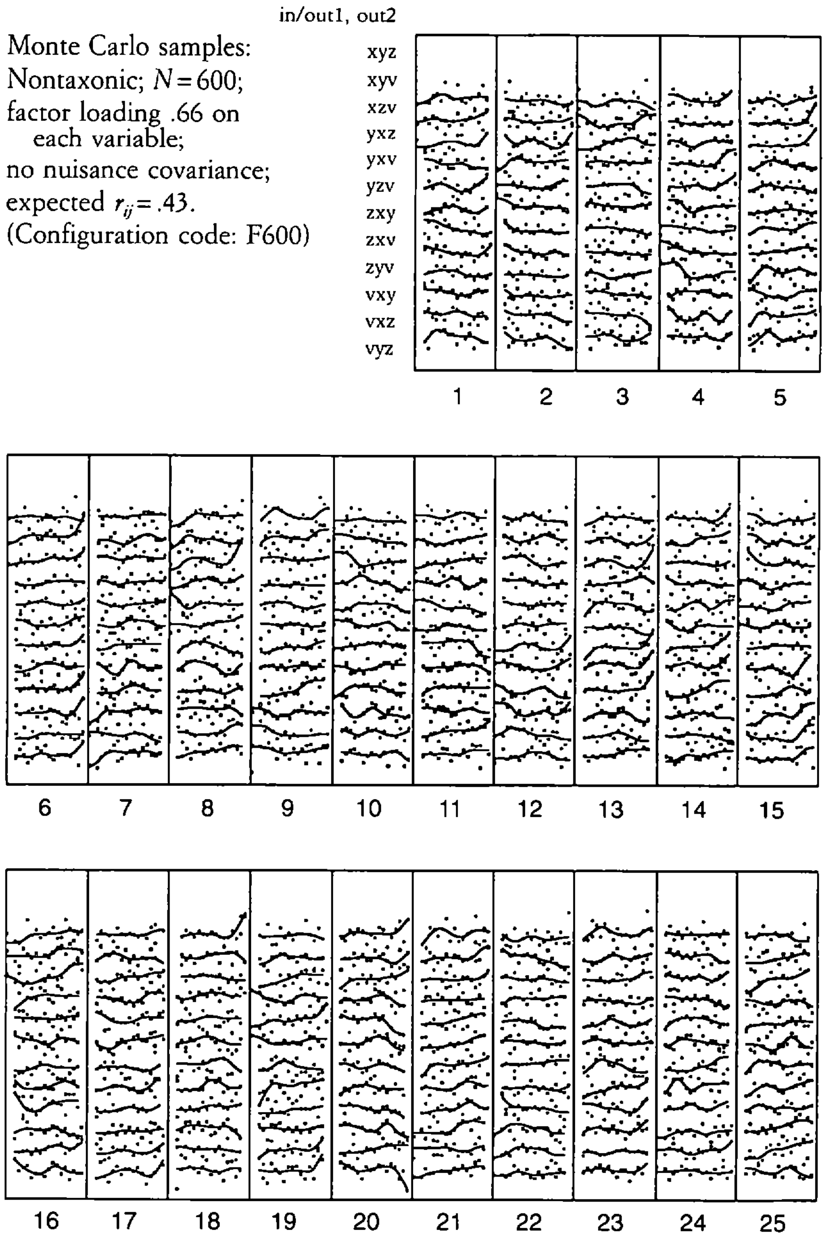


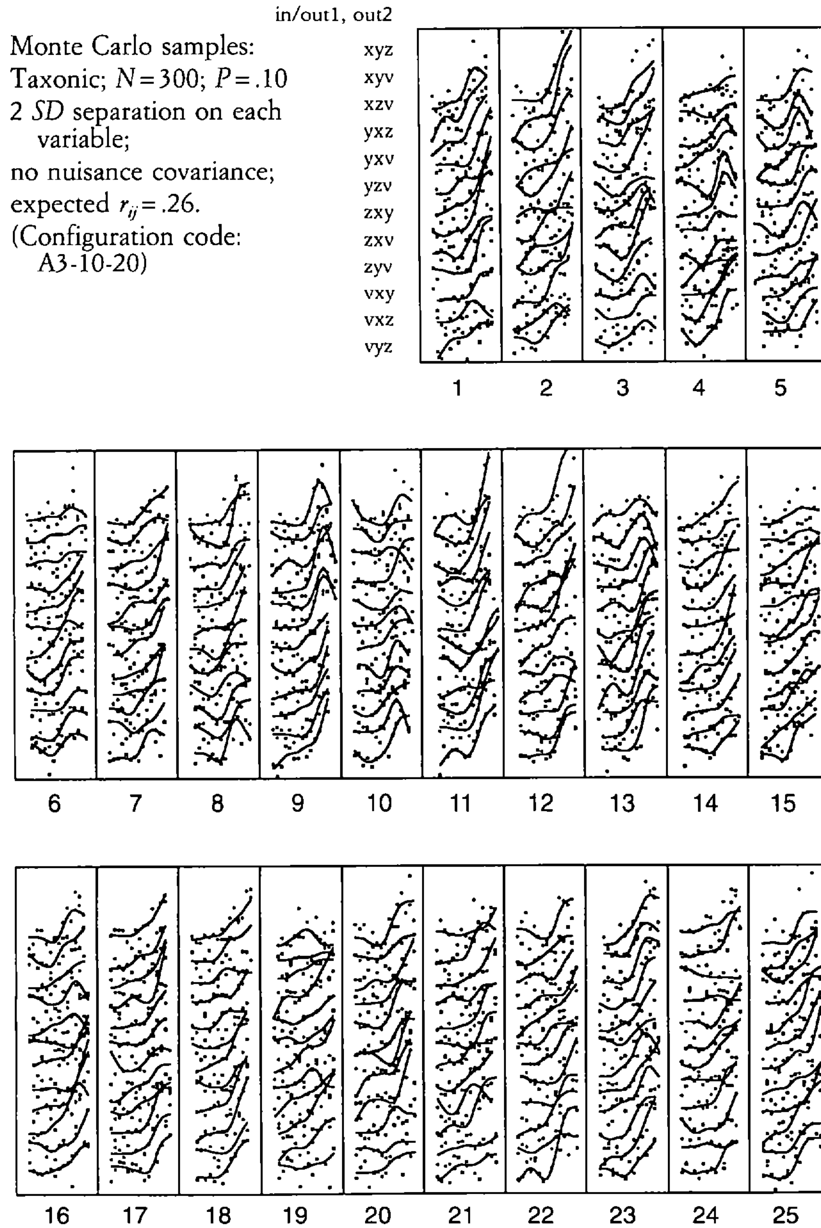




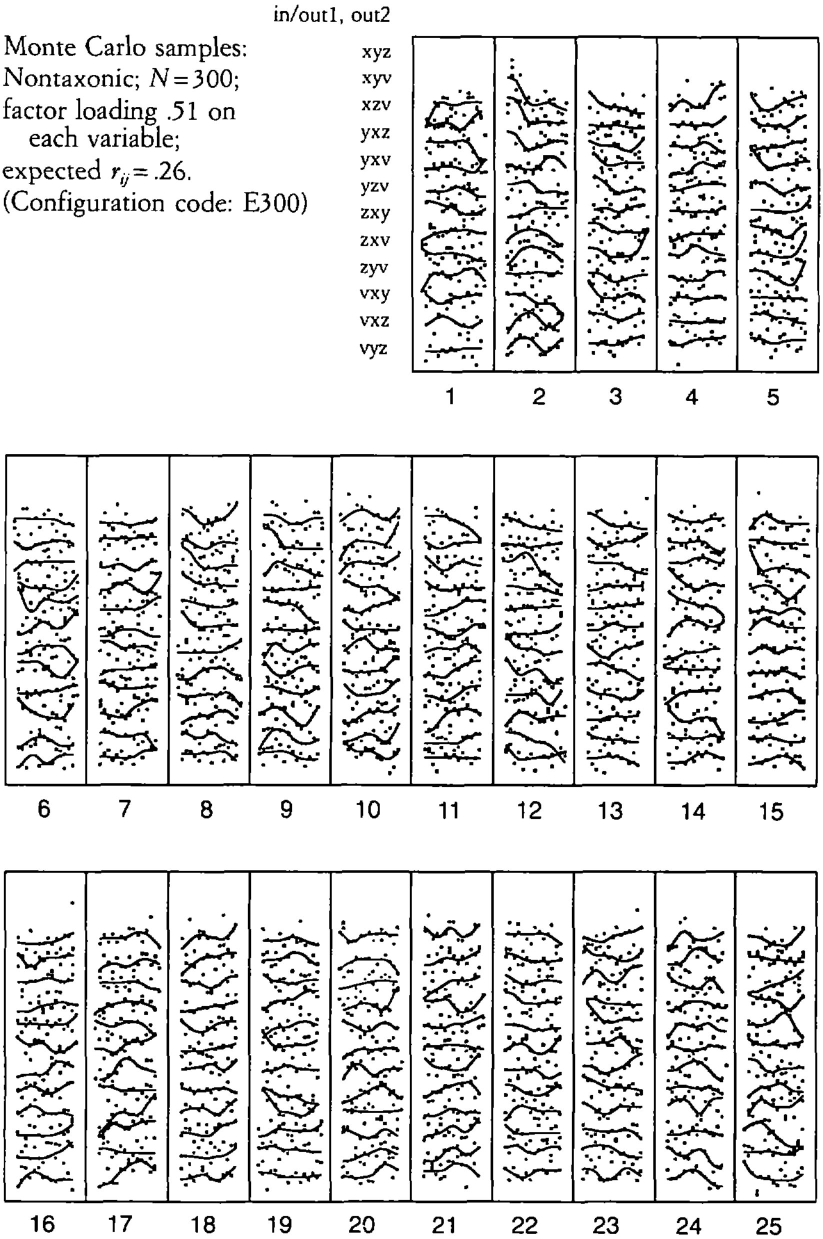
in/out1, out2
Monte Carlo samples:
Taxonic; N = 600; P = .25
2 SD separation on each variable;
no nuisance covariance;
expected r_ij = .43.
(Configuration code: A6-25-20)
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1 2 3 4 5
6 7 8 9 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25

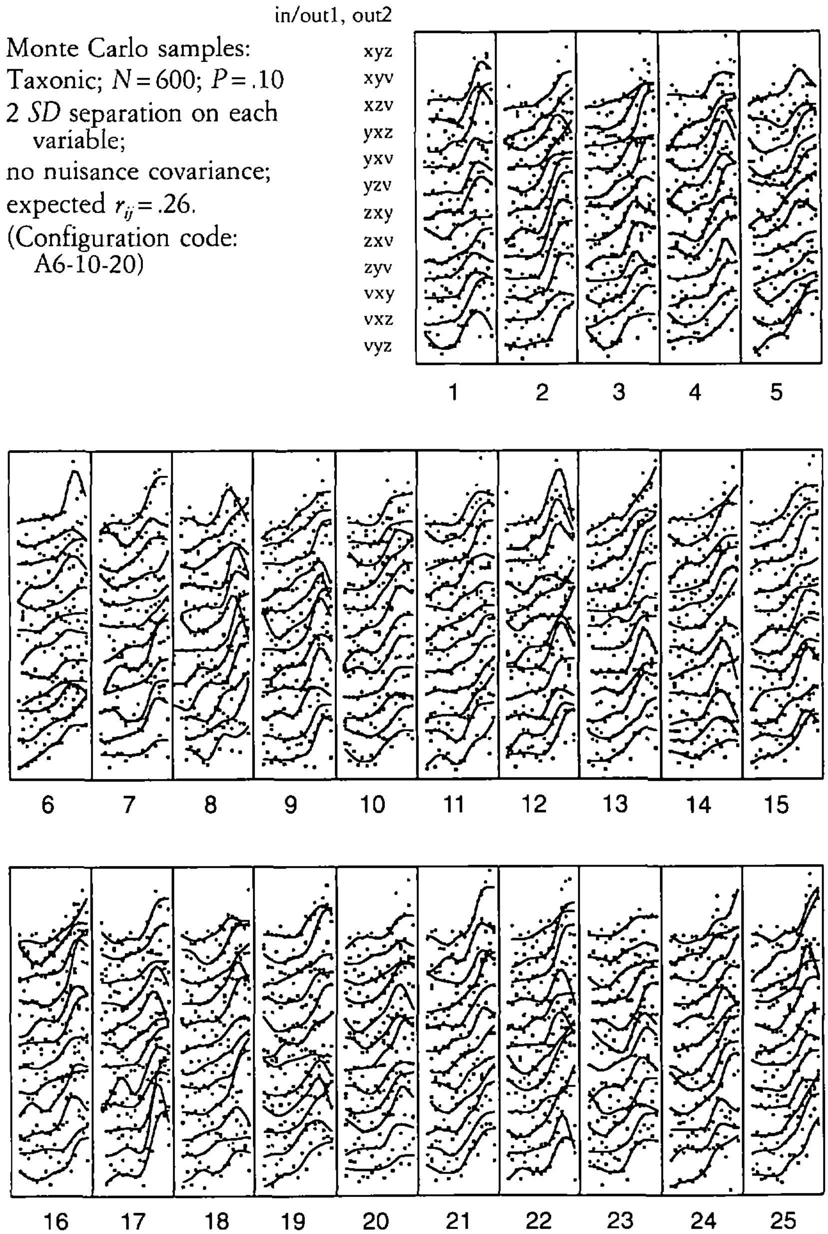
Monte Carlo samples:
Nontaxonic; $N = 600$;
factor loading .66 on each variable;
no nuisance covariance;
expected $r_{ij} = .43$.
(Configuration code: F600)



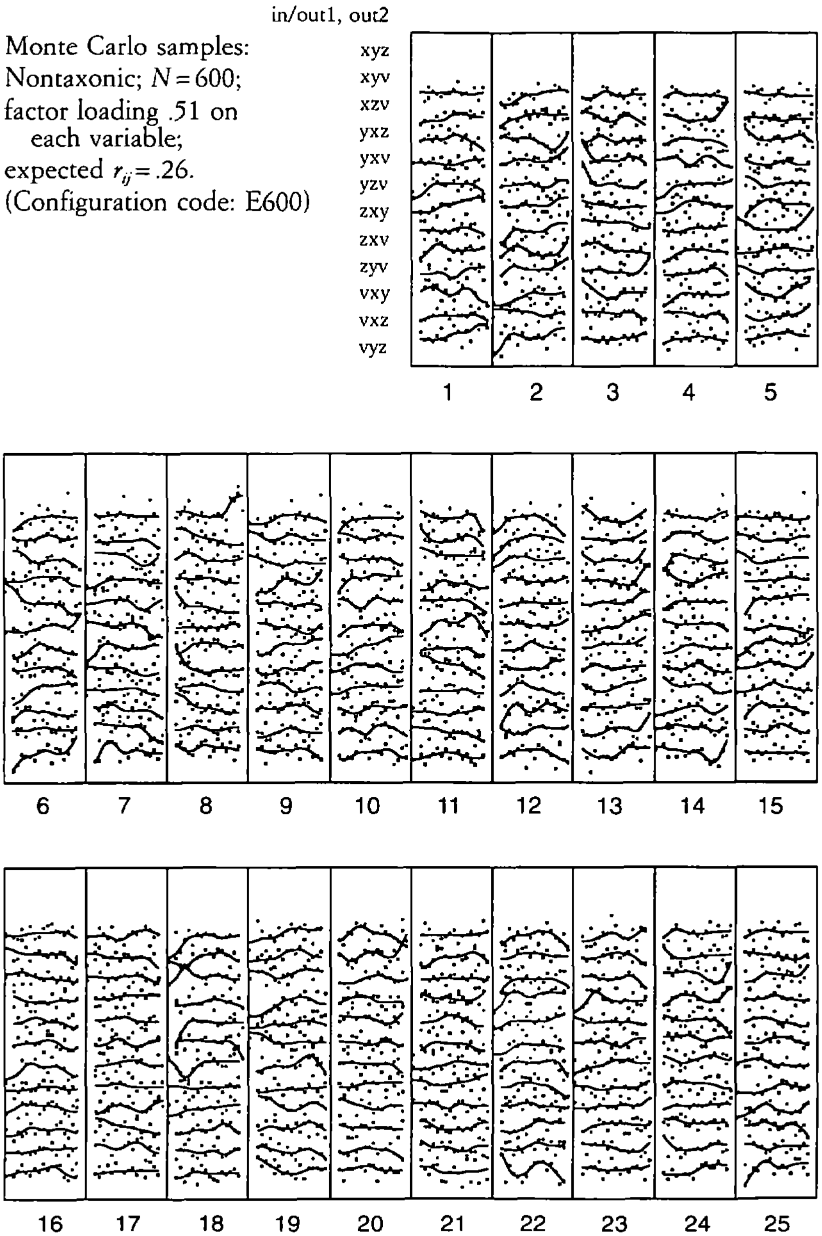

in/out1, out2
Monte Carlo samples:
Taxonic; N=300; P=.10
2 SD separation on each variable;
no nuisance covariance;
expected r_ij=.26.
(Configuration code: A3-10-20)
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

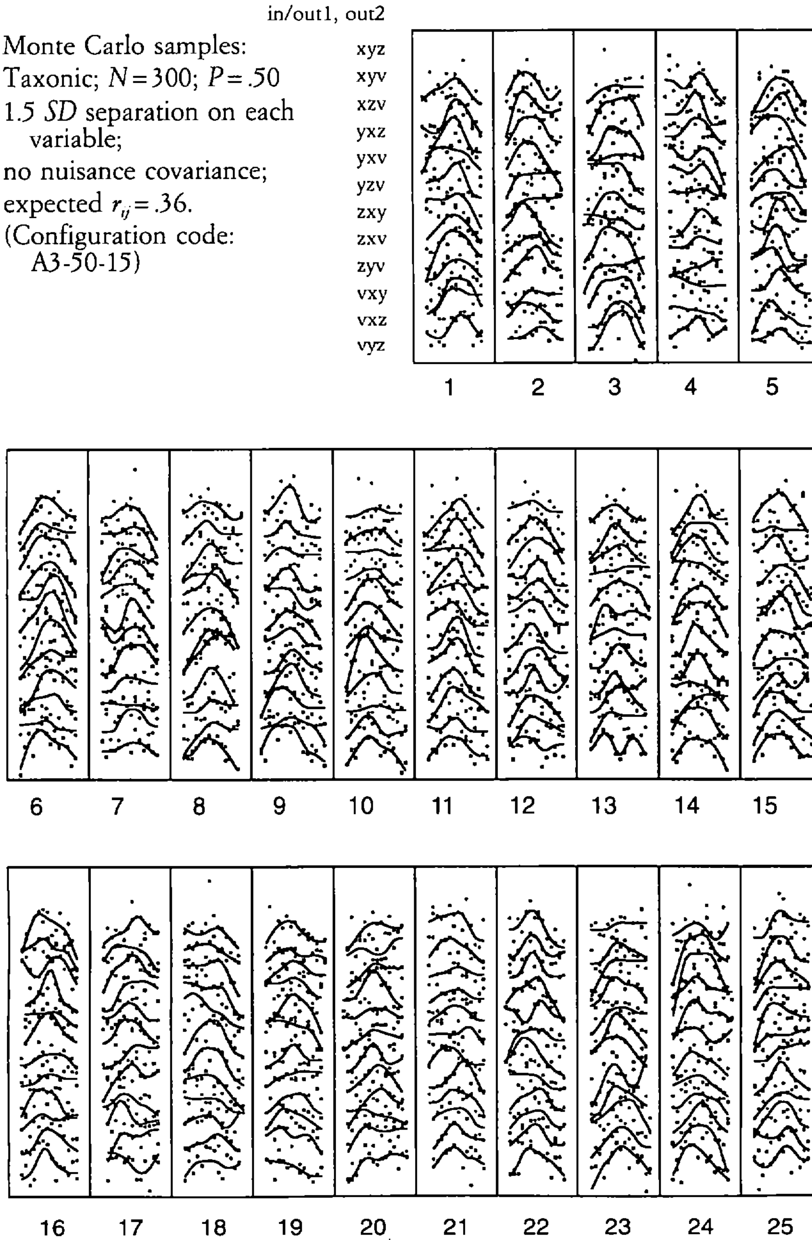
Monte Carlo samples:
Nontaxonic; $N = 300$;
factor loading .51 on each variable;
expected $r_{ij} = .26$.
(Configuration code: E300)



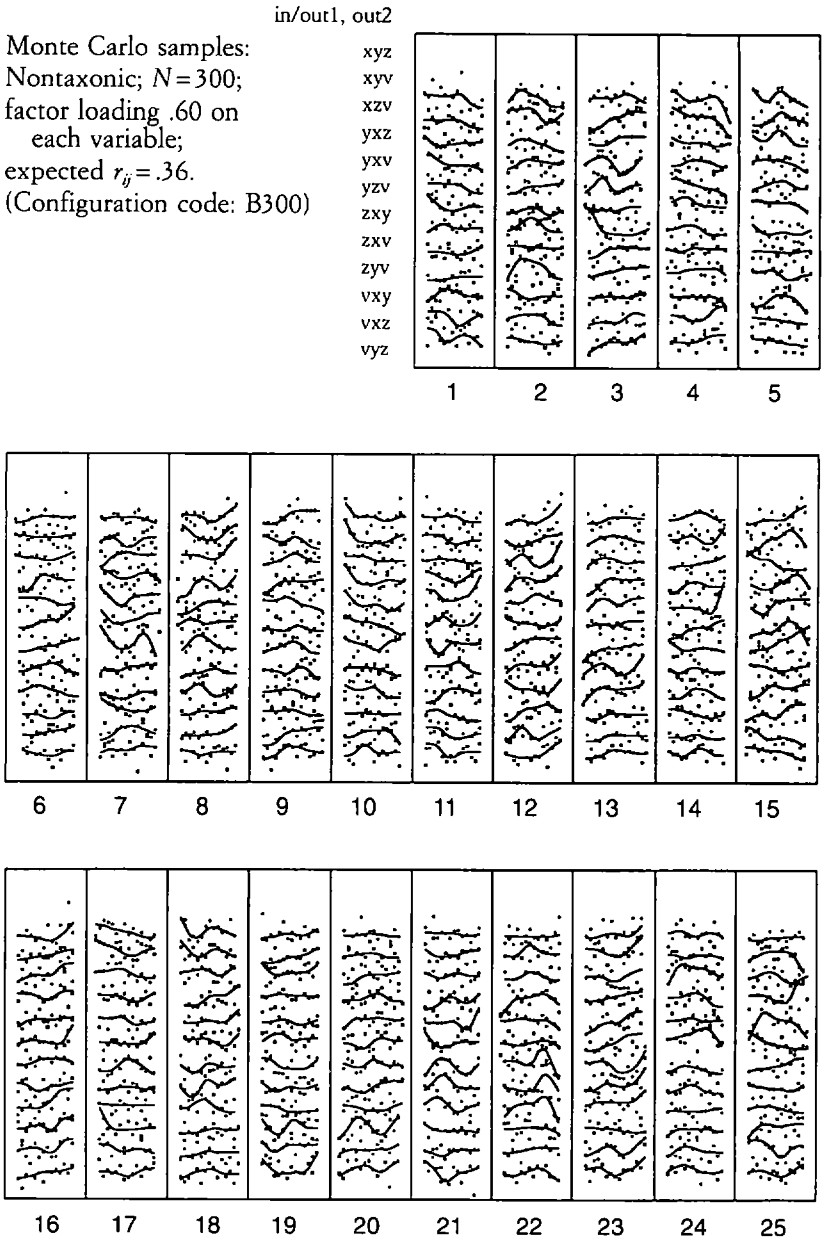

in/out1, out2
Monte Carlo samples:
Taxonic; N=600; P=.10
2 SD separation on each variable;
no nuisance covariance;
expected r_{ij}=.26.
(Configuration code: A6-10-20)
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1 2 3 4 5
6 7 8 9 10 11 12 13 14 15
16 17 18 19 20 21 22 23 24 25

Monte Carlo samples:
Nontaxonic; $N = 600$;
factor loading .51 on
each variable;
expected $r_{ij} = .26$.
(Configuration code: E600)

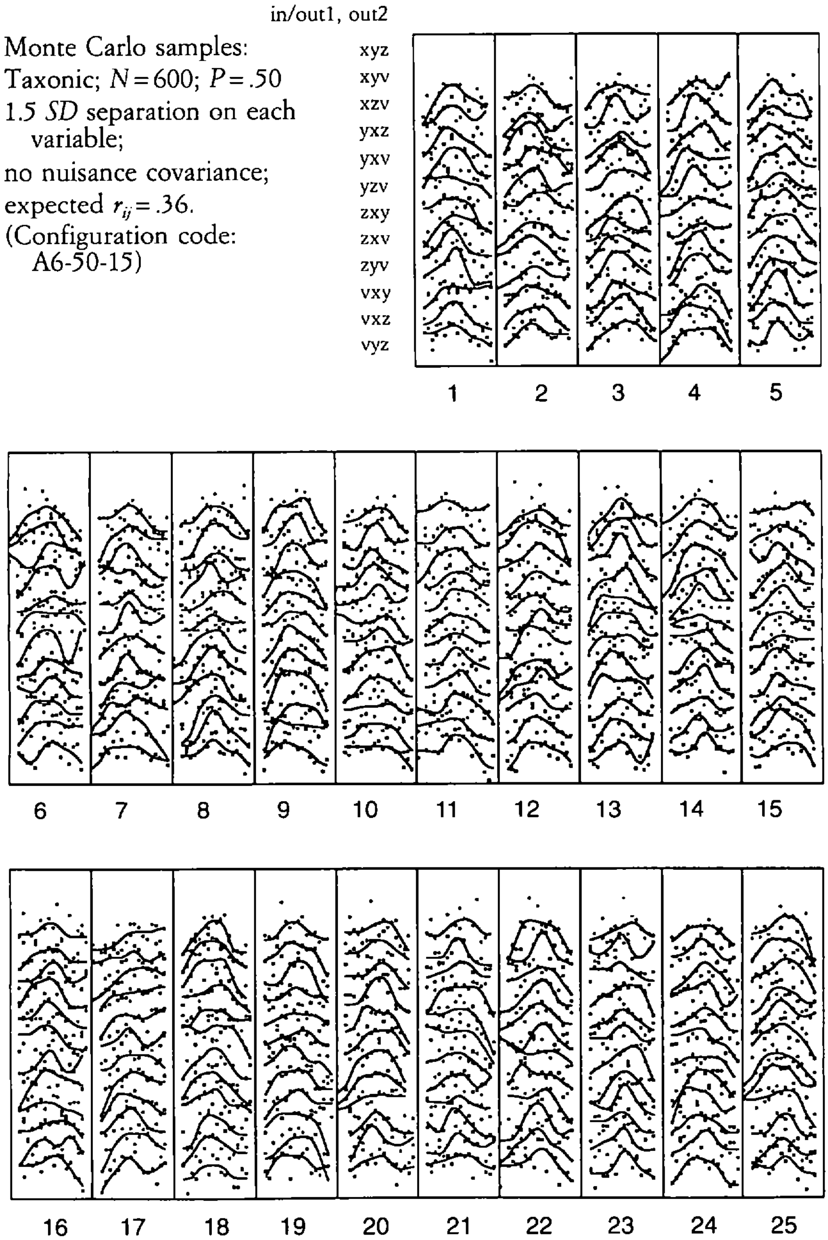




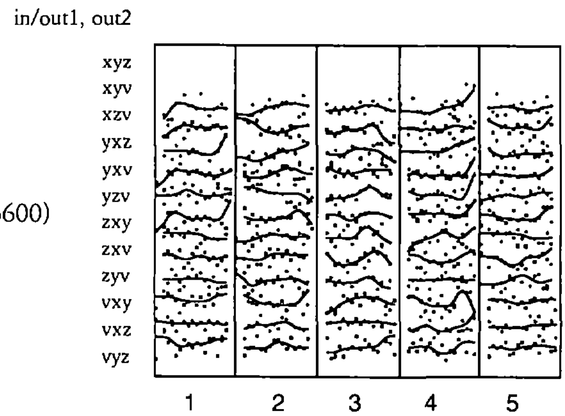
Monte Carlo samples:
Taxonic; $N = 300$; $P = .50$
1.5 *SD* separation on each variable;
no nuisance covariance;
expected $r_{ij} = .36$.
(Configuration code: A3-50-15)

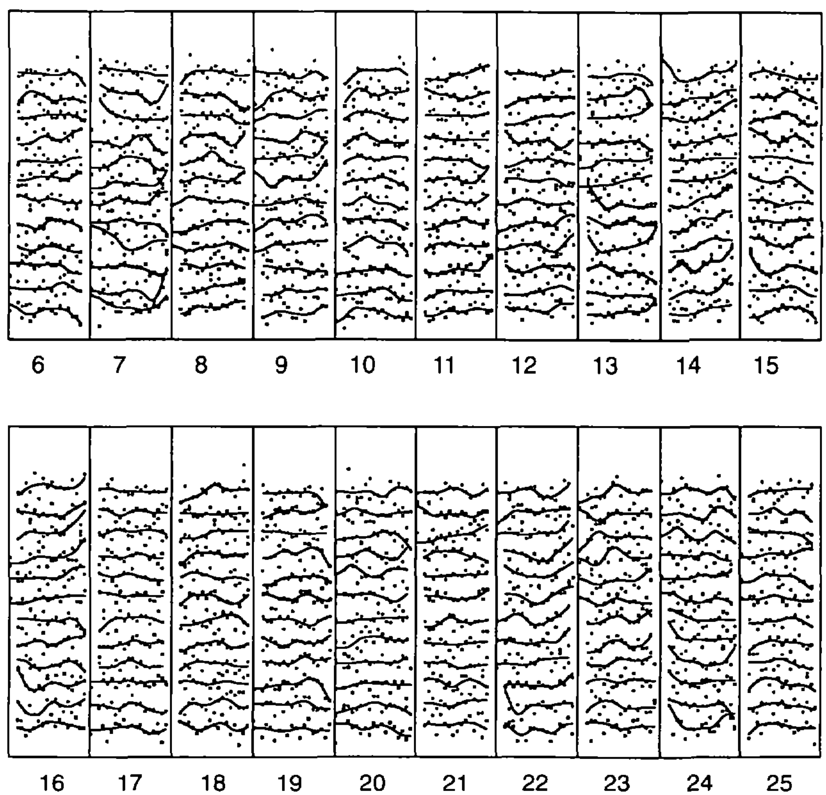


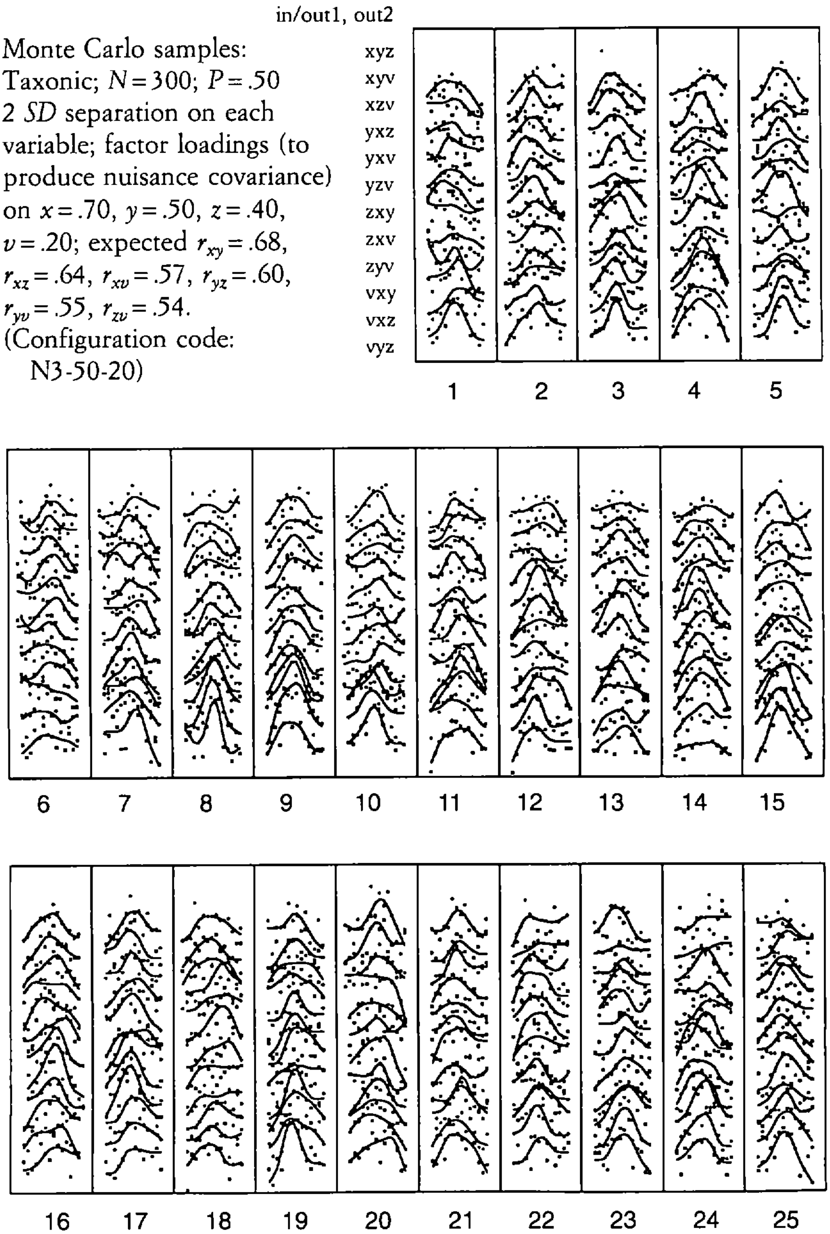
Monte Carlo samples:
Nontaxonic; $N = 300$;
factor loading .60 on each variable;
expected $r_{ij} = .36$.
(Configuration code: B300)


in/out1, out2
Monte Carlo samples:
Taxonic; $N = 600$; $P = .50$
1.5 *SD* separation on each variable;
no nuisance covariance;
expected $r_{ij} = .36$.
(Configuration code: A6-50-15)
xyz
xyv
xzv
yxz
yxv
yzv
zxy
zxv
zyv
vxy
vxz
vyz
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Monte Carlo samples:
Nontaxonic; $N = 600$;
factor loading .60 on
each variable;
expected $r_{ij} = .36$.
(Configuration code: B600)

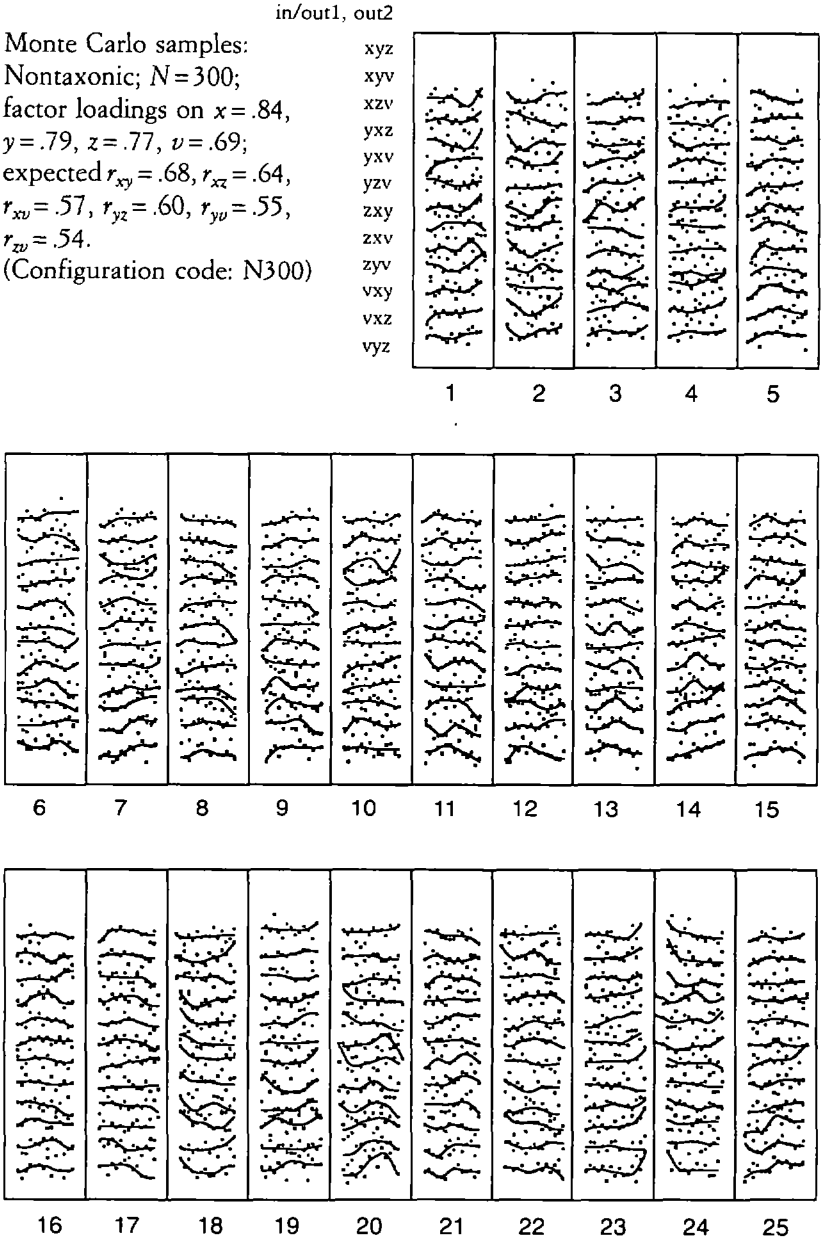




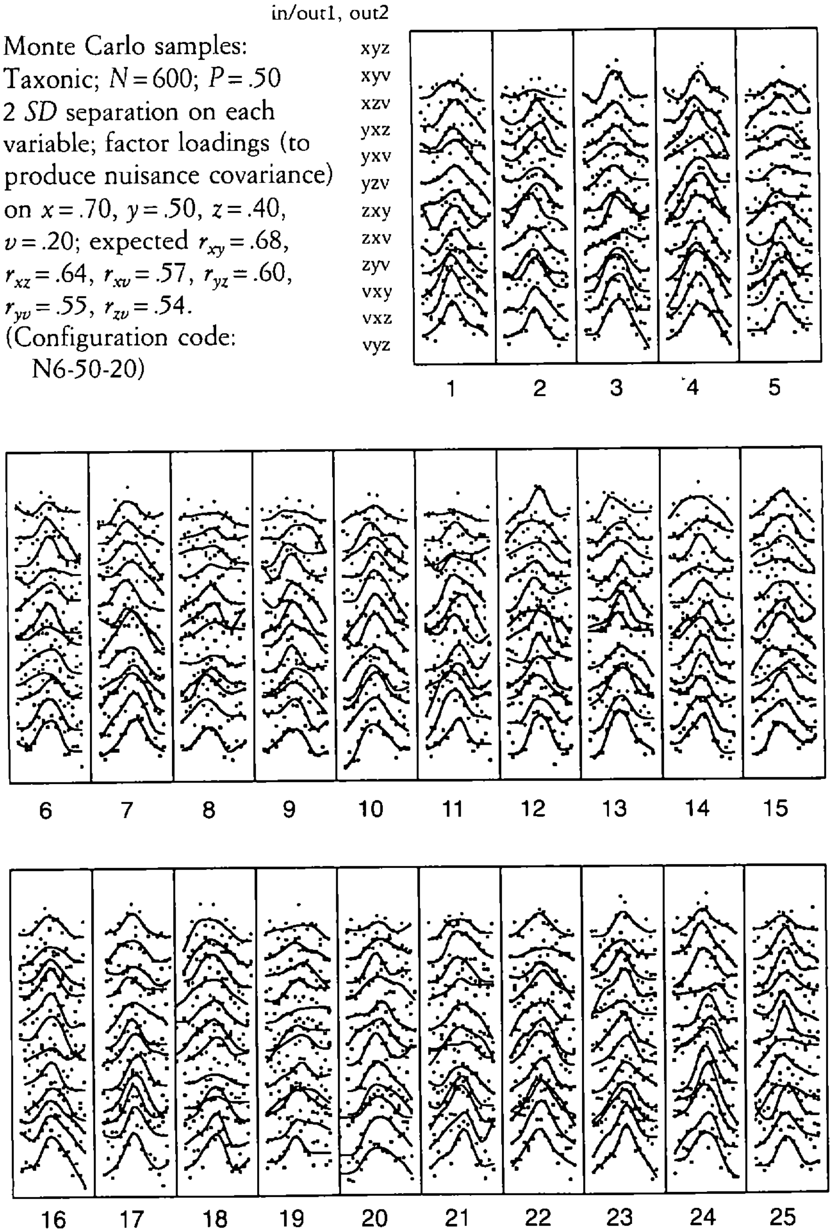


Monte Carlo samples: Taxonic; $N=300$; $P=.50$ 2 *SD* separation on each variable; factor loadings (to produce nuisance covariance) on $x=.70$, $y=.50$, $z=.40$, $v=.20$; expected $r_{xy}=.68$, $r_{xz}=.64$, $r_{xv}=.57$, $r_{yz}=.60$, $r_{yv}=.55$, $r_{zv}=.54$. (Configuration code: N3-50-20)

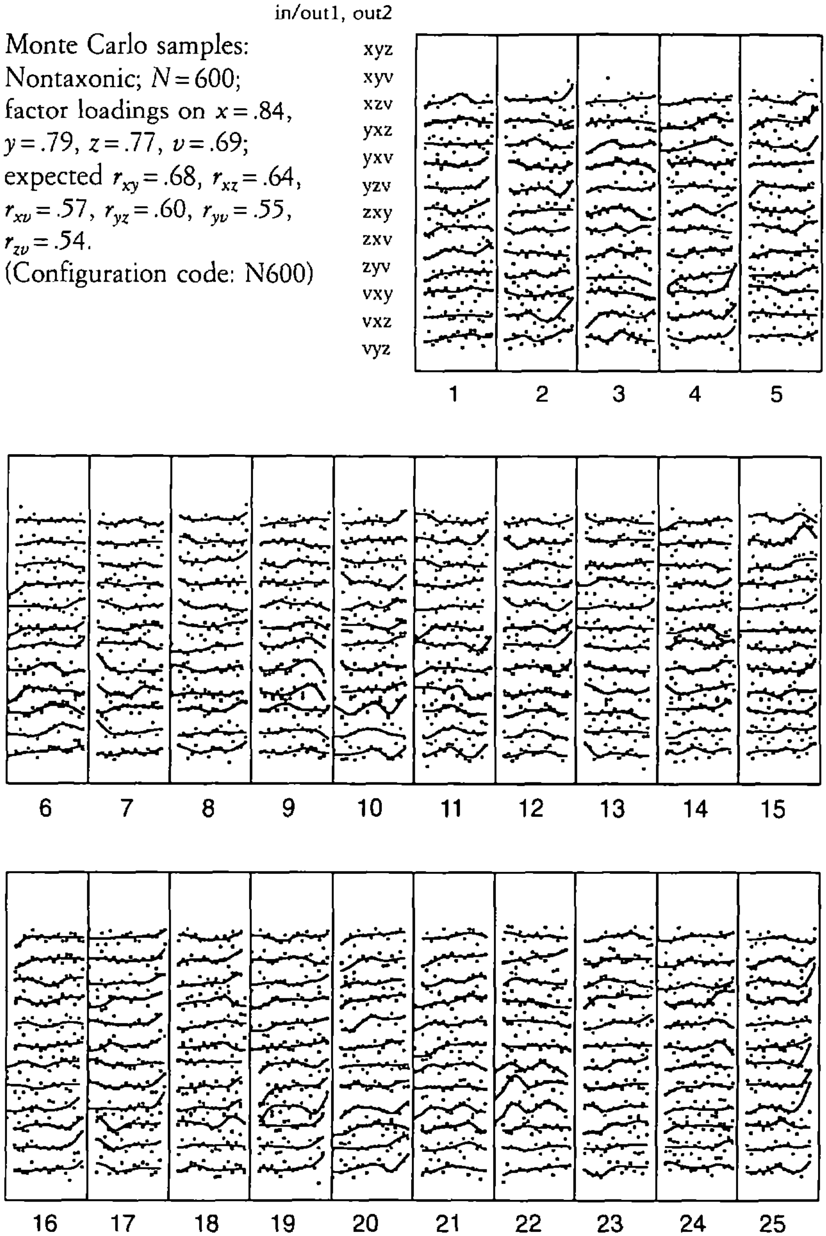
Monte Carlo samples:
Nontaxonic; $N = 300$;
factor loadings on $x = .84$,
$y = .79$, $z = .77$, $v = .69$;
expected $r_{xy} = .68$, $r_{xz} = .64$,
$r_{xv} = .57$, $r_{yz} = .60$, $r_{yv} = .55$,
$r_{zv} = .54$.
(Configuration code: N300)

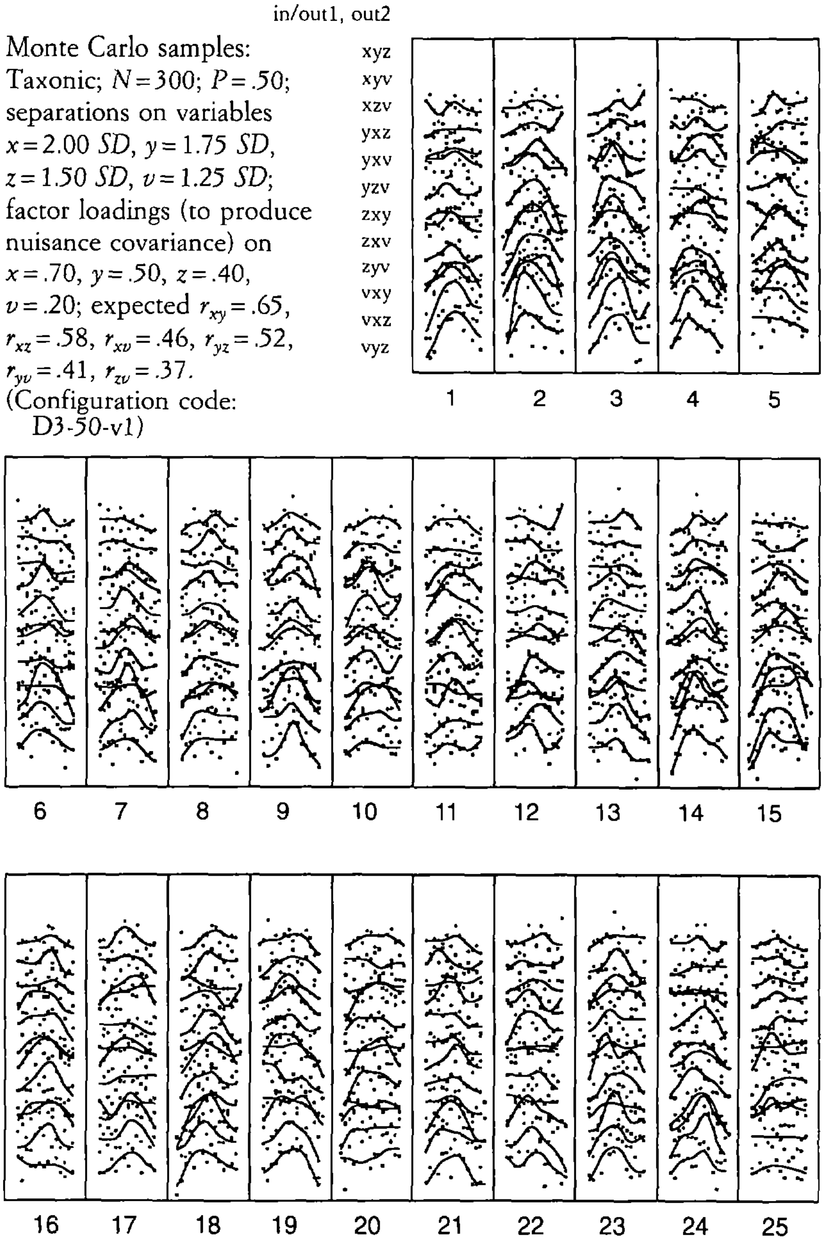


Monte Carlo samples:
Taxonic; $N = 600$; $P = .50$
2 *SD* separation on each variable; factor loadings (to produce nuisance covariance) on $x = .70$, $y = .50$, $z = .40$, $v = .20$; expected $r_{xy} = .68$, $r_{xz} = .64$, $r_{xv} = .57$, $r_{yz} = .60$, $r_{yv} = .55$, $r_{zv} = .54$.
(Configuration code: N6-50-20)



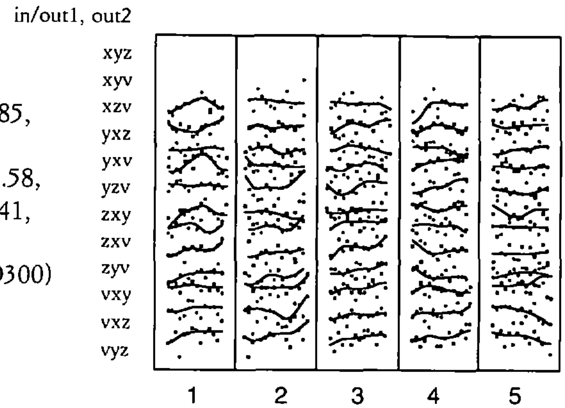
Monte Carlo samples:
Nontaxonic; $N = 600$;
factor loadings on $x = .84$,
$y = .79$, $z = .77$, $v = .69$;
expected $r_{xy} = .68$, $r_{xz} = .64$,
$r_{xv} = .57$, $r_{yz} = .60$, $r_{yv} = .55$,
$r_{zv} = .54$.
(Configuration code: N600)

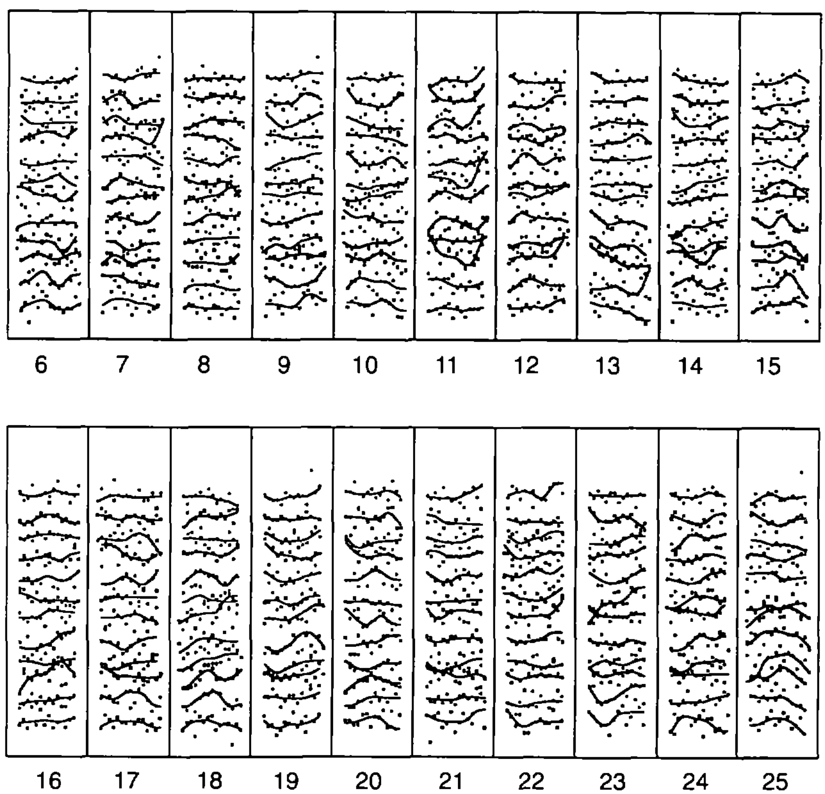




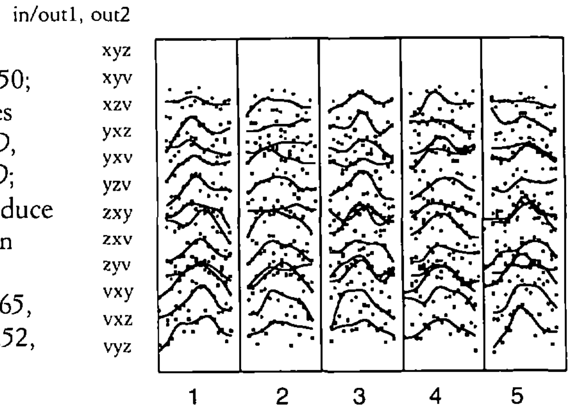
Monte Carlo samples: Taxonic; $N=300$; $P=.50$; separations on variables $x=2.00$ *SD*, $y=1.75$ *SD*, $z=1.50$ *SD*, $v=1.25$ *SD*; factor loadings (to produce nuisance covariance) on $x=.70$, $y=.50$, $z=.40$, $v=.20$; expected $r_{xy}=.65$, $r_{xz}=.58$, $r_{xv}=.46$, $r_{yz}=.52$, $r_{yv}=.41$, $r_{zv}=.37$. (Configuration code: D3-50-v1)

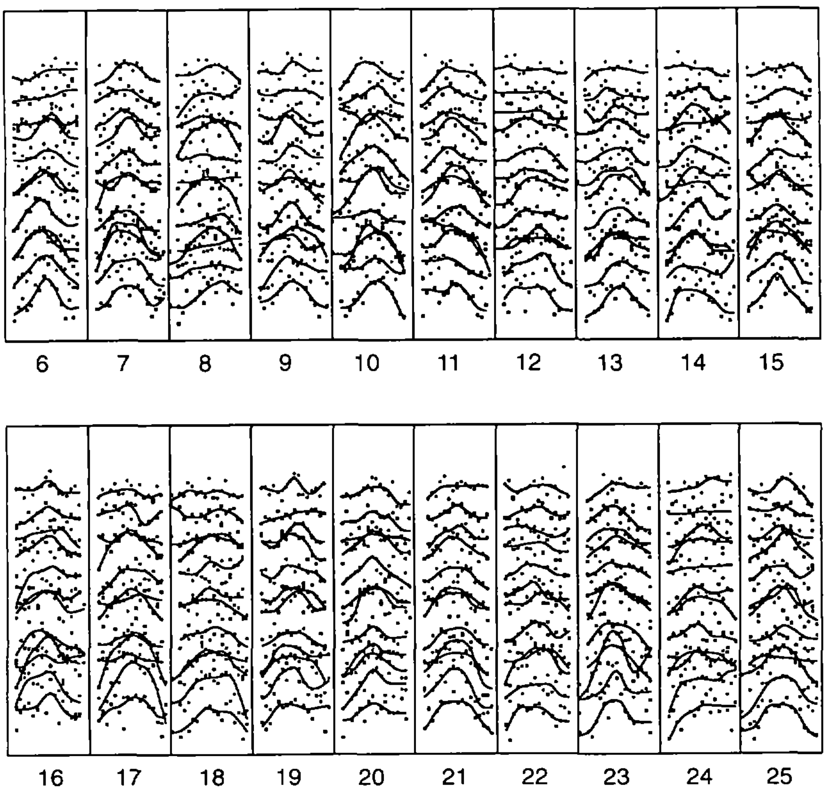
Monte Carlo samples:
Nontaxonic; $N = 300$;
factor loadings on $x = .85$,
$y = .76$, $z = .68$, $v = .54$;
expected $r_{xy} = .65$, $r_{xz} = .58$,
$r_{xv} = .46$, $r_{yz} = .52$, $r_{yv} = .41$,
$r_{zv} = .37$.
(Configuration code: D300)



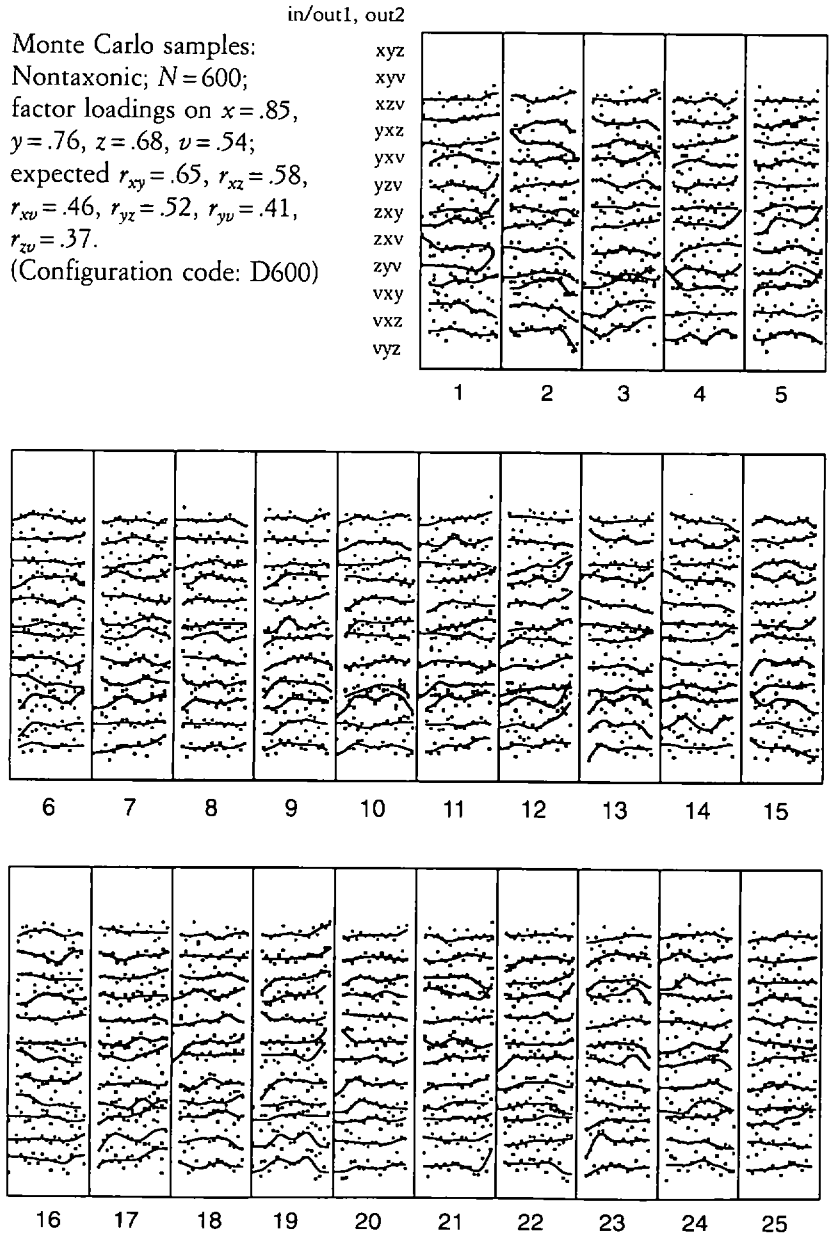


Monte Carlo samples: Taxonic; $N = 600$; $P = .50$; separations on variables $x = 2.00$ *SD*, $y = 1.75$ *SD*, $z = 1.50$ *SD*, $v = 1.25$ *SD*; factor loadings (to produce nuisance covariance) on $x = .70$, $y = .50$, $z = .40$, $v = .20$; expected $r_{xy} = .65$, $r_{xz} = .58$, $r_{xv} = .46$, $r_{yz} = .52$, $r_{yv} = .41$, $r_{zv} = .37$. (Configuration code: D6-50-v1)





Monte Carlo samples:
Nontaxonic; $N = 600$;
factor loadings on $x = .85$,
$y = .76$, $z = .68$, $v = .54$;
expected $r_{xy} = .65$, $r_{xz} = .58$,
$r_{xv} = .46$, $r_{yz} = .52$, $r_{yv} = .41$,
$r_{zv} = .37$.
(Configuration code: D600)



APPENDIX D

ACCURACY OF K ESTIMATES

The following table shows mean values for the 25 Monte Carlo samples in each configuration. With four variables, each sample yields two estimates of K for each combination of output variables; i.e., there is an estimate for *xy* when *z* is the input variable and another when *v* is the input variable; we averaged those two to get the *xy* $\hat{K}$ for a given sample. Estimated K (K_{est}) in the table is the mean of those $\hat{K}$ values over 25 samples. The Monte Carlo configurations are grouped by major parameter being examined: sample size, base rate, taxonic separation, nuisance covariance, and a combination of various separations and various amounts of nuisance covariance. Within each group, samples are in order according to sample size.

Configuration	Output Pair	True K		Estimated K		Proportional Error = $(K_{est} - K_{true})/K_{true}$			
						Algebraic		Absolute	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Sample Size									
A1-50-20	xy	3.80	.54	5.68	1.28	.51	.34	.51	.33
	xz	3.93	.54	6.07	1.54	.56	.43	.58	.41
	xv	3.90	.52	6.38	2.16	.65	.58	.66	.56
	yz	3.88	.46	5.69	1.05	.47	.24	.48	.24
	yv	3.85	.59	6.13	1.51	.58	.28	.59	.27
	zv	3.98	.47	6.42	2.40	.62	.53	.62	.53
A2-50-20	xy	4.06	.42	5.26	1.31	.29	.27	.32	.24
	xz	4.04	.43	5.33	.81	.32	.17	.33	.16
	xv	4.00	.30	5.34	.83	.34	.18	.34	.18
	yz	4.05	.40	5.15	.72	.27	.12	.27	.12
	yv	4.02	.46	5.55	.88	.39	.20	.39	.20
	zv	3.99	.39	5.47	1.17	.38	.30	.39	.29
A3-50-20	xy	4.00	.32	4.88	.66	.22	.15	.22	.15
	xz	4.01	.32	5.05	.61	.26	.16	.26	.16
	xv	3.93	.27	4.80	.67	.22	.16	.23	.15
	yz	4.08	.25	5.14	.70	.27	.21	.27	.21
	yv	4.01	.22	5.12	.92	.28	.23	.29	.23
	zv	4.01	.26	5.16	.91	.28	.19	.30	.17
A6-50-20	xy	4.00	.21	4.59	.37	.15	.09	.15	.07
	xz	3.96	.18	4.55	.64	.15	.16	.16	.15
	xv	4.05	.24	4.67	.53	.15	.12	.16	.11
	yz	3.91	.17	4.50	.38	.15	.11	.15	.11
	yv	4.00	.21	4.40	.61	.10	.12	.12	.10
	zv	3.96	.20	4.68	.50	.18	.14	.19	.14

Configuration	Output Pair	True K		Estimated K		Proportional Error = (est K – true K)/true K			
						Algebraic		Absolute	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Base Rate *P* = .25									
A3-25-20	xy	4.02	.37	5.24	1.00	.32	.28	.32	.27
	xz	3.93	.29	5.47	1.02	.40	.27	.41	.24
	xv	3.96	.31	5.33	1 16	.35	27	.35	.27
	yz	3.96	.34	5.51	88	.39	22	.40	.20
	yv	3.99	.30	5.64	86	.42	21	.42	.21
	zv	3.90	.25	5.06	.85	.30	.21	.30	.21
A6-25-20	xy	4.01	.23	4.86	.62	.21	.15	.23	.13
	xz	3.88	.29	4.65	.69	.20	.15	.21	.14
	xv	3.99	.20	4.84	.74	.21	.17	.21	.17
	yz	3.91	.25	4.52	.56	.16	.15	.17	.14
	yv	4.03	.26	4.90	.69	.22	.17	.22	.16
	zv	3.90	.26	4.92	.58	.26	.13	.26	.13
Base Rate *P* = .10									
A3-10-20	xy	4.13	.49	5.69	1.34	.39	.34	.39	.34
	xz	3.90	.41	5.51	1.54	.40	.35	.43	.31
	xv	3.82	.46	4.88	1.45	.27	.34	.36	.24
	yz	4.22	.48	5.43	1.34	.30	.34	.31	.33
	yv	4.14	.57	5.41	1.46	.32	.37	.37	.31
	zv	3.91	.53	5.29	1.24	.37	.35	.40	.32
A6-10-20	xy	3.91	.38	5.24	.90	.34	.18	.35	.16
	xz	3.84	.33	5.69	1.14	.49	.27	.49	.27
	xv	3.94	.42	5.72	1.32	.46	.35	.46	.35
	yz	3.83	.33	5.62	1.15	.48	.32	.50	.28
	yv	3.94	.45	5.28	.92	.35	.23	.35	.23
	zv	3.85	.32	5.36	.95	.40	.26	.40	.25

Configuration	Output Pair	True K		Estimated K		Proportional Error = $(K_{est} - K_{true}) / K_{true}$			
						Algebraic		Absolute	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Separation 1.5 *SD*									
A3-50-15	xy	2.24	.18	3.82	.85	.71	.35	.71	.35
	xz	2.30	.28	3.56	.60	.56	.25	.56	.25
	xv	2.29	.20	3.66	.53	.61	.26	.61	.26
	yz	2.26	.27	3.69	.80	.64	.33	.64	.33
	yv	2.25	.25	3.60	.44	.61	.21	.61	.21
	zv	2.30	.26	3.66	.65	.60	.27	.60	.27
A6-50-15	xy	2.26	.21	2.96	.38	.31	.15	.31	.14
	xz	2.25	.16	3.17	.40	.41	.18	.41	.18
	xv	2.28	.20	3.07	.46	.35	.16	.35	.16
	yz	2.23	.15	3.00	.47	.34	.16	.34	.16
	yv	2.25	.19	3.12	.36	.39	.18	.39	.18
	zv	2.25	.18	3.20	.56	.43	.24	.43	.24
Nuisance Covariance									
N3-50-20	xy	3.94	.30	5.07	.73	.29	.20	.29	.20
	xz	3.92	.32	4.43	64	.14	.18	.18	.13
	xv	3.97	.28	3.85	68	–.03	.17	.13	.11
	yz	3.96	.29	4.02	57	.01	.12	.10	.07
	yv	4.01	.24	3.83	.54	–.04	.14	.12	.09
	zv	3.99	.23	3.86	.54	–.03	.13	.10	.08
N6-50-20	xy	4.11	.28	4.64	.44	.13	.11	.14	.11
	xz	4.08	.28	4.27	.63	.05	.16	.14	.09
	xv	4.07	.25	3.54	.64	–.13	.13	.17	.07
	yz	4.10	.26	3.92	.51	–.04	.11	.09	.08
	yv	4.08	.25	3.48	.62	–.15	.13	.17	.09
	zv	4.05	.23	3.52	.61	–.13	.12	.16	.09
Various Separations and Nuisance Covariance									
D3-50-v1	xy	3.53	.35	5.23	.63	.48	.14	.48	.14
	xz	3.04	.32	4.59	.77	.51	.20	.51	.20
	xv	2.57	.27	3.44	.44	.35	.23	.35	.23
	yz	2.57	.28	3.41	.55	.34	.23	.34	.23
	yv	2.17	.26	2.82	.41	.31	.19	.31	.18
	zv	1.87	.20	2 38	.41	.29	.24	.32	.19
D6-50-v1	xy	3.56	.29	4 90	.52	.38	.10	.38	.10
	xz	3.07	.24	4 11	.39	.34	.12	.34	.12
	xv	2.51	.23	2.83	.36	.13	.14	.16	.12
	yz	2.68	.21	3.16	.35	.18	.12	.19	.10
	yv	2.20	.21	2.40	.33	.10	.14	.14	.09
	zv	1.89	.15	1.99	.21	.06	.12	.10	.08

APPENDIX E

Base Rate Estimates From Taxonic Samples

Estimates based on abscissa intervals are given for all input/output1, output2 combinations for each taxonic configuration. See Appendix F (p. 1196) for a summary of pseudoestimates generated by the nontaxonic samples. Ordering of configurations in this appendix:

N[a]	Taxonic Configuration				Expected r_{ij}[f]	
	P[b]	sep[c]	Factor Loadings[d]	File Code[e]		
100	.50	2.0	0	A1-50-20	.50	
200	.50	2.0	0	A2-50-20	.50	
300	.50	2.0	0	A3-50-20	.50	
600	.50	2.0	0	A6-50-20	.50	
300	.25	2.0	0	A3-25-20	.43	
600	.25	2.0	0	A6-25-20	.43	
300	.10	2.0	0	A3-10-20	.26	
600	.10	2.0	0	A6-10-20	.26	
300	.50	1.5	0	A3-50-15	.36	
600	.50	1.5	0	A6-50-15	.36	
300	.50	2.0	x = .70	N3-50-20	r_{xy} = .68	r_{yz} = .60
			y = .50		r_{xz} = .64	r_{yv} = .55
			z = .40		r_{xv} = .57	r_{zv} = .54
			v = .20			
600		same as for N3-50-20		N6-50-20	same as for N3-50-20	
300	.50	x = 2.00	x = .70	D3-50-v1	r_{xy} = .65	r_{yz} = .52
		y = 1.75	y = .50		r_{xz} = .58	r_{yv} = .41
		z = 1.50	z = .40		r_{xv} = .46	r_{zv} = .37
		v = 1.25	v = .20			
600		same as for D3-50-v1		D6-50-v1	same as for D3-50-v1	

[a]Sample size. [b]Base rate. [c]Amount of separation in SD units, same for all four variables unless given otherwise. [d]Same for all variables in taxon and in complement groups unless given otherwise. [e]A filename coding used by the authors for identification of the Monte Carlo samples. [f]Same for all variables unless given otherwise.

MAXCOV Estimations of Base Rate
A1-50-20: True $P=.50$, $N=100$, 2 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.39	.42	.47	.52	.54	.52	.54	.60	.46	.51	.49	.43	.49	.06
2	.53	.27	.33	.42	.51	.52	.42	.55	.55	.35	.58	.53	.46	.10
3	.41	.45	.53	.69	.67	.70	.70	.73	.52	.43	.44	.44	.56	.13
4	.55	.45	.47	.57	.58	.53	.39	.59	.56	.52	.47	.52	.52	.06
5	75	.63	.60	.43	.65	.63	.41	.48	.65	.54	.60	.60	.58	.10
6	82	.45	.51	.46	.44	.42	.64	.42	.47	.38	.38	.41	.48	.13
7	48	.41	.37	.35	.32	.33	.47	.46	.52	.26	.54	.25	.40	.10
8	.47	.52	.61	.45	.45	.49	.63	.33	.35	.53	.67	.50	.50	.10
9	.42	.41	.42	.35	.43	.68	.40	.39	.66	.52	.33	.69	.47	.13
10	.45	.60	.52	.28	.39	.70	.48	.44	.49	.36	.40	.49	.47	.11
11	.36	.45	.46	.46	.46	.45	.46	.55	.50	.62	.57	.34	.47	.08
12	.39	.48	.42	.39	.64	.42	.47	.44	.44	.46	.43	.47	.45	.07
13	.46	.43	.55	.40	.49	.32	.41	.54	.80	.43	.39	.45	.47	.12
14	.40	.34	.67	.67	.63	.63	.40	.43	.39	.49	.49	.35	.49	.13
15	.34	.52	.60	.26	.48	.63	.29	.65	.76	.52	.34	.68	.51	.17
16	.47	.59	.44	.70	.63	.55	.60	.47	.47	.57	.54	.54	.55	.08
17	.42	.38	.41	.32	.30	.55	.49	.47	.49	.47	.47	.47	.44	.07
18	.54	.51	.66	.26	.63	.61	.49	.57	.48	.46	.51	.42	.51	.11
19	.44	.39	.54	.48	.49	.46	.61	.71	.27	.54	5l	.35	.48	.12
20	.56	.52	.63	.48	.48	.49	.50	.52	.58	.57	58	.59	.54	.05
21	.54	.55	.46	.32	.29	.33	.45	.52	.56	.65	36	.46	.46	.11
22	.72	.53	.52	.61	.73	.58	.40	.42	.46	.47	.46	.56	.54	.11
23	.37	.44	.48	.40	.54	.43	.25	.38	.68	.46	.48	.50	.45	.10
24	.62	.43	.46	.52	.50	.50	.48	.52	.55	.52	.53	.35	.50	.07
25	.58	.57	.42	.50	.57	.51	.25	.27	.50	.67	.49	.51	.49	.12
												M and *SD* over 25 samples:	.49	.04

MAXCOV Estimations of Base Rate
A2-50-20: True $P = .50$, $N = 200$, 2 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.42	.47	.60	.54	.45	.49	.46	.57	.55	.50	.35	.49	.49	.07
2	.31	.31	.51	.39	.48	.62	.59	.58	.60	.40	.70	.52	.50	.13
3	.35	.33	.39	.51	.49	.48	.48	.33	.51	.68	.54	.72	.48	.13
4	.52	.45	.51	.51	.47	.48	.42	.44	.44	.44	.49	.53	.48	.04
5	.34	.49	.41	.47	.56	.53	.56	.60	.53	.44	.40	.52	.49	.08
6	.51	.57	.30	.45	.45	.46	.46	.55	.58	.41	.53	.52	.48	.08
7	.42	.52	.54	.50	.55	.48	.21	.53	.42	.53	.43	.48	.47	.09
8	.53	.54	.66	.48	.56	.56	.47	.61	.49	.71	.59	.55	.56	.07
9	.46	.62	.49	.48	.55	.53	.52	.51	.52	.50	.44	.55	.51	.05
10	.61	.45	.64	.50	.40	.35	.49	.57	.64	.52	.47	.53	.51	.09
11	.44	.60	.42	.42	.51	.43	.48	.47	.78	.32	.29	.50	.47	.13
12	.46	.50	.46	.56	.44	.49	.38	.49	.44	.43	.52	.53	.47	.05
13	.57	.45	.56	.56	.55	.54	.48	.44	.48	.33	.39	.56	.49	.08
14	.39	.58	.43	.74	.52	.53	.49	.41	.47	.44	.52	.35	.49	.10
15	.46	.52	.45	.45	.56	.59	.48	.46	.40	.45	.47	.44	.48	.05
16	.43	.47	.46	.52	.52	.46	.57	.43	.61	.52	.38	.54	.49	.07
17	.62	.50	.49	.32	.81	.14	.17	.28	.48	.65	.35	.50	.44	.20
18	.41	.61	.44	.55	.41	.53	.50	.57	.64	.50	.52	.47	.51	.07
19	.49	.53	.53	.46	.56	.45	.59	.53	.54	.54	.56	.49	.52	.04
20	.42	.46	.54	.43	.45	.44	.58	.48	.61	.51	.56	.55	.50	.06
21	.51	.52	.46	.51	.52	.54	.43	.48	.51	.55	.52	.52	.51	.03
22	.42	.47	.49	.47	.44	.52	.47	.49	.46	.39	.40	.47	.46	.04
23	.39	.51	.50	.47	.53	.63	.47	.48	.46	.54	.40	.60	.50	.07
24	.40	.36	.44	.31	.33	.29	.47	.53	.49	.66	.66	.48	.45	.12
25	.51	.50	.46	.58	.49	.60	.56	.57	.60	.48	.48	.54	.53	.05
										M and *SD* over 25 samples:			.49	.03

MAXCOV Estimations of Base Rate
A3-50-20: True $P = .50$, $N = 300$, 2 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.48	.47	.47	.57	.47	.47	.30	.56	.59	.45	.44	.58	.49	.08
2	.48	.56	.53	.44	.48	.49	.43	.49	.56	.51	.53	.50	.50	.04
3	.49	.43	.41	.49	.45	.48	.46	.52	.48	.52	.46	.48	.47	.03
4	.47	.42	.43	.44	.62	.44	.53	.64	.57	.48	.43	.51	.50	.08
5	.38	.47	.47	.50	.39	.47	.56	.53	.57	.56	.60	.48	.50	.07
6	.51	.49	.52	.49	.48	.48	.50	.48	.49	.52	.51	.49	.50	.02
7	.46	.61	.44	.58	.53	.56	.55	.50	.46	.49	.57	.48	.52	.05
8	.48	.47	.50	.43	.59	.49	.54	.49	.54	.55	.46	.45	.50	.05
9	.63	.62	.66	.50	.47	.50	.16	.55	.60	.52	.52	.57	.52	.13
10	.40	.46	.46	.60	.53	.37	.44	.41	.87	.47	.48	.49	.50	.13
11	.36	.51	.38	.44	.47	.43	.36	.37	.58	.58	.61	.46	.46	.09
12	.49	.50	.51	.46	.50	.51	.57	.55	.61	.31	.48	.48	.50	.07
13	.52	.51	.35	.47	.73	.52	.39	.43	.45	.37	.52	.35	.47	.11
14	.57	.58	.17	.53	.54	.52	.51	.53	.57	.52	.50	.47	.50	.11
15	.51	.59	.58	.58	.58	.57	.26	.53	.69	.53	.51	.51	.54	.10
16	.49	.57	.51	.45	.58	.50	.37	.52	.36	.51	.49	.47	.49	.07
17	.54	.43	.46	.54	.44	.45	.52	.49	.50	.41	.42	.43	.47	.05
18	.51	.53	.51	.48	.40	.46	.49	.58	.61	.48	.48	.48	.50	.06
19	.45	.61	.47	.52	.49	.42	.51	.48	.52	.29	.52	.46	.48	.08
20	.48	.40	.58	.52	.47	.51	.44	.46	.44	.39	.36	.38	.45	.06
21	.32	.48	.39	.42	.28	.51	.50	.51	.46	.43	.61	.40	.44	.09
22	.53	.56	.51	.57	.55	.50	.56	.55	.57	.61	.55	.48	.54	.04
23	.54	.54	.57	.55	.53	.52	.43	.50	.44	.47	.47	.49	.50	.04
24	.49	.48	.47	.55	.53	.54	.47	.53	.52	.45	.47	.54	.50	.04
25	.51	.51	.49	.53	.57	.42	.48	.46	.49	.47	.41	.58	.49	.05
												M and *SD* over 25 samples	.49	.02

MAXCOV Estimations of Base Rate
A6-50-20: True $P = .50$, $N = 600$, 2 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.49	.45	.41	.46	.44	.49	.47	.50	.45	.48	.59	.48	.47	.04
2	.40	.42	.54	.49	.53	.43	.46	.55	.50	.48	.55	.52	.49	.05
3	.50	.51	.52	.50	.48	.46	.57	.47	.52	.52	.52	.49	.50	.03
4	.53	.13	.54	.40	.53	.52	.62	.62	.52	.52	.54	.49	.50	.13
5	.46	.51	.50	.50	.55	.52	.51	.54	.45	.43	.51	.46	.49	.04
6	.53	.52	.50	.48	.52	.49	.49	.48	.47	.52	.43	.50	.49	.03
7	.58	.45	.55	.49	.50	.48	.58	.46	.46	.43	.52	.51	.50	.05
8	.46	.49	.44	.59	.56	.56	.50	.58	.43	.50	.49	.46	.50	.05
9	.51	.52	.53	.58	.48	.54	.56	.57	.54	.44	.48	.50	.52	.04
10	.54	.43	.54	.53	.52	.51	.52	.65	.50	.54	.46	.57	.52	.05
11	.46	.57	.49	.48	.56	.56	.51	.48	.51	.47	.49	.54	.51	.04
12	.48	.49	.40	.52	.52	.53	.48	.49	.46	.55	.56	.50	.50	.04
13	.23	.46	.43	.49	.47	.47	.52	.51	.47	.52	.46	.51	.46	.08
14	.53	.53	.52	.48	.47	.49	.49	.46	.46	.51	.51	.53	.50	.03
15	.13	.43	.46	.63	.56	.54	.46	.44	.46	.52	.53	.48	.47	.12
16	.47	.45	.56	.29	.31	.53	.50	.42	.47	.52	.43	.42	.45	.08
17	.54	.58	.44	52	.43	.46	.39	.37	.53	.48	.47	.46	.47	.06
18	.47	.43	.51	53	.47	.50	.49	.53	.51	.54	.54	.52	.50	.03
19	.48	.54	.45	52	.46	.52	.51	.51	.52	.47	.48	.48	.50	.03
20	.50	.46	.47	.48	.48	.53	.51	.51	.46	.47	.46	.49	.48	.02
21	.58	.53	.57	.54	.46	.48	.52	.54	.50	.41	.46	.42	.50	.06
22	.49	.50	.55	.51	.56	.53	.45	.47	.46	.50	.49	.55	.51	.04
23	.50	.50	.49	.52	.53	.52	.51	.46	.53	.46	.47	.49	.50	.03
24	.51	.49	.49	.48	.50	.48	.53	.49	.53	.52	.46	.53	.50	.02
25	.50	.54	.37	.53	.53	.52	.53	.50	.53	.49	.47	.47	.50	.05
M and *SD* over 25 samples:													.49	.02

MAXCOV Estimations of Base Rate
A3-25-20: True $P=.25$, $N=300$, 2 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.27	.17	.25	.32	.25	.23	.40	.16	.21	.31	.22	.20	.25	.07
2	.27	.27	.21	.15	.18	.17	.28	.22	.17	.20	.16	.23	.21	.05
3	.22	.24	.22	.37	.26	.19	.34	.21	.25	.20	.40	.26	.26	.07
4	.20	.23	.18	.24	.23	.22	.22	.19	.29	.24	.19	.14	.21	.04
5	.17	.17	.38	.20	.16	.23	.20	.30	.22	.21	.22	.27	.23	.06
6	.26	.14	.18	.29	.20	.28	.30	.30	.31	.26	.23	.25	.25	.05
7	.32	.24	.30	.23	.24	.22	.16	.17	.27	.27	.24	.18	.24	.05
8	.26	.28	.26	.21	.30	.18	.18	.21	.29	.19	.16	.16	.22	.05
9	.28	.24	.22	.39	.38	.17	.36	.28	.26	.32	.23	.24	.28	.07
10	.20	.21	.24	.26	.22	.28	.23	.23	.18	.33	.29	.15	.24	.05
11	.26	.28	.22	.23	.25	.24	.24	.32	.23	.25	.32	.20	.25	.04
12	.15	.36	.17	.28	.28	.18	.21	.26	.19	.27	.25	.28	.24	.06
13	.22	.25	.30	.19	.18	.18	.21	.25	.25	.28	.27	.23	.23	.04
14	.27	.23	.28	.22	.30	.26	.21	.21	.15	.18	.36	.39	.25	.07
15	.15	.13	.14	.22	.21	.34	.25	.33	.19	.17	.31	.31	.23	.08
16	.25	.18	.18	.27	.27	.29	.20	.19	.23	.23	.25	.22	.23	.04
17	.33	.32	.32	.17	.24	.32	.24	.24	.16	.18	.23	.25	.25	.06
18	.35	.25	.19	.24	.31	.30	.31	.21	.22	.26	.20	.26	.26	.05
19	.23	.15	.15	.21	.20	.20	.22	.25	.23	.31	.23	.23	.22	.04
20	.19	.29	.23	.24	.18	.12	.31	.29	.29	.20	.19	.20	.23	.06
21	.24	.21	.18	.17	.20	.21	.32	.24	.18	.26	.23	.31	.23	.05
22	.25	.35	.20	.29	.12	.21	.20	.15	.23	.32	.30	.21	.24	.07
23	.27	.18	.20	.29	.33	.18	.31	.29	.20	.25	.23	.22	.25	.05
24	.24	.50	.25	.29	.34	.25	.19	.26	.19	.18	.22	.27	.26	.09
25	.22	.14	.22	.20	.32	.23	.15	.14	.17	.16	.21	.29	.20	.06
												M and *SD* over 25 samples:	.24	.02

MAXCOV Estimations of Base Rate
A6-25-20: True $P = .25$, $N = 600$, 2 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.25	.25	.24	.24	.25	.24	.27	.27	.18	.23	.24	.20	.24	.03
2	.27	.20	.30	.24	.24	.21	.26	.31	.26	.26	.18	.12	.24	.05
3	.23	.24	.26	.23	.29	.23	.28	.24	.26	.30	.28	.25	.26	.02
4	.25	.26	.26	.24	.21	.21	.28	.26	.31	.24	.25	.26	.25	.03
5	.14	.26	.27	.19	.20	.18	.20	.19	.23	.18	.20	.19	.20	.04
6	.24	.28	.22	.22	.26	.23	.20	.23	.23	.22	.25	.21	.23	.02
7	.26	.24	.16	.23	.17	.27	.24	.20	.23	.26	.27	.26	.23	.04
8	.20	.24	.22	.20	.25	23	.23	.25	.24	.20	.24	.19	.22	.02
9	.24	.29	.27	.27	.28	28	.26	.26	.24	.26	.26	.28	.26	.02
10	.29	.42	.29	.31	.27	27	.23	.28	.27	.25	.17	.24	.27	.06
11	.37	.43	.23	.19	.38	.24	.26	.20	.30	.22	.20	.19	.27	.08
12	.30	.19	.25	.23	.17	.26	.14	.26	.90	.34	.28	.25	.30	.20
13	.22	.18	.26	.23	.23	.22	.21	.26	.29	.27	.26	.20	.24	.03
14	.22	.17	.19	.25	.26	.16	.21	.21	.22	.31	.30	.30	.23	.05
15	.27	.24	26	.23	.27	.28	.19	.25	.30	.31	.33	.25	.27	.04
16	.29	.31	28	.17	.17	.18	.28	.26	.27	.21	.27	.23	.24	.05
17	.27	.29	27	.30	.31	.29	.19	.19	.23	.23	.21	.23	.25	.04
18	.11	.23	.22	.18	.23	.27	.23	.23	.31	.23	.23	.22	.22	.05
19	.20	.23	.22	.23	.25	.27	.22	.12	.34	.25	.16	.13	.22	.06
20	.30	.25	.29	.21	.17	.22	.25	.27	.28	.27	.15	.23	.24	.05
21	.23	.23	.22	.26	.31	.22	.24	.30	.16	.16	.14	.12	.22	.06
22	.25	.19	.19	.25	.21	.32	.25	.27	.25	.22	.23	.19	.24	.04
23	.19	.30	.32	.19	.24	.26	.20	.26	.30	.23	.26	.12	.24	.06
24	.23	.22	.30	.20	.17	.26	.21	.21	.21	.18	.31	.22	.23	.04
25	.31	.25	.29	.22	.23	.21	.21	.24	.21	.27	.25	.25	.25	.03
									M and *SD* over 25 samples:				.24	.02

MAXCOV Estimations of Base Rate
A3-10-20: True $P = .10$, $N = 300$, 2 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.19	.09	.18	.08	.05	.08	.11	.09	.11	.11	.14	.13	.11	.04
2	.12	.09	.08	.08	.10	.08	.10	.10	.08	.13	.26	.10	.11	.05
3	.07	.08	.09	.07	.09	.11	.13	.10	.11	.12	.18	.11	.10	.03
4	.14	.17	.13	.19	.10	.17	.09	.06	.24	.13	.12	.13	.14	.05
5	.20	.21	.22	.18	.12	.12	.14	.10	.10	.09	.12	.12	.14	.05
6	.16	.17	.16	.10	.09	.13	.21	.22	.23	.08	.08	.11	.14	.06
7	.08	.11	.11	.08	.10	.12	.10	.12	.07	.24	.11	.20	.12	.05
8	.14	.13	.17	.08	.11	.08	.14	.14	.25	.14	.10	.17	.14	.05
9	.11	.10	.07	.10	.10	.10	.10	.09	.08	.18	.15	.10	.11	.03
10	.17	.20	.86	.11	.12	.13	.08	.23	.18	.16	.17	.15	.21	.21
11	.07	.13	.09	.11	.14	.11	.12	.07	.11	.12	.10	.09	.11	.02
12	.12	.07	.23	.08	.08	.09	.10	.12	.11	.11	.10	.12	.11	.04
13	.10	.18	.10	.11	.14	.10	.14	.10	.11	.12	.10	.11	.12	.02
14	.08	.09	.08	.08	.15	.07	.05	.13	.07	.13	.15	.14	.10	.03
15	.13	.11	.09	.10	.12	.11	.09	.10	.09	.16	.15	.15	.12	.02
16	.15	.12	.17	.12	.13	.11	.07	.09	.10	.12	.11	.10	.11	.03
17	.09	.06	.09	.10	.08	.10	.08	.09	.08	.09	.10	.10	.09	.01
18	.09	.06	.27	.11	.15	.11	.12	.13	.10	.06	.13	.14	.12	.05
19	.48	.10	.14	.12	.15	.15	.10	.13	.13	.08	.13	.14	.15	.11
20	.09	.09	08	.15	.11	.05	.14	.14	.13	.09	.08	.08	.10	.03
21	.08	.15	08	.14	.11	.11	.27	.11	.32	.12	.15	.18	.15	.07
22	.16	.14	10	.08	.11	.10	.14	.10	.11	.08	.08	.08	.11	.03
23	.13	.10	.13	.12	.12	.13	.13	.12	.13	.19	.11	.17	.13	.02
24	.13	.09	10	.11	12	.14	.90	.17	.15	.14	.17	.13	.20	.22
25	.11	.12	08	.08	08	.07	.09	.06	.09	.11	.09	.16	.10	.03
												M and *SD* over 25 samples:	.13	.03

MAXCOV Estimations of Base Rate
A6-10-20: True $P = .10$, $N = 600$, 2 *SD* Separation on all Indicators

Sample	input/output1.output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.08	.08	.08	.09	.10	09	.07	.06	.08	.10	.09	.11	.08	.01
2	.06	.11	.12	.10	.11	.10	.10	.10	.11	.09	.07	.08	.10	.02
3	.09	.08	.07	.11	.06	.11	.17	.09	.15	.11	.08	.08	.10	.03
4	.10	.09	.09	.08	.07	.09	.14	.08	.09	.08	.11	.12	.10	.02
5	.12	.13	.09	.06	.07	.07	.15	.09	.07	.23	.08	.08	.10	.05
6	.10	.10	.10	.08	.11	.08	.12	.06	.09	.15	.12	.13	.10	.02
7	.10	.12	.11	.09	.20	.08	.08	09	.09	.11	.12	.07	.11	.03
8	.19	.08	.12	.13	.10	.14	.08	08	.10	.11	.07	.16	.11	.04
9	.10	.12	.09	.09	.10	.09	.10	09	.10	.13	.08	.09	.10	.01
10	.21	.10	.10	.10	.11	10	.18	.19	.18	.10	.10	.12	.13	.04
11	.11	.12	.07	.10	.10	08	.12	.12	.11	.10	.11	.11	.10	.02
12	.12	.14	.15	.06	.09	08	.10	.12	.12	.10	.09	.06	.10	.03
13	.05	.18	.10	.07	.07	.08	.12	.08	.09	.11	.10	.11	.10	.03
14	.11	.12	.24	.06	.14	.06	.08	.13	.10	.10	.11	.11	.11	.05
15	.11	.07	.09	.05	.12	.10	.09	.10	.09	.12	.09	.09	.09	.02
16	.07	.11	.11	.09	.08	.11	.12	.08	.11	.07	.10	.06	.09	.02
17	.09	.10	.10	.13	.11	.10	.07	.10	.11	.09	.10	.08	.10	.02
18	.06	.12	.08	.11	.09	.12	.07	.08	08	.10	.13	.11	.10	.02
19	.07	.07	.08	.07	.07	.07	.16	.09	13	.08	.10	.14	.09	.03
20	.07	.08	.13	.12	.11	.13	.10	.09	08	.14	.15	.14	.11	.03
21	.12	.11	.10	.07	.11	.10	.09	.07	.10	.08	.09	.10	.10	.02
22	.10	.08	.09	.13	.15	.14	.08	.08	.08	.09	.08	.08	.10	.03
23	.16	.10	.12	.09	.07	.12	.12	.12	.11	.10	.09	.11	.11	.02
24	.07	.18	.09	.15	.16	.09	.09	.09	.10	.08	.15	.08	.11	.04
25	.08	.09	.06	.11	.08	.07	.09	.06	.09	.06	.10	.06	.08	.02
							M and *SD* over 25 samples:						.10	.01

MAXCOV Estimations of Base Rate
A3-50-15: True $P=.50$, $N=300$, 1.5 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.35	.33	.52	.24	.48	.79	.48	.63	.28	.59	.22	.42	.44	.17
2	.64	.62	.62	.45	.40	.38	.66	.48	.42	.60	.63	.60	.54	.11
3	.68	.59	.54	.61	.36	.55	.26	.58	.68	.67	.32	.32	.51	.15
4	.50	.88	.25	.41	.76	.71	.64	.25	.30	.78	.73	.20	.53	.24
5	.57	.40	.44	.49	.51	.46	.40	.61	.73	.33	.59	.53	.51	.11
6	.38	.61	.58	.47	.55	.44	.50	.41	.44	.76	.19	.61	.49	.14
7	.40	.45	.46	.47	.51	.80	.58	.36	.58	.64	.54	.63	.54	.12
8	.56	.55	.62	.27	.32	.42	.79	.33	.53	.18	.46	.19	.44	.18
9	.50	.24	.70	.46	.83	.52	.69	.48	.49	.67	.56	.74	.57	.16
10	.73	.53	.75	.56	.55	.56	.63	.63	.54	.54	.66	.57	.60	.08
11	.48	.52	.43	.47	.78	.53	.60	.49	.50	.52	.44	.18	.50	.14
12	.67	.49	.45	.44	.35	.60	.59	.60	.47	.48	.54	.71	.53	.10
13	.41	.54	.49	.24	.59	.66	.60	.53	.61	.47	.63	.73	.54	.13
14	.52	.46	.51	.60	.36	.48	.63	.49	.62	.29	.81	.64	.54	.14
15	.42	.17	.65	.51	.37	.22	.42	.60	.58	.74	.44	.80	.49	.19
16	.60	.63	.45	.50	.53	.52	.46	.59	.65	.68	.59	.62	.57	.07
17	.45	.49	.61	.32	.48	.57	.33	.40	.65	.66	.56	.67	.51	.12
18	.56	.66	.38	.81	.76	.65	.68	.34	.74	.18	.54	.57	.57	.19
19	.83	.53	.51	.60	.34	.44	.45	.75	.45	.46	.48	.46	.53	.14
20	.51	.20	.47	.52	.23	.23	.48	.45	.45	.46	.15	.59	.40	.15
21	.39	.82	.84	.60	.14	.30	.59	.39	.55	.45	.46	.44	.50	.20
22	.64	.66	.62	.44	.53	.57	.82	.85	.82	.53	.51	.66	.64	.13
23	.20	.17	.13	.53	.46	.50	.43	.57	.54	.30	.33	.42	.38	.15
24	.69	.39	.26	.57	.58	.55	.76	.37	.57	.69	.49	.53	.54	.14
25	.48	.46	.18	.36	.82	.34	.29	.47	.15	.31	.31	.40	.38	.17
												M and *SD* over 25 samples:	.51	.06

MAXCOV Estimations of Base Rate
A6-50-15: True $P = .50$, $N = 600$, 1.5 *SD* Separation on all Indicators

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.57	.52	.51	.41	.64	.74	.39	.57	.49	.17	.50	.46	.50	.14
2	.57	.55	.58	.53	.65	.43	.61	.56	.53	.71	.65	.57	.58	.07
3	.47	.49	.52	.47	.45	.25	.61	.46	.61	.41	.39	.43	.46	.10
4	.24	.54	.34	.72	.63	.41	.45	.53	.62	.48	.55	.62	.51	.14
5	.62	.50	.60	.44	.68	.38	.33	.87	.16	.58	.46	.55	.51	.18
6	.80	.66	.50	.56	.43	.11	.51	.14	.51	.47	.55	.53	.48	.19
7	.50	.58	.50	.54	.49	.54	.67	.60	.15	.42	.55	.18	.48	.16
8	.14	.11	.66	.50	.31	.52	.46	.55	.46	.43	.50	.49	.43	.16
9	.46	.46	.60	.61	.58	.35	.55	.67	.55	.34	.38	.38	.49	.11
10	.27	.43	.55	.86	.45	.85	.35	.51	.35	.47	.47	.77	.53	.20
11	.66	.36	.55	.56	.31	.49	.42	.84	.46	.56	.62	.79	.55	.16
12	.82	.48	.46	.41	.56	.41	.60	.78	.42	.49	.59	.52	.55	.13
13	.51	.45	.48	.36	.38	.70	.35	.62	.18	.45	.61	.16	.44	.16
14	.35	.48	.38	.47	.48	.53	.58	.70	.46	.50	.50	.50	.49	.09
15	.59	.59	.56	.41	.42	.48	.51	.62	.44	.48	.52	.23	.49	.11
16	.41	.16	.41	.51	.42	.75	.49	.27	.54	.33	.28	.43	.42	.15
17	.45	.53	.38	.44	.70	.17	.60	.42	.65	.55	.50	.50	.49	.14
18	.42	.56	.43	.45	.67	.58	.63	.51	.74	.54	.32	.68	.54	.12
19	.71	.56	.36	.54	.59	.34	.38	.77	.19	.67	.45	.40	.50	.17
20	.59	.44	.83	.53	.66	.40	.49	.68	.32	.57	.54	.47	.54	.14
21	.26	.48	.38	.68	.53	.50	.53	.46	.77	.61	.15	.19	.46	.19
22	.67	.46	.39	.47	.53	.50	.50	.73	.72	.54	.55	.52	.55	.10
23	.46	.51	.50	.36	.51	.42	.44	.45	.46	.54	.46	.50	.47	.05
24	.43	.48	.47	.41	.50	.27	.35	.53	.70	.59	.45	.56	.48	.11
25	.51	.54	.33	.57	.43	.51	.81	.60	.33	.42	.46	.58	.51	.13
									M and *SD* over 25 samples:				.50	.04

MAXCOV Estimations of Base Rate
N3-50-20: True $P = .50$, $N = 300$, 2 *SD* Separation on all Indicators
Nuisance Covariance in Taxon and Complement Groups

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.56	.46	.65	.61	.40	.39	.24	.35	.51	.51	.51	.53	.48	.12
2	.26	.17	.52	.56	.57	.55	.53	.24	.53	.54	.56	.54	.46	.15
3	.74	.63	.72	.53	.54	.40	.60	.62	.58	.59	.57	.53	.59	.09
4	.41	.43	.64	.44	.44	.55	.43	.43	.42	.45	.52	.46	.47	.07
5	.47	.41	.42	.40	.52	.45	.34	.50	.38	.41	.41	.47	.43	.05
6	.45	.52	.54	.42	.37	.37	.56	.51	.47	.79	.56	.59	.51	.11
7	.45	.58	.76	.66	.49	.71	.53	.53	.49	.51	.50	.47	.56	.10
8	.19	.65	.49	.51	.38	.57	.45	.44	.39	.45	.51	.50	.46	.11
9	.42	.51	.46	.40	.59	.48	.56	.56	.51	.49	.45	.59	.50	.06
10	.40	.59	.41	.38	.73	.52	.49	.42	.52	.60	.58	.58	.52	.10
11	.24	.28	.57	.53	.56	.48	.41	.41	.42	.39	.50	.23	.42	.12
12	.51	.34	.54	.51	.48	.45	.44	.55	.68	.46	.50	.48	.49	.08
13	.58	.57	.48	.39	.36	.40	.52	.47	.46	.39	.41	.40	.45	.07
14	.46	.49	.58	.55	.60	.56	.41	.55	.58	.48	.47	.45	.52	.06
15	.57	.53	.65	.54	.55	.54	.49	.52	.54	.49	.60	.48	.54	.05
16	.48	.49	.35	.70	.56	.31	.44	.42	.46	.60	.36	.44	.47	.11
17	.52	.50	.49	.43	.48	.34	.48	.52	.53	.55	.56	.54	.49	.06
18	.74	.52	.67	.36	.41	.35	.20	.21	.21	.52	.63	.56	.45	.19
19	.58	.47	.37	.42	.52	.52	.49	.40	.47	.53	.55	.61	.49	.07
20	.58	.54	.60	.61	.79	.57	.42	.49	.44	.54	.57	.37	.54	.11
21	.55	.34	.54	.61	.33	.55	.44	.42	.41	.36	.40	.39	.44	.10
22	.71	.50	.17	.68	.51	.64	.38	.58	.39	.55	.77	.74	.55	18
23	.63	.46	.50	.54	.48	.70	.49	.53	.46	.42	.44	.43	.51	08
24	.40	.38	.41	.42	.41	.41	.67	.72	.46	.46	.47	.44	.47	11
25	.49	.41	.57	.51	.41	.55	.57	.55	.59	.50	.46	.52	.51	.06
												M and *SD* over 25 samples:	.49	.04

MAXCOV Estimations of Base Rate
N6-50-20: True $P = .50$, $N = 600$, 2 *SD* Separation on all Indicators
Nuisance Covariance in Taxon and Complement Groups

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.40	.45	.40	.56	.51	.53	.47	.61	.62	.53	.51	.50	.51	.07
2	.43	.44	.50	.51	.47	.47	.64	.49	.50	.48	.48	.56	.50	.06
3	.49	.47	.48	.41	.48	.41	.47	.57	.39	.52	.50	.52	.48	.05
4	.42	.48	.50	.45	.42	.45	.49	.46	.52	.49	.49	.46	.47	.03
5	.40	.41	.42	.39	.22	.40	.46	.43	.40	.22	.46	.17	.37	.10
6	.58	.50	.52	.21	.47	.48	.77	.52	.55	.41	.50	.50	.50	.13
7	.54	.58	.55	.45	.63	.54	.49	.53	.48	.48	.46	.43	.51	.06
8	.81	.21	.53	.55	.53	.49	.22	.47	.51	.63	.59	.60	.51	.16
9	.58	.54	.58	.56	.53	.46	.55	.55	.54	.49	.49	.48	.53	.04
10	.57	.60	.53	.46	.47	.48	.52	.50	.60	.53	.53	.53	.53	.05
11	.48	.55	.16	.44	.41	.41	.55	.50	.48	.59	.45	.52	.46	.11
12	.48	.53	.45	.49	.55	.59	.47	.47	.51	.51	.42	.52	.50	.05
13	.64	.59	.48	.41	.49	.42	.53	.47	.47	.48	.47	.52	.50	.07
14	.54	.43	.48	.47	.49	.40	.53	.52	.50	.44	.53	.45	.48	.04
15	.48	.44	.49	.55	.51	.52	.49	.40	.40	.53	.53	.53	.49	.05
16	.56	.52	.53	.58	.59	60	.53	.54	.50	.63	.63	.49	.56	.05
17	.52	.52	.53	.57	.43	53	.45	.43	.48	.51	.50	.52	.50	.05
18	.69	.55	.55	.60	.56	58	.48	.48	.46	.56	.57	.54	.55	.06
19	.45	.48	.46	.45	.43	.46	.41	.44	.69	.23	.26	.23	.42	.13
20	.51	.51	.54	.47	.43	.52	.57	.47	.58	.53	.49	.58	.52	.05
21	.48	.54	.57	.22	.49	.52	.43	.55	.48	.49	.47	.46	.47	.09
22	.54	.48	.49	.50	.51	.52	.54	.52	.52	.53	.53	.56	.52	.02
23	.51	.48	.50	.48	.50	.52	.47	.46	.44	.54	.50	.44	.49	.03
24	.48	.49	.47	.46	.46	.44	.46	.52	.51	.48	.51	.46	.48	.02
25	.20	.52	.50	.51	.49	.50	.46	.53	.43	.56	.50	.49	.47	.09
												M and *SD* over 25 samples:	.49	.02

MAXCOV Estimations of Base Rate

D3-50-v1: True $P = .50$, $N = 300$, separation on $x = 2.00$ *SD*, $y = 1.75$ *SD*, $z = 1.50$ *SD*, $v = 1.25$ *SD*

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.83	.47	.78	.74	.49	.80	.77	.78	.52	.43	.58	.35	.63	.17
2	.47	.67	.45	.64	.51	.51	.33	.61	.38	.62	.66	.66	.54	.12
3	.14	.16	.51	.59	.59	.59	.57	.65	.59	.16	.23	.43	.43	.20
4	.85	.31	.39	.55	.55	.51	.44	.78	.74	.71	.72	.75	.61	.17
5	.56	.45	.81	.47	.49	.47	.57	.53	.48	.48	.71	.55	.55	.11
6	86	.57	.77	.19	.62	.68	.46	.80	.71	.50	.18	.72	.59	.22
7	88	.63	.48	.84	.49	.36	.39	.42	.47	.42	.41	.60	.53	.17
8	68	.44	.41	.52	.61	.58	.44	.19	.60	.26	.24	.26	.44	.17
9	.45	.52	.54	.45	.50	.41	.42	.39	.44	.52	.49	.47	.47	.05
10	.22	.57	.57	.60	.76	.69	.60	.61	.61	.46	.46	.41	.55	.14
11	.64	.12	.47	.55	.62	.46	.47	.44	.42	.29	.45	.28	.43	.15
12	.16	.58	.39	.28	.47	.42	.25	.23	.49	.61	.53	.59	.42	.16
13	.46	.50	.73	.70	.47	.74	.47	.44	.22	.47	.46	.45	.51	.15
14	.51	.47	.57	.58	.54	.47	.43	.54	.55	.62	.62	.54	.54	.06
15	.59	.46	.64	.34	.60	.55	.33	.49	.20	.38	.55	.67	.49	.14
16	.43	.42	.38	.43	.29	.47	.51	.34	.64	.26	.47	.42	.42	.10
17	.52	.58	.43	.57	.67	.57	.25	.85	.80	.25	.23	.20	.49	.22
18	.44	.53	.82	.43	.40	.40	.40	.46	.15	.48	.68	.69	.49	.17
19	.84	.50	.57	.56	.50	.49	.72	.77	.72	.64	.57	.42	.61	.13
20	.26	.81	.19	.43	.23	.69	.34	.34	.28	.41	.40	.28	.39	.19
21	.48	.76	.72	.55	.56	.20	.52	.49	.72	.50	.42	.13	.50	.19
22	.12	.48	.44	.18	.42	.73	.42	.61	.81	.28	.32	.25	.42	.21
23	.52	.51	.52	.60	.24	.23	.65	.55	.81	.47	.64	.48	.52	.16
24	.44	.54	.55	.49	.50	.54	.54	.28	.45	.44	.39	.41	.46	.08
25	.59	.81	.53	.48	.44	.42	.58	.60	.59	.59	.70	.59	.58	.11
									M and *SD* over 25 samples:				.50	.07

MAXCOV Estimations of Base Rate

D6-50-v1: True $P = .50$, $N = 600$, separation on $x = 2.00$ *SD*, $y = 1.75$ *SD*, $z = 1.50$ *SD*, $v = 1.25$ *SD*

Sample	input/output1,output2 combination												*M*	*SD*
	x/yz	*x/yv*	*x/zv*	*y/xz*	*y/xv*	*y/zv*	*z/xy*	*z/xv*	*z/yv*	*v/xy*	*v/xz*	*v/yz*		
1	.50	.61	.67	.54	.52	.20	.48	.78	.41	.37	.50	.68	.52	.15
2	.59	.60	.44	.33	.54	.28	.56	.61	.18	.55	.56	.23	.46	.16
3	.49	.49	.45	.46	.50	.45	.46	.57	.47	.51	.54	.48	.49	.04
4	.56	.56	.53	.77	.48	.78	.18	.52	.56	.41	.55	.37	.52	.16
5	.20	.91	.53	.40	.16	.52	.36	.20	.25	.74	.53	.54	.44	.23
6	.33	.11	.13	.41	.50	.46	.55	.60	.59	.48	.47	.47	.43	.16
7	.53	.60	.52	.50	.48	.47	.48	.42	.42	.64	.64	.63	.53	.08
8	.51	.11	.70	.47	.60	.54	.32	.65	.18	.34	.34	.31	.42	.19
9	.48	.18	.46	.55	.37	.81	.48	.47	.44	.24	.51	.40	.45	.16
10	.62	.38	.16	.57	.36	.55	.51	.54	.38	.54	.39	.51	.46	.13
11	.85	.60	.82	.45	.67	.55	.51	.60	.52	.47	.43	.43	.57	.14
12	.80	.85	.87	.28	.61	.81	.53	.51	.72	.50	.40	.39	.61	.20
13	.35	.67	.50	.53	.53	.36	.40	.57	.36	.51	.54	.37	.48	.10
14	.80	.47	.55	.82	.50	.60	.69	.52	.70	.49	.46	.67	.60	.13
15	.35	.44	.17	.50	.41	.44	.53	.59	.36	.55	.56	.80	.48	.15
16	.48	.46	.45	.46	.45	.46	.24	.69	.36	.56	.59	.47	.47	.11
17	.53	.23	.46	.57	.36	.30	.35	.40	.59	.47	.50	.41	.43	.11
18	.55	.90	.31	.51	.54	.57	.27	.41	.77	.59	.56	.64	.55	.17
19	.45	.36	.09	.54	.26	.33	.39	.34	.30	.64	.72	.41	.40	.17
20	.49	.53	.55	.52	.58	.30	.47	.36	.35	.48	.24	.76	.47	.14
21	.63	.46	.39	.62	.47	.46	.38	.49	.48	.46	.39	.53	.48	.08
22	.13	.79	.85	.51	.55	.55	.21	.52	.55	.38	.76	.39	.52	.22
23	.69	.61	.86	.56	.65	.62	.52	.49	.51	.57	.56	.55	.60	.10
24	.18	.10	.29	.37	.42	.29	.46	.47	.46	.25	.21	.22	.31	.12
25	.37	.77	.53	.44	.48	.57	.44	.44	.45	.44	.33	.46	.48	.11
												M and *SD* over 25 samples:	.49	.07

APPENDIX F

"Base Rate" Estimates From Nontaxonic Samples

Mean "base rate" estimates (using abscissa intervals) are calculated using 25 samples per nontaxonic configuration.

Sample Configuration			"Base Rate"	*SD*
File Code[a]	r_{ij}	*N*		
E300	.26	300	.47	.10
E600	.26	600	.49	.11
B300	.36	300	.47	.12
B600	.36	600	.42	.13
F300	.44	300	.46	.09
F600	.44	600	.41	.13
C100	.50	100	.47	.11
C200	.50	200	.44	.11
C300	.50	300	.47	.12
C600	.50	600	.39	.11
N300	r_{xy} = .68, r_{yz} = .60; r_{xz} = .64, r_{yv} = .55; r_{xv} = .57, r_{zv} = .54	300	.46	.13
N600	correlations same as for N300	600	.33	.11
D300	r_{xy} = .65, r_{yz} = .52; r_{xz} = .58, r_{yv} = .41; r_{xv} = .46, r_{zv} = .37	300	.43	.08
D600	correlations same as for D300	600	.44	.13

[a]The letter is the authors' code for the configuration of factor loadings used to produce the desired r_{ij}; the number part indicates sample size.

APPENDIX G

Estimates of Complement and Taxon Means From Taxonic Samples

Each estimate is the average of the three estimates generated per sample when four indicators are used. For example, the taxon mean for x is estimated when y and z, then y and v, and then z and v are used as the output variables; these three values are averaged to get the means given in this appendix. Results for the Monte Carlo configurations are presented in the following order:

N[a]	Taxonic Configuration				Expected r_{ij}[f]	
	P[b]	sep[c]	Factor Loadings[d]	File Code[e]		
100	.50	2.0	0	A1-50-20	.50	
200	.50	2.0	0	A2-50-20	.50	
300	.50	2.0	0	A3-50-20	.50	
600	.50	2.0	0	A6-50-20	.50	
300	.25	2.0	0	A3-25-20	.43	
600	.25	2.0	0	A6-25-20	.43	
300	.10	2.0	0	A3-10-20	.26	
600	.10	2.0	0	A6-10-20	.26	
300	.50	1.5	0	A3-50-15	.36	
600	.50	1.5	0	A6-50-15	.36	
300	.50	2.0	x = .70	N3-50-20	r_{xy} = .68	r_{yz} = .60
			y = .50		r_{xz} = .64	r_{yv} = .55
			z = .40		r_{xv} = .57	r_{zv} = .54
			v = .20			
600	.50	2.0	same as for N3-50-20	N6-50-20	same as for N3-50-20	
300	.50	x = 2.00	x = .70	D3-50-v1	r_{xy} = .65	r_{yz} = .52
		y = 1.75	y = .50		r_{xz} = .58	r_{yv} = .41
		z = 1.50	z = .40		r_{xv} = .46	r_{zv} = .37
		v = 1.25	v = .20			
600	.50	same as for D3-50-v1		D6-50-v1	same as for D3-50-v1	

[a]Sample size. [b]Base rate. [c]Amount of separation in *SD* units, same for all four variables unless given otherwise. [d]Same for all variables in taxon and in complement groups unless given otherwise. [e]A filename coding used by the authors for identification of the Monte Carlo samples. [f]Same for all variables unless given otherwise.

MAXCOV Estimations of Means
A1-50-20: True $P = .50$, $N = 100$, 2 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.13	.18	−.05	.23	1.90	1.88	1.90	2.01	.28	.15	.16	.15	−.03	−.17	−.30	−.04
2	.35	.16	−.21	.21	1.54	1.80	1.97	1.76	.22	.11	.13	.21	.03	−.08	−.11	−.05
3	.21	.19	.13	.44	1.87	1.40	1.69	2.02	.25	.02	−.09	.20	−.07	−.39	−.40	.03
4	.12	.18	.31	.04	1.98	1.79	1.74	1.71	.16	.17	.13	.15	−.08	−.29	−.17	−.20
5	−.01	−.05	.11	−.03	1.45	1.73	1.85	1.75	−.06	−.13	.13	−.01	−.40	−.16	−.12	−.20
6	.23	.11	.28	.18	1.52	1.93	1.87	2.37	.09	.21	.17	.35	−.39	−.15	−.11	.09
7	.35	.52	.06	.59	1.93	2.19	2.00	1.93	.24	.37	.14	.51	.04	.30	−.11	−.17
8	−.17	.34	.43	.28	1.72	2.02	1.90	1.83	−.01	.16	.30	.12	−.16	−.18	−.07	−.27
9	.24	.30	.13	.23	2.10	1.78	1.91	1.82	.30	.33	.14	.28	.05	−.14	−.21	−.21
10	.24	.40	.21	.50	1.72	1.98	1.81	2.05	.22	.25	.24	.22	−.25	−.05	−.16	.05
11	.38	.35	.06	.20	2.10	2.04	1.77	1.86	.30	.06	.11	.27	−.06	.04	−.12	−.29
12	.24	.42	.12	.37	2.32	1.81	1.89	2.09	.23	.31	.11	.27	.12	−.25	.02	−.07
13	.14	.42	−.06	.42	2.11	1.97	1.43	1.91	.20	.46	.14	.26	−.13	−.23	−.42	−.02
14	.19	−.31	.38	.25	1.98	1.52	1.97	1.95	.31	−.26	.29	.22	−.14	−.34	−.10	−.04
15	.16	.05	.12	−.02	1.76	1.37	1.56	1.73	.21	.14	.07	.14	−.16	−.19	−.28	−.24
16	.12	.14	−.01	−.18	1.86	1.52	1.82	1.80	.08	.05	.08	.12	−.06	−.48	−.14	−.32
17	.25	.53	.13	.29	2.09	2.13	1.94	1.83	.30	.32	.19	.13	.01	.02	−.11	.01
18	.33	−.06	.07	.28	1.85	1.84	1.71	1.95	.02	.15	.14	.14	−.12	−.16	−.19	−.18
19	.51	.17	.13	.24	2.07	1.94	1.69	1.99	.26	.17	.06	.13	−.01	−.07	−.12	−.05
20	.08	.03	.01	.09	1.67	1.73	1.73	1.71	−.08	.16	.04	−.07	−.20	−.20	−.15	−.20
21	.00	.57	.06	.23	1.83	1.83	1.89	1.65	.10	.46	.14	.16	−.21	.09	−.24	−.14
22	.38	−.02	.19	.09	2.00	1.53	1.98	1.90	−.02	−.05	.26	.18	−.25	−.41	−.02	−.12
23	17	.28	.33	.42	2.13	1.79	2.08	2.09	.29	.17	.37	.21	−.01	−.06	−.03	−.07
24	06	−.06	.18	.23	1.72	1.90	1.86	2.14	.06	.09	.05	.21	−.13	−.05	−.10	−.06
25	13	−.08	.33	.09	1.83	1.94	1.80	1.82	.15	.06	.47	.12	−.20	−.23	−.06	−.23
M	.19	.19	.14	.23	1.88	1.82	1.83	1.91	.16	.16	.16	.19	−.11	−.15	−.15	−.12
SD	.14	.22	.15	.17	.21	.21	.14	.16	.12	.16	.11	.11	.13	.17	.10	.11
								mean absolute error	.18	.19	.17	.19	.13	.19	.15	.13
								SD	.10	.12	.10	.10	.11	.12	.10	.09

MAXCOV Estimations of Means

A2-50-20: True $P = .50$, $N = 200$, 2 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.02	−.12	−.01	.03	1.95	2.08	1.96	1.90	−.02	.02	.05	.21	−.01	−.05	−.17	−.04
2	.38	.23	−.29	.01	2.05	1.84	1.78	1.80	.36	.08	−.23	.06	.00	−.13	−.19	−.16
3	.22	.11	.19	−.04	2.22	1.78	1.94	1.65	.37	.04	.26	−.11	.16	−.02	−.04	−.39
4	.01	.07	.14	.11	1.91	2.10	1.91	1.94	.06	.13	.20	.12	−.04	−.06	.03	−.09
5	.30	.08	.09	−.05	2.31	1.95	1.83	1.76	.30	.06	.00	.16	.11	−.17	−.20	−.03
6	.24	.06	.02	.15	2.11	2.01	1.81	1.97	.21	.11	−.02	.06	−.11	.04	−.10	.01
7	−.08	−.11	.24	.14	1.94	1.90	1.90	1.90	.06	.07	.39	−.03	−.10	−.10	−.09	.07
8	.05	.08	−.41	.04	1.77	1.92	1.93	1.69	.03	−.01	−.01	.02	−.23	−.10	−.10	−.31
9	.06	−.10	−.00	.10	1.90	2.01	2.01	2.12	.10	.03	−.04	.01	−.17	−.06	−.00	−.04
10	−.17	.31	−.13	.06	1.91	2.22	1.91	1.75	−.06	.21	−.02	.04	−.28	.13	−.26	−.06
11	.22	.19	−.01	.47	2.01	2.12	1.76	2.10	.11	.16	.03	.30	−.00	.03	−.25	.07
12	.30	.05	.16	−.14	2.00	2.04	2.11	2.13	.07	.04	.15	.09	.04	−.03	.09	−.03
13	.10	−.26	.19	.22	1.84	1.85	2.02	2.14	.09	−.11	.07	.21	−.16	−.16	.02	.12
14	.22	.03	.14	.06	2.05	1.81	1.94	1.86	.07	−.08	.14	.15	.04	−.24	−.03	.01
15	.02	.04	.17	.20	1.75	1.74	2.00	2.08	.05	.10	.19	.05	−.06	−.24	−.06	.12
16	.15	.05	.15	.06	2.05	1.89	1.88	2.01	.11	.09	.07	.10	.07	−.05	−.15	−.02
17	−.07	.18	.47	.21	1.88	1.87	1.83	1.60	−.06	.09	.50	.20	−.09	.05	−.06	−.16
18	.16	−.06	−.20	.02	2.03	1.86	1.72	1.90	.07	−.05	−.13	.09	−.00	.07	−.18	−.03
19	−.07	.09	.03	.00	1.94	1.98	1.87	1.81	.03	.02	.00	−.01	−.05	.03	−.18	−.09
20	.01	.20	−.14	−.13	1.90	1.99	1.91	1.84	.12	.19	−.10	−.02	−.10	.03	−.12	−.17
21	.10	−.10	.08	.08	1.91	1.89	1.84	2.16	.00	−.01	.16	−.05	.01	−.09	−.11	−.11
22	.13	−.00	.21	.30	2.02	1.94	1.98	2.16	.14	.13	.08	.30	.00	−.05	.01	−.01
23	.10	−.05	.12	.01	1.83	1.72	2.00	1.93	.16	−.02	.08	.06	−.03	−.14	.05	−.09
24	.40	.46	−.02	−.20	2.25	2.33	1.96	1.73	.24	.49	.03	−.12	.15	.29	.02	−.25
25	.03	−.30	.17	.14	2.14	1.85	1.75	2.01	.03	−.12	−.12	.03	−.02	−.17	−.14	−.07
M	.11	.04	.05	.07	1.99	1.95	1.90	1.92	.11	.07	.07	.08	−.04	−.05	−.09	−.07
SD	.14	.16	.18	.14	.14	.14	.09	.17	.11	.12	.16	.11	.10	.12	.10	.12
								mean absolute error	.12	.10	.12	.10	.08	.10	.11	.10
								SD	.10	.10	.12	.08	.07	.07	.07	.09

MAXCOV Estimations of Means

A3-50-20: True $P = .50$, $N = 300$, 2 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.21	.08	.08	.04	2.11	1.85	1.93	1.96	.02	.04	.11	.04	.07	−.06	−.10	.01
2	.01	.04	−.01	.05	1.94	2.06	1.98	1.86	.07	.07	.05	.05	−.12	.02	−.01	−.14
3	.17	.00	.06	.17	2.14	1.96	1.98	1.96	.15	.09	.06	.11	.08	.04	−.02	−.02
4	.15	.14	−.05	.03	1.97	1.97	1.79	2.06	.10	.11	.03	.01	.16	−.09	−.28	.06
5	.35	.12	−.00	−.03	2.12	2.01	1.72	1.87	.18	.15	.03	−.02	.05	.02	−.24	−.15
6	.11	.01	−.05	.09	1.77	2.01	1.98	2.01	−.02	.04	.05	.05	−.01	.02	−.00	−.08
7	.06	−.13	−.04	−.02	2.01	2.05	2.06	1.79	.03	−.14	.02	−.02	−.05	−.11	−.01	−.02
8	.04	.11	−.21	−.08	2.06	2.02	1.84	1.89	.04	.02	−.01	.04	.02	.02	−.10	−.01
9	−.33	.04	.28	−.08	1.61	1.96	1.84	1.84	−.24	.07	.20	−.07	−.29	−.07	−.15	−.05
10	.24	.16	−.01	−.06	2.15	1.98	1.64	2.05	.14	.05	−.02	.03	.07	−.08	−.20	.05
11	.33	.08	.21	−.04	1.88	2.14	1.98	1.96	.28	.09	.17	−.07	−.05	.11	.07	−.10
12	−.02	.07	−.19	.21	1.97	2.14	1.71	1.79	.00	−.00	−.06	.23	−.04	.03	−.22	.01
13	.26	−.05	.10	.21	2.13	1.81	2.06	2.07	.20	−.06	.12	.21	−.03	−.17	.15	.09
14	.21	−.07	−.01	.16	1.91	1.92	1.94	1.91	.18	−.03	.02	.12	−.07	−.07	−.15	−.08
15	−.05	−.09	.23	−.02	1.86	1.82	1.69	2.03	−.11	−.06	.17	.03	−.16	−.18	−.13	−.07
16	.05	−.01	.26	.15	1.93	2.09	1.98	2.03	.02	.06	.18	.02	−.14	−.14	.09	.02
17	.09	.19	.05	.22	2.09	2.12	2.11	2.07	.09	.09	.05	.17	.04	.02	−.05	.11
18	.06	.25	−.20	.08	2.03	2.10	1.96	2.10	−.01	.15	−.13	.11	−.06	.09	−.13	.03
19	.09	.11	−.05	.09	1.85	2.06	1.92	2.08	.05	.11	.03	.17	−.08	.04	−.05	.09
20	.05	.09	.18	.33	2.12	2.14	2.11	2.10	.06	.02	.14	.31	−.04	−.02	.06	.12
21	.27	.26	−.03	.11	2.20	2.09	2.04	1.93	.20	.22	.03	.06	.20	.12	−.02	.02
22	.02	−.08	−.09	−.04	2.00	1.98	1.79	1.81	−.03	−.01	−.06	.01	−.07	−.16	−.15	−.20
23	−.08	−.04	.05	.06	1.95	1.80	1.91	2.08	−.11	−.00	.12	.07	−.08	−.15	.01	.03
24	−.00	−.09	−.16	.25	1.87	1.94	1.95	1.98	.08	−.06	−.03	.19	−.03	−.08	−.06	−.14
25	−.09	.10	.11	−.03	2.06	1.84	2.14	1.98	−.02	.02	.07	.05	−.03	−.07	.00	.01
M	.09	.05	.02	.07	1.99	1.99	1.92	1.97	.05	.04	.05	.08	−.03	−.04	−.07	−.02
SD	.15	.10	.14	.11	.13	.11	.14	.10	.11	.08	.08	.09	.10	.09	.11	.08
						mean absolute error			.10	.07	.08	.09	.08	.08	.10	.07
								SD	.08	.05	.06	.08	.06	.05	.08	.05

MAXCOV Estimations of Means
A6-50-20: True $P = .50$, $N = 600$, 2 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.07	.08	.09	.09	2.17	2.09	1.94	1.94	.13	.13	.06	.05	.10	−.00	.00	−.11
2	.10	.11	.07	.03	2.02	2.11	1.94	1.94	.13	.02	.06	−.01	.05	.06	−.08	−.05
3	−.15	.11	−.02	−.06	1.99	2.09	1.84	1.96	−.03	.00	−.02	−.02	−.02	.08	−.08	−.03
4	.29	.14	−.03	−.03	1.76	2.00	1.81	1.97	.25	.05	−.10	−.01	−.32	−.02	−.22	−.05
5	.13	−.01	.13	.18	1.95	1.98	1.92	2.09	.05	−.05	.07	.08	−.04	−.02	−.06	.03
6	−.00	.10	.14	.13	1.98	1.99	2.06	2.03	.00	.04	.10	.04	−.07	−.04	−.00	.02
7	−.02	.03	−.07	.04	1.91	1.96	1.95	1.97	.00	.03	−.01	.02	−.10	.01	.02	.02
8	.16	−.03	−.02	.06	2.09	1.88	2.03	2.14	.07	−.07	.00	.07	.06	−.20	−.01	−.01
9	−.01	.06	−.14	.10	1.89	1.89	1.92	2.05	−.03	−.04	−.09	.10	−.04	−.08	−.15	−.01
10	.01	−.07	−.00	−.06	1.93	1.95	1.82	1.93	.00	−.08	−.06	−.03	−.01	−.01	−.14	−.06
11	−.05	−.10	.12	.04	1.97	1.91	1.91	2.01	−.06	−.07	.02	−.04	−.01	−.07	−.05	.02
12	.03	.04	.09	−.05	1.96	2.00	1.87	1.88	.12	−.05	.11	−.01	.03	−.05	−.03	−.11
13	.37	.05	.03	.01	1.68	2.04	1.94	2.06	.41	.07	.01	.01	−.22	.04	.00	.01
14	−.13	.09	.16	−.01	2.00	2.18	2.01	2.01	−.05	.01	.09	−.01	−.04	.07	.02	−.05
15	.43	−.07	.15	−.08	2.09	1.77	2.14	1.99	.40	−.08	.10	−.03	−.01	−.19	.09	−.06
16	.08	.44	.17	.13	1.98	1.90	2.16	2.08	.06	.42	.07	.11	−.04	−.10	.06	.04
17	.04	.14	.23	.10	1.98	2.03	2.04	2.04	−.05	.10	.22	.06	−.07	.04	.04	.08
18	.03	.04	.01	−.14	2.07	2.02	1.83	2.04	.08	.03	.03	−.09	.04	−.04	−.06	−.06
19	−.03	.05	.07	.01	2.00	1.98	1.96	2.04	.09	−.01	−.02	.05	−.05	−.00	−.03	.01
20	.09	.04	.01	.09	2.00	1.98	1.95	1.97	.10	.02	.06	.07	−.02	−.02	−.04	.03
21	.00	.00	.05	.18	1.80	1.95	1.99	2.17	−.11	.08	−.06	.17	−.11	−.05	−.04	.11
22	−.05	.02	.07	.03	1.98	1.88	2.00	1.94	−.00	−.04	.06	.02	−.05	−.09	.08	−.08
23	−.01	−.05	−.02	.13	2.00	1.98	2.03	2.00	.04	−.03	−.03	.01	−.01	−.05	.00	.08
24	.06	.07	−.02	−.02	1.96	2.05	1.96	2.01	.03	.09	.01	−.01	−.02	−.03	−.08	−.03
25	.10	−.14	−.04	.05	2.05	1.87	1.89	2.13	.14	−.08	.00	.06	.00	−.06	−.08	.05
M	.06	.05	.05	.04	1.97	1.98	1.96	2.02	.07	.02	.03	.03	−.04	−.03	−.03	−.01
SD	.13	.11	.08	.08	.10	.09	.09	.07	.12	.10	.07	.06	.08	.07	.07	.06
								mean absolute error	.10	.07	.06	.05	.06	.06	.06	.05
								SD	.11	.08	.05	.04	.07	.05	.05	.03

MAXCOV Estimations of Means

A3-25-20: True $P = .25$, $N = 300$, 2 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.03	−.00	.09	.02	1.98	1.89	1.90	1.87	.01	−.04	.06	.01	.08	−.04	−.19	−.03
2	.02	.14	.07	.15	1.74	2.02	2.05	1.99	.02	.24	.08	.09	−.14	−.06	−.04	.06
3	.07	−.10	.06	−.04	2.18	1.96	1.89	1.58	.02	−.05	.01	.00	.11	−.06	−.24	−.32
4	.10	.04	.05	.23	2.25	2.15	1.96	2.00	.09	.02	.02	.13	.06	.14	−.04	−.01
5	−.05	.09	.13	−.08	1.97	1.97	2.05	1.97	.02	.13	.04	.02	−.02	−.01	−.01	−.04
6	.20	−.17	−.09	.06	2.14	1.88	1.77	1.82	.12	.05	−.12	.04	−.03	−.18	−.17	−.18
7	−.00	.02	.08	.13	2.02	2.02	2.08	1.85	−.09	.03	.12	.07	−.03	.02	.06	−.18
8	−.01	.18	.03	.17	1.79	1.54	1.98	2.02	−.02	.12	.02	.14	−.13	−.35	−.02	.06
9	.05	−.02	−.06	.12	1.81	1.84	1.82	1.94	.04	−.07	−.08	−.02	−.12	−.21	−.24	−.03
10	.10	.07	.14	.03	1.84	1.89	1.85	1.81	.09	.05	.10	.04	−.03	−.24	−.13	−.20
11	.11	−.05	−.00	.10	1.98	1.94	1.90	1.90	.07	.03	.01	.04	−.26	−.05	−.15	−.13
12	.11	−.00	.24	−.10	1.68	1.82	1.87	1.94	.09	.02	.06	−.05	−.20	−.07	.06	−.01
13	.13	.24	.02	−.07	1.85	2.11	1.87	1.91	.05	.20	.04	.02	−.18	−.09	−.13	−.08
14	−.05	.04	.25	−.12	2.00	1.74	2.20	1.62	−.03	.01	.14	−.07	−.01	−.07	.02	−.39
15	.26	−.05	.04	−.12	2.26	1.92	1.83	1.78	.28	.02	−.01	−.00	.02	−.13	−.09	−.14
16	.18	−.04	.11	.09	1.71	1.72	2.23	2.04	.15	−.01	.12	.01	−.13	−.21	.01	.00
17	−.17	−.04	.09	.14	1.76	2.03	1.78	1.94	−.13	.02	.10	.11	−.27	−.05	−.04	−.12
18	−.09	−.09	.12	.01	1.76	1.86	1.96	1.80	.01	−.05	.01	.09	−.16	−.11	−.03	−.18
19	.24	.09	.11	−.06	1.94	2.05	1.91	1.90	.13	.08	.07	−.02	.03	.03	−.13	−.05
20	.15	.18	−.16	.22	1.87	2.09	1.82	1.92	.11	.16	−.09	.18	−.22	−.02	−.12	−.19
21	.14	.09	.12	−.09	2.01	2.13	1.97	1.71	.06	.11	.01	.02	.07	.08	−.03	−.12
22	−.00	.10	.20	.03	1.66	1.86	2.10	1.70	.04	.10	.10	.00	−.26	.03	.09	−.27
23	.03	.05	.09	.07	1.99	1.87	1.76	2.07	.08	−.01	.02	.03	−.04	−.16	−.16	−.04
24	−.08	−.03	.01	.13	1.70	1.60	1.81	1.95	−.05	−.04	.07	.05	−.37	−.22	.03	−.02
25	.12	.11	.14	.10	2.21	1.97	1.92	2.06	.10	.02	.21	.07	.14	−.07	.04	.02
M	.06	.03	.08	.05	1.92	1.91	1.93	1.88	.05	.05	.05	.04	−.08	−.08	−.07	−.10
SD	.10	.10	.09	.11	.18	.15	.13	.13	.08	.08	.07	.06	.13	.11	.09	.11
								mean absolute error	.08	.07	.07	.05	.12	.11	.09	.11
								SD	.06	.06	.05	.05	.10	.08	.07	.10

MAXCOV Estimations of Means
A6-25-20: True $P=.25$, $N=600$, 2 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.04	.04	−.01	.09	2.00	2.05	1.91	2.18	.01	.03	.02	.05	−.04	−.03	−.05	.07
2	−.03	.10	−.01	.24	2.00	2.04	1.84	1.83	−.01	.03	−.02	.14	−.08	.05	−.16	−.07
3	−.07	−.01	.01	−.02	1.81	2.08	1.79	2.02	.04	.01	−.01	−.07	−.12	−.03	−.04	−.04
4	.01	−.01	−.05	−.01	2.02	2.12	1.90	1.89	.02	.04	−.03	.00	−.11	.11	−.17	−.04
5	.14	.13	.16	.14	1.93	2.17	2.00	2.20	.10	.09	.09	.10	−.15	.18	.10	.16
6	.08	.04	.07	.03	2.01	1.96	2.03	1.98	.01	.06	.07	.06	−.02	−.06	.01	.00
7	.03	.02	.20	−.02	1.85	2.03	1.96	2.05	.07	.08	.07	−.00	−.06	−.05	−.08	−.09
8	−.01	.04	.07	.16	2.05	1.87	1.92	1.71	.07	.08	.04	.14	−.02	−.10	−.10	−.17
9	−.05	−.05	.02	−.02	1.95	1.90	2.02	2.01	−.03	−.05	−.03	−.05	−.03	−.09	.03	−.01
10	−.11	−.11	.05	.01	1.65	1.88	1.90	1.94	−.11	−.06	.02	.05	−.26	−.09	−.11	−.00
11	−.01	−.06	.09	.12	1.83	1.82	1.91	2.09	−.09	−.01	.02	.07	−.40	−.13	−.09	.11
12	.06	.17	.09	.01	1.84	1.91	1.58	1.87	.06	.10	.14	−.05	−.15	−.13	−.58	−.17
13	.06	.14	.08	−.05	2.08	2.07	1.94	1.92	.06	.04	.02	.02	.08	.03	−.12	−.05
14	.14	.11	.08	−.12	2.02	1.79	2.09	1.91	.09	.11	.04	−.09	.16	−.16	.19	−.17
15	.02	.01	.06	−.06	1.97	1.95	1.90	1.98	.00	.01	.04	−.05	−.05	−.15	−.14	−.20
16	−.08	.22	.04	.03	1.89	1.93	1.86	1.93	−.06	.20	−.04	.04	−.10	−.02	.01	.01
17	.03	−.05	.11	.15	1.95	1.92	2.05	2.14	−.04	−.07	.12	.08	−.08	−.23	.05	.01
18	.11	.01	.06	.06	1.98	2.01	1.95	1.74	.15	.05	−.01	.08	.03	.02	−.04	−.11
19	.14	.07	.05	.23	2.02	1.74	1.77	1.65	.04	.06	.09	.24	.13	−.20	−.18	−.37
20	−.04	.15	−.08	.12	1.74	2.05	1.75	1.84	.00	.10	.01	.12	−.22	.06	−.17	−.17
21	.02	.07	.12	.15	2.19	1.84	1.88	1.84	.00	.01	.04	.26	.12	−.14	−.09	−.07
22	.15	.07	.01	.10	1.99	2.20	1.94	1.94	.07	−.01	−.03	.09	.06	−.07	.04	−.02
23	.07	.10	−.03	.17	1.93	1.88	1.91	1.98	−.02	.06	−.01	.11	−.06	−.07	−.11	−.06
24	.07	.04	.17	.02	2.01	2.19	1.85	1.83	.02	.06	.07	.07	−.02	.18	.05	−.17
25	−.03	.03	.07	.03	1.88	2.08	1.92	1.86	−.02	.03	.07	.04	−.22	.11	.03	−.22
M	.03	.05	.06	.06	1.94	1.98	1.90	1.93	.02	.04	.03	.06	−.06	−.04	−.07	−.07
SD	.07	.08	.06	.09	.11	.12	.10	.13	.06	.06	.05	.08	.13	.11	.14	.11
								mean absolute error	.05	.06	.05	.08	.11	.10	.11	.10
								SD	.04	.04	.03	.06	.09	.06	.11	.09

MAXCOV Estimations of Means

A3-10-20: True $P = .10$, $N = 300$, 2 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	−.12	.12	−.01	−.09	1.40	1.94	1.73	1.69	−.06	.07	.01	−.02	−.51	−.45	−.32	−.36
2	.01	.08	.10	−.02	1.68	1.84	1.29	1.46	.00	.07	.06	−.07	−.05	−.35	−.61	−.47
3	.12	−.00	−.01	−.04	1.54	1.89	1.52	1.64	.08	.05	.01	−.04	−.42	−.37	−.39	−.35
4	−.04	−.07	.04	−.07	1.62	1.63	1.74	1.57	−.01	−.06	−.01	−.01	−.67	−.23	−.47	−.36
5	−.06	−.02	−.00	−.13	1.43	1.72	1.65	1.40	−.14	−.04	.01	.02	−.53	−.34	−.57	−.39
6	−.09	.07	−.18	.08	1.62	1.51	1.43	1.86	−.08	.05	−.17	.05	−.39	−.81	−.52	−.29
7	.06	−.03	.03	.01	1.67	1.54	1.29	1.27	.02	.04	.06	−.13	−.44	−.31	−.65	−.31
8	−.08	.00	−.10	.02	1.76	1.45	1.40	1.68	−.06	.07	−.10	−.01	−.37	−.60	−.42	−.55
9	.06	.01	−.03	−.03	1.79	2.19	1.60	1.54	.03	.00	.05	−.05	−.31	−.26	−.39	−.46
10	−.32	−.08	−.04	−.05	.90	1.71	1.43	1.60	−.22	.00	−.06	−.11	−1.04	−.44	−.58	−.11
11	.11	.05	.04	.01	1.50	1.55	1.80	1.91	.03	−.02	.04	.02	−.32	−.45	−.51	−.43
12	−.08	.06	−.02	−.08	1.51	1.80	1.79	1.92	−.07	.06	.00	.00	−.13	−.34	−.21	−.18
13	−.01	−.11	−.01	−.02	1.77	1.99	1.58	1.74	−.03	−.02	−.01	.01	−.32	−.28	−.57	−.33
14	−.04	.17	.09	−.01	1.95	1.58	1.63	1.64	.02	.03	.03	−.04	−.01	−.52	−.12	−.30
15	.09	.06	.05	.01	1.45	1.93	1.78	1.44	.06	−.02	.03	−.06	−.68	−.25	−.24	−.33
16	−.01	−.00	.04	.12	1.56	1.78	1.40	1.79	−.07	−.02	.08	−.02	−.42	−.33	−.50	.03
17	.16	−.02	.03	.09	1.48	1.51	1.80	1.64	.07	.04	.05	.03	−.43	−.35	−.25	−.34
18	−.00	−.08	−.01	.08	1.35	1.47	1.45	1.71	−.02	−.02	.01	.02	−.34	−.68	−.57	−.41
19	−.09	−.05	.09	−.03	1.18	1.57	1.23	1.51	−.14	−.06	.04	−.00	−.89	−.26	−.71	−.41
20	.10	.05	−.15	.02	1.92	1.75	1.32	1.17	.04	.03	−.05	.11	−.15	−.32	−.37	−.84
21	.01	−.02	−.07	−.10	1.86	2.03	1.45	1.55	.02	−.03	−.21	−.06	−.35	−.18	−.37	−.41
22	.02	.08	.04	.14	1.28	1.86	1.82	2.08	−.01	.02	.00	.02	−.60	−.30	−.36	.08
23	−.03	.06	−.06	−.07	1.77	1.70	1.69	1.50	−.01	−.04	−.04	−.08	−.26	−.13	−.27	−.53
24	−.01	.02	.21	−.09	1.47	1.42	1.07	1.37	.01	.04	.14	−.03	−.16	−.78	−.99	−.61
25	.04	−.02	.08	−.04	1.43	1.93	1.66	1.75	.02	.07	.07	−.02	−.61	−.20	−.52	−.02
M	−.01	.01	.01	−.01	1.55	1.73	1.54	1.62	−.02	.01	.00	−.02	−.42	−.38	−.46	−.35
SD	.10	.06	.08	.07	.23	.20	.20	.21	.07	.04	.07	.05	.24	.17	.18	.20
								mean absolute error	.05	.04	.05	.04	.42	.38	.46	.36
								SD	.05	.02	.05	.03	.24	.17	.18	.18

MAXCOV Estimations of Means

A6-10-20: True $P = .10$, $N = 600$, 2 SD Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.10	.08	.07	–.02	1.95	1.78	2.10	1.71	.05	.04	.05	.01	–.14	–.19	–.01	–.21
2	–.06	.05	.10	.05	1.82	2.02	1.91	2.01	.01	.02	.02	.04	–.12	–.22	–.10	–.08
3	.05	.04	–.05	.02	2.05	2.04	1.63	1.87	.02	.03	–.04	.03	.07	–.14	–.23	–.16
4	.04	.08	–.03	.03	1.90	1.96	1.67	1.69	.02	.05	.01	.02	–.14	–.10	–.32	–.31
5	–.02	.07	–.01	–.02	1.58	1.83	1.73	1.79	–.00	.08	.03	–.03	–.23	–.28	–.39	–.15
6	.02	.06	.13	–.01	1.91	1.53	1.88	1.28	.01	.04	.04	–.02	–.09	–.31	–.29	–.18
7	–.05	.01	.07	–.02	1.77	1.40	1.66	1.79	–.03	–.01	.05	–.01	.02	–.37	–.29	–.08
8	.02	–.07	.03	.05	1.51	1.95	1.76	1.58	–.01	–.04	.02	.00	–.41	–.16	–.15	–.28
9	–.04	.01	.08	.00	1.86	1.89	1.93	1.93	.00	.01	.02	.00	–.22	–.01	–.06	–.07
10	–.01	.03	–.13	.01	1.85	1.65	1.79	1.75	–.06	.00	–.16	–.00	–.21	–.08	–.24	–.18
11	.00	.01	.01	.07	1.89	1.66	1.87	1.87	–.00	.02	–.03	.00	–.06	–.15	–.00	–.22
12	–.11	.16	–.00	.11	1.70	1.16	1.70	2.11	–.05	.10	–.02	.05	–.23	–.74	–.13	–.10
13	–.02	.11	.03	–.00	1.69	2.12	1.99	2.02	–.01	.05	.01	–.03	–.20	–.01	–.14	–.07
14	–.11	.02	.10	.01	1.70	1.74	1.77	1.77	–.07	.04	.02	.02	–.37	–.09	–.34	–.40
15	.01	–.04	.02	.03	1.69	1.87	1.86	1.92	.01	.03	.00	–.00	.01	–.06	.11	.07
16	.03	.06	–.02	.01	1.68	2.07	1.46	2.00	.02	.00	.01	.06	–.25	–.08	–.20	–.15
17	–.02	.01	–.04	.15	1.78	1.54	1.55	2.07	.04	.01	.02	.02	–.36	–.46	–.26	–.08
18	.05	.00	.06	.04	1.53	1.80	1.91	1.76	.06	–.02	.05	.00	–.41	.09	–.14	–.29
19	.11	.01	–.02	.06	1.96	1.73	1.72	1.57	.06	.06	–.03	.02	–.01	–.14	–.24	–.42
20	.01	.00	.07	–.11	1.87	1.74	1.72	1.80	.02	–.02	.03	–.09	–.32	–.42	–.27	–.08
21	–.05	.08	.10	.10	1.99	1.96	1.68	1.84	–.03	.02	.05	.04	–.03	–.14	–.32	–.26
22	.01	–.00	.06	.02	1.90	1.72	1.82	2.22	.04	–.03	.05	.03	–.08	–.37	–.07	–.13
23	.02	.05	.00	–.02	1.66	1.86	1.80	1.69	–.01	.04	–.02	.02	–.42	–.29	–.07	–.12
24	.04	.04	–.02	–.02	1.60	1.79	1.77	1.78	.00	–.04	.02	.02	–.41	–.29	–.09	–.37
25	.08	.03	.05	.06	1.68	1.96	1.77	1.76	.07	.03	.04	.07	–.27	–.03	–.07	–.19
M	.00	.04	.02	.02	1.78	1.79	1.78	1.82	.01	.02	.01	.01	–.20	–.20	–.17	–.18
SD	.05	.05	.06	.05	.15	.22	.14	.19	.04	.04	.04	.03	.15	.17	.12	.11
								mean absolute error	.03	.03	.03	.02	.20	.21	.18	.18
								SD	.02	.02	.03	.02	.14	.17	.11	.10

MAXCOV Estimations of Means

A3-50-15: True $P=.50$, $N=300$, 1.5 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.05	.09	.01	.23	1.71	1.30	1.58	1.49	.08	.05	.09	.21	.21	–.14	.04	–.02
2	–.31	.14	–.17	–.07	1.22	1.74	1.61	1.40	–.25	.12	–.12	–.18	–.14	.16	.04	–.12
3	–.20	–.19	.07	.15	1.34	1.53	1.39	1.67	–.22	–.05	–.06	.08	–.10	.02	–.02	.16
4	–.06	–.01	.14	–.14	1.29	1.30	1.41	1.09	–.06	–.06	.18	–.03	–.13	–.21	.04	–.33
5	–.02	.01	–.07	–.05	1.66	1.60	1.35	1.74	–.01	.02	–.23	–.08	.11	–.00	–.01	.16
6	.02	.01	.05	–.10	1.53	1.65	1.66	1.28	–.03	.06	.08	.07	–.03	–.01	.07	–.21
7	–.04	–.03	–.11	–.23	1.75	1.29	1.63	1.48	.08	–.08	–.05	–.22	.15	–.17	–.01	–.14
8	–.13	.26	.09	.45	1.43	1.70	1.36	1.69	–.16	.25	–.04	.37	–.08	.22	–.07	.11
9	.24	–.05	–.09	–.16	1.55	1.39	1.47	1.17	.04	–.03	–.12	–.12	–.07	–.23	–.00	–.28
10	–.23	–.24	–.14	–.02	1.12	1.44	1.42	1.56	–.12	–.21	–.18	–.15	–.31	–.01	–.10	–.08
11	–.09	–.11	–.01	.09	1.63	1.34	1.55	1.68	–.07	–.12	–.04	.11	.14	–.11	–.03	.19
12	–.02	.13	–.24	–.19	1.49	1.58	1.51	1.39	–.08	.06	–.11	–.12	–.04	.05	–.07	–.12
13	–.16	.17	–.16	–.04	1.59	1.39	1.36	1.30	.01	–.02	–.17	–.08	.00	–.03	–.07	–.21
14	–.08	.07	–.22	.10	1.57	1.59	1.51	1.38	–.01	–.03	–.21	–.05	–.01	.07	–.08	–.21
15	.19	.16	–.14	–.02	1.49	1.57	1.63	1.20	.16	.27	–.10	.01	.02	.05	–.05	–.29
16	–.09	–.24	–.05	–.21	1.22	1.50	1.48	1.45	–.11	–.08	–.11	–.31	–.07	–.00	–.10	–.14
17	–.10	.12	–.07	–.14	1.53	1.56	1.48	1.32	–.11	.12	.04	–.11	.08	–.01	.07	–.27
18	–.12	–.16	–.00	.08	1.52	1.14	1.47	1.40	–.12	–.31	–.06	.09	–.03	–.29	–.16	–.03
19	–.14	.17	.00	.02	1.44	1.58	1.49	1.67	–.17	.08	–.04	.01	–.19	.08	–.02	.07
20	.22	.39	–.06	.17	1.55	1.58	1.60	1.42	.25	.20	–.02	.15	–.04	.15	.13	.05
21	–.02	.25	–.10	–.01	1.15	1.46	1.46	1.67	–.08	.37	–.02	.01	–.32	–.10	–.03	.14
22	–.30	–.09	–.32	–.10	1.33	1.51	.93	1.39	–.34	–.11	–.35	–.10	–.13	.07	–.50	–.08
23	.61	–.11	–.06	.19	1.80	1.58	1.43	1.57	.67	–.10	.05	.27	.13	.11	–.08	.14
24	.08	–.19	–.10	–.15	1.60	1.37	1.43	1.44	–.01	–.22	.01	–.10	.12	.01	–.20	–.09
25	.25	.10	.29	.27	1.85	1.36	1.67	1.71	.14	.16	.26	.26	.22	–.13	.21	.21
M	–.02	.03	–.06	.00	1.49	1.48	1.48	1.46	–.02	.01	–.05	–.00	–.02	–.02	–.04	–.05
SD	.20	.16	.13	.17	.19	.14	.15	.18	.19	.16	.13	.16	.14	.13	.13	.16
								mean absolute error	.13	.13	.11	.13	.12	.10	.09	.15
								SD	.14	.10	.08	.09	.08	.08	.10	.08

MAXCOV Estimations of Means

A6-50-15: True $P = .50$, $N = 600$, 1.5 *SD* Separation on all Indicators

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.05	–.10	.04	.20	1.49	1.33	1.57	1.53	–.02	–.09	–.07	.21	–.07	–.14	.11	.04
2	–.11	–.01	–.21	–.19	1.42	1.50	1.46	1.34	–.18	–.12	–.22	–.26	–.02	.02	–.03	–.20
3	–.17	.18	–.03	.02	1.47	1.66	1.43	1.74	–.03	.17	–.06	.12	.01	.14	–.10	.21
4	.27	–.09	.03	–.13	1.40	1.35	1.46	1.49	.24	–.09	–.06	–.09	–.05	–.14	–.04	–.09
5	–.18	–.00	.27	–.10	1.39	1.51	1.22	1.56	–.13	.02	.23	–.14	–.11	–.01	–.19	.04
6	–.13	.33	.28	–.01	1.32	1.54	1.43	1.39	–.23	.25	.30	.01	–.21	–.00	–.21	–.07
7	–.05	.06	–.09	.31	1.54	1.55	1.43	1.33	–.04	–.10	.01	.26	–.04	.04	–.15	–.14
8	.30	.08	.06	–.03	1.39	1.63	1.50	1.46	.34	.09	.00	–.00	–.10	.07	–.01	.08
9	–.16	–.07	–.11	.21	1.42	1.51	1.42	1.73	–.05	.01	–.14	.28	.01	–.07	–.12	.12
10	.01	.12	.16	.12	1.66	1.14	1.56	1.42	.18	.12	.11	.03	.06	–.43	.17	–.11
11	–.03	.07	.12	–.02	1.53	1.56	1.33	1.29	–.02	.09	.14	–.01	–.07	.04	–.21	–.35
12	–.15	.08	–.18	–.16	1.33	1.78	1.37	1.40	–.17	.04	–.17	–.13	–.07	.11	–.16	.02
13	–.02	.09	.19	.18	1.58	1.50	1.58	1.35	–.06	.05	.16	.11	.12	.06	.05	–.14
14	.06	–.08	–.10	–.10	1.60	1.61	1.26	1.51	.17	–.06	–.01	–.05	.10	.09	–.17	.03
15	–.20	.09	.04	.07	1.45	1.59	1.50	1.53	–.18	.07	–.01	.13	–.09	.12	–.04	.03
16	.34	.03	–.04	.29	1.60	1.43	1.54	1.69	.25	–.08	.07	.25	.08	–.05	.07	.17
17	.05	.21	.02	.06	1.56	1.48	1.40	1.49	.01	.16	–.08	–.01	.09	–.07	–.08	–.02
18	.06	–.15	–.10	–.08	1.62	1.31	1.28	1.43	.07	–.09	–.12	–.03	.03	–.12	–.20	–.03
19	.01	–.15	.35	.03	1.53	1.55	1.27	1.48	–.04	–.04	.28	.01	–.09	.09	–.22	–.03
20	.01	–.00	–.01	.04	1.29	1.55	1.33	1.58	.03	–.09	.05	–.02	–.24	–.00	–.15	–.06
21	.24	–.06	–.10	.29	1.64	1.28	1.37	1.57	.19	–.02	–.05	.28	.15	–.16	–.17	.13
22	–.05	–.15	.06	–.15	1.57	1.57	1.08	1.52	–.06	–.08	.09	–.22	–.00	.04	–.37	.07
23	–.09	.08	.05	–.05	1.47	1.71	1.76	1.53	–.04	.06	–.01	–.04	.10	.15	.20	.04
24	.01	.25	.08	–.09	1.64	1.58	1.44	1.53	–.01	.13	.01	–.12	.10	.13	–.06	.03
25	.13	.05	.09	–.04	1.46	1.57	1.36	1.67	.10	–.02	.06	–.02	.00	–.00	–.24	.06
M	.01	.04	.03	.03	1.49	1.51	1.41	1.50	.01	.02	.02	.02	–.01	–.00	–.09	–.01
SD	.15	.12	.14	.15	.10	.14	.14	.12	.14	.10	.13	.15	.10	.13	.13	.12
								mean absolute error	.11	.09	.10	.11	.08	.09	.14	.09
								SD	.09	.05	.08	.10	.06	.09	.08	.08

MAXCOV Estimations of Means
N3-50-20: True $P = .50$, $N = 300$, 2 *SD* Separation on all Indicators
Nuisance Covariance in Taxon and Complement Groups

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	-.00	.27	.51	.08	1.69	1.83	1.96	1.86	-.04	.28	.38	.11	-.18	-.21	-.05	-.17
2	.65	.01	.33	-.07	1.91	1.89	2.04	1.86	.50	-.07	.20	-.05	-.24	-.15	-.09	-.16
3	.05	.01	.04	.13	1.59	2.12	1.69	1.78	-.13	.07	.00	-.00	-.50	-.01	-.34	-.23
4	.17	-.02	.07	.06	1.91	1.98	2.02	1.88	.07	.07	.24	.14	-.05	-.02	.04	-.04
5	.17	.14	.29	.20	2.00	1.91	2.10	2.04	.20	.15	.35	.30	.02	-.02	-.01	-.01
6	.05	.37	.18	.20	1.89	2.12	1.63	1.58	.05	.24	.18	.21	-.07	.16	-.22	-.51
7	-.07	.09	-.11	.20	1.74	1.43	1.89	1.89	-.04	.09	-.00	.13	-.28	-.44	-.05	-.11
8	.30	.10	.25	.16	1.78	1.97	1.93	1.96	.28	.15	.26	.10	-.29	-.10	-.01	-.08
9	.15	.08	-.05	.03	1.97	1.85	1.79	1.92	.12	.13	-.00	.06	.02	-.10	-.15	-.09
10	.14	.28	.14	-.01	1.91	1.81	1.87	1.79	.10	.18	.18	-.14	-.01	-.24	-.15	-.19
11	.44	.00	.33	.40	2.01	1.80	2.09	1.99	.40	.02	.27	.31	.00	-.11	.09	.01
12	.25	.16	.26	.08	2.07	1.96	1.73	1.96	.24	.07	.18	.13	-.08	.01	-.38	-.03
13	.02	.25	.28	.14	1.75	2.05	2.04	2.04	.03	.25	.15	.30	-.18	.16	-.09	.07
14	.04	.02	.23	.03	1.99	1.86	1.96	1.93	.04	-.07	.07	.14	-.09	-.19	-.08	-.05
15	-.08	.04	.01	.12	1.82	1.86	1.87	1.96	-.10	.01	.05	-.01	-.24	-.15	-.10	-.11
16	.20	.18	.17	.24	2.01	1.80	1.95	1.79	.16	.14	.16	.27	.05	-.19	.09	-.19
17	.10	.28	.15	-.09	1.94	2.19	1.95	1.69	.03	.18	-.01	.02	-.03	.12	-.02	-.22
18	-.01	.49	.75	-.00	1.68	2.06	2.43	1.73	-.17	.32	.68	.01	-.32	.09	.35	-.26
19	.06	-.05	.20	-.17	1.85	1.95	1.77	1.72	.15	.09	.20	-.04	-.04	-.03	-.08	-.18
20	.01	.05	.26	.27	1.80	1.61	2.10	1.87	-.09	.00	.26	.21	-.15	-.44	-.05	-.21
21	.21	.23	.28	.52	2.05	1.91	2.08	2.15	.13	.23	.28	.37	-.09	-.28	-.00	.02
22	.30	-.03	.29	.06	1.56	1.66	1.91	1.56	.33	-.02	.19	-.00	-.50	-.34	-.05	-.56
23	-.09	.23	.14	.23	1.90	1.79	2.06	1.96	-.00	.10	.08	.20	-.11	-.31	-.08	.02
24	.33	.17	-.02	.14	2.06	2.08	1.73	2.11	.17	.30	-.07	.14	.19	.03	-.28	.01
25	.00	.18	-.03	.32	2.03	1.98	1.81	2.02	.13	.12	-.06	.18	-.13	-.12	-.24	-.14
M	.14	.14	.20	.13	1.88	1.90	1.94	1.88	.10	.12	.17	.12	-.13	-.12	-.08	-.14
SD	.17	.13	.18	.15	.14	.17	.17	.15	.16	.11	.16	.13	.16	.17	.15	.15
						mean absolute error			.15	.13	.18	.14	.15	.16	.12	.15
								SD	.12	.09	.15	.11	.14	.12	.11	.14

MAXCOV Estimations of Means
N6-50-20: True $P=.50$, $N=600$, 2 SD Separation on all Indicators
Nuisance Covariance in Taxon and Complement Groups

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.31	.07	.00	.14	2.13	1.90	1.73	1.86	.29	–.00	.04	.09	.04	–.10	–.28	–.13
2	.15	.05	.05	.08	2.08	1.96	1.87	2.02	.19	.08	.06	.03	–.04	–.03	–.20	–.06
3	–.00	.21	.16	.07	2.13	2.14	1.95	1.88	.02	.19	.18	.08	.08	.06	–.10	–.14
4	.07	.27	.09	.19	2.09	2.07	1.98	1.96	.09	.24	.12	.14	.05	–.02	–.08	–.06
5	.15	.44	.30	.66	2.05	1.89	1.91	1.48	.24	.45	.27	.68	.11	–.06	–.04	–.48
6	.03	.31	.29	.24	1.87	1.93	1.57	1.90	.00	.35	.32	.27	–.09	–.13	–.46	–.17
7	–.10	.01	.08	.14	1.88	1.88	1.94	1.91	–.01	.00	.08	.23	–.20	–.19	–.08	–.07
8	.51	.06	.45	.06	1.44	1.81	1.71	1.62	.43	.07	.42	–.01	–.68	–.14	–.34	–.33
9	.04	.15	.04	.14	1.73	1.85	1.77	1.90	–.03	.08	.01	.06	–.20	–.15	–.16	–.02
10	–.07	.12	.07	–.00	1.82	2.09	1.88	1.90	–.09	.05	.04	.02	–.18	.07	–.19	–.12
11	.29	.22	.00	.07	2.06	2.07	1.87	1.90	.29	.21	.07	.08	–.02	.07	–.11	–.14
12	.05	–.02	.21	.14	1.91	1.91	1.86	1.90	.10	.01	.16	.17	–.07	–.15	–.10	–.12
13	–.03	.15	.14	.22	1.75	2.12	2.01	1.94	–.05	.17	.12	.18	–.19	.06	–.06	–.14
14	.11	.06	.03	.07	1.92	2.01	1.91	1.94	.09	.14	.07	.12	–.03	.05	–.12	–.04
15	.11	–.00	.33	–.02	2.00	1.88	1.98	1.85	.11	.03	.28	.02	.00	–.13	–.05	–.14
16	–.09	–.21	.03	–.03	1.88	1.76	1.93	1.83	–.06	–.16	.10	–.04	–.10	–.20	–.15	–.27
17	–.06	.05	.18	.07	2.01	2.01	2.05	1.98	–.02	.09	.18	.04	–.07	–.11	–.00	–.08
18	–.08	–.13	.14	–.03	1.80	1.68	2.02	1.81	–.14	–.11	.09	.01	–.21	–.23	–.00	–.24
19	.08	.25	.49	.79	1.95	1.93	1.73	1.90	.10	.24	.35	.72	.03	–.06	–.28	–.15
20	.08	.18	–.01	.17	1.86	1.93	1.88	1.73	.12	.16	.04	.16	–.19	–.09	–.21	–.29
21	.05	.24	.18	.15	1.80	1.94	1.90	1.85	.01	.26	.12	.12	–.12	–.05	–.09	–.03
22	–.08	.08	.04	.16	2.10	1.97	1.96	1.79	.01	.12	.06	.05	–.02	–.17	–.15	–.19
23	.02	–.01	.18	.11	1.99	1.89	2.07	1.98	.00	.11	.20	.06	–.02	–.11	–.03	–.03
24	–.02	.04	.07	.05	2.09	2.22	1.95	1.89	.01	.10	.03	.17	.07	.11	–.02	–.14
25	.31	.02	.22	.06	1.86	1.91	1.86	1.88	.30	.01	.18	.13	–.14	–.02	–.11	–.18
M	.07	.10	.15	.15	1.93	1.95	1.89	1.86	.08	.12	.14	.14	–.09	–.07	–.14	–.15
SD	.15	.14	.13	.19	.16	.12	.11	.11	.14	.13	.11	.18	.15	.09	.11	.10
								mean absolute error	.11	.14	.14	.15	.12	.10	.14	.15
								SD	.11	.11	.11	.18	.13	.06	.11	.10

MAXCOV Estimations of Means

D3-50-v1: True $P = .50$, $N = 300$, Separation on $x = 2.00$ *SD*, $y = 1.75$ *SD*, $z = 1.50$ *SD*, $v = 1.25$ *SD*

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	.06	−.26	.01	.10	1.46	1.22	1.06	1.23	.11	−.09	.09	.11	−.47	−.39	−.47	−.02
2	.07	.05	.19	−.12	1.99	1.80	1.44	1.22	.04	−.05	.19	−.16	−.11	−.13	−.06	−.23
3	.57	−.20	−.12	.39	2.42	1.68	1.38	1.24	.61	−.13	−.12	.44	.17	−.23	−.17	−.11
4	.44	.04	−.01	−.30	1.79	1.61	1.32	1.10	.38	−.05	−.15	−.39	−.25	−.05	−.28	−.26
5	.11	.03	−.07	.01	1.64	1.75	1.47	1.21	.03	.08	.01	−.07	−.35	−.04	−.08	−.11
6	.10	.08	.06	.29	1.52	1.59	1.32	1.22	.12	.06	.05	.13	−.65	−.21	−.40	−.15
7	.00	.24	.08	.12	1.59	1.49	1.53	1.34	−.00	.28	.05	.11	−.40	−.21	.15	−.05
8	.18	−.05	.14	.36	1.90	1.65	1.43	1.43	.11	−.12	.18	.31	−.13	−.12	−.05	.22
9	.07	.20	.07	.09	1.98	1.86	1.65	1.42	.07	.13	.09	−.05	−.12	.04	.15	.09
10	.32	−.05	−.20	.12	2.03	1.34	1.31	1.27	.18	−.13	−.19	.04	−.14	−.38	−.15	.06
11	.33	.15	.24	.15	1.79	1.66	1.68	1.23	.27	.05	.07	.22	−.22	−.17	.13	.10
12	.43	.31	.39	−.05	1.69	1.91	1.39	1.22	.34	.17	.29	−.22	−.26	.19	.01	.03
13	−.18	−.12	.19	−.12	1.70	1.34	1.69	1.31	−.04	−.04	.21	.00	−.22	−.37	.13	.11
14	−.05	−.02	−.07	−.10	2.07	1.60	1.61	1.09	−.01	−.04	.01	−.12	−.08	−.08	−.05	−.11
15	−.08	.01	.22	−.01	1.77	1.79	1.63	1.20	.06	.07	.27	−.00	−.29	−.07	.15	−.11
16	.24	.16	.02	.22	2.25	1.58	1.38	1.27	.24	.23	.06	.25	.11	.05	−.07	−.07
17	.13	−.03	.09	.44	1.94	1.53	1.11	1.60	.02	−.05	.12	.44	−.07	−.29	−.35	.23
18	−.27	.10	.26	−.27	1.67	1.87	1.57	1.13	−.08	.17	.24	−.26	−.33	.18	.17	−.08
19	−.08	.10	−.12	−.06	1.66	1.80	1.22	1.10	−.02	.03	−.27	−.03	−.39	−.05	−.34	−.08
20	.54	.27	.22	.10	1.98	1.82	1.51	1.21	.55	.14	.32	.21	−.14	.00	.09	.06
21	−.22	.29	−.09	.22	1.56	1.24	1.36	1.09	−.12	.24	−.09	.25	−.37	−.33	−.11	−.10
22	.42	.30	−.08	.29	1.93	1.31	1.23	1.38	.41	.30	−.14	.38	−.12	−.40	−.14	.10
23	−.04	.38	−.10	−.07	1.83	1.79	1.24	1.27	−.03	.35	−.16	−.10	−.03	.10	−.24	.03
24	−.03	.08	−.00	.15	1.91	1.73	1.47	1.52	−.03	.02	.10	.09	−.03	−.06	.12	.13
25	.02	.16	.07	.01	1.68	1.66	1.34	1.07	.01	.14	−.06	−.10	−.37	.01	−.15	−.16
M	.12	.09	.05	.08	1.83	1.62	1.41	1.26	.13	.07	.05	.06	−.21	−.12	−.08	−.02
SD	.23	.16	.14	.19	.22	.20	.17	.13	.19	.14	.16	.21	.18	.17	.19	.13
								mean absolute error	.16	.13	.14	.18	.23	.17	.17	.11
								SD	.17	.09	.09	.13	.15	.13	.11	.06

MAXCOV Estimations of Means

D6-50-v1: True $P = .50$, $N = 600$, Separation on $x = 2.00$ *SD*, $y = 1.75$ *SD*, $z = 1.50$ *SD*, $v = 1.25$ *SD*

Sample	Pooled Estimates								Error in Pooled Estimates							
	Complement				Taxon				Complement				Taxon			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	−.10	.29	.12	.15	1.73	1.61	1.46	1.18	−.09	.22	.11	.06	−.28	−.19	−.18	−.12
2	.05	.45	.24	.10	1.82	1.72	1.45	1.21	.01	.37	.18	.09	−.17	−.09	−.09	−.05
3	.12	.09	.04	−.06	1.89	1.77	1.44	1.30	.18	.11	.01	−.01	−.11	.00	.01	−.02
4	.09	.29	.20	.08	1.94	1.26	1.28	1.20	−.05	.19	.21	.08	−.14	−.43	−.27	.03
5	.41	.31	.44	.17	1.65	1.67	1.37	1.16	.41	.35	.41	.05	−.33	−.17	−.03	−.18
6	.68	.21	−.13	−.06	2.22	1.78	1.36	1.37	.70	.19	−.14	−.04	.19	−.07	−.10	.11
7	−.06	.06	.09	−.13	1.81	1.83	1.58	1.11	−.02	.06	.08	−.16	−.18	.02	.10	−.17
8	.35	−.01	.25	.37	1.64	1.65	1.47	1.35	.26	−.02	.27	.14	−.35	−.11	−.03	.17
9	.35	.07	.01	.21	2.00	1.50	1.64	1.21	.35	.12	.05	.19	−.05	−.31	.07	−.03
10	.33	.06	−.02	.03	1.64	1.72	1.50	1.24	.39	.02	.10	.08	−.34	.01	−.04	−.06
11	.10	−.12	.01	.06	1.37	1.66	1.50	1.33	.16	−.00	−.08	.07	−.67	−.18	−.04	.07
12	.03	.43	.05	.17	1.20	1.24	1.27	1.39	.04	.41	.05	.14	−.84	−.54	−.26	.05
13	.17	.09	.12	.15	1.75	1.69	1.49	1.31	.14	−.01	.14	.09	−.24	.04	.01	−.02
14	−.03	.20	−.09	−.06	1.73	1.41	1.25	1.17	−.15	.07	−.11	−.01	−.21	−.32	−.23	−.06
15	.58	.15	.14	−.04	1.79	1.85	1.47	1.12	.53	.14	.10	−.09	−.28	.02	−.11	−.20
16	.08	.16	.11	−.19	2.13	1.89	1.28	1.26	.09	.18	.23	−.16	.03	−.05	−.23	.02
17	.20	.15	.18	.07	1.90	1.86	1.51	1.19	.31	.19	.23	.06	−.12	.14	−.09	.02
18	.37	−.01	.22	.00	1.80	1.56	1.34	1.13	.36	−.03	.25	−.07	−.24	−.12	−.16	−.20
19	.42	.36	.20	.02	2.01	1.64	1.80	1.09	.42	.41	.26	.04	.03	−.14	.27	−.18
20	−.04	.10	.17	.34	2.05	1.83	1.69	1.11	−.06	.09	.15	.22	−.03	.03	.16	−.17
21	.04	.05	.09	.16	1.93	1.73	1.72	1.25	.14	.03	.11	.08	−.08	−.09	.06	.01
22	.31	−.00	.22	.13	1.40	1.62	1.30	1.20	.31	.03	.14	.18	−.54	−.15	−.11	−.13
23	−.24	−.07	−.02	−.24	1.48	1.54	1.46	1.33	−.14	−.10	−.05	−.17	−.55	−.27	.03	−.04
24	.70	.44	.01	.40	1.61	1.63	1.63	1.24	.76	.41	.07	.38	−.31	−.10	.04	.08
25	.06	.16	.03	.11	1.81	1.73	1.52	1.35	.06	.04	.06	.10	−.17	−.04	.10	.11
M	.20	.16	.11	.08	1.77	1.66	1.47	1.23	.20	.14	.11	.05	−.24	−.12	−.04	−.04
SD	.24	.16	.12	.16	.24	.16	.14	.09	.24	.15	.13	.13	.22	.15	.13	.11
								mean absolute error	.24	.15	.14	.11	.26	.14	.11	.09
								SD	.20	.14	.09	.08	.20	.13	.08	.07

APPENDIX H

Estimates of "Complement and Taxon Means" From Nontaxonic Samples

Below are pooled estimates of "complement and taxon means" (using abscissa intervals) over 25 samples for nontaxonic samples.

Sample Configuration[a]	r_{ij}	N	Estimates of "Complement Means"								Estimates of "Taxon Means"							
			x	SD	y	SD	z	SD	v	SD	x	SD	y	SD	z	SD	v	SD
E300	.26	300	–.46	.24	–.39	.21	–.43	.14	–.46	.20	.45	.21	.50	.23	.52	.22	.48	.18
E600	.26	600	–.37	.20	–.37	.18	–.45	.24	–.40	.21	.46	.16	.43	.19	.41	.16	.44	.19
B300	.36	300	–.40	.19	–.35	.18	–.43	.21	–.44	.22	.46	.21	.45	.21	.46	.13	.48	.21
B600	.36	600	–.31	.19	–.24	.17	–.32	.18	–.26	.17	.37	.18	.39	.19	.40	.16	.45	.20
F300	.44	300	–.37	.19	–.40	.21	–.38	.22	–.45	.20	.44	.17	.46	.21	.46	.21	.45	.19
F600	.44	600	–.19	.18	–.26	.15	–.30	.18	–.26	.18	.36	.19	.43	.19	.41	.19	.37	.17
C100	.50	100	–.45	.18	–.39	.22	–.38	.20	–.41	.20	.42	.16	.41	.19	.39	.17	.44	.16
C200	.50	200	–.41	.21	–.29	.19	–.32	.20	–.34	.21	.42	.17	.47	.20	.51	.19	.50	.15
C300	.50	300	–.42	.20	–.32	.19	–.38	.19	–.39	.16	.44	.17	.43	.16	.43	.22	.41	.13
C600	.50	600	–.22	.13	–.28	.17	–.31	.19	–.29	.18	.35	.11	.40	.19	.38	.16	.35	.18
N300	r_{xy} = .68, r_{yz} = .60, r_{xz} = .64, r_{yv} = .55, r_{xv} = .57, r_{zv} = .54	300	–.41	.22	–.38	.18	–.34	.17	–.36	.19	.44	.21	.48	.16	.43	.24	.42	.19
N600	correlations same as for N300	600	–.19	.18	–.18	.15	–.16	.14	–.21	.13	.37	.17	.35	.17	.36	.12	.33	.17
D300	r_{xy} = .65, r_{yz} = .52, r_{xz} = .58, r_{yv} = .41, r_{xv} = .46, r_{zv} = .37	300	–.41	.19	–.34	.19	–.39	.19	–.35	.23	.56	.20	.49	.17	.47	.19	.41	.15
D600	correlations same as for D300	600	–.38	.25	–.24	.17	–.28	.11	–.26	.18	.40	.18	.38	.17	.33	.13	.37	.16

[a]The letter is the authors' code for the configuration of factor loadings used to produce the desired r_{ij}; the number part indicates sample size.

APPENDIX I

Estimates of Separation From Taxonic Samples

Each estimate is the estimated taxon mean minus the estimated complement mean (given in Appendix G). To get the error, the true separation (known to us because we constructed these samples) was subtracted from the estimated value. Results for the Monte Carlo configurations are presented in the following order:

N[a]	Taxonic Configuration				Expected r_{ij}[f]	
	p[b]	sep[c]	Factor Loadings[d]	File Code[e]		
100	.50	2.0	0	A1-50-20	.50	
200	.50	2.0	0	A2-50-20	.50	
300	.50	2.0	0	A3-50-20	.50	
600	.50	2.0	0	A6-50-20	.50	
300	.25	2.0	0	A3-25-20	.43	
600	.25	2.0	0	A6-25-20	.43	
300	.10	2.0	0	A3-10-20	.26	
600	.10	2.0	0	A6-10-20	.26	
300	.50	1.5	0	A3-50-15	.36	
600	.50	1.5	0	A6-50-15	.36	
300	.50	2.0	x = .70	N3-50-20	r_{xy} = .68	r_{yz} = .60
			y = .50		r_{xz} = .64	r_{yv} = .55
			z = .40		r_{xv} = .57	r_{zv} = .54
			v = .20			
600	.50	2.0	same as for N3-50-20	N6-50-20	same as for N3-50-20	
300	.50	x = 2.00	x = .70	D3-50-v1	r_{xy} = .65	r_{yz} = .52
		y = 1.75	y = .50		r_{xz} = .58	r_{yv} = .41
		z = 1.50	z = .40		r_{xv} = .46	r_{zv} = .37
		v = 1.25	v = .20			
600	.50	same as for D3-50-v1		D6-50-v1	same as for D3-50-v1	

[a]Sample size. [b]Base rate [c]Amount of separation in *SD* units, same for all four variables unless given otherwise [d]Same for all variables in taxon and in complement groups unless given otherwise. [e]A filename coding used by the authors for identification of the Monte Carlo samples. [f]Same for all variables unless given otherwise.

MAXCOV Estimations of Separations
A1-50-20: True $P = .50$, $N = 100$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.77	1.70	1.95	1.79	–.31	–.31	–.46	–.19
2	1.19	1.65	2.18	1.55	–.20	–.19	–.24	–.26
3	1.66	1.20	1.56	1.57	–.32	–.42	–.30	–.17
4	1.86	1.62	1.43	1.67	–.23	–.46	–.30	–.35
5	1.47	1.79	1.75	1.79	–.34	–.03	–.25	–.20
6	1.29	1.82	1.60	2.19	–.48	–.36	–.29	–.26
7	1.58	1.67	1.94	1.34	–.20	–.07	–.25	–.67
8	1.89	1.68	1.47	1.55	–.15	–.35	–.36	–.39
9	1.86	1.48	1.78	1.59	–.25	–.47	–.35	–.49
10	1.48	1.58	1.60	1.55	–.47	–.31	–.40	–.17
11	1.72	1.69	1.71	1.67	–.36	–.02	–.23	–.56
12	2.08	1.39	1.77	1.71	–.11	–.55	–.09	–.34
13	1.97	1.56	1.49	1.49	–.33	–.69	–.56	–.28
14	1.79	1.83	1.59	1.71	–.44	–.09	–.40	–.27
15	1.60	1.32	1.44	1.75	–.37	–.33	–.34	–.38
16	1.74	1.38	1.83	1.98	–.13	–.53	–.23	–.44
17	1.84	1.60	1.81	1.54	–.29	–.30	–.30	–.12
18	1.52	1.90	1.64	1.67	–.14	–.31	–.32	–.31
19	1.56	1.78	1.55	1.76	–.26	–.24	–.18	–.17
20	1.59	1.70	1.72	1.62	–.12	–.36	–.19	–.13
21	1.83	1.25	1.83	1.42	–.31	–.37	–.38	–.30
22	1.61	1.56	1.80	1.82	–.23	–.36	–.28	–.30
23	1.96	1.51	1.76	1.67	–.30	–.23	–.40	–.28
24	1.66	1.96	1.68	1.90	–.19	–.14	–.15	–.26
25	1.69	2.03	1.47	1.73	–.34	–.29	–.53	–.35
M	1.69	1.63	1.69	1.68	–.28	–.31	–.31	–.31
SD	.21	.21	.18	.17	.10	.16	.11	.13
			mean absolute error		.28	.31	.31	.31
				SD	.10	.16	.11	.13

MAXCOV Estimations of Separations
A2-50-20: True $P = .50$, $N = 200$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.93	2.20	1.98	1.87	.01	−.07	−.22	−.25
2	1.67	1.61	2.07	1.79	−.36	−.21	.03	−.22
3	2.00	1.67	1.75	1.69	−.21	−.05	−.30	−.29
4	1.90	2.03	1.77	1.83	−.10	−.20	−.18	−.21
5	2.01	1.87	1.74	1.82	−.19	−.23	−.21	−.19
6	1.87	1.95	1.79	1.82	−.31	−.07	−.08	−.05
7	2.02	2.01	1.67	1.76	−.16	−.17	−.49	.10
8	1.72	1.84	2.33	1.65	−.26	−.09	−.09	−.33
9	1.84	2.12	2.01	2.02	−.27	−.09	.04	−.04
10	2.08	1.91	2.03	1.69	−.22	−.08	−.24	−.10
11	1.79	1.92	1.77	1.63	−.11	−.13	−.28	−.23
12	1.70	2.00	1.95	2.27	−.03	−.07	−.06	−.11
13	1.74	2.12	1.83	1.92	−.25	−.04	−.05	−.09
14	1.82	1.79	1.80	1.80	−.03	−.16	−.17	−.14
15	1.72	1.70	1.82	1.88	−.11	−.34	−.25	.07
16	1.91	1.84	1.73	1.95	−.04	−.14	−.23	−.12
17	1.95	1.69	1.36	1.38	−.03	−.04	−.56	−.36
18	1.87	1.92	1.92	1.89	−.07	.12	−.05	−.13
19	2.02	1.88	1.84	1.80	−.08	.01	−.18	−.08
20	1.89	1.79	2.06	1.96	−.22	−.16	−.02	−.15
21	1.81	1.99	1.75	2.09	.00	−.08	−.27	−.06
22	1.89	1.94	1.77	1.86	−.14	−.18	−.07	−.30
23	1.73	1.77	1.89	1.92	−.19	−.12	−.03	−.14
24	1.84	1.87	1.99	1.92	−.08	−.20	−.01	−.13
25	2.11	2.15	1.58	1.87	−.05	−.05	−.02	−.10
M	1.87	1.90	1.85	1.84	−.14	−.11	−.16	−.15
SD	.12	.15	.18	.17	.10	.09	.15	.11
			mean absolute error		.14	.12	.17	.16
				SD	.10	.07	.14	.09

MAXCOV Estimations of Separations
A3-50-20: True $P = .50$, $N = 300$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.90	1.77	1.85	1.92	.04	–.09	–.21	–.03
2	1.93	2.02	1.98	1.81	–.19	–.05	–.06	–.20
3	1.97	1.96	1.92	1.79	–.07	–.04	–.08	–.13
4	1.82	1.82	1.84	2.03	.06	–.20	–.30	.05
5	1.77	1.89	1.72	1.90	–.13	–.13	–.28	–.13
6	1.67	2.00	2.03	1.92	.02	–.02	–.05	–.13
7	1.95	2.19	2.10	1.81	–.09	.02	–.04	.00
8	2.02	1.92	2.05	1.97	–.03	.00	–.09	–.05
9	1.94	1.92	1.56	1.91	–.05	–.14	–.35	.03
10	1.90	1.82	1.65	2.10	–.07	–.12	–.17	.02
11	1.55	2.05	1.77	2.00	–.32	.02	–.10	–.02
12	1.99	2.07	1.90	1.58	–.04	.03	–.16	–.22
13	1.87	1.86	1.96	1.86	–.23	–.12	.03	–.12
14	1.70	1.99	1.95	1.74	–.26	–.04	–.17	–.20
15	1.91	1.91	1.46	2.04	–.05	–.12	–.30	–.10
16	1.88	2.11	1.72	1.88	–.16	–.20	–.09	–.00
17	2.00	1.94	2.06	1.85	–.06	–.07	–.10	–.06
18	1.96	1.85	2.15	2.03	–.04	–.06	–.00	–.08
19	1.76	1.95	1.97	1.98	–.13	–.07	–.08	–.07
20	2.07	2.04	1.94	1.77	–.10	–.04	–.08	–.19
21	1.93	1.82	2.07	1.82	–.00	–.10	–.05	–.04
22	1.97	2.06	1.87	1.85	–.04	–.15	–.09	–.20
23	2.03	1.84	1.86	2.03	.03	–.15	–.11	–.04
24	1.87	2.02	2.11	1.73	–.11	–.02	–.04	–.33
25	2.15	1.74	2.02	2.01	–.01	–.09	–.07	–.03
M	1.90	1.94	1.90	1.89	–.08	–.08	–.12	–.09
SD	.13	.11	.17	.12	.09	.06	.10	.09
			mean absolute error		.09	.08	.12	.10
				SD	.08	.05	.09	.08

MAXCOV Estimations of Separations
A6-50-20: True $P = .50$, $N = 600$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	2.10	2.01	1.86	1.85	−.03	−.13	−.06	−.15
2	1.92	2.00	1.87	1.91	−.08	.04	−.14	−.03
3	2.14	1.98	1.86	2.02	.01	.07	−.06	−.01
4	1.48	1.86	1.84	2.00	−.58	−.07	−.12	−.04
5	1.82	1.99	1.79	1.91	−.09	.03	−.14	−.05
6	1.98	1.89	1.92	1.90	−.07	−.08	−.10	−.02
7	1.93	1.93	2.02	1.93	−.10	−.03	.03	.00
8	1.93	1.91	2.05	2.08	−.01	−.14	−.01	−.08
9	1.90	1.83	2.05	1.95	−.00	−.04	−.06	−.11
10	1.92	2.02	1.83	1.99	−.02	.08	−.08	−.02
11	2.01	2.01	1.79	1.97	.05	.01	−.07	.06
12	1.93	1.96	1.77	1.93	−.08	−.00	−.14	−.10
13	1.31	1.99	1.91	2.05	−.62	−.03	−.00	−.00
14	2.12	2.09	1.86	2.02	.01	.06	−.06	−.04
15	1.66	1.84	1.99	2.07	−.41	−.11	−.01	−.03
16	1.90	1.47	2.00	1.95	−.10	−.52	−.01	−.07
17	1.94	1.89	1.81	1.95	−.03	−.06	−.18	.02
18	2.05	1.99	1.81	2.18	−.05	−.07	−.09	.03
19	2.02	1.93	1.88	2.03	−.13	.00	−.01	−.04
20	1.91	1.95	1.94	1.88	−.12	−.04	−.10	−.04
21	1.80	1.94	1.95	1.98	.01	−.14	.02	−.06
22	2.02	1.86	1.93	1.91	−.05	−.06	.02	−.10
23	2.02	2.02	2.05	1.87	−.05	−.02	.03	.07
24	1.90	1.98	1.98	2.03	−.05	−.12	−.09	−.01
25	1.94	2.01	1.93	2.08	−.14	.02	−.09	−.01
M	1.91	1.93	1.91	1.98	−.11	−.05	−.06	−.03
SD	.18	.11	.09	.08	.17	.11	.06	.05
			mean absolute error		.12	.08	.07	.05
				SD	.16	.10	.05	.04

MAXCOV Estimations of Separations
A3-25-20: True $P=.25$, $N=300$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.95	1.89	1.81	1.85	.06	–.00	–.25	–.04
2	1.72	1.87	1.98	1.84	–.16	–.30	–.13	–.03
3	2.11	2.06	1.83	1.62	.09	–.02	–.25	–.32
4	2.15	2.11	1.91	1.77	–.03	.11	–.07	–.13
5	2.02	1.88	1.92	2.05	–.04	–.14	–.05	–.06
6	1.94	2.04	1.87	1.76	–.15	–.23	–.05	–.21
7	2.02	2.01	2.00	1.72	.06	–.01	–.06	–.25
8	1.81	1.36	1.95	1.85	–.11	–.46	–.05	–.08
9	1.76	1.86	1.88	1.82	–.15	–.14	–.16	–.01
10	1.74	1.82	1.72	1.78	–.12	–.30	–.23	–.24
11	1.87	1.99	1.90	1.80	–.33	–.08	–.16	–.17
12	1.56	1.82	1.63	2.04	–.29	–.09	–.00	.04
13	1.73	1.87	1.85	1.98	–.23	–.28	–.17	–.11
14	2.04	1.70	1.96	1.74	.02	–.08	–.12	–.32
15	2.00	1.98	1.79	1.89	–.25	–.15	–.08	–.14
16	1.53	1.76	2.12	1.95	–.28	–.20	–.11	–.01
17	1.93	2.07	1.69	1.80	–.14	–.08	–.15	–.23
18	1.85	1.95	1.83	1.80	–.17	–.06	–.03	–.27
19	1.70	1.97	1.81	1.96	–.10	–.05	–.20	–.03
20	1.72	1.90	1.98	1.71	–.33	–.18	–.03	–.37
21	1.87	2.04	1.85	1.80	.01	–.03	–.04	–.10
22	1.66	1.76	1.90	1.67	–.30	–.08	–.02	–.27
23	1.96	1.82	1.67	2.00	–.12	–.14	–.18	–.07
24	1.79	1.63	1.79	1.82	–.32	–.18	–.04	–.07
25	2.10	1.86	1.78	1.96	.03	–.09	–.17	–.05
M	1.86	1.88	1.86	1.84	–.13	–.13	–.11	–.14
SD	.17	.16	.11	.11	.13	.12	.07	.11
				mean absolute error	.16	.14	.11	.15
				SD	.10	.11	.07	.11

MAXCOV Estimations of Separations
A6-25-20: True $P=.25$, $N=600$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.96	2.01	1.91	2.08	–.04	–.07	–.08	.02
2	2.03	1.94	1.85	1.59	–.07	.01	–.13	–.21
3	1.88	2.08	1.77	2.04	–.16	–.04	–.03	.03
4	2.01	2.12	1.95	1.89	–.13	.07	–.14	–.05
5	1.79	2.04	1.84	2.07	–.25	.10	.01	.05
6	1.92	1.92	1.95	1.95	–.03	–.12	–.06	–.05
7	1.82	2.00	1.76	2.07	–.12	–.13	–.15	–.08
8	2.06	1.84	1.85	1.55	–.09	–.18	–.14	–.31
9	2.00	1.95	2.00	2.03	–.00	–.04	.06	.04
10	1.76	1.99	1.85	1.93	–.15	–.03	–.13	–.05
11	1.84	1.89	1.82	1.97	–.31	–.12	–.11	.03
12	1.78	1.75	1.50	1.86	–.21	–.23	–.72	–.12
13	2.02	1.94	1.86	1.97	.02	–.01	–.14	–.07
14	1.88	1.69	2.00	2.04	.06	–.27	.14	–.08
15	1.95	1.94	1.85	2.04	–.06	–.16	–.17	–.15
16	1.97	1.71	1.82	1.91	–.04	–.21	.05	–.03
17	1.91	1.97	1.94	1.99	–.04	–.16	–.07	–.07
18	1.87	2.00	1.89	1.67	–.12	–.03	–.03	–.19
19	1.89	1.67	1.71	1.43	.09	–.26	–.27	–.61
20	1.77	1.90	1.83	1.72	–.22	–.05	–.18	–.29
21	2.17	1.77	1.76	1.69	.12	–.15	–.13	–.33
22	1.84	2.13	1.93	1.83	–.01	–.05	.07	–.11
23	1.86	1.78	1.94	1.82	–.04	–.14	–.11	–.17
24	1.94	2.15	1.67	1.81	–.04	.12	–.01	–.23
25	1.92	2.05	1.85	1.83	–.19	.07	–.04	–.26
M	1.91	1.93	1.84	1.87	–.08	–.08	–.10	–.13
SD	.10	.14	.11	.17	.10	.11	.16	.15
			mean absolute error		.11	.11	.13	.15
				SD	.08	.07	.14	.13

MAXCOV Estimations of Separations
A3-10-20: True $P=.10$, $N=300$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.52	1.82	1.74	1.78	–.45	–.52	–.33	–.34
2	1.67	1.76	1.19	1.48	–.06	–.41	–.67	–.39
3	1.42	1.89	1.53	1.68	–.50	–.42	–.39	–.31
4	1.66	1.70	1.70	1.63	–.66	–.17	–.47	–.35
5	1.49	1.74	1.65	1.53	–.38	–.30	–.58	–.41
6	1.71	1.44	1.61	1.78	–.32	–.86	–.34	–.34
7	1.61	1.57	1.25	1.26	–.46	–.34	–.71	–.19
8	1.85	1.45	1.50	1.67	–.32	–.67	–.32	–.53
9	1.73	2.18	1.63	1.57	–.33	–.26	–.44	–.41
10	1.22	1.79	1.47	1.65	–.83	–.44	–.52	–.00
11	1.39	1.50	1.76	1.89	–.35	–.43	–.55	–.45
12	1.58	1.74	1.81	2.01	–.06	–.40	–.22	–.18
13	1.78	2.09	1.59	1.77	–.29	–.26	–.56	–.34
14	1.99	1.41	1.54	1.65	–.03	–.56	–.15	–.26
15	1.36	1.87	1.73	1.43	–.73	–.24	–.27	–.27
16	1.56	1.78	1.36	1.67	–.35	–.32	–.58	.05
17	1.33	1.53	1.77	1.56	–.50	–.39	–.30	–.37
18	1.35	1.54	1.46	1.63	–.32	–.66	–.59	–.43
19	1.27	1.62	1.14	1.54	–.75	–.20	–.75	–.41
20	1.81	1.70	1.47	1.15	–.19	–.35	–.32	–.95
21	1.84	2.05	1.52	1.64	–.37	–.15	–.16	–.35
22	1.26	1.78	1.77	1.95	–.60	–.33	–.36	.06
23	1.80	1.64	1.75	1.56	–.25	–.09	–.23	–.45
24	1.48	1.40	.86	1.47	–.16	–.82	–1.13	–.58
25	1.40	1.94	1.58	1.79	–.64	–.27	–.58	.00
M	1.56	1.72	1.54	1.63	–.40	–.39	–.46	–.33
SD	.21	.21	.23	.19	.21	.19	.22	.21
			mean absolute error		.40	.39	.46	.34
				SD	.21	.19	.22	.20

MAXCOV Estimations of Separations
A6-10-20: True $P=.10$, $N=600$
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.85	1.71	2.03	1.73	–.19	–.23	–.06	–.22
2	1.88	1.97	1.82	1.96	–.14	–.24	–.13	–.12
3	2.01	2.00	1.68	1.84	.05	–.17	–.19	–.18
4	1.86	1.88	1.70	1.66	–.16	–.15	–.33	–.32
5	1.60	1.76	1.74	1.81	–.23	–.36	–.42	–.12
6	1.89	1.48	1.75	1.30	–.09	–.36	–.33	–.16
7	1.83	1.39	1.59	1.81	.05	–.36	–.34	–.08
8	1.49	2.02	1.73	1.53	–.40	–.12	–.17	–.28
9	1.90	1.88	1.85	1.93	–.22	–.02	–.08	–.07
10	1.86	1.62	1.92	1.74	–.16	–.09	–.09	–.17
11	1.89	1.65	1.87	1.80	–.06	–.17	.03	–.22
12	1.81	1.00	1.71	2.00	–.18	–.84	–.11	–.15
13	1.70	2.02	1.97	2.02	–.19	–.06	–.15	.09
14	1.81	1.72	1.68	1.75	–.29	–.13	–.36	–.42
15	1.67	1.91	1.84	1.90	–.00	–.09	.10	–.07
16	1.65	2.01	1.48	1.99	–.27	–.08	–.22	–.20
17	1.80	1.52	1.59	1.93	–.39	–.46	–.29	–.10
18	1.49	1.79	1.85	1.72	–.46	.11	–.19	–.29
19	1.85	1.73	1.75	1.51	–.08	–.20	–.21	–.44
20	1.86	1.74	1.64	1.91	–.35	–.39	–.30	.01
21	2.03	1.88	1.59	1.74	.00	–.16	–.37	–.30
22	1.89	1.72	1.76	2.20	–.12	–.33	–.13	–.16
23	1.64	1.81	1.80	1.71	–.41	–.34	–.05	–.14
24	1.56	1.75	1.79	1.80	–.41	–.25	–.10	–.39
25	1.59	1.92	1.72	1.70	–.34	–.05	–.11	–.25
M	1.78	1.75	1.75	1.80	–.20	–.22	–.18	–.19
SD	.15	.23	.12	.18	.15	.18	.13	.13
			mean absolute error		.21	.23	.19	.20
				SD	.14	.17	.11	.11

MAXCOV Estimations of Separations
A3-50-15: True $P = .50$, $N = 300$
1.5 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.67	1.21	1.57	1.27	.13	−.18	−.04	−.23
2	1.53	1.60	1.78	1.47	.10	.04	.16	.07
3	1.55	1.71	1.32	1.53	.11	.07	.04	.08
4	1.36	1.30	1.27	1.22	−.07	−.15	−.14	−.29
5	1.68	1.59	1.42	1.79	.12	−.02	.22	.24
6	1.51	1.64	1.61	1.38	−.01	−.07	−.01	−.28
7	1.79	1.32	1.74	1.71	.07	−.09	.03	.09
8	1.56	1.44	1.27	1.24	.08	−.03	−.03	−.26
9	1.31	1.44	1.56	1.33	−.11	−.20	.12	−.16
10	1.36	1.69	1.56	1.58	−.19	.19	.07	.08
11	1.72	1.45	1.56	1.59	.20	.01	.01	.08
12	1.51	1.45	1.75	1.58	.04	−.01	.04	.01
13	1.75	1.22	1.52	1.34	−.01	−.02	.11	−.13
14	1.65	1.52	1.73	1.27	.01	.10	.12	−.16
15	1.30	1.41	1.77	1.21	−.14	−.22	.05	−.30
16	1.31	1.74	1.53	1.66	.03	.08	.01	.17
17	1.62	1.44	1.55	1.47	.19	−.13	.02	−.16
18	1.64	1.30	1.47	1.32	.10	.02	−.10	−.12
19	1.58	1.41	1.49	1.66	−.02	.00	.02	.05
20	1.32	1.18	1.66	1.25	−.30	−.05	.15	−.10
21	1.17	1.21	1.56	1.68	−.24	−.47	−.01	.13
22	1.63	1.59	1.25	1.48	.21	.19	−.15	.02
23	1.19	1.69	1.49	1.38	−.54	.21	−.12	−.13
24	1.52	1.56	1.53	1.59	.13	.23	−.20	.00
25	1.59	1.26	1.38	1.44	.08	−.30	−.05	−.05
M	1.51	1.46	1.53	1.46	−.00	−.03	.01	−.05
SD	.17	.17	.15	.17	.17	.16	.10	.15
			mean absolute error		.13	.12	.08	.14
				SD	.11	.11	.06	.09

MAXCOV Estimations of Separations
A6-50-15: True $P = .50$, $N = 600$
1.5 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.44	1.43	1.53	1.33	–.05	–.05	.18	–.17
2	1.54	1.51	1.67	1.53	.17	.14	.19	.06
3	1.63	1.47	1.46	1.72	.04	–.03	–.04	.09
4	1.13	1.44	1.42	1.62	–.29	–.05	.02	.01
5	1.57	1.51	.95	1.66	.02	–.03	–.42	.18
6	1.45	1.21	1.16	1.40	.01	–.25	–.50	–.08
7	1.58	1.49	1.52	1.02	.00	.14	–.17	–.40
8	1.10	1.54	1.45	1.49	–.45	–.03	–.01	.08
9	1.58	1.58	1.53	1.52	.06	–.08	02	–.15
10	1.65	1.02	1.40	1.30	–.13	–.55	06	–.14
11	1.55	1.49	1.21	1.31	–.05	–.05	– 36	–.34
12	1.48	1.69	1.55	1.56	.10	.07	.02	.15
13	1.60	1.41	1.38	1.16	.19	.00	–.11	–.25
14	1.54	1.70	1.37	1.61	–.07	.15	–.16	.08
15	1.64	1.50	1.46	1.46	.09	.05	–.03	–.11
16	1.27	1.40	1.58	1.39	–.17	.03	.00	–08
17	1.52	1.27	1.38	1.44	.07	–.23	.00	–.01
·18	1.56	1.46	1.37	1.51	–.04	–.03	–.08	.00
19	1.52	1.70	.92	1.45	–.05	.14	–.50	–.04
20	1.28	1.55	1.34	1.53	–.27	.08	–.20	–.05
21	1.40	1.33	1.47	1.28	–.03	–.14	–.12	–.15
22	1.62	1.72	1.03	1.68	.06	.12	–.46	.29
23	1.56	1.63	1.71	1.58	.15	.09	.21	.08
24	1.63	1.33	1.36	1.62	.10	–.01	–.07	.16
25	1.33	1.52	1.27	1.71	–.10	.02	–.30	.08
M	1.49	1.48	1.38	1.48	–.03	–.02	–.11	–.03
SD	.15	.16	.20	.17	.15	.15	.20	.16
			mean absolute error		.11	.10	.17	.13
				SD	.10	.11	.16	.10

MAXCOV Estimations of Separations
N3-50-20: True $P = .50$, $N = 300$
Nuisance Covariance in Taxon and Complement Groups
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.69	1.56	1.44	1.78	–.14	–.49	–.43	–.28
2	1.26	1.88	1.71	1.94	–.74	–.09	–.29	–.11
3	1.54	2.11	1.65	1.65	–.36	–.08	–.34	–.22
4	1.74	2.00	1.95	1.81	–.11	–.09	–.20	–.18
5	1.83	1.77	1.82	1.84	–.18	–.17	–.36	–.31
6	1.84	1.76	1.45	1.38	–.12	–.09	–.40	–.71
7	1.82	1.34	2.00	1.70	–.24	–.53	–.05	–.24
8	1.48	1.87	1.68	1.79	–.57	–.24	–.27	–.18
9	1.82	1.77	1.85	1.89	–.11	–.23	–.15	–.15
10	1.77	1.53	1.72	1.80	–.11	–.42	–.33	–.05
11	1.57	1.80	1.77	1.59	–.40	–.14	–.18	–.30
12	1.83	1.80	1.47	1.88	–.33	–.06	–.56	–.16
13	1.73	1.80	1.75	1.90	–.21	–.10	–.24	–.23
14	1.95	1.84	1.73	1.90	–.12	–.12	–.15	–.19
15	1.90	1.82	1.86	1.84	–.14	–.16	–.15	–.10
16	1.82	1.62	1.78	1.55	–.10	–.34	–.06	–.46
17	1.84	1.92	1.80	1.79	–.05	–.06	–.01	–.24
18	1.69	1.57	1.68	1.74	–.15	–.23	–.33	–.28
19	1.80	1.99	1.57	1.90	–.19	–.13	–.28	–.13
20	1.79	1.56	1.84	1.60	–.06	–.44	–.31	–.42
21	1.84	1.68	1.80	1.63	–.23	–.51	–.28	–.35
22	1.26	1.69	1.62	1.50	–.83	–.32	–.24	–.55
23	1.99	1.55	1.93	1.73	–.11	–.41	–.16	–.18
24	1.73	1.90	1.74	1.97	.02	–.26	–.21	–.13
25	2.03	1.81	1.84	1.70	–.27	–.25	–.18	–.32
M	1.74	1.76	1.74	1.75	–.23	–.24	–.25	–.26
SD	.19	.17	.14	.15	.20	.15	.12	.15
			mean absolute error		.24	.24	.25	.26
				SD	.20	.15	.12	.15

MAXCOV Estimations of Separations
N6-50-20: True $P = .50$, $N = 600$
Nuisance Covariance in Taxon and Complement Groups
2 *SD* Separation on all Indicators

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.82	1.83	1.73	1.72	−.25	−.10	−.31	−.22
2	1.93	1.91	1.82	1.94	−.22	−.12	−.26	−.09
3	2.13	1.93	1.78	1.81	.06	−.12	−.27	−.22
4	2.02	1.81	1.89	1.77	−.04	−.26	−.19	−.19
5	1.91	1.45	1.61	.82	−.13	−.51	−.31	−1.16
6	1.84	1.62	1.27	1.66	−.09	−.47	−.78	−.44
7	1.98	1.88	1.86	1.77	−.19	−.19	−.16	−.30
8	.92	1.74	1.26	1.56	−1.10	−.21	−.76	−.32
9	1.69	1.70	1.73	1.76	−.17	−.22	−.17	−.07
10	1.89	1.96	1.81	1.90	−.10	.02	−.22	−.14
11	1.77	1.85	1.87	1.82	−.31	−.14	−.18	−.22
12	1.86	1.94	1.65	1.76	−.17	−.16	−.26	−.29
13	1.79	1.97	1.87	1.73	−.14	−.11	−.18	−.33
14	1.81	1.96	1.89	1.87	−.12	−.09	−.19	−.16
15	1.88	1.88	1.64	1.87	−.11	−.17	−.33	−.16
16	1.97	1.97	1.90	1.87	−.04	−.04	−.26	−.22
17	2.07	1.96	1.86	1.90	−.06	−.21	−.18	−.12
18	1.88	1.81	1.88	1.84	−.08	−.12	−.09	−.25
19	1.87	1.68	1 24	1.11	−.07	−.30	−.63	−.87
20	1.78	1.75	1 89	1.56	−.31	−.26	−.25	−.45
21	1.75	1.71	1 71	1.71	−.13	−.31	−.21	−.15
22	2.18	1.88	1.91	1.63	−.03	−.29	−.21	−.24
23	1.97	1.90	1.88	1.87	−.02	− 23	−.23	−.10
24	2.11	2.18	1.88	1.84	.06	01	−.05	−.30
25	1.55	1.89	1.64	1.82	−.44	− 03	−.28	−.31
M	1.86	1.85	1.74	1.72	−.17	−.18	−.28	−.29
SD	.24	.14	.20	.25	.22	.13	.18	.24
			mean absolute error		.18	.19	.28	.29
				SD	.21	.12	.18	.24

MAXCOV Estimations of Separations
D3-50-v1: True $P = .50$, $N = 300$
Separation on $x = 2.00$ *SD*, $y = 1.75$ *SD*, $z = 1.50$ *SD*, $v = 1.25$ *SD*

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.39	1.48	1.06	1.13	−.58	−.31	−.56	−.13
2	1.92	1.75	1.25	1.33	−.15	−.09	−.25	−.07
3	1.85	1.88	1.50	.85	−.44	−.10	−.05	−.55
4	1.35	1.57	1.33	1.40	−.63	.00	−.13	.13
5	1.52	1.72	1.54	1.20	−.38	−.13	−.08	−.04
6	1.41	1.51	1.26	.93	−.77	−.27	−.44	−.28
7	1.59	1.25	1.46	1.22	−.40	−.49	.10	−.17
8	1.72	1.70	1.29	1.07	−.24	−.00	−.23	−.09
9	1.91	1.66	1.57	1.33	−.19	−.09	.06	.14
10	1.70	1.39	1.51	1.15	−.32	−.25	.04	.02
11	1.46	1.51	1.44	1.08	−.49	−.22	.06	−.12
12	1.26	1.60	1.01	1.27	−.60	.02	−.28	.25
13	1.88	1.46	1.50	1.43	−.18	−.33	−.08	.11
14	2.11	1.62	1.68	1.19	−.06	−.04	−.06	.01
15	1.85	1.77	1.40	1.22	−.34	−.14	−.12	−.11
16	2.01	1.42	1.36	1.05	−.13	−.18	−.14	−.32
17	1.81	1.56	1.02	1.17	−.09	−.24	−.48	−.20
18	1.94	1.78	1.32	1.40	−.25	.00	−.07	.17
19	1.74	1.70	1.33	1.16	−.37	−.08	−.07	−.06
20	1.44	1.54	1.29	1.11	−.69	−.14	−.23	−.14
21	1.78	.94	1.45	.86	−.26	−.57	−.02	−.35
22	1.51	1.01	1.32	1.09	−.53	−.70	−.00	−.28
23	1.88	1.41	1.34	1.34	−.00	−.25	−.08	.13
24	1.95	1.65	1.48	1.37	−.00	−.08	.02	.04
25	1.65	1.50	1.26	1.06	−.38	−.13	−.09	−.07
M	1.71	1.54	1.36	1.18	−.34	−.19	−.13	−.08
SD	.23	.22	.16	.16	.21	.18	.17	.18
			mean absolute error		.34	.19	.15	.16
				SD	.21	.17	.15	.12

MAXCOV Estimations of Separations
D6-50-v1: True $P=.50$, $N=600$
Separation on $x=2.00$ *SD*, $y=1.75$ *SD*, $z=1.50$ *SD*, $v=1.25$ *SD*

Sample	Estimates of Separation				Error			
	x	*y*	*z*	*v*	*x*	*y*	*z*	*v*
1	1.83	1.32	1.34	1.03	–.19	–.41	–.28	–.17
2	1.77	1.27	1.21	1.11	–.19	–.45	–.27	–.14
3	1.77	1.68	1.40	1.35	–.29	–.10	–.01	–.01
4	1.85	.97	1.09	1.12	–.08	–.62	–.49	–.05
5	1.24	1.36	.93	.99	–.74	–.52	–.44	–.23
6	1.54	1.56	1.49	1.43	–.51	–.26	.04	.15
7	1.87	1.77	1.48	1.24	–.15	–.04	.02	–.00
8	1.29	1.67	1.22	.98	–.61	–.09	–.30	.03
9	1.65	1.43	1.64	1.01	–.40	–.42	.02	–.22
10	1.31	1.66	1.52	1.21	–.73	–.01	–.14	–.14
11	1.27	1.78	1.48	1.26	–.82	–.18	.04	–.00
12	1.17	.81	1.23	1.22	–.88	–.95	–.31	–.10
13	1.58	1.60	1.37	1.16	–.38	.05	–.13	–.11
14	1.76	1.22	1.34	1.23	–.07	–.39	–.11	–.05
15	1.21	1.70	1.33	1.16	–.81	–.12	–.21	–.11
16	2.05	1.72	1.17	1.46	–.06	–.23	–.46	.18
17	1.70	1.71	1.32	1.12	–.43	–.05	–.32	–.04
18	1.44	1.57	1.12	1.12	–.60	–.09	–.40	–.13
19	1.60	1.28	1.60	1.07	–.39	–.54	.01	–.22
20	2.09	1.74	1.52	.77	.02	–.06	.01	–.39
21	1.89	1.68	1.63	1.09	–.22	–.12	–.05	–.07
22	1.09	1.63	1.08	1.08	–.85	–.17	–.25	–.31
23	1.72	1.61	1.48	1.57	–.41	–.17	.08	.13
24	.91	1.19	1.61	.85	–1.07	–.51	–.03	–.30
25	1.74	1.58	1.49	1.24	–.23	–.09	.04	.01
M	1.57	1.50	1.36	1.15	–.44	–.26	–.16	–.09
SD	.31	.25	.19	.18	.30	.24	.18	.14
				mean absolute error	.45	.27	.18	.13
				SD	.30	.23	.16	.10