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SUPPLEMENTARY MATERIALS To Bootstrap Confidence Intervals for Ordinary Least Squares Factor Loadings and Correlations in Exploratory Factor Analysis

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SUPPLEMENTARY MATERIALS To Bootstrap Confidence Intervals for Ordinary Least Squares Factor Loadings and Correlations in Exploratory Factor Analysis

Table 1

Population Correlation Matrix of Model Error Conditions

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13
Ball	1.00												
Draw	0.80	1.00											
Eraser	0.74	0.84	1.00										
Card	0.43	0.39	0.41	1.00									
Kick	0.63	0.53	0.58	0.40	1.00								
Pebble	0.44	0.41	0.41	0.27	0.44	1.00							
Chair	0.34	0.32	0.31	0.24	0.37	0.30	1.00						
Keyhole	0.25	0.25	0.23	0.17	0.26	0.21	0.23	1.00					
Bottle	0.27	0.27	0.26	0.19	0.28	0.24	0.20	0.83	1.00				
Rifle	0.31	0.31	0.28	0.19	0.29	0.18	0.21	0.60	0.61	1.00			
Door	0.19	0.16	0.16	0.17	0.23	0.20	0.24	0.24	0.22	0.19	1.00		
Heart	0.20	0.17	0.18	0.14	0.21	0.24	0.25	0.20	0.21	0.23	0.72	1.00	
Earphone	0.25	0.23	0.25	0.17	0.26	0.27	0.25	0.17	0.21	0.14	0.51	0.45	1.00

Note. V1 = Ball, V2 = Draw, V3 = Eraser, V4 = Card, V5 = Kick, V6 = Pebble, V7 = Chair, V8 = Keyhole, V9 = Bottle, V10 = Rifle, V11 = Door, V12 = Heart, V13 = Earphone. The correlation matrix was originally reported in Porac et al (1980).

Table 2

Population Correlation Matrix of No Model Error Conditions

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13
Ball	1.00												
Draw	0.77	1.00											
Eraser	0.77	0.76	1.00										
Card	0.43	0.43	0.42	1.00									
Kick	0.61	0.61	0.60	0.35	1.00								
Pebble	0.45	0.44	0.44	0.26	0.38	1.00							
Chair	0.36	0.35	0.35	0.22	0.31	0.25	1.00						
Keyhole	0.25	0.25	0.23	0.18	0.27	0.21	0.21	1.00					
Bottle	0.28	0.27	0.25	0.19	0.29	0.22	0.22	0.83	1.00				
Rifle	0.30	0.30	0.28	0.19	0.28	0.22	0.21	0.60	0.61	1.00			
Door	0.18	0.14	0.15	0.16	0.24	0.24	0.27	0.22	0.23	0.20	1.00		
Heart	0.19	0.16	0.17	0.16	0.24	0.24	0.26	0.22	0.22	0.19	0.71	1.00	
Earphone	0.26	0.24	0.24	0.18	0.26	0.24	0.23	0.18	0.18	0.17	0.51	0.46	1.00

Note. V1 = Ball, V2 = Draw, V3 = Eraser, V4 = Card, V5 = Kick, V6 = Pebble, V7 = Chair, V8 = Keyhole, V9 = Bottle, V10 = Rifle, V11 = Door, V12 = Heart, V13 = Earphone. This matrix was the model implied correlation matrix obtained by fitting a three-factor model to the data reported in Porac et al (1980).

Figure Captions

Figure 1. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the model error condition where the manifest variables are normally distributed and the sample size is $n = 200$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 2. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the model error condition where the manifest variables are elliptically distributed and the sample size is $n = 200$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 3. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the model error condition where the manifest variables are normally distributed and the sample size is $n = 300$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 4. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the model error condition where the manifest variables are elliptically distributed and the sample size is $n = 300$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 5. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the model error condition where the manifest variables are normally distributed and the sample size is $n = 962$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 6. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the model error condition where the manifest variables are elliptically distributed and the sample size is $n = 962$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 7. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are

normally distributed and the sample size is $n = 100$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 8. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are elliptically distributed and the sample size is $n = 100$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 9. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are normally distributed and the sample size is $n = 200$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 10. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are elliptically distributed and the sample size is $n = 200$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile

intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

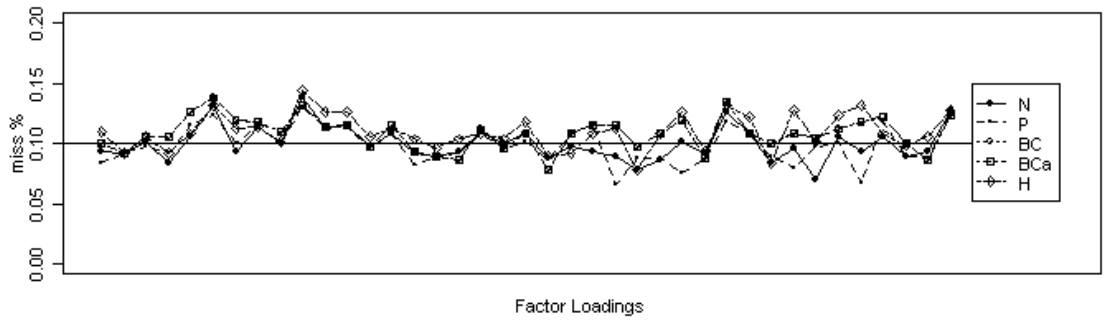
Figure 11. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are normally distributed and the sample size is $n = 300$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 12. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are elliptically distributed and the sample size is $n = 300$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.

Figure 13. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are normally distributed and the sample size is $n = 962$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five

types of bootstrap CIs.

Figure 14. Comparison of the five types of bootstrap CIs for factor loadings. The CIs were constructed for the no model error condition where the manifest variables are elliptically distributed and the sample size is $n = 962$. SE, P, BC, BCa, and H stand for SE based bootstrap intervals, percentile intervals, bias-corrected percentile intervals, bias-corrected accelerated intervals, and hybrid intervals, respectively. This figure shows the proportion of 'miss left', 'miss right', and 'miss' for the five types of bootstrap CIs.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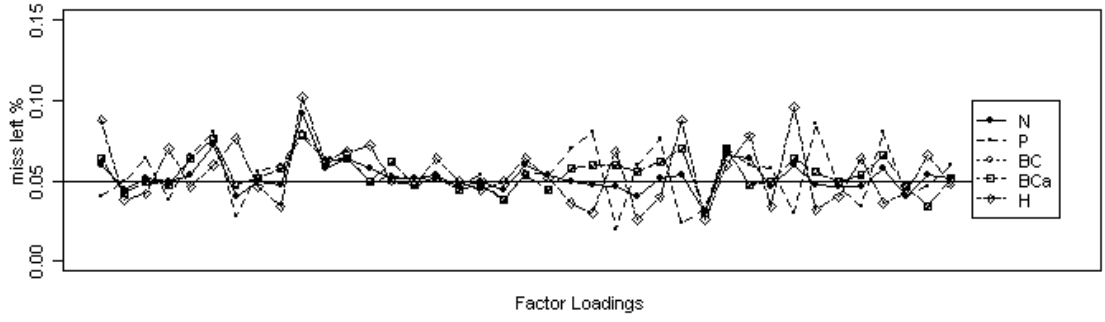
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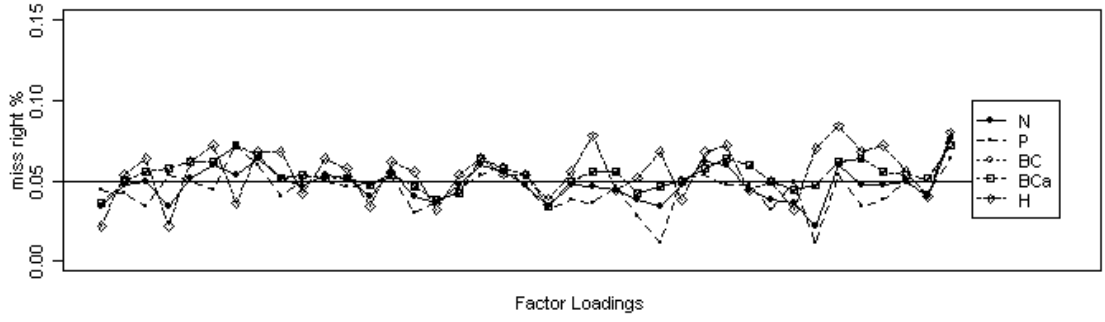
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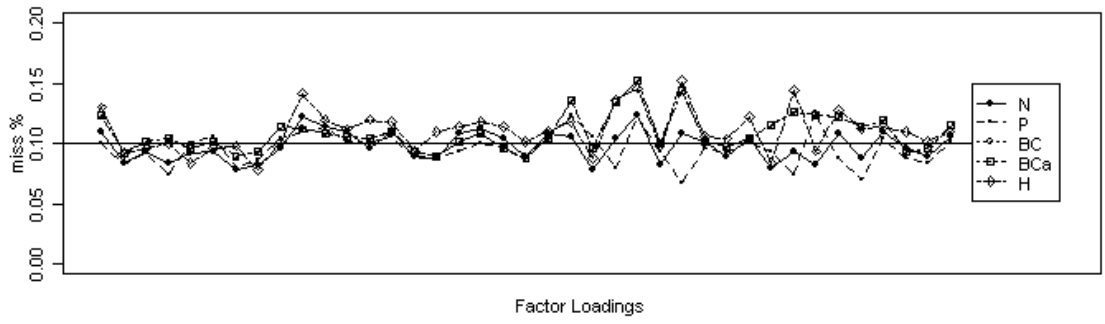
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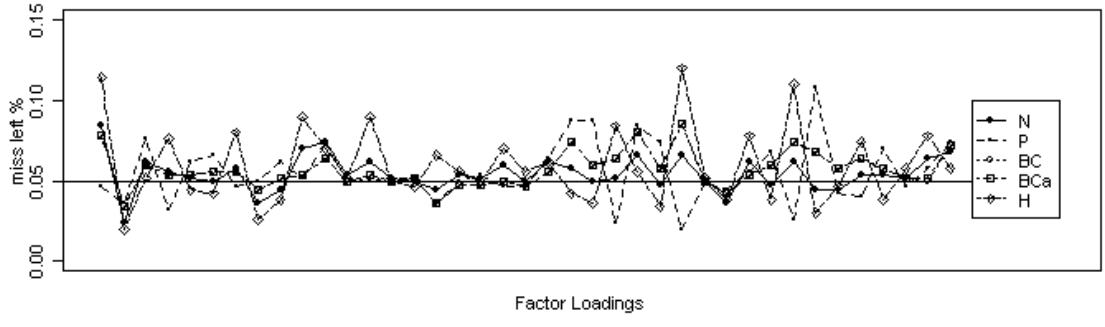
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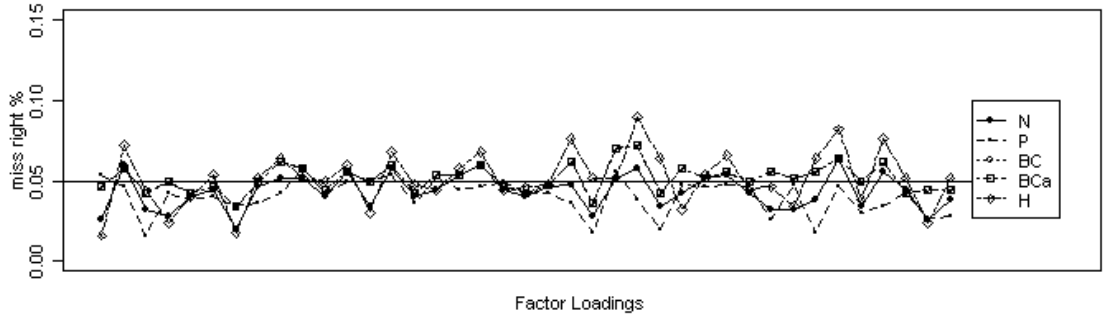
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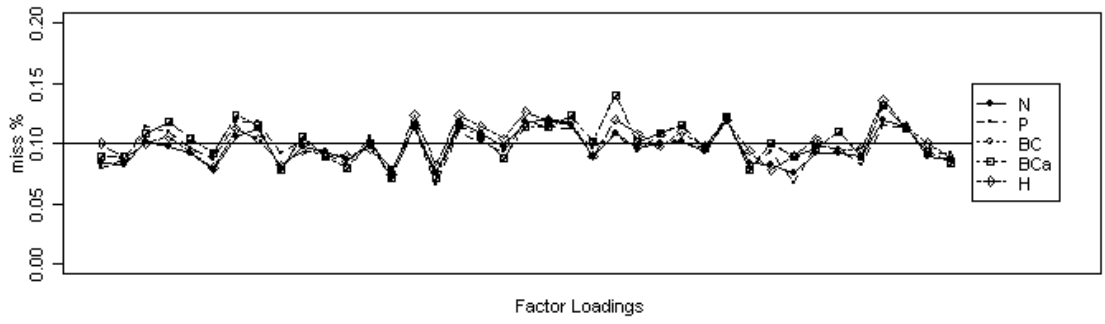
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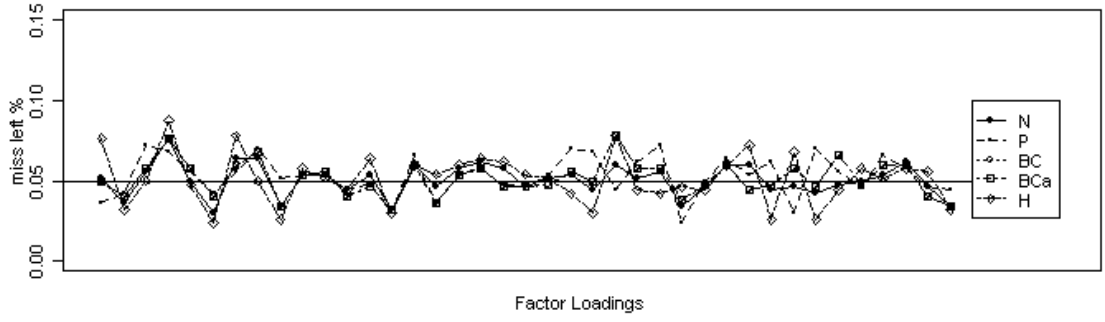
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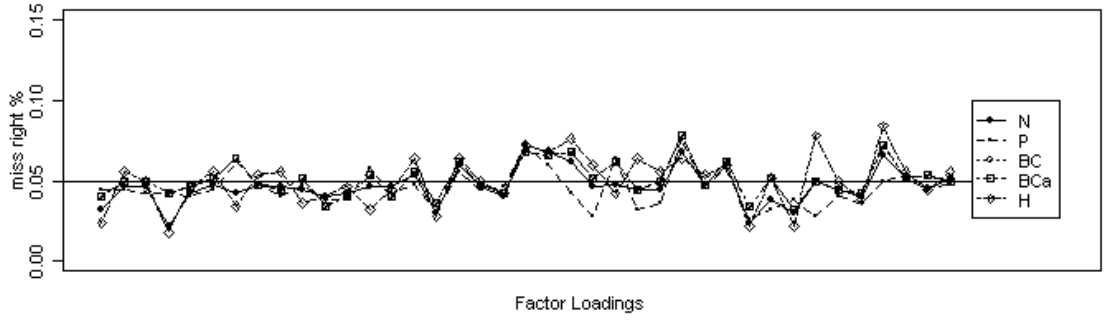
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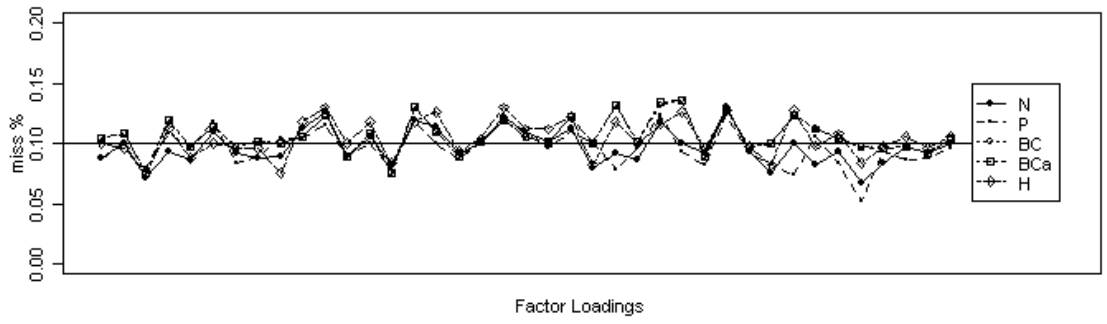
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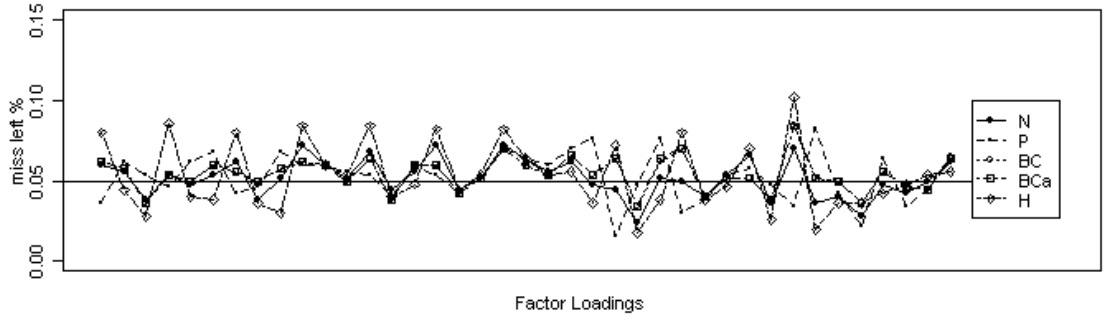
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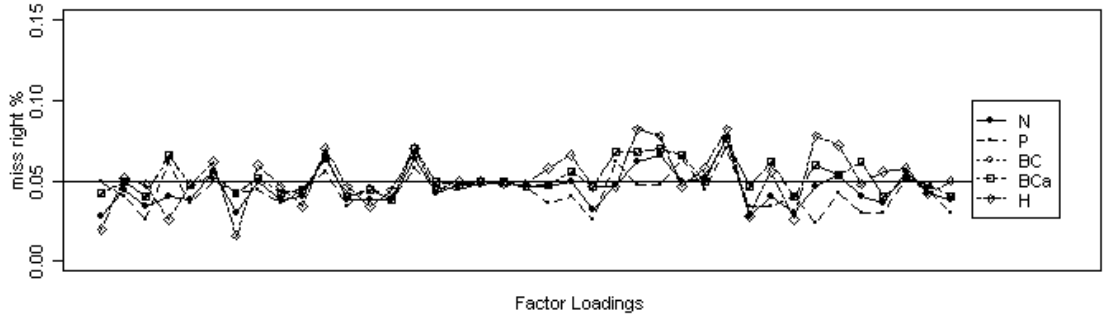
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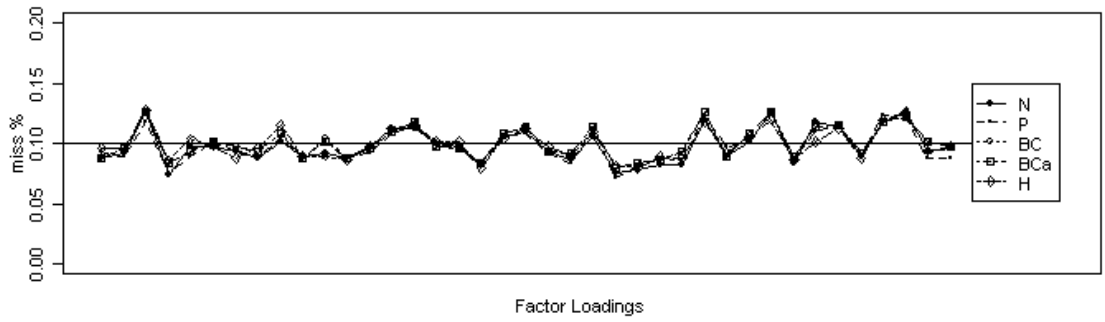
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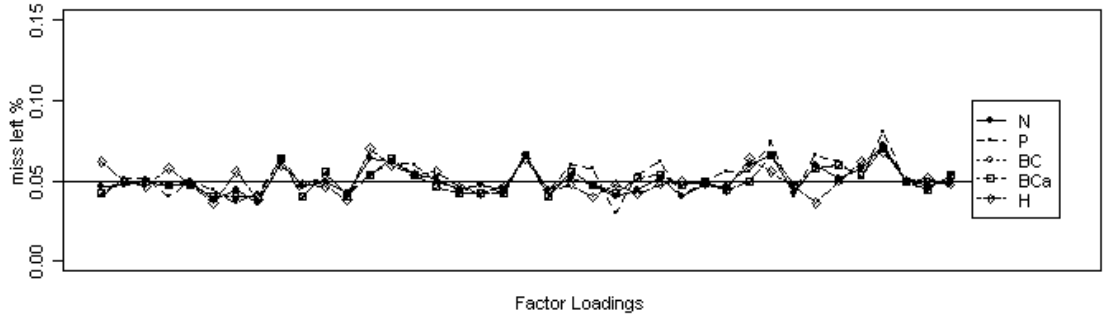
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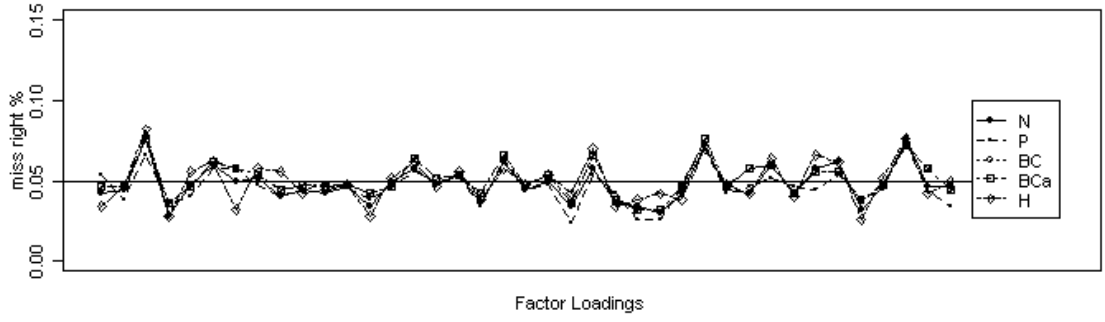
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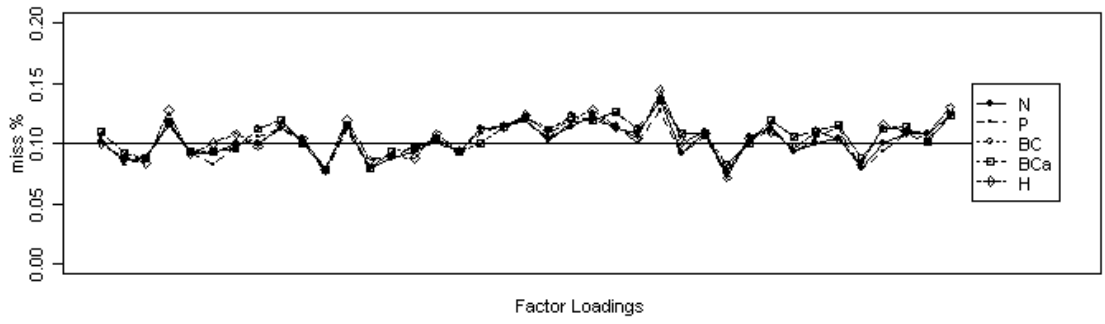
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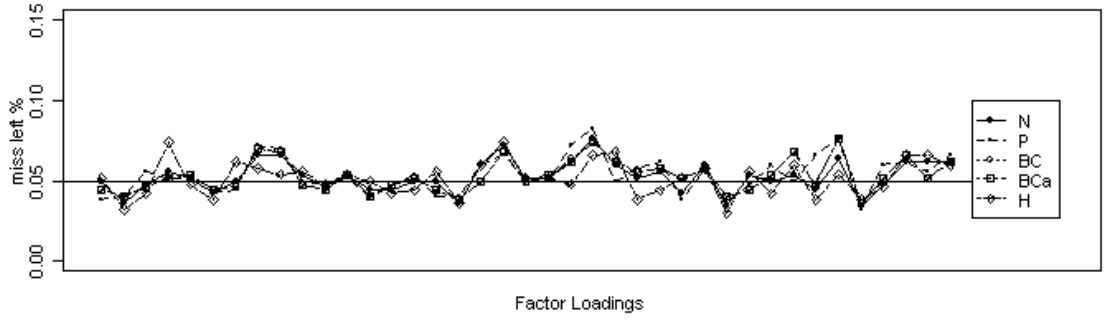
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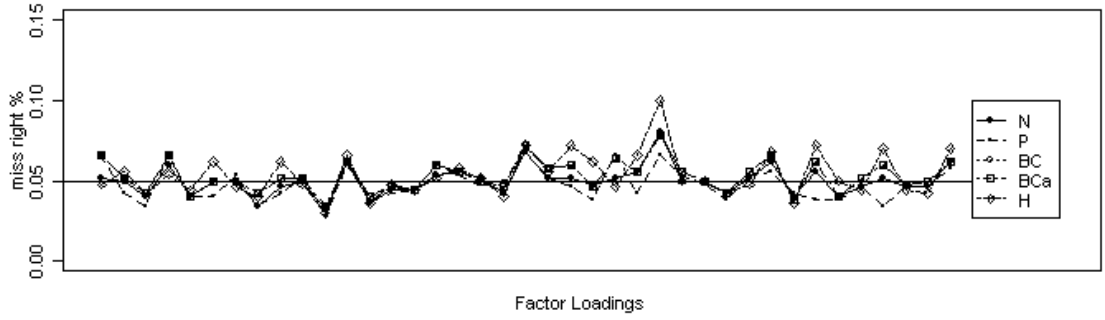
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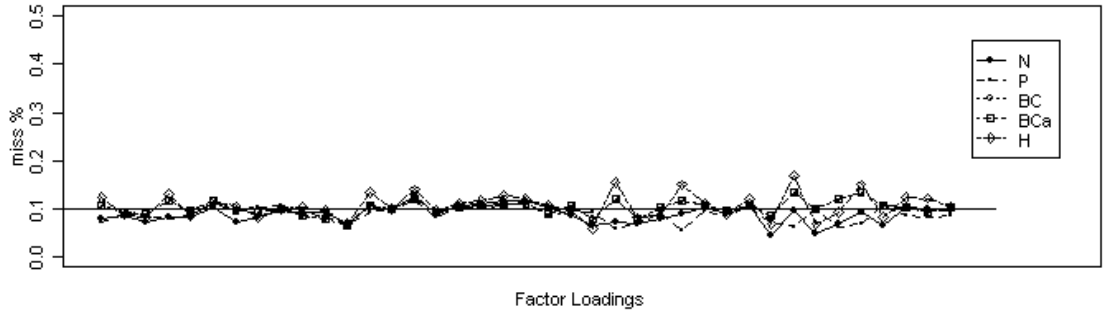
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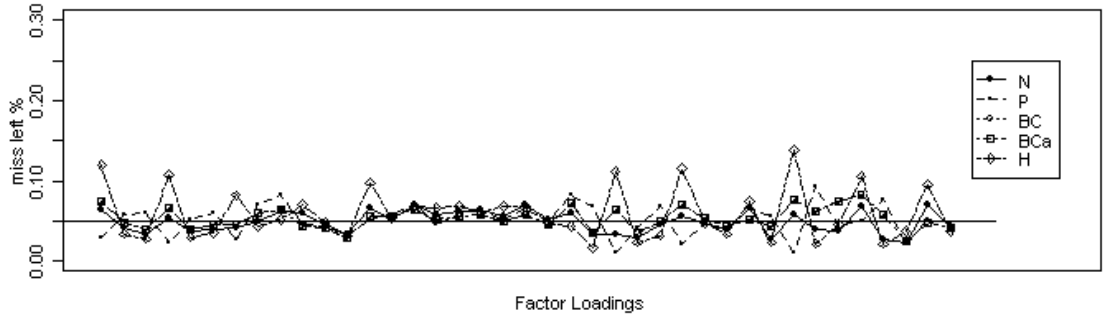
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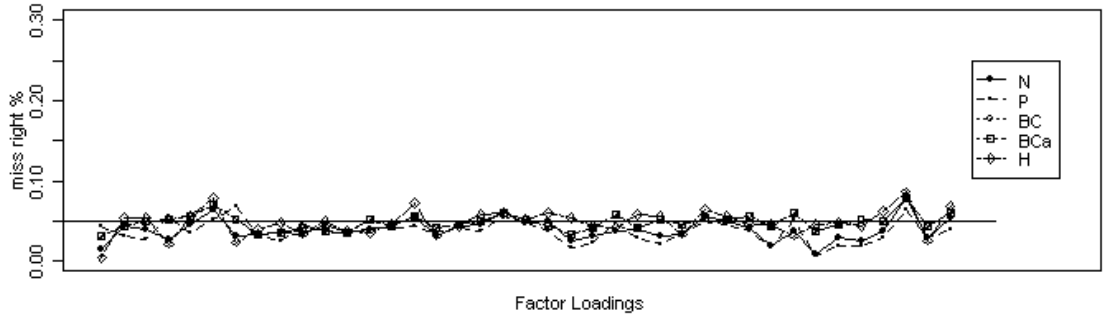
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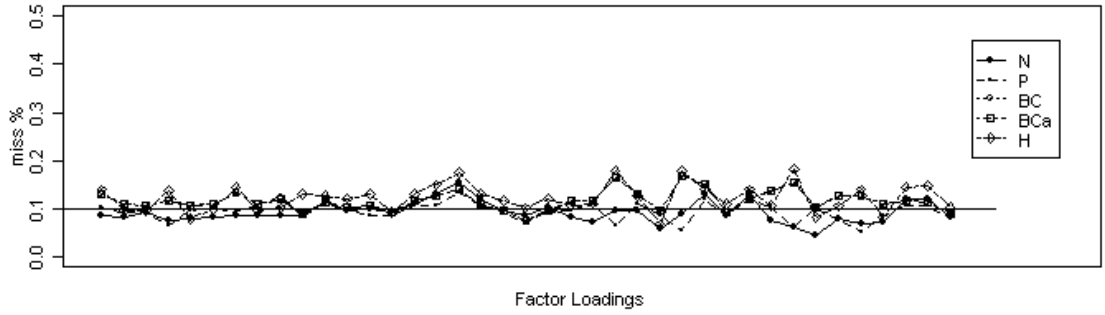
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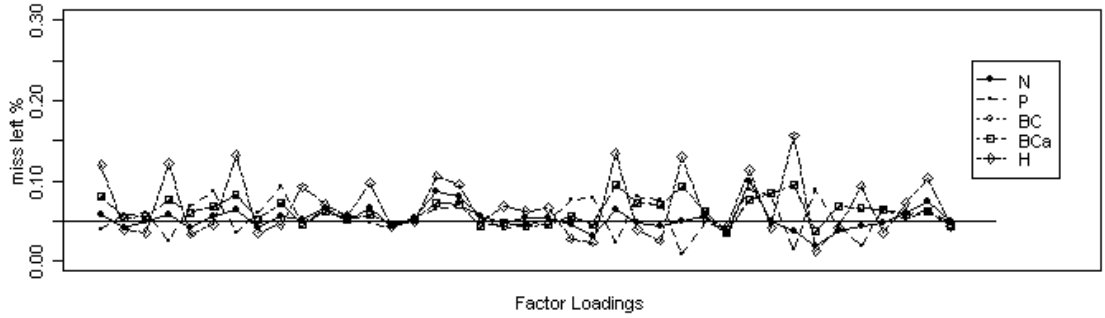
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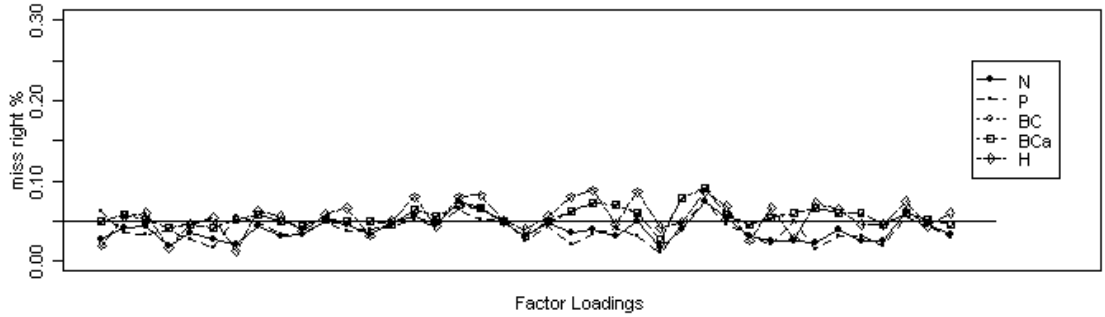
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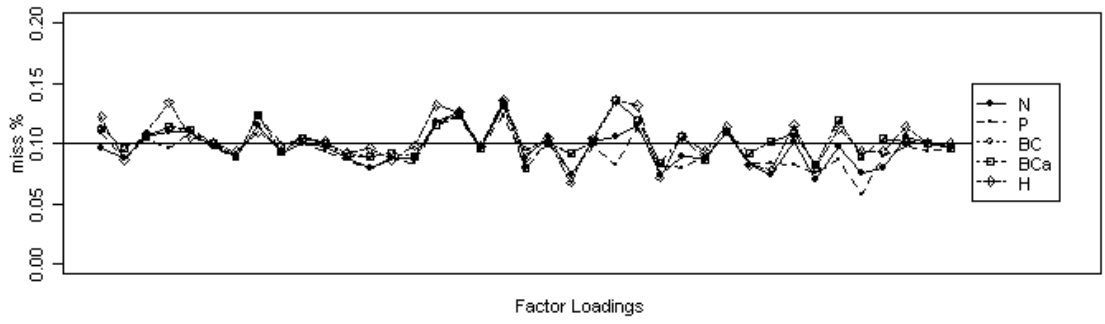
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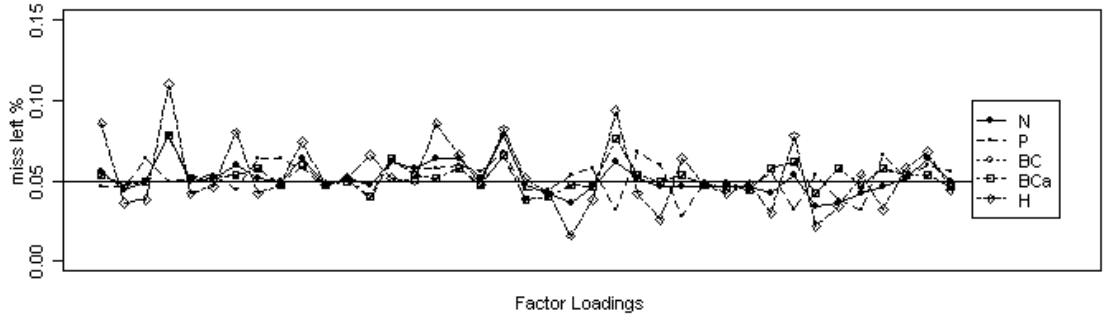
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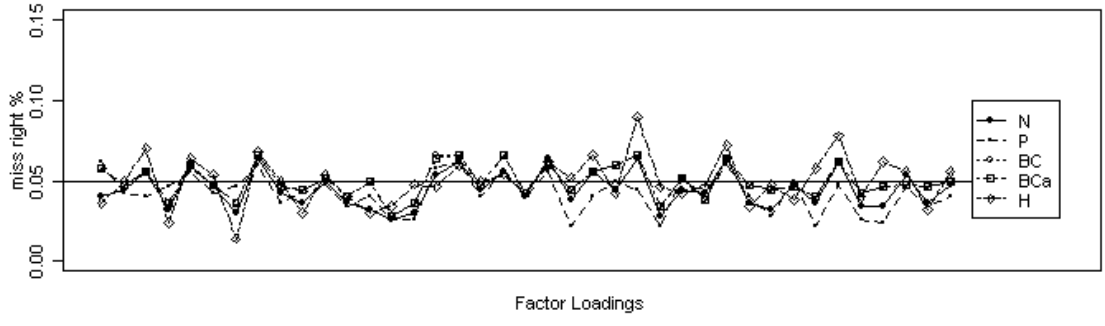
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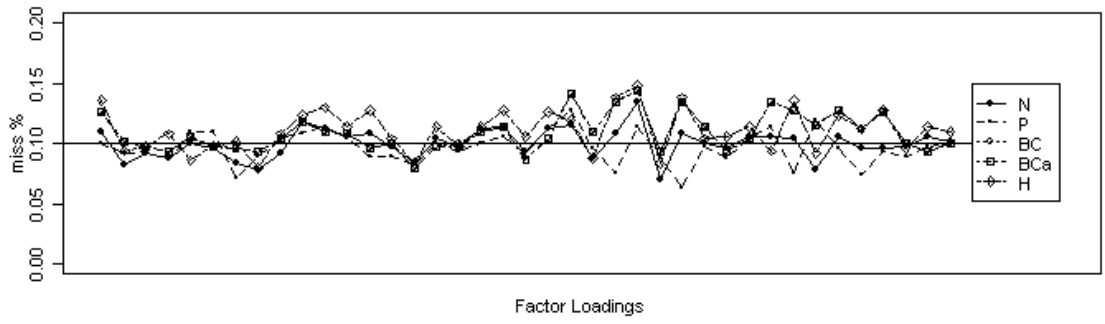
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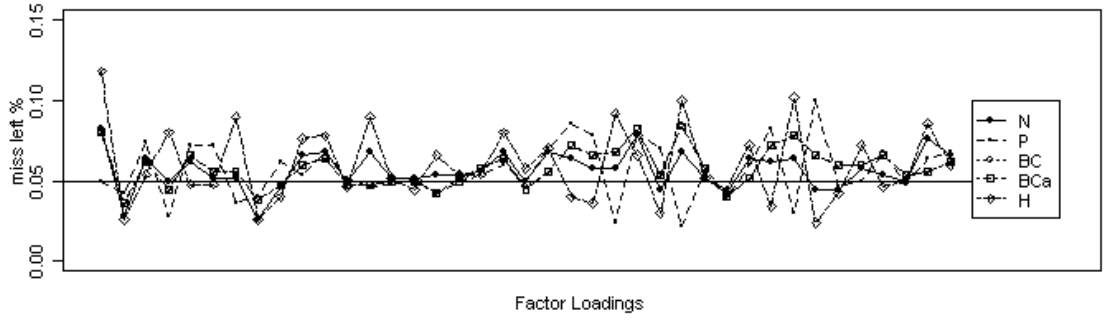
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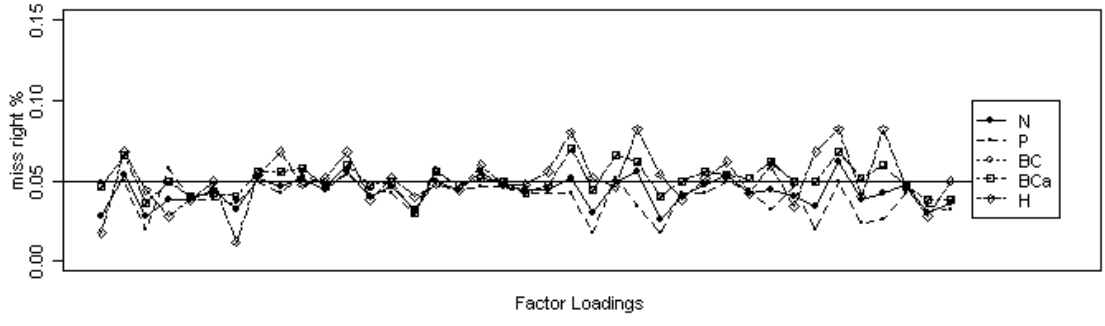
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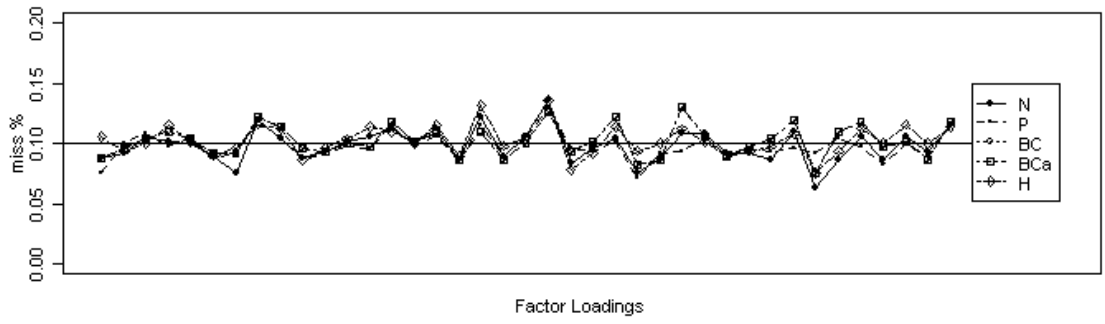
Factor Loadings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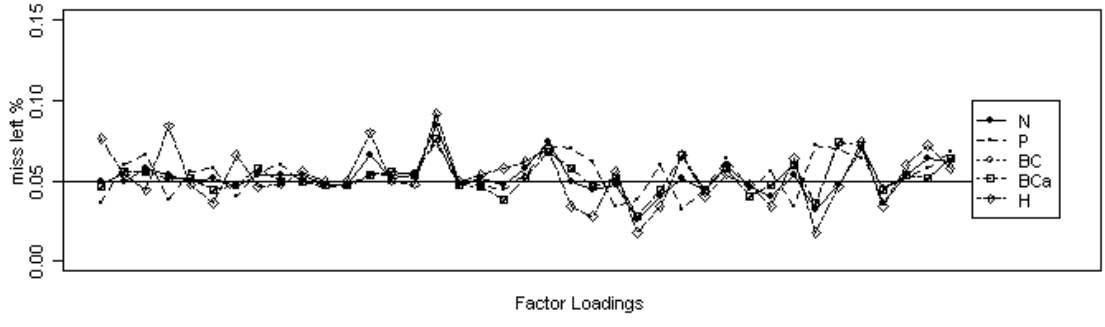
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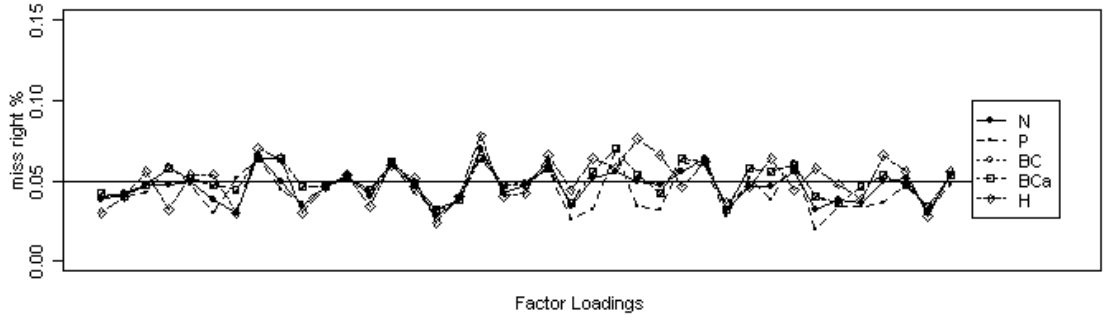
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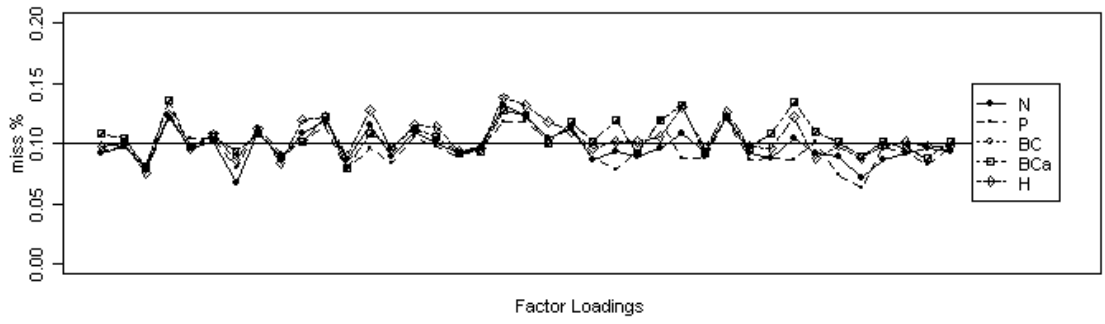
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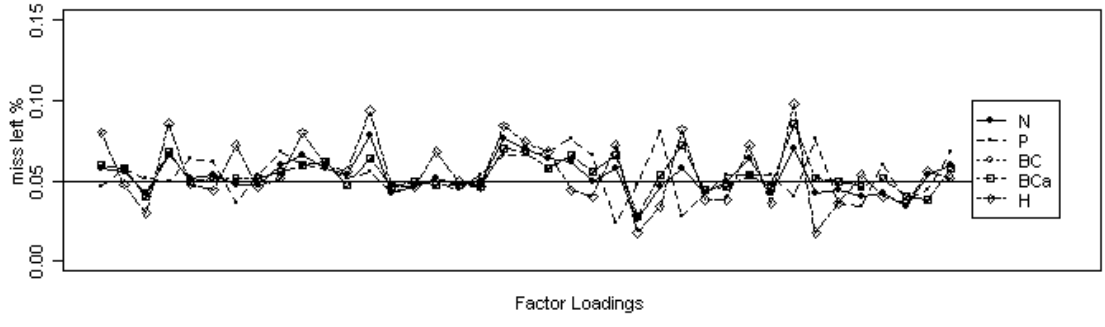
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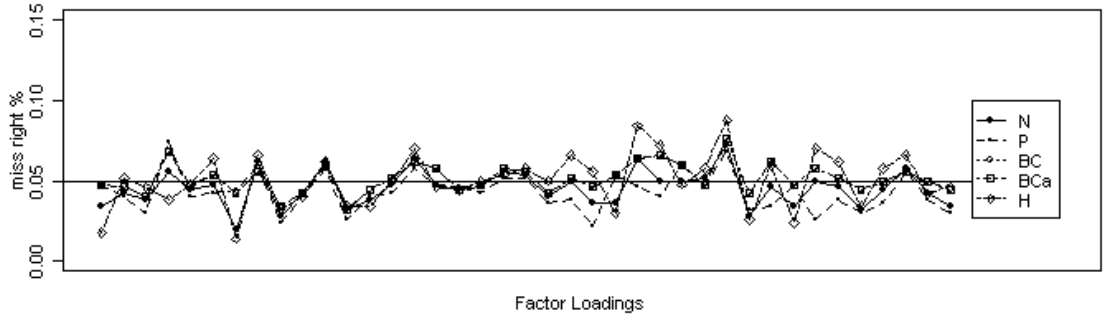
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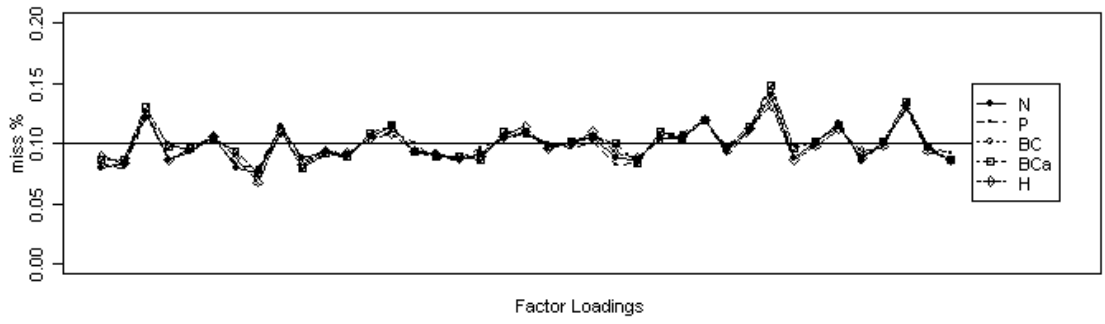
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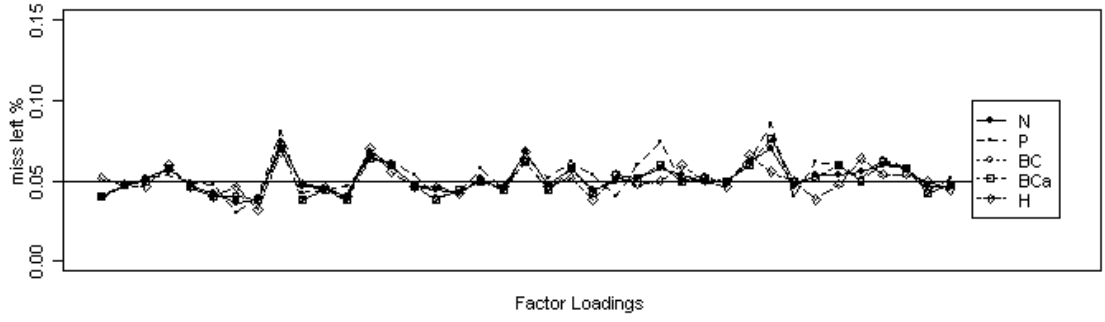
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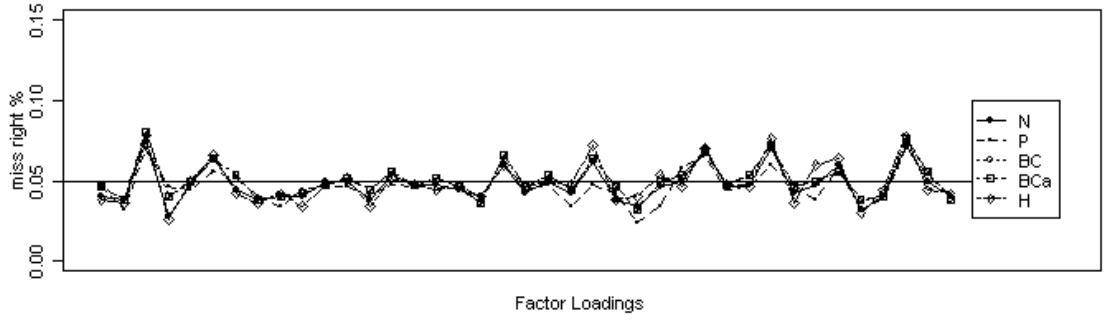
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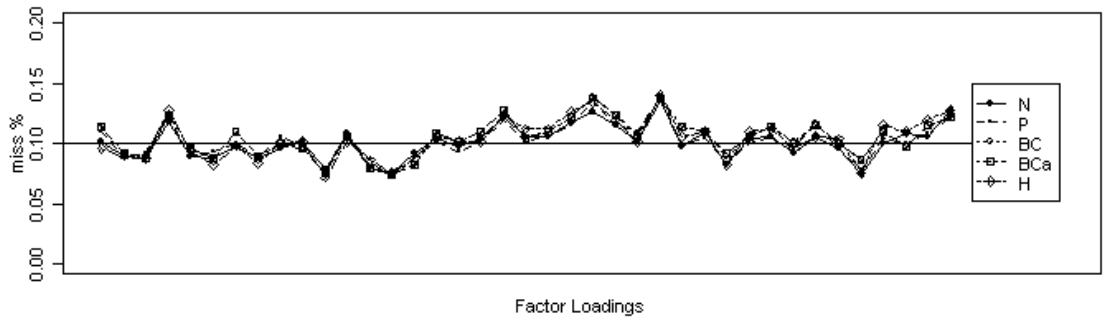
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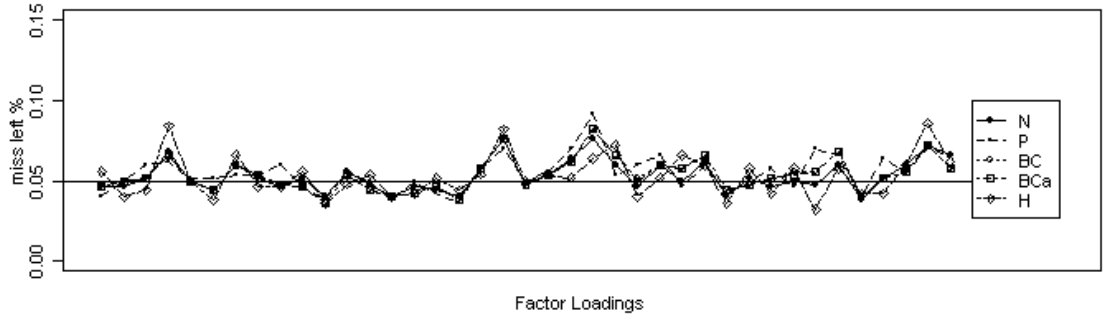
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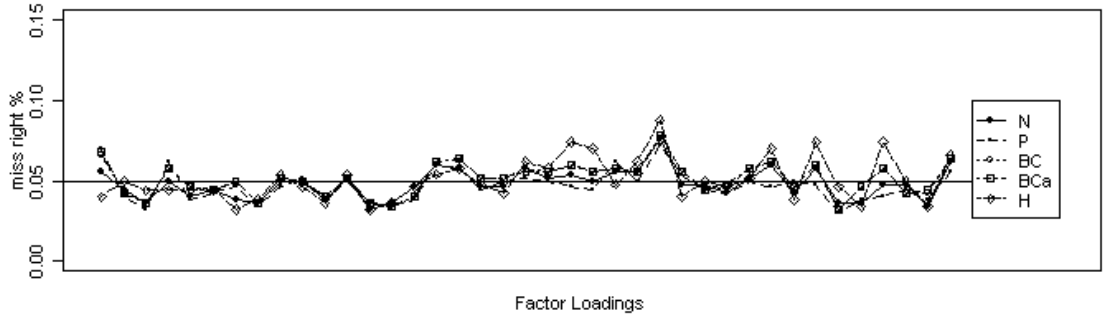
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