```
DATASET ACTIVATE DataSet1.
NPAR TESTS
  /M-W= Acc BY Exp(1 2) (Exp1 is our experiment; Exp2 is K&J-L, 2012)
  /STATISTICS=DESCRIPTIVES QUARTILES
  /MISSING ANALYSIS.
```

NPar Tests

Mann-Whitney Test

Overall Accuracy:

Ranks

	1 our 2 KJL	N	Mean Rank	Sum of Ranks
Acc	1	64	62.78	4018.00
	2	64	66.22	4238.00
	Total	128		

Test Statistics[a]

	Acc
Mann-Whitney U	1938.000
Wilcoxon W	4018.000
Z	-.524
Asymp. Sig. (2-tailed)	.600

a. Grouping Variable: 1 our 2 KJL

```
NPAR TESTS
  /M-W= Aac Aca Eac Eca Iac Ica Oac Oca NVC BY Exp(1 2)
  /STATISTICS=DESCRIPTIVES QUARTILES
  /MISSING ANALYSIS.
```

Accuracy of the 9 possible conclusions:

Ranks

	1 our 2 KJL	N	Mean Rank	Sum of Ranks
Aac	1	64	72.70	4653.00
	2	64	56.30	3603.00
	Total	128		
Aca	1	64	80.29	5138.50
	2	64	48.71	3117.50
	Total	128		
Eac	1	64	63.78	4082.00
	2	64	65.22	4174.00
	Total	128		

Eca	1	64	71.92	4603.00
	2	64	57.08	3653.00
	Total	128		
Iac	1	64	69.75	4464.00
	2	64	59.25	3792.00
	Total	128		
Ica	1	64	80.36	5143.00
	2	64	48.64	3113.00
	Total	128		
Oac	1	64	72.83	4661.00
	2	64	56.17	3595.00
	Total	128		
Oca	1	64	78.72	5038.00
	2	64	50.28	3218.00
	Total	128		
NVC	1	64	62.97	4030.00
	2	64	66.03	4226.00
	Total	128		

Test Statistics[a]

	Aac	Aca	Eac	Eca	Iac	Ica	Oac	Oca	NVC
Mann-Whitney U	1523.000	1037.500	2002.000	1573.000	1712.000	1033.000	1515.000	1138.000	1950.000
Wilcoxon W	3603.000	3117.500	4082.000	3653.000	3792.000	3113.000	3595.000	3218.000	4030.000
Z	-2.644	-5.430	-.220	-2.286	-1.602	-4.851	-2.542	-4.352	-.467
Asymp. Sig. (2-tailed)	.008	.000	.826	.022	.109	.000	.011	.000	.640

Paired T-test:

```
T-TEST GROUPS=Exp(1 2)
  /MISSING=ANALYSIS
  /VARIABLES=Aac Aca Eac Eca Iac Ica Oac Oca NVC Acc
  /CRITERIA=CI(.95).
```

T-Test

Group Statistics

1 our 2 KJL	N	Mean	Std. Deviation	Std. Error Mean

Aac	1	64	.032374100719424	.106206279072521	.013275784884065
	2	64	.038261217948718	.136005904053867	.017000738006733
Aca	1	64	.021807553956835	.074511277675398	.009313909709425
	2	64	.011217948717949	.061463799505022	.007682974938128
Eac	1	64	.090490107913669	.134932191137677	.016866523892210
	2	64	.134515224358975	.187792927792086	.023474115974011
Eca	1	64	.075876798561151	.115918194732302	.014489774341538
	2	64	.069010416666667	.121065669339055	.015133208667382
Iac	1	64	.131519784172662	.140425869665111	.017553233708139
	2	64	.130608974358974	.175219258971750	.021902407371469
Ica	1	64	.105215827338129	.122093743922652	.015261717990331
	2	64	.070512820512820	.137114142345191	.017139267793149
Oac	1	64	.133880395683453	.129297152914430	.016162144114304
	2	64	.116085737179487	.154523493619691	.019315436702461
Oca	1	64	.131407374100719	.127128970349071	.015891121293634
	2	64	.076422275641026	.124306329501062	.015538291187633
NVC	1	64	.277428057553957	.163008447333627	.020376055916703
	2	64	.296173878205128	.191243765978136	.023905470747267
Acc	1	64	.413893884892086	.224707748540680	.028088468567585
	2	64	.425681089718750	.238761563745091	.029845195468136

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Aac	Equal variances assumed	.703	.403	-.273	126	.785	-0.0059	0.0216	-0.0486	0.0368
	Equal variances not assumed			-.273	119.008	.785	-0.0059	0.0216	-0.0486	0.0368
Aca	Equal variances assumed	.421	.518	.877	126	.382	0.0106	0.0121	-0.0133	0.0345
	Equal variances not assumed			.877	121.603	.382	0.0106	0.0121	-0.0133	0.0345
Eac	Equal variances assumed	6.100	.015	-1.523	126	.130	-0.0440	0.0289	-0.1012	0.0132
	Equal variances not assumed			-1.523	114.360	.130	-0.0440	0.0289	-0.1013	0.0132
Eca	Equal variances assumed	.065	.799	.328	126	.744	0.0069	0.0210	-0.0346	0.0483
	Equal variances not assumed			.328	125.763	.744	0.0069	0.0210	-0.0346	0.0483
Iac	Equal variances assumed	1.502	.223	.032	126	.974	0.0009	0.0281	-0.0546	0.0565
	Equal variances not assumed			.032	120.293	.974	0.0009	0.0281	-0.0547	0.0565
Ica	Equal variances assumed	.274	.602	1.512	126	.133	0.0347	0.0229	-0.0107	0.0801
	Equal variances not assumed			1.512	124.341	.133	0.0347	0.0229	-0.0107	0.0801
Oac	Equal variances assumed	1.719	.192	.707	126	.481	0.0178	0.0252	-0.0320	0.0676
	Equal variances not assumed			.707	122.199	.481	0.0178	0.0252	-0.0321	0.0677
Oca	Equal variances assumed	.250	.618	2.474	126	.015	0.0550	0.0222	0.0110	0.0990
	Equal variances not assumed			2.474	125.937	.015	0.0550	0.0222	0.0110	0.0990

NVC	Equal variances assumed	2.217	.139	-.597	126	.552	-0.0187	0.0314	-0.0809	0.0434
	Equal variances not assumed			-.597	122.916	.552	-0.0187	0.0314	-0.0809	0.0434
Acc	Equal variances assumed	.493	.484	-.288	126	.774	-0.0118	0.0410	-0.0929	0.0693
	Equal variances not assumed			-.288	125.539	.774	-0.0118	0.0410	-0.0929	0.0693

```
SORT CASES  BY noModel.
SPLIT FILE SEPARATE BY noModel.
NPAR TESTS
  /M-W= Aac Aca Eac Eca Iac Ica Oac Oca NVC Acc BY Exp(1 2)
  /STATISTICS=DESCRIPTIVES QUARTILES
  /MISSING ANALYSIS.
```

According to NVC/no of model:

noModel = NVC

Mann-Whitney Test

Ranks[a]

	1 our 2 KJL	N	Mean Rank	Sum of Ranks
Aac	1	37	42.70	1580.00
	2	37	32.30	1195.00
	Total	74		
Aca	1	37	46.14	1707.00
	2	37	28.86	1068.00
	Total	74		
Eac	1	37	39.30	1454.00
	2	37	35.70	1321.00
	Total	74		
Eca	1	37	43.70	1617.00
	2	37	31.30	1158.00
	Total	74		
Iac	1	37	40.92	1514.00
	2	37	34.08	1261.00
	Total	74		

Ica	1	37	46.97	1738.00
	2	37	28.03	1037.00
	Total	74		
Oac	1	37	40.86	1512.00
	2	37	34.14	1263.00
	Total	74		
Oca	1	37	46.35	1715.00
	2	37	28.65	1060.00
	Total	74		
NVC	1	37	34.08	1261.00
	2	37	40.92	1514.00
	Total	74		
Acc	1	37	34.08	1261.00
	2	37	40.92	1514.00
	Total	74		

Test Statistics[a,b]

	Aac	Aca	Eac	Eca	Iac	Ica	Oac	Oca	NVC	Acc
Mann-Whitney U	492.000	365.000	618.000	455.000	558.000	334.000	560.000	357.000	558.000	558.000
Wilcoxon W	1195.000	1068.000	1321.000	1158.000	1261.000	1037.000	1263.000	1060.000	1261.000	1261.000
Z	-2.246	-4.058	-.721	-2.515	-1.368	-3.797	-1.346	-3.551	-1.368	-1.368
Asymp. Sig. (2-tailed)	.025	.000	.471	.012	.171	.000	.178	.000	.171	.171

noModel = 1

Descriptive Statistics[a]

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
Aac	20	.1131018 26231323	.2368330 38679845	.0000000 00000000 0	.8141025 64102564 1	0.0016	0.0072	0.0535

Aca	20	.06624930824571147108382	.16144110000000000	.58273381294964003	0.0000	0.0072	0.0288
Eac	20	.19089651355838460409320	.26637530000000000	.78205128205128200	0.0016	0.0136	0.3855
Eca	20	.13520106991330085086135	.20102180000000000	.62589928057553960	0.0016	0.0072	0.2428
Iac	20	.21024949271352102225026	.26197020064102564	.82051282051282050	0.0156	0.0608	0.4271
Ica	20	.15397297546578179890326	.21719580000000000	.70512820512820510	0.0066	0.0372	0.2847
Oac	20	.02338821250691853209556	.02169030000000000	.05755395683453240	0.0016	0.0160	0.0432
Oca	20	.01746910164176454647829	.01951320000000000	.05755395683453240	0.0000	0.0108	0.0342
NVC	20	.05389457664637510181031	.03188790064102564	.10256410256410256	0.0192	0.0544	0.0805
Acc	20	.81584117319604346122702	.54487179500000000	.90384615400000000	0.8024	0.8237	0.8649
1 our 2 KJL	20	1.50	.513	1	2	1.0000	1.5000	2.0000

Mann-Whitney Test

Ranks[a]

	1 our 2 KJL	N	Mean Rank	Sum of Ranks
Aac	1	10	10.80	108.00
	2	10	10.20	102.00
	Total	20		
Aca	1	10	13.35	133.50
	2	10	7.65	76.50
	Total	20		

Eac	1	10	9.70	97.00
	2	10	11.30	113.00
	Total	20		
Eca	1	10	12.10	121.00
	2	10	8.90	89.00
	Total	20		
Iac	1	10	11.00	110.00
	2	10	10.00	100.00
	Total	20		
Ica	1	10	11.80	118.00
	2	10	9.20	92.00
	Total	20		
Oac	1	10	15.20	152.00
	2	10	5.80	58.00
	Total	20		
Oca	1	10	15.20	152.00
	2	10	5.80	58.00
	Total	20		
NVC	1	10	11.40	114.00
	2	10	9.60	96.00
	Total	20		
Acc	1	10	10.00	100.00
	2	10	11.00	110.00
	Total	20		

a. noModel = 1

Test Statistics[a,b]

	Aac	Aca	Eac	Eca	Iac	Ica	Oac	Oca	NVC	Acc
Mann-Whitney U	47.000	21.500	42.000	34.000	45.000	37.000	3.000	3.000	41.000	45.000
Wilcoxon W	102.000	76.500	97.000	89.000	100.000	92.000	58.000	58.000	96.000	100.000
Z	-.229	-2.192	-.610	-1.224	-.378	-.987	-3.591	-3.728	-.682	-.379
Asymp. Sig. (2-tailed)	.819	.028	.542	.221	.705	.324	.000	.000	.495	.705
Exact Sig. [2*(1-tailed Sig.)]	.853[c]	.029[c]	.579[c]	.247[c]	.739[c]	.353[c]	.000[c]	.000[c]	.529[c]	.739[c]

a. noModel = 1

b. Grouping Variable: 1 our 2 KJL

c. Not corrected for ties.

noModel = 2

Descriptive Statistics[a]

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles		
						25th	50th (Median)	75th
Aac	8	.0086988 10182623	.0091299 23333959	.0000000 00000000 0	.0287769 78417266 2	0.00160	0.00719	0.01141
Aca	8	.0017985 61151079	.0033302 88128678	.0000000 00000000 0	.0071942 44604316 5	0.00000	0.00000	0.00540
Eac	8	.0254104 40878067	.0100909 29993778	.0128205 12820512 8	.0431654 67625899 3	0.01619	0.02361	0.03205
Eca	8	.0071942 44604317	.0115364 56485428	.0000000 00000000 0	.0287769 78417266 2	0.00000	0.00000	0.01799
Iac	8	.1105538 64600627	.0452521 20624278	.0503597 12230215 8	.1923076 92307692 4	0.07051	0.10791	0.13996
Ica	8	.0767040 21398266	.0372129 21197040	.0128205 12820512 8	.1223021 58273381 3	0.04503	0.08333	0.10971
Oac	8	.2971084 67072496	.1891373 18126710	.1217948 71794871 8	.5899280 57553956 8	0.12538	0.25540	0.49359
Oca	8	.2663830 47408227	.1768714 28299141	.0705128 20512820 5	.5251798 56115107 9	0.10269	0.24820	0.41346
NVC	8	.1620780 29883785	.0555245 81101318	.0863309 35251798 6	.2302158 27338129 5	0.10759	0.16404	0.21795
Acc	8	.4395637 33634892	.0981195 36294796	.3309352 51798561 2	.5899280 57553956 8	0.35413	0.41026	0.53514

1 our 2 KJL	8	1.50	.535	1	2	1.00000	1.50000	2.00000

a. noModel = 2

Mann-Whitney Test

Ranks[a]

	1 our 2 KJL	N	Mean Rank	Sum of Ranks
Aac	1	4	5.75	23.00
	2	4	3.25	13.00
	Total	8		
Aca	1	4	5.50	22.00
	2	4	3.50	14.00
	Total	8		
Eac	1	4	4.25	17.00
	2	4	4.75	19.00
	Total	8		
Eca	1	4	6.00	24.00
	2	4	3.00	12.00
	Total	8		
Iac	1	4	4.25	17.00
	2	4	4.75	19.00
	Total	8		
Ica	1	4	6.00	24.00
	2	4	3.00	12.00
	Total	8		
Oac	1	4	4.75	19.00
	2	4	4.25	17.00
	Total	8		
Oca	1	4	5.00	20.00
	2	4	4.00	16.00
	Total	8		
NVC	1	4	4.00	16.00
	2	4	5.00	20.00
	Total	8		
Acc	1	4	4.25	17.00
	2	4	4.75	19.00
	Total	8		

a. noModel = 2

Test Statistics[a,b]

	Aac	Aca	Eac	Eca	Iac	Ica	Oac	Oca	NVC	Acc
Mann-Whitney U	3.000	4.000	7.000	2.000	7.000	2.000	7.000	6.000	6.000	7.000
Wilcoxon W	13.000	14.000	17.000	12.000	17.000	12.000	17.000	16.000	16.000	17.000
Z	-1.488	-1.528	-.292	-1.984	-.290	-1.732	-.289	-.577	-.577	-.289
Asymp. Sig. (2-tailed)	.137	.127	.770	.047	.772	.083	.773	.564	.564	.773
Exact Sig. [2*(1-tailed Sig.)]	.200[c]	.343[c]	.886[c]	.114[c]	.886[c]	.114[c]	.886[c]	.686[c]	.686[c]	.886[c]

a. noModel = 2

b. Grouping Variable: 1 our 2 KJL

c. Not corrected for ties.

noModel = 3

Descriptive Statistics[a]

	N	Mean	Std. Deviation	Minimum	Maximum	Percentiles 25th	50th (Median)	75th
Aac	26	.0386956 70682389	.1187820 60994943	.0000000 000000000	.4935897 435897437	0.0000	0.0000	0.0090
Aca	26	.0106157 67740837	.0264146 11792729	.0000000 000000000	.1007194 244604317	0.0000	0.0000	0.0072
Eac	26	.2424456 88419678	.1729624 31862904	.0071942 446043165	.7051282 051282051	0.1385	0.1942	0.3363
Eca	26	.1601304 75501256	.1239804 75393537	.0000000 000000000	.5256410 256410257	0.0805	0.1217	0.2234

Iac	26	.0475199 72187930	.0374496 01059398	.0000000 00000000 0	.1654676 25899280 6	0.0246	0.0372	0.0647
Ica	26	.0326667 65995488	.0344032 11872162	.0000000 00000000 0	.1151079 13669064 8	0.0000	0.0236	0.0484
Oac	26	.1165481 81573085	.1199163 86713387	.0000000 00000000 0	.4423076 92307692 3	0.0194	0.0791	0.1846
Oca	26	.1122557 57524158	.1139061 30267207	.0000000 00000000 0	.3956834 53237410 1	0.0304	0.0816	0.1683
NVC	26	.2152065 32998453	.0631841 47537004	.0897435 89743589 7	.3381294 96402877 7	0.1712	0.2137	0.2703
Acc	26	.1984164 14882955	.1192426 85232506	.0128205 13000000 0	.4423076 92000000 0	0.0926	0.1893	0.2860
1 our 2 KJL	26	1.50	.510	1	2	1.0000	1.5000	2.0000

a. noModel = 3

Mann-Whitney Test

Ranks[a]

	1 our 2 KJL	N	Mean Rank	Sum of Ranks
Aac	1	13	14.92	194.00
	2	13	12.08	157.00
	Total	26		
Aca	1	13	17.23	224.00
	2	13	9.77	127.00
	Total	26		
Eac	1	13	10.77	140.00
	2	13	16.23	211.00
	Total	26		
Eca	1	13	13.65	177.50
	2	13	13.35	173.50
	Total	26		
Iac	1	13	14.46	188.00

	2	13	12.54	163.00
	Total	26		
Ica	1	13	18.31	238.00
	2	13	8.69	113.00
	Total	26		
Oac	1	13	16.00	208.00
	2	13	11.00	143.00
	Total	26		
Oca	1	13	16.31	212.00
	2	13	10.69	139.00
	Total	26		
NVC	1	13	15.31	199.00
	2	13	11.69	152.00
	Total	26		
Acc	1	13	15.54	202.00
	2	13	11.46	149.00
	Total	26		

a. noModel = 3

Test Statistics[a,b]

	Aac	Aca	Eac	Eca	Iac	Ica	Oac	Oca	NVC	Acc
Mann-Whitney U	66.000	36.000	49.000	82.500	72.000	22.000	52.000	48.000	61.000	58.000
Wilcoxon W	157.000	127.000	140.000	173.500	163.000	113.000	143.000	139.000	152.000	149.000
Z	-1.034	-2.861	-1.821	-.103	-.642	-3.239	-1.670	-1.874	-1.206	-1.360
Asymp. Sig. (2-tailed)	.301	.004	.069	.918	.521	.001	.095	.061	.228	.174
Exact Sig. [2*(1-tailed Sig.)]	.362[c]	.012[c]	.072[c]	.920[c]	.545[c]	.001[c]	.101[c]	.064[c]	.243[c]	.186[c]

a. noModel = 3

b. Grouping Variable: 1 our 2 KJL

c. Not corrected for ties.

Correlations

```
DATASET ACTIVATE DataSet3.

SORT CASES  BY valid.
SPLIT FILE SEPARATE BY valid.
DATASET ACTIVATE DataSet3.
```

```
CORRELATIONS
  /VARIABLES=Acc KJLAcc AvgTFil AvgT SDTime SDTimeFil
  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```

0=NVC; 1 =with Valid Conclusion

Correlations for NVC:

Descriptive Statistics[a]

	Mean	Std. Deviation	N
Acc	.366517596733424	.145632334005792	37
KJLAcc	.4103	.16189	37
AvgTFil	17210.4648957 5523800	7207.13236375 9937000	37
AvgT	16949.8598094 4974300	3355.38871998 1029000	37
SDTime	18432.5604598 2226400	19508.4214555 71790000	37
SDTimeFil	20798.5484654 4427700	36923.1170548 31820000	37

a. 0=NVC; 1 =withVC = .00

Correlations[a]

		KJLAcc	AvgTFil	AvgT	SDTime	SDTimeFil
Acc	Pearson Correlation	.907**	-.219	-.084	-.059	-.092
	Sig. (2-tailed)	.000	.193	.621	.730	.587
	N	37	37	37	37	37
KJLAcc	Pearson Correlation		-.188	.000	-.011	-.063
	Sig. (2-tailed)		.265	.998	.948	.713
	N		37	37	37	37
AvgTFil	Pearson Correlation			.783**	.869**	.893**
	Sig. (2-tailed)			.000	.000	.000
	N			37	37	37
AvgT	Pearson Correlation				.724**	.655**
	Sig. (2-tailed)				.000	.000
	N				37	37
SDTime	Pearson Correlation					.981**

	Sig. (2-tailed)					.000
	N					37

**. Correlation is significant at the 0.01 level (2-tailed).

a. 0=NVC; 1 =withVC = .00

Correlations for with-valid-conclusion syllogisms:

Descriptive Statistics[a]

	Mean	Std. Deviation	N
Acc	.478816946442846	.292254302824802	27
KJLAcc	.4468	.31787	27
AvgTFil	19500.4607277 8876600	5827.99206975 4427000	27
AvgT	17806.6927791 1005000	2283.51663075 8579000	27
SDTime	15443.6389224 8116500	4094.36528436 1178500	27
SDTimeFil	16896.5053118 2391600	9256.55698584 1570000	27

a. 0=NVC; 1 =withVC = 1.00

Correlations[a]

		KJLAcc	AvgTFil	AvgT	SDTime	SDTimeFil
Acc	Pearson Correlation	.976**	-.524**	-.393*	-.319	-.435*
	Sig. (2-tailed)	.000	.005	.043	.105	.023
	N	27	27	27	27	27
KJLAcc	Pearson Correlation		-.506**	-.382*	-.336	-.426*
	Sig. (2-tailed)		.007	.049	.087	.027
	N		27	27	27	27
AvgTFil	Pearson Correlation			.514**	.655**	.920**
	Sig. (2-tailed)			.006	.000	.000
	N			27	27	27
AvgT	Pearson Correlation				.757**	.428*

	Sig. (2-tailed)				.000	.026
	N				27	27
SDTime	Pearson Correlation					.755**
	Sig. (2-tailed)					.000
	N					27

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. 0=NVC; 1 =withVC = 1.00

```
NONPAR CORR
  /VARIABLES=Acc KJLAcc AvgTFil AvgT SDTime SDTimeFil
  /PRINT=BOTH TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Nonparametric Correlations

Correlations for NVC:

Correlations[a]

			KJLAcc	AvgTFil	AvgT	SDTime	SDTimeFil
Kendall's tau_b	Acc	Correlation Coefficient	.680**	-.154	-.069	.015	-.109
		Sig. (2-tailed)	.000	.182	.547	.896	.346
		N	37	37	37	37	37
	KJLAcc	Correlation Coefficient		-.187	.026	.102	-.153
		Sig. (2-tailed)		.107	.824	.380	.186
		N		37	37	37	37
	AvgTFil	Correlation Coefficient			.562**	.267*	.550**
		Sig. (2-tailed)			.000	.020	.000
		N			37	37	37
	AvgT	Correlation Coefficient				.640**	.411**
		Sig. (2-tailed)				.000	.000
		N				37	37

	SDTime	Correlation Coefficient					.345**
		Sig. (2-tailed)					.003
		N					37
Spearman's rho	Acc	Correlation Coefficient	.814**	-.202	-.119	.028	-.167
		Sig. (2-tailed)	.000	.230	.484	.867	.323
		N	37	37	37	37	37
	KJLAcc	Correlation Coefficient		-.249	-.034	.120	-.227
		Sig. (2-tailed)		.137	.842	.478	.177
		N		37	37	37	37
	AvgTFil	Correlation Coefficient			.747**	.410*	.761**
		Sig. (2-tailed)			.000	.012	.000
		N			37	37	37
	AvgT	Correlation Coefficient				.835**	.584**
		Sig. (2-tailed)				.000	.000
		N				37	37
	SDTime	Correlation Coefficient					.481**
		Sig. (2-tailed)					.003
		N					37

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. 0=NVC; 1 =withVC = .00

Correlations for with-valid-conclusion syllogisms:

Correlations[a]

			KJLAcc	AvgTFil	AvgT	SDTime	SDTimeFil
Kendall's tau_b	Acc	Correlation Coefficient	.808**	-.383**	-.291*	-.245	-.308*
		Sig. (2-tailed)	.000	.005	.035	.076	.025
		N	27	27	27	27	27
	KJLAcc	Correlation Coefficient		-.417**	-.285*	-.262	-.337*
		Sig. (2-tailed)		.002	.037	.055	.014
		N		27	27	27	27
	AvgTFil	Correlation Coefficient			.544**	.453**	.607**
		Sig. (2-tailed)			.000	.001	.000
		N			27	27	27
	AvgT	Correlation Coefficient				.613**	.527**
		Sig. (2-tailed)				.000	.000
		N				27	27
	SDTime	Correlation Coefficient					.652**
		Sig. (2-tailed)					.000
		N					27
Spearman's rho	Acc	Correlation Coefficient	.940**	-.516**	-.390*	-.304	-.464*
		Sig. (2-tailed)	.000	.006	.044	.123	.015
		N	27	27	27	27	27
	KJLAcc	Correlation Coefficient		-.525**	-.393*	-.365	-.504**
		Sig. (2-tailed)		.005	.043	.061	.007
		N		27	27	27	27
	AvgTFil	Correlation Coefficient			.696**	.617**	.786**
		Sig. (2-tailed)			.000	.001	.000
		N			27	27	27
	AvgT	Correlation Coefficient				.792**	.702**
		Sig. (2-tailed)				.000	.000

	N				27	27
SDTime	Correlation Coefficient					.838**
	Sig. (2-tailed)					.000
	N					27

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. 0=NVC; 1 =withVC = 1.00

Regarding the entropy:

```
SORT CASES BY syllogism(A).
DATASET ACTIVATE DataSet3.
SPLIT FILE OFF.
NONPAR CORR
  /VARIABLES=Entropy KJLEntropy
  /PRINT=SPEARMAN TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Nonparametric Correlations

Correlations

			Entropy	KJLEntropy
Spearman's rho	Our Entropy	Correlation Coefficient	1.000	.741**
		Sig. (2-tailed)	.	.000
		N	64	64
	KJLEntropy	Correlation Coefficient	.741**	1.000
		Sig. (2-tailed)	.000	.
		N	64	64

**. Correlation is significant at the 0.01 level (2-tailed).

```
NPAR TESTS
  /WILCOXON=Entropy WITH KJLEntropy (PAIRED)
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS.
```

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Our Entropy	64	2.1942	.28808	1.49	2.65
KJLEntropy	64	1.9521	.40262	1.05	2.64

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
KJLEntropy – Our Entropy	Negative Ranks	49[a]	38.14	1869.00
	Positive Ranks	15[b]	14.07	211.00
	Ties	0[c]		
	Total	64		

a. KJLEntropy < Our Entropy

b. KJLEntropy > Our Entropy

c. KJLEntropy = Our Entropy

Test Statistics[a]

	KJLEntropy – Our Entropy
Z	-5.544[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

```
CORRELATIONS
  /VARIABLES=Entropy Acc
  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```

Same as K&J-L: more difficult problems (lower accuracy) -> higher entropy (more diversity of the responses)

Correlations

Descriptive Statistics

	Mean	Std. Deviation	N

Entropy	2.1942	.28808	64
Acc	.413893884892086	.224707748540680	64

Correlations

		Entropy	Acc
Entropy	Pearson Correlation	1	-.565**
	Sig. (2-tailed)		.000
	N	64	64
Acc	Pearson Correlation	-.565**	1
	Sig. (2-tailed)	.000	
	N	64	64

**. Correlation is significant at the 0.01 level (2-tailed).

```
NONPAR CORR
  /VARIABLES=Entropy Acc
  /PRINT=SPEARMAN TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Nonparametric Correlations

Correlations

			Entropy	Acc
Spearman's rho	Entropy	Correlation Coefficient	1.000	-.497**
		Sig. (2-tailed)	.	.000
		N	64	64
	Acc	Correlation Coefficient	-.497**	1.000
		Sig. (2-tailed)	.000	.
		N	64	64

**. Correlation is significant at the 0.01 level (2-tailed).