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TABLE I.  $k$ -VALUES OF THREE HIGHEST COHERENCE VALUES FOR 12 CORPORA (A - D10) GIVEN BY 16 COHERENCE MEASURES ( $H_{sO} - C_{UMass}$ ).

	HsO	LCh	Lesk	WuP	Resnik	JCn	Lin	Path	vec_p	vec	$C_A$	$C_P$	$C_V$	$C_{NPMI}$	$C_{UCI}$	$C_{UMass}$
<b>A</b>	95	179	112	<u>23</u>	<u>23</u>	<u>7</u>	<u>6</u>	179	116	116	14	93	<u>7</u>	172	172	6
	112	450	115	<u>7</u>	<u>6</u>	<u>23</u>	7	450	178	102	9	138	9	95	181	25
	102	139	174	<u>6</u>	<u>7</u>	<u>6</u>	<u>23</u>	139	144	108	12	95	21	181	162	<u>23</u>
<b>A20</b>	164	146	143	<u>7</u>	<u>7</u>	6	<u>7</u>	143	124	36	<u>12</u>	99	4	95	95	77
	19	143	164	8	6	<u>59</u>	6	146	144	87	<u>10</u>	64	16	99	77	64
	90	132	173	<u>10</u>	12	<u>7</u>	93	144	146	60	<u>7</u>	151	24	59	183	62
<b>A10</b>	175	187	93	37	37	8	37	187	129	4	20	51	<u>6</u>	51	120	32
	93	145	164	93	93	93	8	145	163	<u>6</u>	51	102	76	88	51	52
	37	175	137	175	112	4	93	175	4	129	24	114	80	120	88	61
<b>B</b>	150	198	198	108	62	58	90	198	250	85	69	69	5	69	69	11
	196	147	164	89	90	54	62	147	92	89	7	11	6	81	158	10
	117	161	196	109	89	52	89	161	280	135	6	46	22	158	11	26
<b>B20</b>	170	143	129	33	33	33	33	149	<u>5</u>	67	10	101	<u>5</u>	66	101	10
	171	149	149	8	109	25	109	143	153	60	4	66	12	101	102	9
	190	187	171	<u>5</u>	63	48	<u>5</u>	170	181	142	14	10	6	95	95	<u>25</u>
<b>B10</b>	73	127	127	<u>73</u>	<u>73</u>	116	31	127	4	4	<u>73</u>	11	14	80	80	10
	146	146	181	64	105	31	73	147	5	135	23	80	7	88	68	11
	175	175	164	105	175	21	105	146	135	6	48	10	20	68	88	12
<b>C</b>	140	7	140	7	140	32	70	7	144	133	9	68	<u>5</u>	107	107	26
	155	8	193	70	113	104	98	<u>5</u>	143	106	17	107	11	140	140	41
	113	<u>5</u>	192	<u>140</u>	70	80	<u>140</u>	8	160	132	12	40	28	126	126	35
<b>C20</b>	50	153	188	11	11	11	11	133	132	111	8	140	5	157	157	33
	157	133	180	50	48	50	50	166	86	67	13	67	9	140	96	8
	144	166	144	48	50	10	48	153	133	152	14	81	7	96	140	14
<b>C10</b>	66	164	66	6	12	121	6	157	64	37	21	42	4	21	21	29
	69	189	103	17	140	4	12	189	117	48	9	9	8	16	22	19
	90	145	185	152	<u>16</u>	28	89	164	25	99	8	112	5	19	69	74
<b>D</b>	100	166	188	6	6	6	6	166	135	83	113	103	12	92	92	17
	149	7	191	7	10	183	7	143	185	146	9	113	113	113	189	19
	188	6	100	<u>9</u>	7	54	<u>8</u>	188	198	167	8	32	103	162	196	24
<b>D20</b>	97	116	107	48	48	4	48	144	7	72	12	78	41	109	109	14
	118	144	144	<u>73</u>	<u>73</u>	48	<u>73</u>	116	29	106	4	73	39	<u>73</u>	<u>73</u>	<u>7</u>
	107	169	184	20	91	91	46	169	197	91	16	55	40	100	100	16
<b>D10</b>	90	<u>69</u>	77	22	77	32	36	69	26	15	<u>12</u>	<u>69</u>	7	57	58	5
	79	141	79	36	90	36	<u>12</u>	280	39	45	6	<u>57</u>	8	58	<u>57</u>	64
	93	<u>67</u>	<u>69</u>	<u>12</u>	<u>67</u>	29	22	141	41	<u>57</u>	18	58	47	<u>69</u>	20	<u>67</u>





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TABLE V. PEARSON AND SPEARMAN CORRELATIONS BETWEEN FOUR HUMAN RATINGS (MC - SIMLEX NOUNS) AND 16 COHERENCE MEASURES ( $HsO - C_{UMASS}$ ). NOTE: HERE VALUES **without any** ASTERISKS ARE STATISTICALLY HIGHLY SIGNIFICANT WITH  $P < 0.001$ . AND \*\* :  $P < 0.01$ , AND \* :  $P < 0.05$ , - :  $P > 0.05$  AND N.D. MEANS NO DATA.

	HsO	LCh	Lesk	WuP	Resnik	JCn	Lin	Path	vec_p	vec	$C_A$	$C_P$	$C_V$	$C_{NPMI}$	$C_{UCI}$	$C_{UMass}$
MC(P)	-	0.57*	-	0.55*	0.59	-	0.53*	-	0.60	<b>0.88</b>	-	0.79	-	0.77	0.67	-
MC(S)	-	0.58*	0.60	0.55*	0.68	-	0.56*	0.56*	0.70	<b>0.90</b>	-	0.81	0.65	0.82	-	-
RG(P)	0.54	0.60	0.44	0.53	0.61	-	0.54	0.54	n.d.	n.d.	-	0.75	-	<b>0.77</b>	0.71	-
RG(S)	0.49	0.56	0.55	0.51	0.55	-	0.46	0.54	n.d.	n.d.	-	<b>0.85</b>	0.50	0.84	0.83	0.45
Lau(P)	0.19	-	0.15	0.18	0.25	0.33	0.29	-	n.d.	n.d.	0.38	<b>0.61</b>	0.31	0.55	0.51	0.28
Lau(S)	0.25	-	0.19	0.20	0.31	0.39	0.37	-	n.d.	n.d.	0.39	<b>0.52</b>	0.33	0.49	0.46	0.26
Simlex n.(P)	0.35	<b>0.52</b>	0.25	0.45	0.41	0.35	0.51	0.51	0.28	0.35	-	0.24	0.13	0.17	0.18	-
Simlex n.(S)	0.36	0.49	0.31	0.47	0.41	<b>0.51</b>	<b>0.51</b>	0.48	0.22	0.33	-	0.22	0.21	0.16	0.18	-

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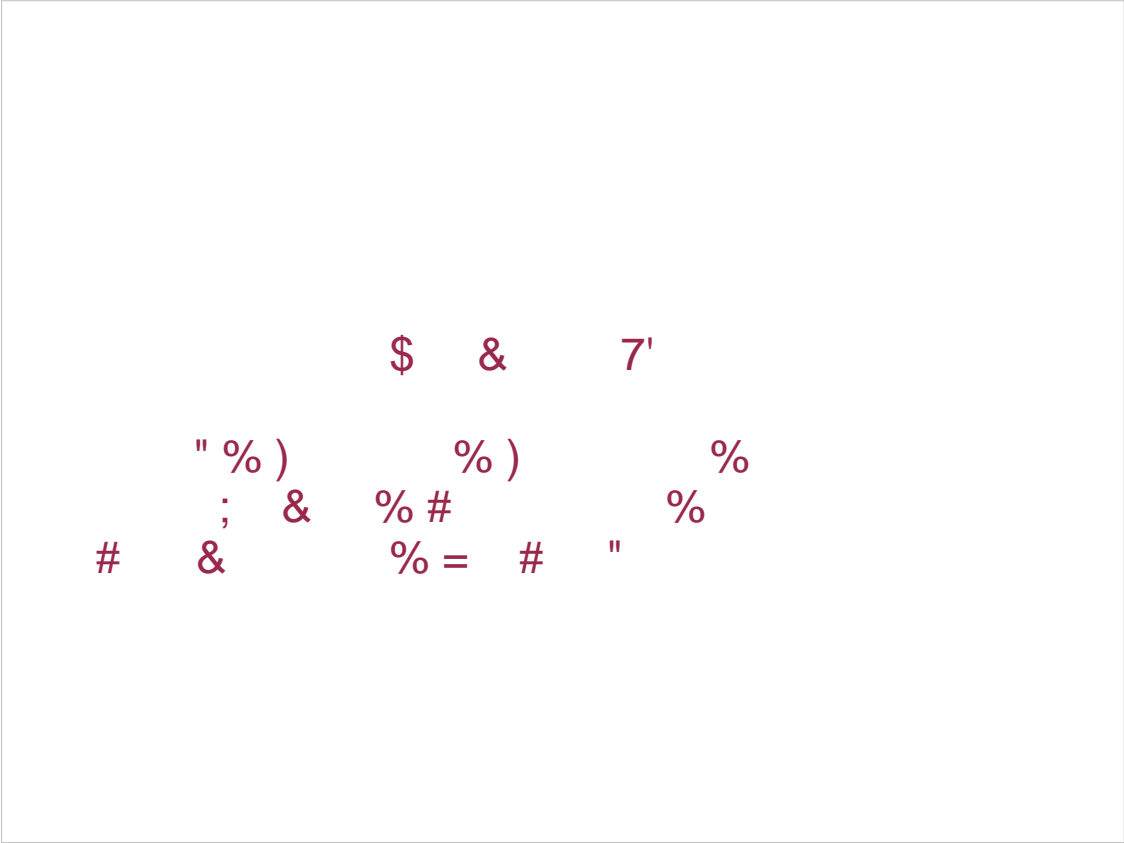
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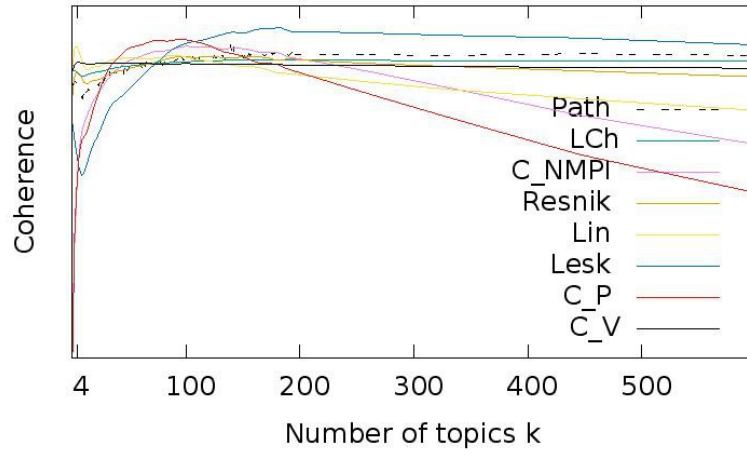
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TABLE I. *k*-VALUES OF THREE HIGHEST COHERENCE VALUES FOR 12 CORPORA (A - D10) GIVEN BY 16 COHERENCE MEASURES ( $H_{\text{AO}} - C_{\text{UMASS}}$ ).

	HsO	LCh	Lesk	WuP	Resnik	JCn	Lin	Path	vec_p	vec	$C_A$	$C_P$	$C_V$	$C_{\text{NPMI}}$	$C_{\text{UCI}}$	$C_{\text{UMass}}$
<b>A</b>	95	179	112	23	23	7	6	179	116	116	14	93	2	172	172	6
	112	450	115	2	6	23	7	450	178	102	9	138	9	95	181	25
	102	139	174	6	7	6	23	139	144	108	12	95	21	181	162	23
<b>A20</b>	164	146	143	7	7	6	7	143	124	36	12	99	4	95	95	77
	19	143	164	8	6	59	6	146	144	87	10	64	16	99	77	64
	90	132	173	10	12	7	93	144	146	60	7	151	24	59	183	62
<b>A10</b>	175	187	93	37	37	8	37	187	129	4	20	51	6	51	120	32
	93	145	164	93	93	8	8	145	163	6	51	102	76	88	51	52
	37	175	137	175	112	4	93	175	4	129	24	114	80	120	88	61
<b>B</b>	150	198	198	108	62	58	90	198	250	85	69	69	5	69	69	11
	196	147	164	89	90	54	62	147	92	89	7	11	6	81	158	10
	117	161	196	109	89	52	89	161	280	135	6	46	22	158	11	26
<b>B20</b>	170	143	129	33	33	33	33	149	5	67	10	101	5	66	101	10
	171	149	149	8	109	25	109	143	153	60	4	66	12	101	102	9
	190	187	171	5	63	48	5	170	181	142	14	10	6	95	95	25
<b>B10</b>	73	127	127	73	73	116	31	127	4	4	73	11	14	80	80	10
	146	146	181	64	105	31	73	147	5	135	23	80	7	88	68	11
	175	175	164	105	175	21	105	146	135	6	48	10	20	68	88	12
<b>C</b>	140	7	140	7	140	32	70	7	144	133	9	68	5	107	107	26
	155	8	193	70	113	104	98	5	143	106	17	107	11	140	140	41
	113	5	192	140	70	80	140	8	160	132	12	40	28	126	126	35
<b>C20</b>	50	153	188	11	11	11	11	133	132	111	8	140	5	157	157	33
	157	133	180	50	48	50	50	166	86	67	13	67	9	140	96	8
	144	166	144	48	50	10	48	153	133	152	14	81	7	96	140	14
<b>C10</b>	66	164	66	6	12	121	6	157	64	37	21	42	4	21	21	29
	69	189	103	17	140	4	12	189	117	48	9	9	8	16	22	19
	90	145	185	152	16	28	89	164	25	99	8	112	5	19	69	74
<b>D</b>	100	166	188	6	6	6	6	166	135	83	113	103	12	92	92	17
	149	7	191	7	10	183	7	143	185	146	9	113	113	113	189	19
	188	6	100	9	7	54	8	188	198	167	8	92	103	162	196	24
<b>D20</b>	97	116	107	48	48	4	48	144	7	72	12	78	41	109	109	14
	118	144	144	73	73	48	73	116	29	106	4	73	39	73	73	7
	107	169	184	20	91	91	46	169	197	91	16	55	40	100	100	16
<b>D10</b>	90	69	77	22	77	32	36	69	26	15	12	69	7	57	58	5
	79	141	79	36	90	36	12	280	39	45	6	57	8	58	57	64
	93	67	69	12	67	29	22	141	41	57	18	58	47	69	20	67

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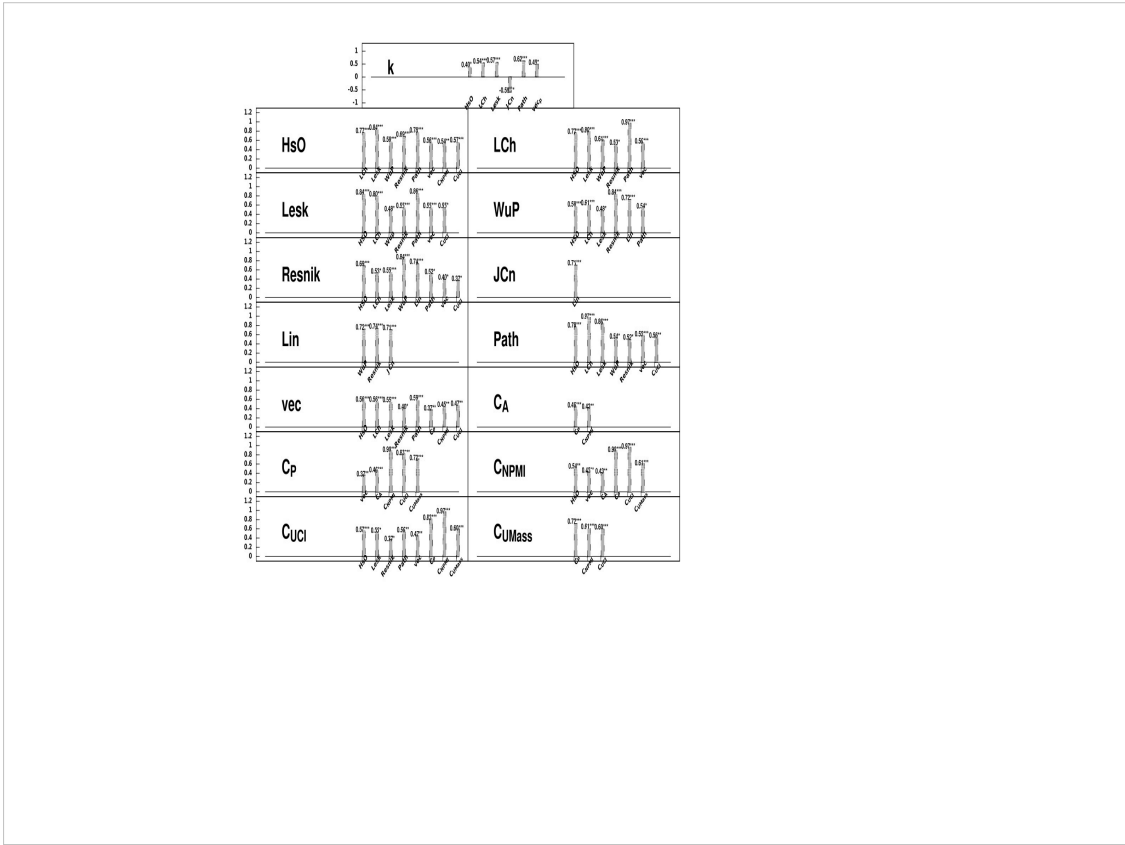
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TABLE V. PEARSON AND SPEARMAN CORRELATIONS BETWEEN FOUR HUMAN RATINGS (MC - SIMLEX NOUNS) AND 16 COHERENCE MEASURES ( $HsO - C_{UMASS}$ ). NOTE: HERE VALUES **without any** ASTERISKS ARE STATISTICALLY HIGHLY SIGNIFICANT WITH  $P < 0.001$ . AND \*\* :  $P < 0.01$ , AND \* :  $P < 0.05$ , - :  $P > 0.05$  AND N.D. MEANS NO DATA.

	HsO	LCh	Lesk	WuP	Resnik	JCn	Lin	Path	vec_p	vec	$C_A$	$C_P$	$C_V$	$C_{NPMI}$	$C_{UCI}$	$C_{UMass}$
MC(P)	-	0.57*	-	0.55*	0.59	-	0.53*	-	0.60	<b>0.88</b>	-	0.79	-	0.77	0.67	-
MC(S)	-	0.58*	0.60	0.55*	0.68	-	0.56*	0.56*	0.70	<b>0.90</b>	-	0.81	0.65	0.82	-	-
RG(P)	0.54	0.60	0.44	0.53	0.61	-	0.54	0.54	n.d.	n.d.	-	0.75	-	<b>0.77</b>	0.71	-
RG(S)	0.49	0.56	0.55	0.51	0.55	-	0.46	0.54	n.d.	n.d.	-	<b>0.85</b>	0.50	0.84	0.83	0.45
Lau(P)	0.19	-	0.15	0.18	0.25	0.33	0.29	-	n.d.	n.d.	0.38	<b>0.61</b>	0.31	0.55	0.51	0.28
Lau(S)	0.25	-	0.19	0.20	0.31	0.39	0.37	-	n.d.	n.d.	0.39	<b>0.52</b>	0.33	0.49	0.46	0.26
Simlex n.(P)	0.35	<b>0.52</b>	0.25	0.45	0.41	0.35	0.51	0.51	0.28	0.35	-	0.24	0.13	0.17	0.18	-
Simlex n.(S)	0.36	0.49	0.31	0.47	0.41	<b>0.51</b>	<b>0.51</b>	0.48	0.22	0.33	-	0.22	0.21	0.16	0.18	-

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