

# DEVELOPMENT OF THE INTERDIGITAL SPACES OF THE HAND

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Already in the past a number of investigators from the ranks of anthropologists and anatomists have occupied themselves with questions relating to the growth of the autopodium of the proximal extremities (see Cited Literature—Hajniš 1968, 1969 a, b, 1970). As far as we know, nobody has followed till now the problems of growth, development, and age changes of the interdigital spaces of the hand. And yet the knowledge of their abnormal depth may perhaps in certain cases be of practical significance. As the late Academician Fr. Burian (oral communication) already told us in 1963, it is possible to assume that in certain congenital defects the interdigital skinfolds in the sense of their elongation may be abnormally developed into short interdigital spaces. Therefore I suggested their study in the overall systematic evaluation of individuals with various types of congenital defects already in preparatory studies dealing with the use of anthropology in plastic surgery (Hajniš, Farkaš 1964, 1965.)

## MATERIAL AND METHODS

For the study of the length growth of the interdigital spaces, anthropometric records of 1707 children and youths of both sexes of Prague (854 boys and 853 girls) were used. The examined girls and boys were divided into 28 age groups from birth to 18 years. The range and the number of the examined persons in the individual age groups can be seen from the tables. In each age group, about the same number of persons were examined. The data (cross-section investigation) were collected in the years 1965-66 in Prague and treated in accordance with current biometric principles.

The length of the interdigital spaces was measured with a sliding caliper from the top of curvature of the individual interdigital skinfolds with the fingers a little spread and minimum abduction of the thumb as a projective distance to the point of dactylion of the preceding finger. That is, at the first space to the tip of the thumb, at the second to dactylon II, and so on (see Fig. 1).

Next the tables in the paper we also attach altogether intentionally unbalances graphs of growth curves, similarly as in the study of questions relating to the growth dynamics of the hand and the fingers

in the above cited papers (Hajniš 1968, 1969a, b, 1970). On the unbalanced growth curves we can see sections of diminished growth activity and of relative growth rest, i.e. periods that, from the viewpoint of the evaluation of growth, probably are of a certain importance in the search for optimum operation periods.

But this importance is not involved in the case of interdigital spaces. The sense of the presented data resides in the possibility of assessing the lengths of all four interdigital spaces in both sexes left and right and in whatever age class from birth until 18 years.

## GROWTH OF LENGTH OF INTERDIGITAL SPACES

From figures 1—4 it can be seen that as the shortest of the interdigital spaces on either side appears the first, while the longest found in boys is fourth. The latter, however, is in girls, in essence, equally long as the third. From the figures and the tables it

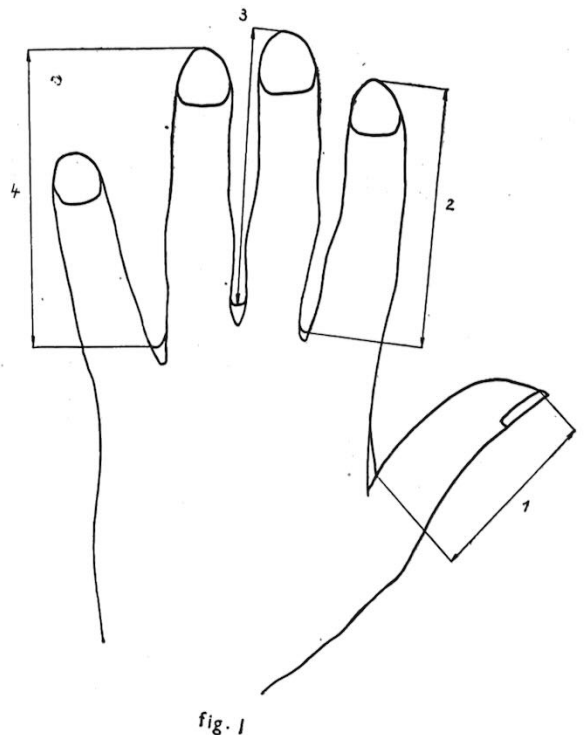


Fig. 1 Length of interdigital spaces

can also be seen that in the growth dynamics of the spaces practically no side differences exist in one or the other sex.

The fastest growth of the length of the interdigital spaces exists also here in the first age classes, just as in the length of the individual fingers (Hajniš 1968), on which the length of the interdigital spaces naturally is directly dependent. Both the absolute length of the spaces in the period immediately after birth and the growth dynamics in the following are very similar in both sexes. The first space (between the thumb and the index finger) gets longer in boys than in girls approximately after the 13th year; the second permanently not until about 14 years, when before it was repeatedly shorter than in girls for a period of 2 1/2 to 3 years. The third and the fourth interdigital space, if we overlook a certain minor irregularity especially in the first three years of growth, also gets permanently longer in boys not before the 14 year of age.

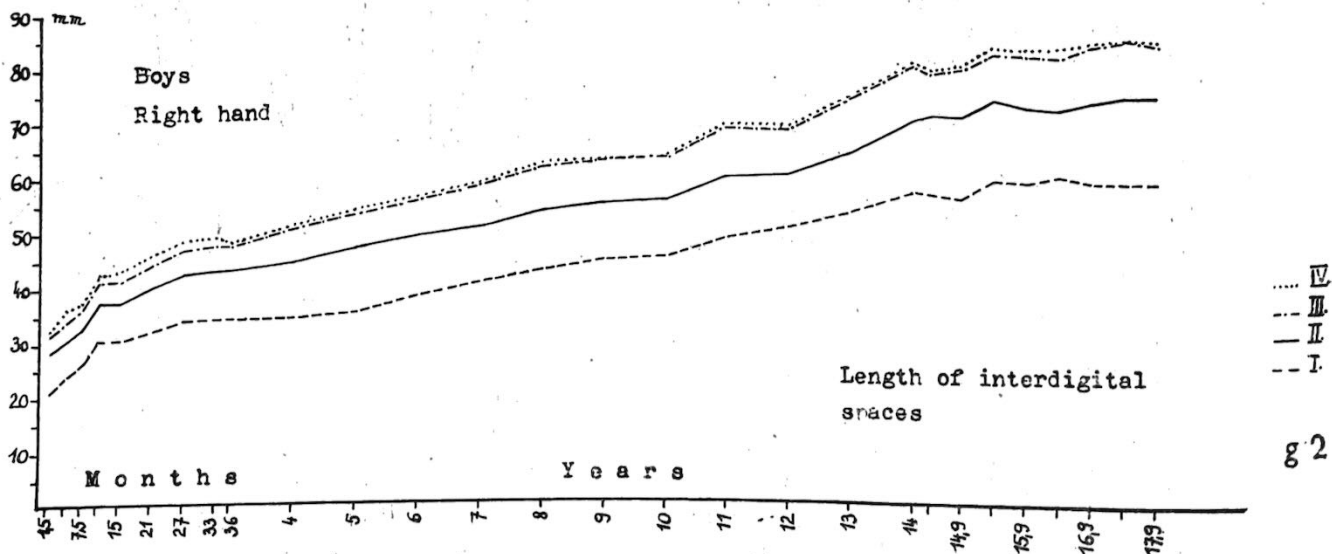
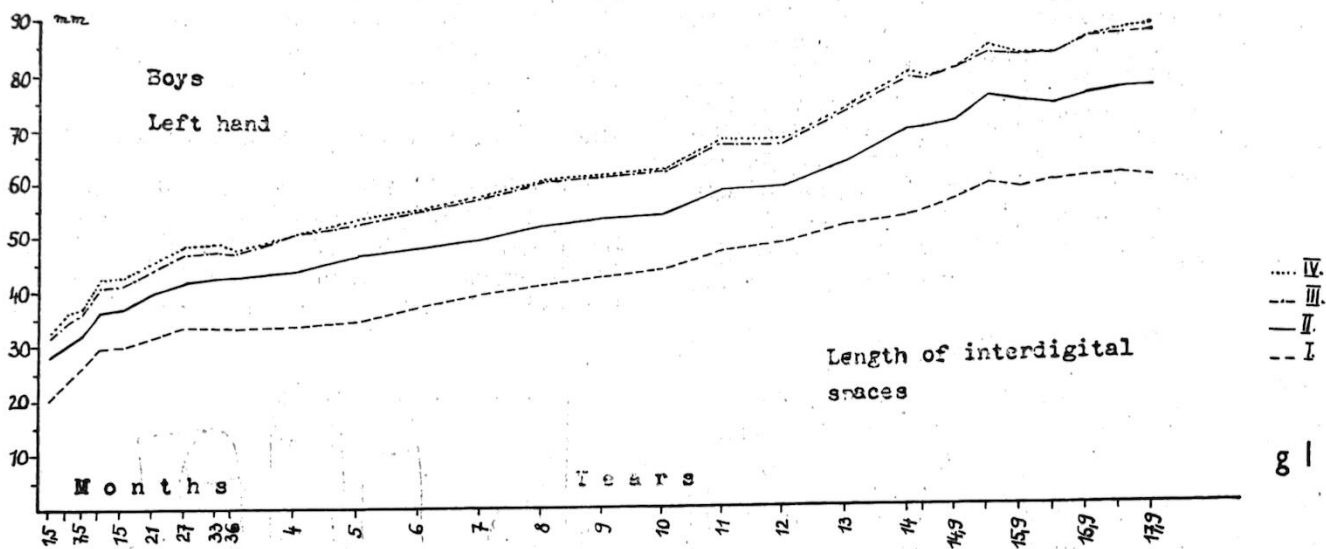
The third and the fourth interdigital space, in essence, do not differ from each other in size in both sexes. The differences in the lengths of the individual spaces increase gradually during the entire period under study; the maximum in boys is reached about the 14th year, while in girls already about the 13th year. The very growth of the length of the spaces in

girls probably comes to an end about 15 years, which is very close to the periods of termination of the length growth of the individual fingers (Hajniš 1968, 1969 b). In boys, negligible increments of the second to fourth spaces can be observed still in the following, i.e. practically to the end of the period under study. It is not excluded that the recorded bilateral decrease of the mean values of the lengths of the third and fourth interdigital spaces of girls in the postpubertal period might be influenced by the elongation of the interdigital skinfolds, about the shape and changes of which we do not know anything for the time being.

The evaluation of the normal and reduced or enlarged lengths of the interdigital spaces must naturally be made in accordance with the principles of biometric work. Therefore we stress that as actually shortened can be regarded only those which are at least 2 s shorter than the mean value of the respective age class.

### SUMMARY

From the cross-section study of the growth of the length of all four interdigital spaces of the left and the right hand in both sexes of Prague children and youth from birth to 18 years of age we can draw the following conclusions:



1. The growth curves are by their course very similar to the growth curves of the finger length (Hajniš 1968).

2. Between the growth changes on the left and the right hand no differences exist, in essence, in one or the other sex.

3. The shortest is the first, the longest the fourth and the third space in boys and girls. The third and the fourth space are for their length practically identical, but more distinct in girls.

4. The fastest growth in both sexes is registered in the first year of life and practically comes to an end in girls about the age of 15. In boys the second to fourth spaces elongate right until the end of the period under study, while the first ends its length development, on the average, after 15 years. Roughly until puberty the interdigital spaces develop equally in boys and girls. Not until the 13th year of age is the first space getting longer in boys. The second to fourth spaces are longer in boys than in girls from 13 1/2 — 14 years.

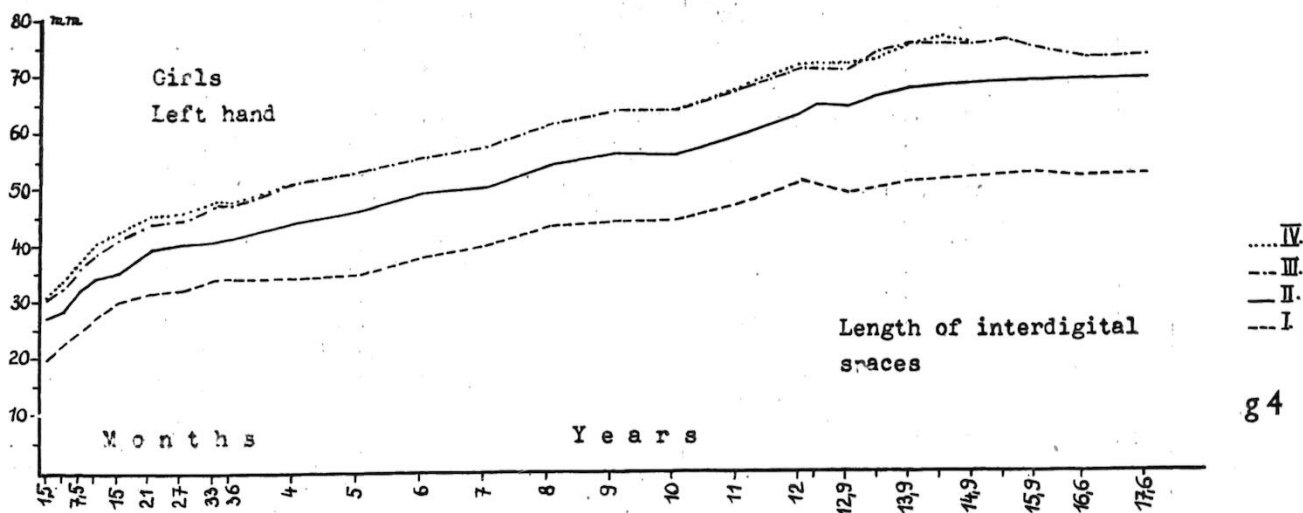
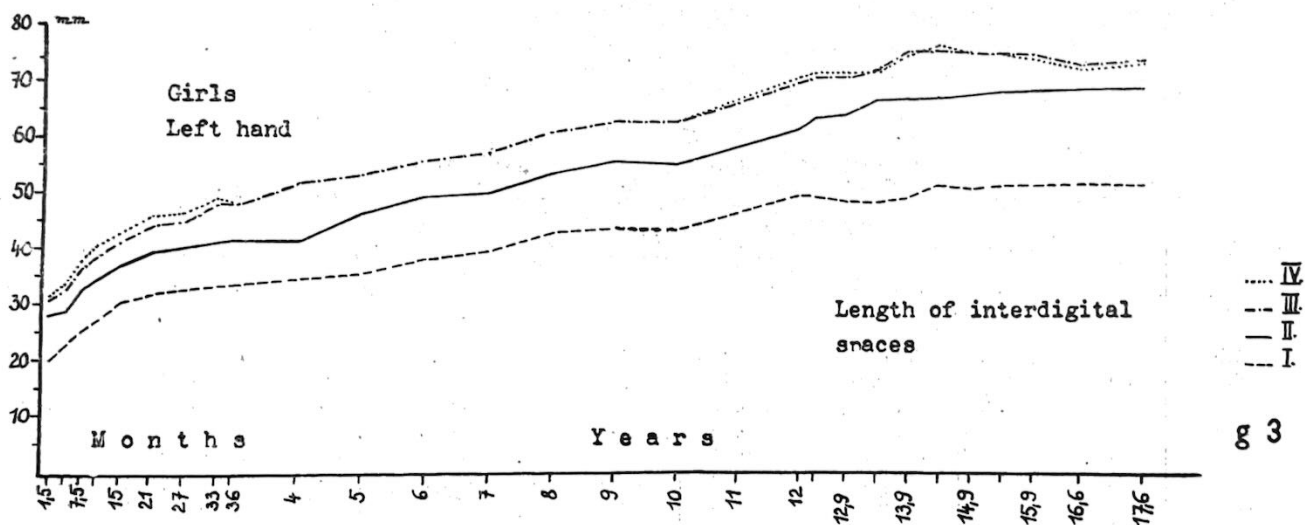
5. The difference in the lengths of the individual spaces (except for the third and the fourth) are increasing with advancing age; the difference in the second and (third + fourth) spaces in girls in the postpubertal period, on the other hand, somewhat diminished.

For the time being it cannot be excluded that the found shortening of the third and the fourth interdigital space in girls is not caused by changes in the size of the interdigital skinfold.

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TAB. 1  
Length of first interdental space. Boys

Age	n	sinister			dexter		
		$\bar{X} \pm 3 \cdot s_{\bar{x}}$	s	min-max	$\bar{X} \pm 3 \cdot s_{\bar{x}}$	s	min-max
1.5	30	20.77 ± 3.003	0.19	17-26	21.32 ± 3.003	0.18	17-25
4.5	30	23.86 ± 3.004	0.26	21-32	23.93 ± 3.004	0.25	21-32
7.5	30	26.76 ± 3.002	0.15	24-29	26.83 ± 3.002	0.16	24-30
10.5	30	30.26 ± 3.004	0.24	26-36	30.63 ± 3.004	0.27	26-37
15	30	30.56 ± 3.003	0.18	25-32	30.63 ± 3.003	0.18	25-33
21	30	32.30 ± 3.004	0.26	28-35	32.40 ± 3.004	0.25	28-36
27	30	34.10 ± 3.004	0.26	30-39	34.36 ± 3.004	0.26	30-39
33	30	34.12 ± 3.004	0.24	30-41	34.19 ± 3.004	0.23	30-41
36	30	34.57 ± 3.004	0.24	28-37	34.47 ± 3.004	0.24	28-37
4	30	34.60 ± 3.004	0.24	31-41	34.47 ± 3.004	0.24	31-41
5	30	35.82 ± 3.005	0.26	31-40	34.58 ± 3.004	0.27	31-41
6	30	38.45 ± 3.006	0.32	33-45	35.70 ± 3.005	0.32	33-45
7	30	40.50 ± 3.006	0.34	31-49	38.34 ± 3.006	0.35	32-49
8	30	42.47 ± 3.005	0.25	38-49	40.50 ± 3.006	0.25	38-49
9	30	43.91 ± 3.007	0.40	38-51	42.83 ± 3.005	0.39	38-51
10	30	44.98 ± 3.006	0.34	39-51	44.20 ± 3.007	0.35	39-52
11	30	48.40 ± 3.006	0.35	41-56	45.00 ± 3.006	0.33	42-54
12	30	49.61 ± 3.007	0.42	42-60	48.77 ± 3.006	0.40	45-60
13	30	52.63 ± 3.007	0.40	44-59	50.24 ± 3.007	0.38	45-60
14	30	53.50 ± 3.008	0.47	48-68	53.00 ± 3.007	0.46	48-68
14.3	30	54.00 ± 3.009	0.52	44-62	56.89 ± 3.008	0.63	44-67
14.9	30	56.00 ± 3.009	0.49	47-68	56.00 ± 3.011	0.51	47-64
15.3	30	58.69 ± 3.008	0.44	50-67	55.43 ± 3.009	0.39	61-66
15.9	31	57.33 ± 3.007	0.41	49-65	58.67 ± 3.007	0.42	50-65
16.3	34	58.51 ± 3.007	0.40	50-65	58.39 ± 3.008	0.44	52-70
16.9	39	58.82 ± 3.007	0.44	52-70	59.50 ± 3.008	0.44	50-68
17.3	30	59.11 ± 3.007	0.39	51-69	58.28 ± 3.007	0.46	50-68
17.9	30	58.77 ± 3.008	0.45	50-70	58.37 ± 3.006	0.34	50-67
					58.16 ± 3.007	0.40	50-68

TAB. 2  
Length of second interdental space. Boys

Age	n	sinister			dexter		
		$\bar{X} \pm 3 \cdot s_{\bar{x}}$	s	min-max	$\bar{X} \pm 3 \cdot s_{\bar{x}}$	s	min-max
1.5	30	28.77 ± 3.004	0.27	23-35	28.32 ± 3.004	0.25	24-32
4.5	30	30.43 ± 3.008	0.47	25-42	30.46 ± 3.008	0.47	25-42
7.5	30	32.76 ± 3.003	0.21	28-37	32.93 ± 3.004	0.23	28-38
10.5	30	36.90 ± 3.003	0.19	33-40	37.40 ± 3.004	0.22	33-43
15	30	37.30 ± 3.003	0.21	32-42	37.50 ± 3.004	0.23	32-44
21	30	40.50 ± 3.004	0.22	35-44	40.63 ± 3.004	0.22	35-44
27	30	42.73 ± 3.004	0.25	38-48	42.90 ± 3.004	0.26	38-48
33	30	43.08 ± 3.004	0.26	39-49	43.51 ± 3.004	0.27	39-49
36	30	43.17 ± 3.007	0.42	32-50	43.55 ± 3.007	0.40	32-50
4	30	44.80 ± 3.005	0.29	41-50	44.80 ± 3.005	0.28	41-50
5	30	47.42 ± 3.006	0.35	42-56	47.28 ± 3.006	0.34	42-57
6	30	49.11 ± 3.006	0.35	42-55	49.10 ± 3.006	0.36	41-56
7	30	50.89 ± 3.006	0.33	45-58	50.84 ± 3.006	0.35	45-59
8	30	53.22 ± 3.006	0.35	47-60	53.65 ± 3.006	0.34	48-60
9	30	54.79 ± 3.008	0.46	48-63	54.77 ± 3.008	0.46	48-63
10	30	55.10 ± 3.008	0.42	48-63	55.23 ± 3.008	0.42	49-63
11	30	59.44 ± 3.006	0.35	52-65	59.58 ± 3.006	0.34	51-70
12	30	59.81 ± 3.010	0.53	50-70	59.79 ± 3.009	0.52	49-70
13	30	63.70 ± 3.007	0.41	56-70	63.66 ± 3.007	0.41	56-70
14	30	69.20 ± 3.009	0.51	56-78	69.50 ± 3.010	0.53	56-80
14.3	30	69.33 ± 3.012	0.67	57-82	70.11 ± 3.011	0.59	60-82
14.9	30	70.28 ± 3.009	0.50	59-79	69.97 ± 3.007	0.39	61-78
15.3	30	74.37 ± 3.009	0.48	67-83	72.80 ± 3.009	0.51	63-81
15.9	31	73.00 ± 3.010	0.55	60-84	71.92 ± 3.009	0.52	60-80
16.3	34	72.27 ± 3.009	0.54	60-84	71.14 ± 3.009	0.54	60-82
16.9	39	73.70 ± 3.009	0.57	63-82	72.78 ± 3.009	0.55	64-84
17.3	30	74.55 ± 3.009	0.49	62-81	73.49 ± 3.008	0.42	60-80
17.9	30	74.77 ± 3.008	0.43	66-83	73.79 ± 3.010	0.55	61-83

TAB. 3  
Length of third interdigital space. Boys

Age	n	sinister			dexter		
		$\bar{X} \pm 3. s_{\bar{x}}$	s	min—max	$\bar{X} \pm 3. s_{\bar{x}}$	s	min—max
1.5	30	31.70 ± 3. 0.03	0.21	28—36	31.54 ± 3. 0.04	0.22	27—38
4.5	30	34.13 ± 3. 0.07	0.41	29—44	34.23 ± 3. 0.07	0.41	29—44
7.5	30	36.60 ± 3. 0.04	0.20	31—39	36.66 ± 3. 0.03	0.20	31—39
10.5	30	40.93 ± 3. 0.04	0.25	36—44	41.13 ± 3. 0.04	0.25	36—44
15	30	41.26 ± 3. 0.04	0.24	35—47	41.46 ± 3. 0.04	0.27	35—48
21	30	44.66 ± 3. 0.05	0.28	40—49	44.86 ± 3. 0.05	0.28	40—50
27	30	47.23 ± 3. 0.04	0.22	44—51	47.23 ± 3. 0.04	0.23	43—51
33	30	47.87 ± 3. 0.04	0.22	42—52	47.90 ± 3. 0.03	0.22	42—52
36	30	47.80 ± 3. 0.08	0.44	39—56	47.97 ± 3. 0.08	0.44	39—56
4	30	51.33 ± 3. 0.05	0.26	48—57	51.37 ± 3. 0.04	0.25	48—57
5	30	53.45 ± 3. 0.07	0.39	39—59	53.42 ± 3. 0.07	0.39	39—59
6	30	55.99 ± 3. 0.08	0.43	48—64	55.96 ± 3. 0.08	0.44	47—64
7	30	58.22 ± 3. 0.07	0.38	51—65	58.28 ± 3. 0.07	0.38	51—65
8	30	61.64 ± 3. 0.07	0.38	55—68	61.65 ± 3. 0.07	0.37	55—68
9	30	62.68 ± 3. 0.10	0.59	53—74	62.51 ± 3. 0.10	0.55	54—74
10	30	63.00 ± 3. 0.08	0.47	54—71	62.83 ± 3. 0.08	0.47	53—71
11	30	68.55 ± 3. 0.08	0.42	56—76	68.59 ± 3. 0.08	0.42	59—78
12	30	68.06 ± 3. 0.11	0.61	58—80	68.10 ± 3. 0.11	0.60	58—80
13	30	73.50 ± 3. 0.08	0.46	65—84	73.42 ± 3. 0.09	0.47	63—86
14	30	78.88 ± 3. 0.10	0.57	68—91	79.20 ± 3. 0.10	0.57	61—91
14.3	30	78.13 ± 3. 0.13	0.70	71—95	77.97 ± 3. 0.12	0.64	69—90
14.9	30	79.90 ± 3. 0.08	0.43	72—88	78.77 ± 3. 0.08	0.44	70—86
15.3	30	82.25 ± 3. 0.10	0.54	73—94	81.39 ± 3. 0.09	0.51	72—92
15.9	31	81.98 ± 3. 0.09	0.52	71—90	81.08 ± 3. 0.10	0.56	70—92
16.3	34	81.79 ± 3. 0.07	0.44	72—94	80.72 ± 3. 0.09	0.51	69—94
16.9	39	82.86 ± 3. 0.09	0.59	73—94	82.43 ± 3. 0.10	0.60	70—97
17.3	30	83.65 ± 3. 0.10	0.55	73—93	83.71 ± 3. 0.09	0.52	69—95
17.9	30	83.70 ± 3. 0.10	0.54	71—95	82.79 ± 3. 0.08	0.45	70—92

TAB. 4  
Length of fourth interdigital space. Boys

Age	n	sinister			dexter		
		$\bar{X} \pm 3. s_{\bar{x}}$	s	min—max	$\bar{X} \pm 3. s_{\bar{x}}$	s	min—max
1.5	30	32.35 ± 3. 0.03	0.20	29—37	32.48 ± 3. 0.03	0.20	29—37
4.5	30	36.23 ± 3. 0.07	0.39	30—46	36.40 ± 3. 0.07	0.40	30—46
7.5	30	37.60 ± 3. 0.03	0.20	32—40	37.70 ± 3. 0.03	0.19	32—40
10.5	30	42.50 ± 3. 0.05	0.30	36—48	42.66 ± 3. 0.05	0.28	37—48
15	30	43.30 ± 3. 0.05	0.27	38—50	43.56 ± 3. 0.05	0.28	38—51
21	30	46.33 ± 3. 0.05	0.30	40—51	46.53 ± 3. 0.05	0.31	41—51
27	30	48.96 ± 3. 0.04	0.24	45—53	48.96 ± 3. 0.04	0.25	45—53
33	30	49.48 ± 3. 0.04	0.24	43—54	49.29 ± 3. 0.04	0.26	42—54
36	30	48.49 ± 3. 0.07	0.41	40—56	48.10 ± 3. 0.07	0.41	40—56
4	30	51.50 ± 3. 0.04	0.25	47—57	51.50 ± 3. 0.04	0.24	47—56
5	30	54.44 ± 3. 0.06	0.33	48—62	54.47 ± 3. 0.06	0.33	48—62
6	30	56.27 ± 3. 0.08	0.42	49—64	56.28 ± 3. 0.08	0.42	48—64
7	30	58.49 ± 3. 0.07	0.40	51—66	58.41 ± 3. 0.07	0.40	50—65
8	30	61.90 ± 3. 0.07	0.39	53—68	62.11 ± 3. 0.07	0.37	53—69
9	30	62.67 ± 3. 0.10	0.55	54—72	62.79 ± 3. 0.10	0.53	54—72
10	30	63.44 ± 3. 0.08	0.46	55—72	63.22 ± 3. 0.08	0.45	55—72
11	30	69.00 ± 3. 0.08	0.45	55—75	68.97 ± 3. 0.08	0.43	58—78
12	30	68.88 ± 3. 0.10	0.55	60—80	68.79 ± 3. 0.10	0.55	60—79
13	30	74.07 ± 3. 0.08	0.47	66—84	74.05 ± 3. 0.08	0.45	66—83
14	30	79.70 ± 3. 0.10	0.52	68—92	79.90 ± 3. 0.10	0.53	68—92
14.3	30	78.79 ± 3. 0.14	0.78	65—95	78.77 ± 3. 0.11	0.63	68—90
14.9	30	80.00 ± 3. 0.09	0.47	71—88	79.23 ± 3. 0.08	0.46	70—86
15.3	30	83.91 ± 3. 0.10	0.57	72—94	82.45 ± 3. 0.09	0.52	79—93
15.9	31	82.10 ± 3. 0.10	0.56	70—99	81.99 ± 3. 0.09	0.53	70—93
16.3	34	82.00 ± 3. 0.07	0.40	74—92	82.31 ± 3. 0.08	0.44	74—93
16.9	39	83.66 ± 3. 0.09	0.56	73—92	83.34 ± 3. 0.09	0.59	78—98
17.3	30	84.53 ± 3. 0.09	0.49	72—94	83.39 ± 3. 0.09	0.51	70—94
17.9	30	84.85 ± 3. 0.09	0.50	72—95	83.40 ± 3. 0.09	0.50	67—94

TAB. 5  
Length of first interdigital space. Girls

Age	n	sinister			dexter		
		$\bar{X} \pm 3 \cdot s_x$	s	min-max	$\bar{X} \pm 3 \cdot s_x$	s	min-max
1.5	30	19.83 ± 3.0.03	0.17	16-25	20.03 ± 3.0.03	0.17	17-25
4.5	30	22.10 ± 3.0.04	0.26	17-28	22.36 ± 3.0.04	0.19	17-28
7.5	30	24.56 ± 3.0.04	0.25	20-30	24.83 ± 3.0.04	0.24	20-30
10.5	30	27.03 ± 3.0.04	0.25	21-31	27.16 ± 3.0.04	0.26	21-30
15	30	30.18 ± 3.0.03	0.19	28-35	30.31 ± 3.0.03	0.20	25-30
21	30	31.66 ± 3.0.05	0.28	28-30	31.93 ± 3.0.02	0.27	28-38
27	30	32.40 ± 3.0.04	0.25	26-36	32.46 ± 3.0.04	0.25	26-36
33	30	33.12 ± 3.0.04	0.24	30-41	34.40 ± 3.0.04	0.27	28-30
36	30	33.20 ± 3.0.05	0.30	24-36	34.50 ± 3.0.05	0.30	24-36
4	30	34.50 ± 3.0.04	0.25	31-41	34.60 ± 3.0.04	0.25	31-40
5	30	35.27 ± 3.0.05	0.29	30-41	35.22 ± 3.0.05	0.28	31-41
6	30	38.21 ± 3.0.05	0.30	32-45	38.11 ± 3.0.05	0.31	32-45
7	30	39.91 ± 3.0.07	0.41	33-52	40.11 ± 3.0.07	0.40	34-52
8	30	43.72 ± 3.0.07	0.37	36-50	43.67 ± 3.0.06	0.35	37-50
9	30	44.20 ± 3.0.07	0.39	37-55	44.44 ± 3.0.07	0.36	37-55
10	30	44.29 ± 3.0.07	0.41	35-53	44.56 ± 3.0.07	0.39	36-52
11	30	47.78 ± 3.0.06	0.36	42-55	47.75 ± 3.0.06	0.34	41-56
12	30	50.70 ± 3.0.08	0.45	42-62	51.50 ± 3.0.08	0.45	44-64
12.3	30	50.70 ± 3.0.07	0.39	43-59	51.00 ± 3.0.07	0.40	42-60
12.9	30	49.79 ± 3.0.06	0.33	43-56	49.59 ± 3.0.08	0.46	40-59
13.3	29	49.63 ± 3.0.06	0.31	43-56	50.62 ± 3.0.06	0.31	44-59
13.9	30	50.40 ± 3.0.07	0.40	41-59	51.82 ± 3.0.08	0.45	42-60
14.3	31	52.71 ± 3.0.08	0.44	42-62	51.82 ± 3.0.08	0.45	44-61
14.9	29	52.00 ± 3.0.06	0.35	45-60	52.10 ± 3.0.08	0.36	44-60
15.3	31	52.73 ± 3.0.07	0.41	47-64	52.93 ± 3.0.06	0.30	47-60
15.9	36	52.39 ± 3.0.05	0.32	47-63	53.21 ± 3.0.05	0.48	48-64
16.6	35	52.81 ± 3.0.05	0.32	45-62	53.57 ± 3.0.08	0.31	48-60
17.6	30	52.70 ± 3.0.08	0.42	43-62	53.00 ± 3.0.05	0.46	47-64
					53.70 ± 3.0.08		

TAB. 6  
Length of second interdigital space. Girls

Age	n	sinister			dexter		
		$\bar{X} \pm 3 \cdot s_x$	s	min-max	$\bar{X} \pm 3 \cdot s_x$	s	min-max
1.5	30	27.90 ± 3.0.03	0.17	25-32	27.61 ± 3.0.02	0.16	25-31
4.5	30	28.60 ± 3.0.03	0.20	24-33	28.76 ± 3.0.04	0.22	24-34
7.5	30	32.46 ± 3.0.04	0.23	27-37	32.60 ± 3.0.04	0.23	27-37
10.5	30	34.56 ± 3.0.05	0.32	29-40	34.63 ± 3.0.06	0.33	29-40
15	30	37.03 ± 3.0.04	0.25	34-43	35.59 ± 3.0.09	0.56	34-43
21	30	39.56 ± 3.0.05	0.28	35-45	39.76 ± 3.0.04	0.27	35-45
27	30	40.20 ± 3.0.04	0.26	35-47	40.36 ± 3.0.04	0.24	35-44
33	30	41.00 ± 3.0.04	0.23	38-47	40.98 ± 3.0.04	0.23	38-47
36	30	41.62 ± 3.0.07	0.41	33-50	41.67 ± 3.0.07	0.41	33-50
4	30	41.27 ± 3.0.04	0.22	40-49	44.21 ± 3.0.04	0.23	40-49
5	30	46.88 ± 3.0.05	0.29	39-52	46.67 ± 3.0.05	0.29	40-53
6	30	49.62 ± 3.0.06	0.33	42-56	49.53 ± 3.0.06	0.34	42-56
7	30	50.61 ± 3.0.06	0.35	44-58	50.84 ± 3.0.06	0.35	44-58
8	30	54.29 ± 3.0.06	0.32	49-61	54.33 ± 3.0.06	0.35	49-64
9	30	56.25 ± 3.0.07	0.39	46-62	56.22 ± 3.0.07	0.41	46-62
10	30	56.27 ± 3.0.08	0.44	48-68	56.21 ± 3.0.08	0.44	47-68
11	30	59.68 ± 3.0.09	0.50	51-70	59.55 ± 3.0.09	0.51	52-65
12	30	62.90 ± 3.0.09	0.48	51-72	63.41 ± 3.0.08	0.44	53-71
12.3	30	64.91 ± 3.0.08	0.46	59-80	65.10 ± 3.0.10	0.53	56-81
12.9	30	65.77 ± 3.0.08	0.42	55-74	64.75 ± 3.0.09	0.47	55-74
13.3	29	68.22 ± 3.0.10	0.54	54-80	66.88 ± 3.0.10	0.51	57-82
13.9	30	68.54 ± 3.0.09	0.48	56-75	68.20 ± 3.0.09	0.50	59-76
14.3	31	68.63 ± 3.0.09	0.49	56-75	68.89 ± 3.0.07	0.40	60-75
14.9	29	69.00 ± 3.0.11	0.59	50-85	69.35 ± 3.0.09	0.48	60-83
15.3	31	69.82 ± 3.0.10	0.54	60-80	69.67 ± 3.0.09	0.49	62-81
15.9	36	70.34 ± 3.0.08	0.50	61-84	70.00 ± 3.0.08	0.47	60-82
16.6	35	70.10 ± 3.0.07	0.40	62-77	70.33 ± 3.0.08	0.50	58-78
17.6	30	70.31 ± 3.0.09	0.50	62-82	70.46 ± 3.0.08	0.45	61-78

TAB. 7  
Length of third interdental space. Girls

Age	n	sinister			dexter		
		$\bar{X} \pm 3. s_{\bar{x}}$	s	min-max	$\bar{X} \pm 3. s_{\bar{x}}$	s	min-max
1.5	30	30.87 ± 3.0.03	0.17	27-35	30.74 ± 3.0.02	0.15	27-34
4.5	30	32.16 ± 3.0.04	0.23	27-36	32.40 ± 3.0.03	0.19	28-35
7.5	30	36.26 ± 3.0.04	0.24	30-40	36.43 ± 3.0.04	0.22	31-41
10.5	30	38.60 ± 3.0.04	0.23	34-42	38.66 ± 3.0.04	0.24	34-43
15	30	41.25 ± 3.0.05	0.30	37-48	41.53 ± 3.0.05	0.30	38-49
21	30	43.90 ± 3.0.05	0.30	39-50	44.00 ± 3.0.05	0.30	39-50
27	30	44.83 ± 3.0.05	0.29	40-50	44.86 ± 3.0.05	0.28	40-51
33	30	48.09 ± 3.0.04	0.23	42-52	47.86 ± 3.0.04	0.23	42-52
36	30	47.32 ± 3.0.08	0.44	39-55	47.34 ± 3.0.08	0.44	38-55
4	30	51.70 ± 3.0.04	0.25	46-57	51.56 ± 3.0.04	0.24	46-57
5	30	53.32 ± 3.0.07	0.37	43-60	53.21 ± 3.0.07	0.36	43-60
6	30	56.00 ± 3.0.05	0.30	51-61	56.07 ± 3.0.05	0.30	51-61
7	30	57.89 ± 3.0.06	0.35	49-65	57.86 ± 3.0.06	0.35	52-65
8	30	61.54 ± 3.0.08	0.46	55-72	61.71 ± 3.0.09	0.47	55-72
9	30	63.76 ± 3.0.08	0.42	55-72	63.73 ± 3.0.08	0.43	54-71
10	30	63.77 ± 3.0.07	0.41	54-72	63.81 ± 3.0.07	0.41	54-72
11	30	67.78 ± 3.0.09	0.51	58-77	67.65 ± 3.0.09	0.50	56-76
12	30	71.11 ± 3.0.08	0.41	63-80	71.50 ± 3.0.07	0.40	63-79
12.3	30	72.22 ± 3.0.09	0.50	61-82	71.10 ± 3.0.11	0.61	53-82
12.9	30	72.29 ± 3.0.08	0.46	61-80	71.20 ± 3.0.09	0.51	62-81
13.3	29	73.91 ± 3.0.10	0.52	62-83	74.52 ± 3.0.08	0.44	64-82
13.9	30	77.00 ± 3.0.09	0.49	68-84	76.34 ± 3.0.09	0.51	68-85
14.3	31	77.11 ± 3.0.07	0.38	69-83	76.44 ± 3.0.07	0.37	68-84
14.9	29	76.65 ± 3.0.07	0.40	70-86	76.21 ± 3.0.08	0.42	66-84
15.3	31	76.67 ± 3.0.10	0.54	66-87	77.00 ± 3.0.10	0.58	66-87
15.9	36	76.38 ± 3.0.08	0.46	66-86	75.74 ± 3.0.08	0.49	65-86
16.6	35	74.33 ± 3.0.10	0.63	62-84	74.25 ± 3.0.11	0.64	62-86
17.6	30	75.10 ± 3.0.13	0.69	61-88	74.76 ± 3.0.12	0.68	61-89

TAB. 8  
Length of fourth interdental space. Girls

Age	n	sinister			dexter		
		$\bar{X} \pm 3. s_{\bar{x}}$	s	min-max	$\bar{X} \pm 3. s_{\bar{x}}$	s	min-max
1.5	30	31.35 ± 3.0.02	0.12	29-35	31.35 ± 3.0.02	0.13	28-34
4.5	30	33.53 ± 3.0.04	0.26	28-40	33.96 ± 3.0.04	0.24	29-40
7.5	30	37.56 ± 3.0.04	0.24	32-42	37.70 ± 3.0.04	0.25	32-42
10.5	30	40.33 ± 3.0.04	0.23	34-44	40.46 ± 3.0.04	0.22	34-44
15	30	42.90 ± 3.0.05	0.29	39-51	43.03 ± 3.0.05	0.29	38-51
21	30	45.60 ± 3.0.06	0.35	40-52	45.70 ± 3.0.06	0.35	40-52
27	30	46.16 ± 3.0.05	0.28	41-52	46.10 ± 3.0.05	0.29	40-51
33	30	48.91 ± 3.0.04	0.23	43-52	48.24 ± 3.0.04	0.22	43-52
36	30	47.90 ± 3.0.08	0.42	38-56	48.20 ± 3.0.07	0.40	39-56
4	30	51.40 ± 3.0.04	0.24	46-55	51.21 ± 3.0.04	0.25	45-55
5	30	53.68 ± 3.0.07	0.40	42-61	53.55 ± 3.0.07	0.39	43-61
6	30	55.83 ± 3.0.06	0.31	50-61	55.91 ± 3.0.06	0.32	50-62
7	30	57.68 ± 3.0.07	0.37	50-65	57.60 ± 3.0.06	0.35	50-65
8	30	61.33 ± 3.0.08	0.47	55-73	61.65 ± 3.0.09	0.48	55-73
9	30	63.46 ± 3.0.07	0.39	53-70	63.68 ± 3.0.07	0.41	53-70
10	30	63.80 ± 3.0.08	0.46	53-73	63.92 ± 3.0.08	0.42	53-72
11	30	68.11 ± 3.0.09	0.52	58-77	68.26 ± 3.0.09	0.50	56-75
12	30	72.20 ± 3.0.08	0.45	62-82	72.33 ± 3.0.08	0.42	63-82
12.3	30	72.91 ± 3.0.09	0.49	65-84	72.54 ± 3.0.09	0.50	63-85
12.9	30	73.14 ± 3.0.08	0.48	61-81	72.62 ± 3.0.09	0.50	64-82
13.3	29	73.33 ± 3.0.07	0.42	65-83	73.29 ± 3.0.09	0.50	65-83
13.9	30	76.81 ± 3.0.10	0.58	67-87	76.07 ± 3.0.10	0.54	69-85
14.3	31	78.30 ± 3.0.08	0.45	68-90	77.44 ± 3.0.07	0.41	69-87
14.9	29	76.87 ± 3.0.10	0.54	60-87	76.19 ± 3.0.10	0.53	63-85
15.3	31	76.27 ± 3.0.08	0.46	60-89	76.95 ± 3.0.11	0.62	60-88
15.9	36	75.84 ± 3.0.09	0.59	62-89	76.09 ± 3.0.07	0.44	62-86
16.6	35	73.33 ± 3.0.09	0.58	60-84	74.05 ± 3.0.12	0.70	60-83
17.6	30	75.30 ± 3.0.10	0.59	63-85	74.32 ± 3.0.12	0.65	62-84