

**ANTHROPOMETRIC FACIAL PROPORTIONS
IN MEDICINE**

ANTHROPOMETRIC FACIAL PROPORTIONS IN MEDICINE

Edited by

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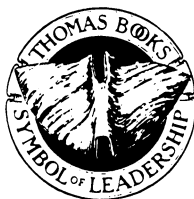
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With a Foreword by

Doctor Paul Tessier



CHARLES C THOMAS • PUBLISHER
Springfield • Illinois • U.S.A.

Published and Distributed Throughout the World by

CHARLES C THOMAS • PUBLISHER

2600 South First Street
Springfield, Illinois 62717

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ISBN 0-398-05261-1

Library of Congress Catalog Card Number: 86-5850

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Printed in the United States of America

SC-R-3

Library of Congress Cataloging-in-Publication Data

Anthropometric facial proportions in medicine.

Includes bibliographies and index.

1. Face—Measurement. 2. Anthropometry. I. Farkas,
Leslie G. II. Munro, Ian R. [DNLM: 1. Cephalometry.
2. Maxillofacial Development. WE 705 A628]

QM535.A64 1986 573'.692 86-5850

ISBN 0-398-05261-1

*To our children
Julia
and
Karen, Neal and Christopher*

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FOREWORD

The monograph of Leslie Farkas and Ian Munro is not among the books we commonly read before going to sleep, or that we can toy with and casually pick up a chapter today and by chance another next week. It deserves recurrent study, but this attention is well rewarded. Such a book is missing from our recent medical literature.

From a clinical standpoint nothing is more difficult than to establish what features are normal or abnormal in a given face, except obvious malformations. Because so many variant features occur from age, race, sex and type, and also fashion, there are no absolutes when examining a patient. However, from a morphological evaluation, to produce a diagnosis one must conclude to orthomorphy or dysmorphy. And herein lies the basic question of orthoplastic facial surgery. What is “ortho” and what is “dys”?

From this evaluation a program of surgical intervention may be clearly indicated, or only minimally suggested. I am sure that there is no conscientious orthoplastic surgeon who has never questioned what goals are possible to obtain in a patient, and what procedures are best employed to obtain the intended result. There is no recipe for surgical intervention, only a continuous need for judgment, and all of us are looking for advice from experts. Here is a book of expert analysis which, when applied, can provide judgments, and judgments good or bad, on the foundation of knowledge.

This book by Doctors Farkas and Munro will help not only the orthoplastic surgeon, but also pediatricians, orthodontists, and psychologists in their diagnosis and decision for treatment or abstention.

The book is not bound within the confines of anthropomorphic measurements. The most important aspect of this book is that the authors never depart from the guiding line of proportion. Harmony or disharmony does not lie within angles, distances, lines, surfaces or volumes. They arise from proportion.

A book such as this cannot exhaust a subject with variations as endless as the humanity it studies. The authors have wisely avoided the stumbling block of excessive iconography. They have correctly chosen demonstrative drawings and diagrams to reinforce through patterns of analysis rather than dissect isolated cases presented in photographs.

This book will not be just another “reference book.” For those who read and study and consider the material contained, they will find a compass map and route marker, to assess whether or not the position is correct and the direction true.

DOCTOR PAUL TESSIER
PARIS, FRANCE

INTRODUCTION

In both the abstract and the concrete worlds, comparison is the method by which the quality of an idea, living creature or inanimate object is judged. Balance is the magic word, defining the status in which the negative and positive signs of an object are brought into equilibrium.

When judging the quality of a face we compare its individual parts, and the verdict is based on our impression of whether they are well balanced or harmonious, or whether they reach only a satisfactory level or remain well below the average. The study of the relationship of the various parts of the human body in Antiquity and later in the Renaissance led to formulation of the proportion canons. Five centuries later they were accepted as directives defining the Ideal, the Harmony, a status of well-balanced signs.

The judgment of facial quality in plastic surgery is based mostly on visual impression and/or scanty measurements, unsatisfactory in modern medicine, a discipline of the biological sciences. It is time to renew and develop the examination methods of the pioneer anatomists from the past few centuries, applying anthropometric methods in morphologic studies of the human body.

In constructive, reconstructive and aesthetic plastic surgery, and in all other disciplines where the head and face are the center of attention (not only orthodontics, genetics, dysmorphology and endocrinology, but also criminology and medical illustration), we seek the definition of at least one of these conditions: average; better than average but still normal; or above the average range and, therefore, abnormal. Our judgment is influenced by so many complex factors and such a degree of subjectivity that it cannot entirely reflect the reality. The only reliable approach is to use measuring techniques, direct from the surface of the body and indirect from roentgenograms (cephalograms). In the process of investigation, the next step is to bring the individual measurements into working relationships, a process that duplicates the visual recording. The basic elements of this method are the proportion indices, the subject of this study.

L.G. Farkas

ACKNOWLEDGMENTS

The authors are grateful to all those who contributed to the creation of this book. The funds necessary for collecting of the data were provided by the Physicians' Services Inc. Foundation, Willowdale, Ontario, and the American Society for Aesthetic Plastic Surgery, Inc. Expenses for manuscript preparation were met by the Conn Smythe Research Foundation, Toronto.

Volunteers for facial measurements were recruited from among employees of The Hospital for Sick Children, students of the Ryerson School of Nursing, actors of the Necessary Angel Theatre Company and fashion models from various Toronto modeling agencies, namely Bookings, International Top Models, Sherrida, Jo Penney, Nexus, Parker and Fanfare. Our special thanks go to the models' supervisors and the directors of the agencies for their enthusiastic response. My former secretary, Mary MacNair, proved to be as efficient as before her retirement in seeking volunteers for measurements. We also acknowledge the special help given to us by the staff of Zoom Professional Photography, Toronto, and its director, Hans Lichtenberg, for organizing the examinations and photography of the fashion models. Equipment for the photodocumentation of subjects in the laboratory was provided by Toronto Camera and Henry's of Toronto. Important professional help in photodocumentation was given by freelance photographer Richard Simpson of Toronto.

In the preparation of the material for the monograph the assistance of our former coworker, Marko J. Katic, B.A., and the indefatigable efforts of our present associate, John C. Kolar, Ph.D., are highly esteemed. We are also greatly indebted to Adele Csimá, M.A., and Tünde Szathmáry, B.A., M.H.Sc., of the Department of Biostatistics, University of Toronto, for their professional help. The computer program that generated and formatted Tables 1 to 166 was written by Cheri Aitken, Michael Durocher, B.P.H.E., and Ihor Prociuk, M.Sc.

The high-quality drawings for the book were produced by graphic artist Marc Rochon, A.O.C.A., under the supervision of Eva Struthers, M.Ph., of Research Visual Education, The Hospital for Sick Children. Carla Salvador, B.A., B.Litt., of the Department of Medical Publications, The Hospital for Sick Children, assisted by Anne Park, B.A., was entrusted with the highly responsible task of editing the manuscript. We commend all of them for their untiring efforts.

CONTENTS

<i>Foreword—Dr. Paul Tessier</i>	ix
<i>Introduction</i>	xi
<i>Acknowledgments page</i>	xiii
<i>List of the Proportion Index Tables</i>	xxi
<i>Chapter</i>	
I The Population Samples—<i>Leslie Farkas</i>	3
II The Proportion Index—<i>Leslie Farkas</i>	5
Introduction	5
The index formula	5
Interpretation of the index value	5
Normal range of indices	6
Disproportion	6
Extent of disproportion	6
Causes of disproportions	7
Disharmony	7
III Categories in Classical Anthropometric Proportion Systems—<i>Karel Hajniš</i>	9
Introduction	9
Formation of indices and their systems	10
Cephalic index	12
Facial index	13
Upper face index	14
Nasal index	15
Use of anthropometric indices	16
Conclusions	16
IV Ethnic Differences in Facial Proportions—<i>John Kolar</i>	19
Introduction	19
Materials and methods	21
Results	21
Head	22
Face	23
Orbits	24
Nose	25
Lips, Mouth and Ears	25
Discussion	26
V Age- and Sex-Related Changes in Facial Proportions—<i>Leslie Farkas</i>	29
History of age-related changes in anthropometry	29
General findings in age-related index changes	30

Absolute and relative values	30
Trend of index changes	30
Degree of change	31
Changes by age periods	32
Age-related changes in each region	33
Head	33
Quality, degree and timing of changes	33
Consistently increasing indices	34
Consistently decreasing indices	35
Face	35
Quality, degree and timing of changes	35
Consistently increasing indices	37
Consistently decreasing indices	38
Orbits	39
Quality, degree and timing of changes	39
Consistently increasing index	40
Consistently decreasing indices	40
Nose	41
Quality, degree and timing of changes	41
Consistently increasing indices	42
Consistently decreasing indices	43
Lips and mouth	44
Quality, degree and timing of changes	44
Consistently increasing indices	45
Consistently decreasing indices	45
Ear	46
Quality, degree and timing of changes	46
Consistently increasing index	47
Consistently decreasing indices	47
Use of age-related changes in clinical practice	48
Sex-related differences in craniofacial indices	49
Statistical analysis of sex-related changes	49
General findings in sex-related index changes	49
Sex-related differences in each region	51
Head	51
General findings	51
Significantly differing indices	51
Indices larger in males	51
Indices larger in females	51
Nonsignificantly differing indices	51
Face	51
General findings	51
Significantly differing indices	51
Indices larger in males	51
Indices larger in females	52
Nonsignificantly differing indices	52

Orbits	52
General findings	52
Significantly differing indices	52
Index larger in males	52
Indices larger in females	52
Nonsignificantly differing indices	53
Nose	53
General findings	53
Significantly differing indices	53
Indices larger in males	53
Indices larger in females	53
Nonsignificantly differing indices	53
Lips and mouth	54
General findings	54
Significantly differing indices	54
Indices larger in males	54
Indices larger in females	54
Nonsignificantly differing indices	54
Ears	55
General findings	55
Significantly differing indices	55
Indices larger in males	55
Index larger in females	55
Nonsignificantly differing indices	55
Conclusions	55
 VI	
The Validity of Neoclassical Facial Proportion Canons—	
<i>Leslie Farkas, Ian Munro and John Kolar</i>	57
Introduction	57
The neoclassical canons	57
Findings	62
Sex- and age-related differences and the neoclassical proportion canons	64
 VII	
Relationships of Profile Segment Inclinations in the Faces of	
North American Caucasians— <i>Leslie Farkas, Ian Munro and John Kolar</i>	67
Introduction	67
Material	67
Methods	67
Statistical analysis	69
Results	69
Basic study group	69
Significantly correlated inclinations	69
Nonsignificantly and poorly correlated inclinations	72
Age-related changes in differences between the main	
inclinations and angles	72
Attractiveness study group	73

	Differences between the facial inclinations	73
	Differences between the facial angles	75
	Comparison of study groups	75
	Interpretation of the findings in clinical practice	76
VIII	Useful Proportion Indices in Clinical Studies—<i>Leslie Farkas and Ian Munro</i>	79
	Proportion analysis in clinical practice	79
	Selection of the indices	79
	Basic proportion indices	79
	Selection of other indices	80
	Proportion indices in the surgeon's hand	80
	Reporting and interpreting the findings	81
	Reporting	81
	Interpreting	81
	The significance of pre- and postoperative follow-up	81
IX	The Use of Proportions in Planning Surgical-Orthodontic Treatment in Young Adult Patients—<i>Arlene Dagys</i>	83
	Introduction	83
	Factors to consider during diagnosis and treatment planning	83
	Soft-tissue clinical assessment	83
	Cephalometric assessment	84
	Dental considerations	85
	Effects of surgery on soft tissue	86
	Vertical proportionality	87
	History	87
	Vertical problems	91
	Maxilla	91
	Preoperative considerations	91
	Excess	91
	Pretreatment	91
	Posttreatment	91
	Deficiency	92
	Pretreatment	92
	Posttreatment	92
	Mandible	92
	Excess	92
	Pretreatment	92
	Posttreatment	92
	Deficiency	93
	Pretreatment	93
	Posttreatment	93
	Horizontal proportionality	93
	Normal	93
	Facial convexity angle	93
	Zero meridian	94
	Natural vertical reference line	95

	Anteroposterior disproportions	95
	Maxilla	96
	Excess	96
	Pretreatment	96
	Posttreatment	96
	Deficiency	96
	Pretreatment	96
	Posttreatment	96
	Mandible	97
	Excess	97
	Pretreatment	97
	Posttreatment	97
	Deficiency	97
	Pretreatment	97
	Posttreatment	97
	Transverse proportionality	98
	Normal	98
	Transverse problems	98
	Conclusion	99
X	Facial Proportions in Aesthetic Surgery—<i>Linton Whitaker</i>	103
	Introduction	103
	Methods and assessment	103
	Treatment	105
	Problems and complications of the surgery	109
	Discussion	111
XI	Linear Proportions in Above- and Below-Average Women's Faces—<i>Leslie Farkas, Ian Munro and John Kolar</i>	119
	Introduction	119
	Subjects	119
	Methods	119
	Statistical analysis	120
	Results	120
	General findings	120
	Head	121
	Identical proportions	121
	Significantly differing proportions	121
	Face	123
	Identical proportions	123
	Significantly differing proportions	123
	Orbits	124
	Identical proportions	124
	Significantly differing proportions	124
	Nose	125
	Identical proportions	125
	Significantly differing proportions	125

	Lips and mouth	126
	Significantly differing proportions	126
	Ears	127
	Identical proportions	127
	Significantly differing proportions	128
	Discussion	128
XII	Disproportion in Psychiatric Syndromes—<i>Curtis Deutsch</i>	131
	Introduction	131
	Proportions in identifiable syndromes	133
	Resolution of syndromes of unknown etiology	133
	Facial disproportion in the attention deficit disorder	133
	Introduction	133
	Method	134
	Results	136
	Discussion	136
	Projective geometry of the face	138
	Facial allometry	140
XIII	Facial Proportions in Medical Illustration—<i>Alexander Wright</i>	143
	Introduction	143
	Facial proportions	143
	Facial design program	145
	Normal data	145
	Facial assessment and analysis	146
	Golden section proportions	148
	Facial design in clinical practice	149
	Conclusions	152
XIV	Results—<i>Leslie Farkas</i>	155
	Measurements used in the proportion indices	155
	Linear measurements	155
	Inclinations and angles	155
	The proportion indices	155
	Types of indices	155
	Naming the indices	155
	Identification and ordering of the indices	157
	The index tables	158
	Chapter XIV Appendix: Facial Proportion Indices in Children Less Than 6 Years Old—<i>Adele Csima and Tünde Szathmáry</i>	163
	Introduction	163
	Methods of statistical adjustment of the anthropometric data	163
	Tables of Proportion Indices	166
	Appendix A: Proportion indices, in alphabetical order	321
	Appendix B: Linear measurements used in the proportions, by craniofacial region	325
	Appendix C: Linear measurements used in the proportions, in alphabetical order	337

LIST OF THE PROPORTION INDEX TABLES

The principles explaining the naming of the tables, the creation of their symbols and the order in which they are placed are explained in Chapter 14. With the help of that chapter, the reader will be able to identify which table represents a particular relationship by scanning this list quickly.

Table 1	Cephalic Index	C-1
Table 2	Forehead-Head Width Index	C-2
Table 3	Forehead-Skull Base Width Index	C-3
Table 4	Skull Base-Head Width Index	C-4
Table 5	Head Width-Craniofacial Height Index	C-5
Table 6	Auricular Head Height-Head Width Index	C-6
Table 7	Auricular Head Height-Skull Base Width Index	C-7
Table 8	Auricular Head-Craniofacial Height Index	C-8
Table 9	Auricular Head Height-Head Length Index	C-9
Table 10	Head-Craniofacial Height Index	C-10
Table 11	Forehead-Head Height Index	C-11
Table 12	Head Ear Depth-Skull Base Width Index	C-12
Table 13	Head Ear Depth-Head Length Index	C-13
Table 14	Facial Index	F-1
Table 15	Mandible-Face Width Index	F-2
Table 16	Upper Face Index	F-3
Table 17	Mandible Width-Face Height Index	F-4
Table 18	Mandibular Index	F-5
Table 19	Mandible Width-Lower Third Face Depth Index	F-6
Table 20	Face Width-Middle Third Face Arc Index	F-7
Table 21	Face Height Index	F-8
Table 22	Upper Face-Face Height Index	F-9
Table 23	Lower Face-Face Height Index	F-10
Table 24	Mandibulo-Face Height Index	F-11
Table 25	Mandibulo-Upper Face Height Index	F-12
Table 26	Mandibulo-Lower Face Height Index	F-13
Table 27	Upper Face Height-Upper Third Face Depth Index	F-14
Table 28	Mandible Height-Lower Third Face Depth Index	F-15
Table 29	Face Height-Lower Third Face Arc Index	F-16
Table 30	Upper Face Height-Middle Third Face Arc Index	F-17
Table 31	Mandible Height-Lower Third Face Arc Index	F-18
Table 32	Middle Third Face Contour Index	F-19
Table 33	Upper-Middle Third Face Depth Index	F-20

Table 34	Middle-Lower Third Face Depth Index	F-21
Table 35	Upper Cheek-Upper Third Face Depth Index	F-22
Table 36	Mid-Cheek Contour Index	F-23
Table 37	Mid-Face Contour Index	F-24
Table 38	Lower Third Face Contour Index	F-25
Table 39	Lower Face Contour Index	F-26
Table 40	Middle-Lower Third Face Half Arc Index	F-27
Table 41	Mandible Width-Total Face Height Index	F-28
Table 42	Lower Face Arcs Index	F-29
Table 43	Intercanthal Index	O-1
Table 44	Orbital Protrusion Index	O-2
Table 45	Orbital Width Index	O-3
Table 46	Eye Fissure Index	O-4
Table 47	Nasal Index	N-1
Table 48	Nasal Root-Nose Width Index	N-2
Table 49	Columella-Nose Width Index	N-3
Table 50	Nostril-Nose Width Index	N-4
Table 51	Nostril Width-Nose Height Index	N-5
Table 52	Nasal Root Depth-Width Index	N-6
Table 53	Nasal Tip Protrusion-Width Index	N-7
Table 54	Nasal Tip Protrusion-Nostril Floor Width Index	N-8
Table 55	Nose Width-Ala Length Index	N-9
Table 56	Columella Width-Length Index	N-10
Table 57	Nostril Floor Width-Ala Length Index	N-11
Table 58	Nasal Tip Protrusion-Nose Height Index	N-12
Table 59	Nasal Root-Nose Height Index	N-13
Table 60	Ala Length-Nose Height Index	N-14
Table 61	Nasal Root Depth-Tip Protrusion Index	N-15
Table 62	Nasal Root Depth-Length Index	N-16
Table 63	Nasal Tip Protrusion-Ala Length Index	N-17
Table 64	Columella Length-Nasal Tip Protrusion Index	N-18
Table 65	Nasal Root-Ala Length Index	N-19
Table 66	Nasal Root Contour Index	N-20
Table 67	Ala Contour Index	N-21
Table 68	Upper Lip Height-Mouth Width Index	L-1
Table 69	Mouth Width Contour Index	L-2
Table 70	Philtrum-Mouth Width Index	L-3
Table 71	Medial-Lateral Cutaneous Upper Lip Height Index	L-4
Table 72	Cutaneous-Total Upper Lip Height Index	L-5
Table 73	Vermilion-Total Upper Lip Height Index	L-6
Table 74	Vermilion-Cutaneous Upper Lip Height Index	L-7
Table 75	Upper Lip Vertical Contour Index	L-8
Table 76	Vermilion Height Index	L-9
Table 77	Ear Index	E-1
Table 78	Ear Height Index	E-2

Table 79	Calva-Head Height Index	AC-1
Table 80	Calva-Forehead Height Index	AC-2
Table 81	Mandible-Mandibular Ramus Height Index	AF-1
Table 82	Chin-Face Height Index	AF-2
Table 83	Chin-Mandible Height Index	AF-3
Table 84	Chin Index	AF-4
Table 85	Mandible Depth-Mandibular Ramus Height Index	AF-5
Table 86	Unilateral Supraorbital Contour Index	AF-6
Table 87	Orbital Index	AO-1
Table 88	Orbit-Eyebrow Height Index	AO-2
Table 89	Vertical Orbit Contour Index	AO-3
Table 90	Eyelid Height Index	AO-4
Table 91	Nasal Bridge Index	AN-1
Table 92	Upper Vermilion Contour Index	AL-1
Table 93	Lower Vermilion Contour Index	AL-2
Table 94	Lower-Upper Lip Height Index	AL-3
Table 95	Cutaneous Lower-Upper Lip Height Index	AL-4
Table 96	Vermilion-Total Lower Lip Height Index	AL-5
Table 97	Vermilion-Cutaneous Lower Lip Height Index	AL-6
Table 98	Cutaneous-Total Lower Lip Height Index	AL-7
Table 99	Vermilion Arc Index	AL-8
Table 100	Forehead-Face Width Index	C-14
Table 101	Skull Base Width-Upper Third Face Depths Index	C-15
Table 102	Skull Base Width-Middle Third Face Depths Index	C-16
Table 103	Skull Base Width-Middle Third Face Arc Index	C-17
Table 104	Skull Base Width-Upper Cheek Depths Index	C-18
Table 105	Skull Base Width-Mid Cheek Depths Index	C-19
Table 106	Skull Base Width-Lower Third Face Depths Index	C-20
Table 107	Skull Base Width-Lower Third Face Arc Index	C-21
Table 108	Head-Face Height Index	C-22
Table 109	Forehead-Upper Face Height Index	C-23
Table 110	Forehead-Face Height Index	C-24
Table 111	Head-Body Height Index	C-25
Table 112	Head Size-Body Height Index	C-26
Table 113	Face-Head Width Index	F-30
Table 114	Face-Skull Base Width Index	F-31
Table 115	Upper Face Height-Biocular Width Index	F-32
Table 116	Face-Auricular Head Height Index	F-33
Table 117	Total Face-Craniofacial Height Index	F-34
Table 118	Face-Craniofacial Height Index	F-35
Table 119	Middle Third Face Depth-Mouth Cheek Index	F-36
Table 120	Middle Third Face-Mouth Cheek Arc Index	F-37
Table 121	Upper Face Height-Mouth Cheek Arc Index	F-38
Table 122	Biocular-Skull Base Width Index	O-5
Table 123	Intercanthal-Skull Base Width Index	O-6

Table 124	Intercanthal-Forehead Width Index	O-7
Table 125	Biocular-Face Width Index	O-8
Table 126	Intercanthal Width-Upper Face Height Index	O-9
Table 127	Intercanthal-Nasal Width Index	O-10
Table 128	Nasal Root Index	O-11
Table 129	Intercanthal-Mouth Width Index	O-12
Table 130	Nose-Craniofacial Height Index	N-22
Table 131	Nose-Forehead Height Index	N-23
Table 132	Nose-Face Width Index	N-24
Table 133	Nose Height-Face Width Index	N-25
Table 134	Nose-Face Height Index	N-26
Table 135	Nose-Upper Face Height Index	N-27
Table 136	Nose-Lower Face Height Index	N-28
Table 137	Nose Height-Middle Third Face Arc Index	N-29
Table 138	Nasal Root-Intercanthal Width Index	N-30
Table 139	Nasal Root Depth-Intercanthal Width Index	N-31
Table 140	Nose-Mouth Width Index	N-32
Table 141	Nasal Tip Protrusion-Upper Lip Height Index	N-33
Table 142	Mouth-Face Width Index	L-10
Table 143	Upper Lip-Upper Face Height Index	L-11
Table 144	Upper Lip-Mandible Height Index	L-12
Table 145	Mouth Cheek-Lower Third Face Arc Index	L-13
Table 146	Upper Lip-Nose Height Index	L-14
Table 147	Ear Width-Temple Depth Index	E-3
Table 148	Ear-Craniofacial Height Index	E-4
Table 149	Ear-Face Height Index	E-5
Table 150	Ear-Lower Face Height Index	E-6
Table 151	Calva-Face Height Index	AC-3
Table 152	Orbital Face-Head Height Index	AF-7
Table 153	Lower Lip-Face Heights Index	AL-9
Table 154	Lower Lip-Mandible Height Index	AL-10
Table 155	Lower Lip-Chin Height Index	AL-11
Table 156	Cephalic Index	YC-1
Table 157	Forehead-Skull Base Width Index	YC-3
Table 158	Facial Index	YF-1
Table 159	Upper Face Index	YF-3
Table 160	Intercanthal Index	YO-1
Table 161	Nasal Index	YN-1
Table 162	Upper Lip Height-Mouth Width Index	YL-1
Table 163	Ear Index	YE-1
Table 164	Forehead-Face Width Index	YC-14
Table 165	Nose-Face Width Index	YN-24
Table 166	Mouth-Face Width Index	YL-10

**ANTHROPOMETRIC FACIAL PROPORTIONS
IN MEDICINE**

Chapter I

THE POPULATION SAMPLES

L.G. FARKAS

Normal proportion indices were determined based on measurements of the head and face from normal North American or Western European Caucasian children and young adults (Table I-I).

TABLE I-I

CAUCASIAN POPULATION GROUPS EXAMINED FOR DETERMINATION OF
NORMAL PROPORTION INDICES

<u>Years of Examination</u>	<u>Number of Subjects Examined</u>		
	<u>Males</u>	<u>Females</u>	<u>Total</u>
1973-1976	654	658	1312
1978-1979	40	40	80
1981-1982	100	89	189
1983-1984	75	278	353
1967	328	302	630
Total	1197	1367	2564

The most basic 129 indices were established using the measurements taken from 1312 normal North American 6- to 18-year-olds between 1973 and 1976 (654 boys and 658 girls).¹ This group is referred to as the “children” for convenience although the oldest age group consists of young adults.

Studies in the youngest children (birth to 6 years old) were done in 630 normal West German Caucasians in 1967.²

All the other subjects were North American young adults. For more detailed examination of the orbits, 80 subjects were examined in 1978–79. Intensive investigation of the surface anatomy of the lower face, particularly the lower lip and chin, was based on measurements in 189 subjects in 1981–82.³ The validity of the neoclassical proportion canons formulated in the Renaissance for modern populations was investigated in a group of 153 subjects (75 males, 78 females) in 1983–84.⁴ In the same period, proportion indices in above-average, average and below-average faces in 200 women (including 50 professional models) were compared.⁵

About 40 per cent of the North American subjects were Anglo-Saxon, 33 per cent were Latin (French, Italian, Spanish, Portuguese) and the remainder were Germanic (German, Swedish, Dutch, Danish, Norwegian) or Slavs (Ukrainian, Polish, Slovak, Croatian) or belonged to small miscellaneous groups of Caucasians (e.g., Hungarian, Estonian, Finnish, Latvian).

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