

The Individual Gnathological Optimum.

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Although it was an immense improvement that EDWARD H. ANGLE introduced the conception of "The Natural Odontological Norm" as the basis and scope of odontology, the science must nevertheless always keep pace with the universal evolution and conform to the principle of renewal.

Though it takes a long time for new thoughts, ideas and principles to make their way to the great majority of "Odontologists" who have not hitherto realized that "Gnathology" is an evolution and extension of "Odontology" in accordance with the demands of time, we are nevertheless beginning to discard the odontological and localistic point of view in our art and science.

The time to come will become the epoch of gnathology with a different basis and scope, which indeed is not so ideal as "The Natural Norm", but which on the other hand is more realistic. This new conception which since 1930 (1) I have been endeavouring to have accepted, is designated as "The Individual Optimum" — it is the ultimate goal which medical science can attain.

Even though man has certain gnathologic-anatomical norms, civilized individuals are nevertheless so individually different especially in respect of physiology that it may be very difficult to establish "The Individual Prognosis".

Because as a rule it is impossible to attain and maintain "The Natural Odontological Norm", "The Individual Gnathological Optimum" must of necessity be the aim of all gnathological treatment.

Whereas, in spite of the multitude of variations regarding the size and shape of the teeth, it is possible to declare what is understood by "The Odontological Norm", it is entirely a matter of subjectivity how to define "The Gnathological Optimum". Already in childhood dysgnatho-prophylactic treatment must in comparatively many cases be undertaken, which is often a matter of extraction therapy, and here the question of the conception

of "The Individual Gnathological Optimum" to be aimed at immediately arises.

Often one is confronted with the considerations of systematic extraction of the six year molars or of premolars. Furthermore there may be a question whether an asymmetric or an asystematic extraction in different groups of teeth is to be preferred.

The latter problem has, in the case no. 661 K, which now will be discussed, an especial pertinence because this is a case with a macrognathic maxilla in connection with a microgenetic lower jaw where 5—5 are missing.

Before the patient in question came under my treatment she had already been subjected to an orthodontic treatment but without result, perhaps just on account of the conservatism of ANGLE, who even went so far in his exaggeration as to suggest to make room for a replacement of the missing teeth, which I myself, however, have only once been induced to try.

The first thing to be considered in this case was the extraction of 6 + 6 (the six year molars in the upper jaw), which in the course of time appeared as the only way to attain and support "The Individual Gnathological Optimum". It must be added that the orthodontic treatment in this case was finished by the insertion of a retention-activator, which unfortunately was used very irregularly. It was only later I conceived the idea of "The Protracted Retention".

In this case we consequently have a typical result of the extraction of teeth in different groups, a method I have often used in order to attain the optimum.

It is of course impossible to attain "Normal Occlusion" after asystematic extraction, but this was precluded because 5—5 were missing. The objection might be made, that it might have been more suitable to extract 5 + 5 instead of 6 + 6. However, here as in other cases it was necessary to consider that the set of teeth in the upper jaw necessitated a considerable reduction.

From this it appears how difficult it is to define the conception of "The Individual Gnathological Optimum".

Now as far as the epicrisis was concerned a radical examination of all the facts which had special or general significance should indeed have been undertaken. However, as the patient was here on a short sejour only, this was quite impossible.

It is on the whole extraordinarily difficult to retain connec-

tions with patients in after years and therefore "The Gnathological Epicrisis" has always been the most neglected point of the science. However, it is in reality the most important.

As a feature of the epicrisis, it must be mentioned that, in spite of the satisfaction of the patient regarding the result, she had not yet forgotten the discomfort of the orthodontic treatment and of the use of the intermaxillary elastics. In future such cases will be treated in the most convenient manner, both for the patient and the dental surgeon, according to the activator method — "The Norwegian System of Functional Gnatho-Orthopedia".

Anamnesis: Healthy girl, $13\frac{2}{12}$ years, who had been submitted to a resultless orthodontic treatment by a foreign dentist, who perhaps had not noticed the agenesy of 5 — 5.

Even if the "orthodontological world" in 1920 was still under the influence of the conservatism of ANGLE, it appears from the models from February 1924 that the extraction therapy had formerly been neglected. Diagnosis: Extreme total protrusion-distodysgnathy complicated by the agenesy of 5 — 5.

Therapy: Extraction of 6 + 6 was the first thing to be done. Afterwards the *Angle orthodontic method* was used with somewhat modified apparatus for about $1\frac{1}{2}$ years and later a retention-activator was used, not, however, in accordance with instructions.

Epicrisis: In spite of the deficient retention the result — when the patient was $21\frac{1}{2}$ years may be described — cum grano salis — as "The Individual Gnathological Optimum" in the functional as well as in the esthetic respect (see Fig. 3).

In 1944, when the patient was $32\frac{1}{2}$ years old, a considerable elongation of the lower incisors had occurred on account of the reduced function due to civilization and to the special, individual dysgnathic conditions of the patient, which are still obvious (note the lower set of models).

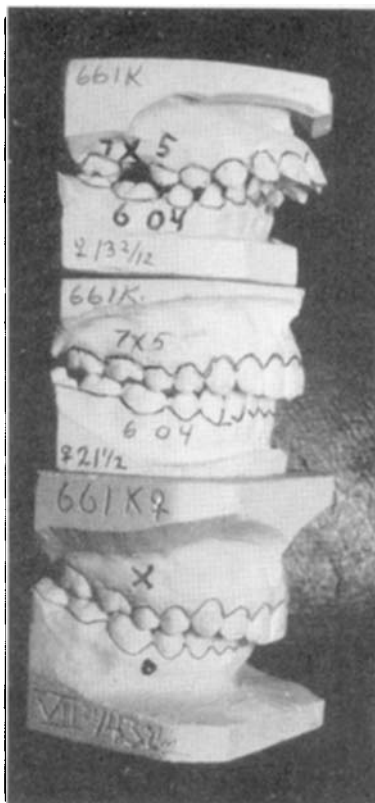


Fig. 1. Case 661 K. The upper set of models.

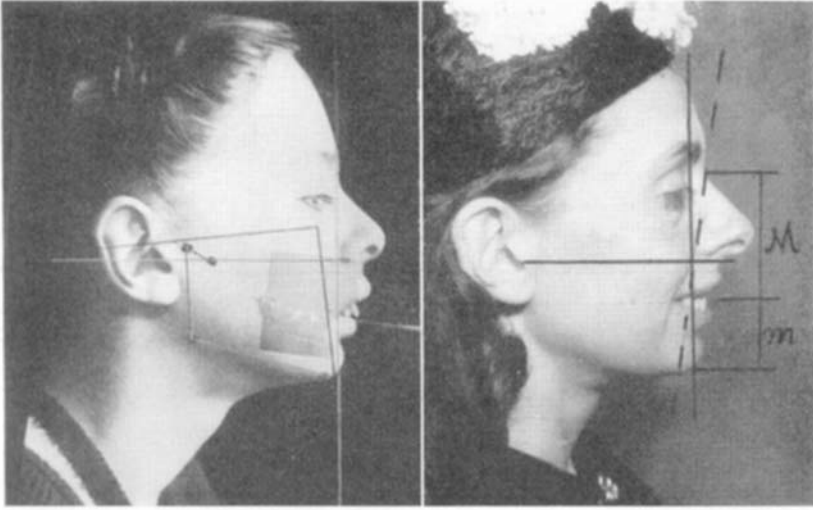


Fig. 2. Gnatho-physiognomic photo (2-3) when about 13 years old.

Fig. 3. Photo corresponding to the most recent set of models in fig. 1, when the patient was 32½ years old.

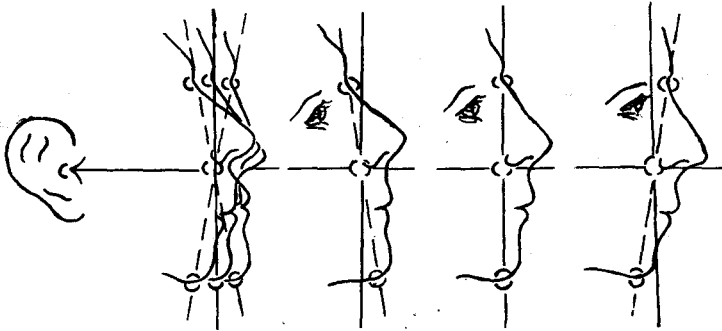


Fig. 4. The three different gnatho-physiognomical optimal basic types viz. "Pro-central-, Ortho-central- and Retro-central-Gnatho-Physiognomy". From left to right is shown the phylogenetic evolution of the face and from right to left the ontogenetic development from child to adult. The farther the phylogenetic evolution is to proceed the earlier must the ontogenetic development come to a stop.

The picture, which is provided with inserted gnatho-physiognometric lines and also with the proportions of the sectio aurea, shows that the patient may be characterized as of the maxillary or nasal type of function and that, perhaps on account of the extraction therapy in connection with the agensy, she has developed into the rare type of retro-gnatho-physiognomy; compare the same type at the right in Fig. 4 (4), with the forehead prevailing over the jaw-

mechanism (5—6). This treatment is of special value as mouth-breathing is generally cured thereby; this advantage was shown by the present case (Figs. 2 and 3).

Summary.

To replace the "Natural Odontological Norm" and the conservative conception of ANGLE the "Individual Gnathological Optimum", perhaps associated with extraction therapy, first suggested by me in 1930, is again put forward in the present paper.

In Case 661 K the extraction of the upper six year mandibles was strongly indicated on account of the agenesy of the lower second premolars in connection with the microgenetic mandible.

This case was also selected in order to emphasize the significance of "Individual Prognosis" as well as the "Gnathological Epicrisis" (in this case 20 years after the commencement of the treatment).

Although the "Protracted Retention", which is advisable in many cases, has here been completely neglected, the result must be considered as an attainment of an "Individual Gnathological Optimum" with respect to the biology of civilization.

Zusammenfassung.

Anstelle der »natürlichen odontologischen Norm« und der konservativen Auffassung von ANGLE, wird das »individuelle gnathologische Optimum«, eventuell in Verbindung mit Extraktions-Therapie, wie der Verfasser erstmalig im Jahre 1930 angegeben hat, in der vorliegenden Arbeit wieder hervorgehoben.

Beim Falle 661 K war eine Extraktion der oberen Sechsjahres-Molaren unbedingt indiziert im Hinblick auf die Agenesie der unteren zweiten Prämolaren in Verbindung mit der vorliegenden Mikrognathie.

Dieser Fall wurde auch gewählt, um die Bedeutung der »individuellen Prognose« wie auch der »gnathologischen Epikrise« hervorzuheben, (bei diesem Falle 20 Jahre nach Beginn der Behandlung).

Obwohl die »protrahierte Retention«, die bei vielen Fällen zu empfehlen ist, hier vollkommen vernachlässigt wurde, muss das Resultat als Erreichung eines »individuellen gnathologischen Optimum« unter Berücksichtigung der Biologie der zivilisierten Menschheit betrachtet werden.

Résumé.

Pour remplacer la *norme odontologique naturelle* et la conception conservatrice d'ANGLE, je propose à nouveau, dans le présent exposé, *l'optimum gnathologique individuel* — associé éventuellement à la thérapeutique extractive — que j'ai recommandée pour la première fois en 1930.

Dans le cas 661 K, l'indication de l'extraction de la mâchoire supérieure âgée de 6 ans était formelle à cause de l'agénésie des prémolaires de seconde dentition liée à la microgénésie de la mâchoire inférieure.

Le choix de ce cas a été aussi dicté par le besoin de souligner l'importance de la *prognose individuelle* aussi bien que de *l'épicrose gnathologique* (dans ce cas, 20 ans après le début du traitement).

Bien que la *rétension prolongée* qui est recommandable en de nombreux cas ait été ici complètement ignorée, le résultat doit du point de vue de la biologie de la civilisation, être considéré comme la réalisation d'un *optimum gnathologique individuel*.

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