Development of the Optician's Trade in Germany

Lecture held by Dr. Helmut Goersch in June 1972 at Atami, Japan, on invitation of Hoya Glass works

Mr. Hirano, Ladies and Gentlemen,

At first my sincere thanks go to HOYA GLASS WORKS for the most honourable invitation to speak to you about the Development of the Optician's Trade in Germany.

I hope that my modest contribution to the HOYA partners' seminar will strengthen the traditionally good relations between the Japanese opticians and the German optician's school in Berlin.

I have taken the liberty to divide my lecture into four parts:

Part I History of the optician's trade
Part II History of the optician's education
Part III History of the optician's relationship to the ophthalmologist
Part IV Present situation and outlook

Part I: History of the optician's trade

1) The Spectacle Maker and the Spectacle Salesman

The eldest known remark about a helpful reading aid is to be found in the old German Literature of 700 years ago. Therefore it is certain that at the end of the 13th century one knew so-called "reading-stones" which presumably were ground crystals. Spectacles were first mentioned in Italy at the beginning of the 14th century. Apparently from Venice, the place of the famous glass makers the art of grinding lenses came to Germany in the 15th century. A decree of the city of Nuremburg dating back to the year 1478 gives the first written proof of the existence of spectacle makers in Germany. They were called "Parillenmacher". The cities of Regensburg and Augsburg followed in the 16th century with an own guild of spectacle makers. All those places were cross points of the late medieval trade routes.

These first spectacle makers made everything themselves. They ground the necessary spectacle lenses from raw material and produced their own spectacle frames. Therefore their spectacles were entirely hand-made and of high quality considering the standards of that time. The profession of the spectacle maker was a handicraft in the real sense of the word.

The decrees concerning the handicraft of the spectacle makers give the usual picture of the crafts of that time. Apprentice and journeyman were considered as an integral part of the master's family and often only one apprentice was allowed for each workshop. In Nuremburg two years apprentice-ship had to be served before the master examination could be taken, but no time as journeyman was required. For the examination two spectacles had to be made, one for far vision and one for near vision. In Regensburg the master examination could be taken after four years of apprenticeship and it comprised the making of ten pieces of craftsmanship as well as the making of all necessary tools. The frames of that time consisted of wood or horn and later also of leather and did not yet have side-pieces which were introduced in the early 18th century. More luxurious frames were imported mainly from Italy and later also from England.

Every registered master of the spectacle makers had to mark his products with his special brand and scamped work was heavily fined. At first the spectacle makers traded their goods themselves but later on these were sold by travelling spectacle salesmen. Scientific interest in spectacle problems started at the beginning of the 17th century but the spectacle makers had practically no part in it. Thus the spectacle makers and spectacle salesmen did not recognize the signs of that time. They neglected the necessary development and the quality of their products did not keep up with the existing possibilities. In the course of the 18th century spectacles became a mass product and their quality gradually deteriorated. The lenses were insufficiently ground and eventually cheap spectacle lenses were merely moulded. We find reported that there were enterprises which produced up to some thousand pieces a week. There was no individual spectacle fitting and someone who needed eye glasses just selected a pair of spectacles from the spectacle salesman. This decline in standard marked the end of the first historical phase of the optician's trade at the end of the 18th century.

2) The Optician and Mechanic

Until then the history of the optician was closely linked with the history of the spectacle lens but from the year 1800 both go into different directions. Grinding-machines were invented and the spectacle lens became an industrial product. Here the name of Johann Duncker has to be mentioned who started together with Samuel Wagener a lens factory in the small town of Rathenow in the year 1800. It was the first German factory to produce quality lenses according to the scientific knowledge of that time. Only the best optically faultless raw material was used. As a result there was a great difference between the correctly ground lenses from Rathenow and the merely moulded lenses from Nuremberg and Augsburg.

Duncker also emphasized the importance of individual expert advice which could only be had from competent opticians. He did not sell his products to travelling spectacle salesmen or unqualified spectacle makers but only to competent opticians. The retail prices were fixed.

And in 1815 Duncker issued a booklet with the title: "Advice on Spectacles; their Condition, Selection and Use" ("Belehrungen über Brillen; die Beschaffenheit, Auswahl und Anwendung derselben"). In this way he tried to make the opticians as well as the users of the spectacles "quality-minded". His thoughts found favourable response with advanced opticians as well as with educated people who were in need of spectacles. And in this way the ideas from Rathenow formed the roots of the developing new profession of qualified opticians. Those opticians who sold spectacles from Rathenow called themselves "Rathenow Opticians".

In March 1801 King Frederic William III of Prussia had granted his privilege to the firm and it was called "Royally Privileged Optical Factory". Later it became the firm of Emil Busch and besides spectacle lenses also magnifying-glasses, microscopes, and telescopes were produced. Its frame spread to many countries throughout the world and we can read in a commemorative publication of the year 1900:

"Spectacles from Rathenow are to be found at the trade fair of Nischni Nowgorod as well as in the shops of Tiflis and Cairo; the Escimo in his sealskin and the slim Indians use them; in Australia, in Clondyke and at the Cape the gold-digger pays for them with gold dust, and they have also made their way to China and Japan ... "

This development of industrial mass production of spectacle lenses had at first a fatal effect on the handicraft of the spectacle makers. For some time individual masters of the craft tried to maintain their position by better lens quality of their self-ground lenses. But soon they had to give in as the industrial products reached the same quality. At that time, when the spectacle makers stopped to grind spectacle lenses themselves, it seemed as if the handicraft of the individual spectacle maker had lost its importance. But slowly it became clear that only the significance of the profession had changed. The competent optician of that time was also a mechanic, he built all kind of optical apparatus and device and he was a "Rathenow Optician". These opticians differed greatly from the travelling spectacle salesmen and they were more and more successful in their struggle against poor quality. And thus they became the precursors of today's "Ophthalmic Opticians". This aspect marked the end of the second historical phase of the optician's trade at the end of the 19th century.

In this connection it might be of interest that there is much literature on the development of spectacle lenses but very little has been written on the development of the optician's trade.

3) The Ophthalmic Optician

With the development of industrialism and with the decrease of illiteracy the demand for better vision increased. As the value of any service has always been measured by the need of the public, the social status of the opticians was growing continually. The opticians had also become aware of the fact that knowing their craft was not sufficient for the ultimate survival. They had started to acquaint themselves with the theory of optic lenses, of spectacle optics, and of ophthalmic optics. They tested the sight of their clients and gave professional advice. There was an expanding demand for their services and they acquired a new image as an established profession. And thus the early 20th century marked the beginning of the third phase in the development of the optician's trade.

On 23rd March 1905 eight opticians from Dresden founded the "Central Association of Owners of Optical Shops" ("Zentralverband der Inhaber optischer Geschäfte") for members from Germany, Austria, Hungary, and Switzerland. All opticians were invited to the first meeting on 25th June 1905. The association grew rapidly, local groups were founded, and on the 6th meeting in 1910 it developed into the "German Optician's Association" ("Deutscher Optiker-Verband").

One of the first aims of all optical associations was the proper professional training of the junior staff. They realized that the assistant examination for opticians and mechanics, as it was held by the trade chambers of that time, was too much workshop-orientated as far as the opticians were concerned. They wanted to follow the British example and to emphasize the knowledge of spectacle determination and fitting. Therefore they created modified regulations for the examination of opticians. The new "Assistant Examination Regulations for the Optician's Trade" ("Gehilfenprüfungsordnung für das Optikergewerbe") was applied in the first assistant examination for opticians which took place in Berlin in 1910. But still the opticians had no possibility of taking a master examination for the optician's trade. The only master examination relevant for them was that of a mechanic. This situation changed also through the efforts of the Optician's Association and on 29th September 1912 the first master examination for opticians took place in Berlin. This was the real beginning of the new independent optician's trade which is nowadays characterized by the expression "Augenoptiker". The literal translation of the term "Augenoptiker" is "Ophthalmic Optician" but the German "Ophthalmic Optician" differs from the British "Ophthalmic Optician" as well as from the American "Optometrist" in his professional education and legal rights. It was in 1926 when Hermann Pistor, the director of the optician's school in Jena, recommended the expression "Augenoptiker". The first legal use of this term appeared in ministerial decree of 1932.

Finally, after much struggle through all the years, the fields of activity and the necessary skill and knowledge of the ophthalmic opticians were legally recognized. They were laid down in the (West-German) governmental "Decree on the Profession of the Ophthalmic Optician Handicraft" ("Verordnung über das Berufsbild für das Augenoptiker-Handwerk") of 16th October 1969. This important document is less than three years old and I shall give you some details from it. According to this decree the fields of activity of the ophthalmic optician comprise:

- Manufacture and fitting of spectacles of all kinds.
- Determination and selection of spectacle lenses and spectacle frames according to optical, anatomical, and aesthetic aspects.
- Determination of the necessary dimensions for unifocal and multifocal lenses according to the quality rules of the German Industrial Standard.
- Measurement of the refraction of the eye, testing of visual acuity.
- Selection and preparation of contact lenses according to medical prescription.
- Repair of spectacles and other visual aids.
- Testing, repair and adjusting of optical instruments.

Then the decree enumerates the necessary skill and knowledge of the Ophthalmic Optician and mentions that all this has to be made the basis for the master examination.

Part II: History of the optician's education

This second part of the lecture summarizes the historical background of the four optician's schools which exist in Germany today.

In former times the professional education of the opticians was entirely in the hands of registered masters of the optician's handicraft. There were no special schools for opticians until the beginning of the 20th century. Then the need of further tuition arose, especially in ophthalmic optics. But at that time it was very difficult for opticians to obtain proper instruction in Germany on how to determine the refraction of the eye. Therefore some of them went to schools of optometry in England or America. It became most important to found such a school in Germany. The first private request for the foundation of a state-recognized school for opticians in 1904 had remained without result. After the formation of the Optician's Association it was repeatedly emphasized that a special

school for opticians was absolutely necessary. A possibility of proper tuition had to be provided for the basic subjects of physical and physiological optics and for the determination of ocular refraction and appropriate spectacles. But it was not easy to find the suitable teaching staff.

1) The school in Berlin

Eventually, in the year 1909, the "Technical School for Opticians" ("Fachschule für Optiker") was founded in Mainz by the "Central Association of Owners of Optical Shops" under supervision of the state. One course of tuition consisted of two parts, lasting three months each. After various difficulties the school was transferred to Berlin. On the 4th September 1912 it started in Berlin under the new name "German Optician's School, Technical School of the German Optician's Association" ("Deutsche Optikerschule, Technikum des Deutschen Optiker-Verbandes"). Each course of tuition took again six months until the First World War interrupted the activity of the school. It was closed from 1915 until 1918. A new beginning was made in 1919. A second department of the school was established for photo technicians and the Institution was renamed to "German School for Optics and Phototechnique" ("Deutsche Schule für Optik und Phototechnik"). The first director of that school was the ophthalmologist Walter Thorner. At first there were only short courses but the full-time work started in October 1921. These full-time courses had a duration of one year, the new director Miethe came from the Technical University in Berlin, and Thorner continued to teach the ophthalmic subjects. The entry requirements for opticians consisted of the assistant examination for opticians and one year practical experience as an assistant. After three years director Miethe resigned from his post because he thought the entrance requirements for the students were not sufficient and could not guarantee that the students have the necessary educational background. This is an important question which is still in discussion today.

From 1925 Walter Mindt directed the school. In 1927 the Prussian ministry of the interior issued a decree through which the title "State-Examined Optician" ("Staatlich geprüfter Optiker") was awarded with passing the final examination. During the second world war the school building was completely destroyed. After the war the department of phototechnique started its work again in 1945 and the department of ophthalmic optics followed in April 1946 with courses of one year duration. The new director was Werner Thiele who had already been at the school as lecturer. For some years the lessons took place in the former building of the Japanese embassy, which was prepared for that purpose.

It had always been the ambition of the school to maintain the necessary harmony between the theoretical and the practical tuition. To keep this principle in spite of the growing knowledge in the ophthalmic subjects an extension of the time of study seemed unavoidable. In 1953 the "Central Association of Ophthalmic Opticians" issued a resolution with the result that in 1954 the school started with courses which lasted two years. Fifteen years later the next alteration was due and since 1970 the study for ophthalmic opticians takes two and a half years and consists of five terms. Each term takes 18 weeks and there are 36 hours of instruction per week. That makes a full-time study program of 3.240 hours of tuition. The final examination leads to the title "State-Examined Ophthalmic Optician" ("Staatlich geprüfter Augenoptiker") and simultaneously the chamber of handicrafts carries out a shortened master examination.

2) The school in Jena

In the year 1917 the Karl-Zeiss-Foundation decided to found a technical school for opticians in Jena. This plan was realized in October 1918 and thus a second German state-recognized optician's school was founded. The financial means for this school were supplied by the Karl-Zeiss-Foundation, and the school was state-controlled. The first director was Gerhard Kloth and in November 1919 Hermann Pistor followed him. The study took six months and there were also special courses for opticians from Switzerland, Scandinavia, Holland, Poland, Czechoslovakia, and Italy. Even ophthalmologists attended the special courses of this school. Since 1919 the state-recognized title "Diploma Optician"("Diplomoptiker") went with the final examination. And a ministerial decree of October 1920 said that the final examination of the school was also valid as master examination for the optician's trade. This meant an exceptional recognition of the activity of the school. In 1921 the duration of the courses was extended to one year and in 1925 to two years.

At that time Jena belonged to the state of Thüringen, and Berlin to the state of Prussia. There was a growing rivalry between these two German states regarding the two schools. Finally Thüringen gave in and from 1926 the title "Diploma Optician" for the graduates of the school in Jena was dropped. Then a decision of the state ministry of Thüringen gave a new name to the school in 1927. It was called "Jena Technical High School for Opticians, State Institution" ("Jenaer Fachhochschule für Optiker, Staatliche Anstalt"). Here again we encounter a difficulty in translation as "technical high school" is literally translated from the German term "Fachhochschule". This is an institution the level of which lies between a technical school and a university. This kind of level is unique in Germany and is again in discussion today.

The students from the optician's school also had the right to attend lectures at the ophthalmic hospital of the university in Jena. The demands in the final examination were much higher than in the master examination of the trade chambers. This was the same situation as we have it today at the optician's schools. After six years (1926-1932) in which no special title was awarded to the graduates of the Jena school a new ministerial decree of 13th June 1932 created the new title "State-Certified Ophthalmic Optician" ("Staatlich approbierter Augenoptiker"). This was the first legal use of the term "ophthalmic optician".

The beginning of the Second World War brought some considerable changes. The government authorities demanded to cut the courses in Jena as well as in Berlin to the duration of one year as mere courses that prepared for the master examination of the optician's trade. The Jena school was thus changed to "State Engineer's School for Optics and Master School for the Ophthalmic Optician Handicraft in Jena" ("Staatliche Ingenieurschule für Optik und Meisterschule für das Augenoptiker-Handwerk"). The courses of two years were no longer meant for ophthalmic opticians but only for engineers in optics. After an interruption at the end of the war the master school for ophthalmic opticians was opened again in November 1945.

Today Jena belongs to the eastern part of Germany and since 1952 the school bears the name of its director of 30 years. It is now called "Technical School for Ophthalmic Opticians Hermann Pistor" ("Fachschule für Augenoptik Hermann Pistor"). The courses have again a duration of two years and the entrance requirements for students are ten years of general school education as well as the assistant examination for opticians.

3) The schools in Cologne and Munich

After the Second World War it was soon realized that the optician's school in Berlin would hardly be enough for the ophthalmic opticians from all over West-Germany. So the Central Association of Ophthalmic Opticians founded the "Technical School for Ophthalmic Optics" in Cologne in 1952 with K. Schachtschabel as director. He was followed by Josef Reiner who still directs the school. Both had come from Jena where they had already been lecturers at the optician's' school. And in 1964 another "Technical School for Ophthalmic Optics" was founded in Munich with Gregor Henke as director.

It has to be emphasized that it never was compulsory for the opticians to attend a technical school. They always did it and still do it voluntarily because they know that only such a school is able to supply them with the best education for their trade.

Part III: The history of the optician's relationship to the ophthalmologist

It is certain that physicians have always given medical treatment to diseased eyes, but in former times nobody knew anything about the process of vision. There were no ophthalmologists in today's sense and the physicians neglected the existence of spectacles almost completely for 600 years after these had been invented. The German ophthalmologist Richard Greeff mentioned in the year 1932 that he had looked through all documents on the history of the oldest ophthalmic hospital in Berlin. He could not find a single word on ophthalmic optics or on spectacles. Ophthalmology as a medical branch of its own developed in the middle of the 19th century after the ophthalmoscope had been invented by the German physicist and physiologist Hermann von Helmholtz. This most important invention took place in the year 1851 and altered the scene completely. With the ophthalmoscope

one could look into the living eye. Helmholtz also wrote a comprehensive work on physiological optics. It contained an explanation of the accommodation of the eye and became the scientific basis for ophthalmologists and opticians.

The real ophthalmology started in Germany with the ophthalmologist Albrecht von Graefe who founded the first eye clinic in Berlin in 1850. But he also ignored the possibilities which were given by spectacles. It was the Dutchman Franz Donders who was the first ophthalmologist to become engaged in scientific research in regard to spectacles. In 1864 he published his book "The Anomalies of Refraction and Accommodation of the Eye". It soon became famous and was translated into many languages. The German translation was issued in the year 1866. Donders was also the first to make the correct statement that an anomaly of the ocular refraction is no disease and he said: "Spectacles will remove your headache". His work was of considerable importance to the opticians as he described how to determine the refraction of the eye. Most of the technical terms which are used in today's ophthalmic optics have been created by Donders.

Through the book of Donders the interest of the ophthalmologists was directed to the determination of spectacles. Some of them regarded this optical procedure as a medical one and started their struggle against the determination of spectacles by opticians. These ophthalmologists wanted that the opticians would only be permitted to sell spectacles according to medical prescription. But the opticians replied that the determination and individual fitting of spectacles was an optical procedure and no medical one and that they had always sold spectacles without any physician. The opticians were supported by the "Central Journal for Optics and Mechanics" which had been founded in 1880. In the year 1905 this periodical started a special "Review for Opticians" which was edited by the ophthalmologist E. Oppenheimer. Though he did also not approve of the determination of spectacles by opticians he saw that this situation could not be changed. Therefore he wanted to assist the opticians in gaining and improving all the necessary knowledge so that they would be able to realize when a client should be sent to an ophthalmologist.

The opticians themselves thought it highly important that they did not enter the field of medicine. Therefore they agreed among themselves to obey the following rules which had been suggested by Hermann Pistor in 1929: The ophthalmic optician will not determine spectacles when the client

a) is under 14 years of age;
b) is myopic to a very high degree;
c) has a noticeable disease of the eye;
d) shows a remarkable change in visual acuity during a short period of time;
e) is under medical treatment from an ophthalmologist;
f) does not reach a sufficient visual acuity with the proper lenses (at least 0,5).

These were entirely voluntary restrictions. Moreover, under no circumstances the optician will make a diagnosis. If he notices that there is something wrong with the eye of his client he will always advice him to visit an ophthalmologist. This attitude still applies to today's ophthalmic opticians.

For a long time there was no legal restriction to the activity of the optician, in fact there was no trade restriction for anyone. The trade regulations for Germany which had been issued on 21st June 1869 guaranteed freedom of trade for everyone. By the way, this is the eldest law which is still in force today. It also applied to all liberal professions if no other law placed a restriction. As far as diseases were concerned it gave the so-called "freedom of cure" ("Kurierfreiheit") for everyone which meant that the medical profession had no privilege in curing diseases. This state of affairs naturally contained certain dangers for the public health. Eventually the government authorities decided that not everyone should have the right to cure diseases. And in 1939 the so-called "Non-Medical Practitioner Law" ("Heilpraktikergesetz") was promulgated. This law laid down that in general only medical practitioners had the legal right to cure diseases. Every non-medical practitioner had now to apply to the appropriate authorities for a special concession.

Only after that particular law came into force the question might have been raised whether determination of spectacles fell within its scope. But nobody thought of putting that question and the ophthalmic opticians continued to measure the ocular refraction of their clients. During the Second World War even government authorities summoned ophthalmic opticians to determine spectacles for

military personnel. After the war the responsible state authorities agreed to the lecture plans of the optician's schools as well as to the regulations for the ophthalmic optician's master examination and both contained the knowledge of determining spectacles.

So the opticians carried on as they had always done, and until 1955 there was no doubt that they had the right to use objective and subjective methods in order to measure the ocular refraction of their clients. But then a certain group of ophthalmologists began to question that right. They argued that the ophthalmic opticians violated the non-medical practitioner law by determining spectacles. In 1956 and 1957 they took action against individual opticians and accused them of a punishable violation of this non-medical practitioner law. The district court, however, acquitted the opticians of that accusation. The ophthalmologists saw that they could not reach their end in this way, but in 1959 they temporarily succeeded in another manner. They induced a local administrative authority to decree that a certain optician, under penalty of a fine, must not determine the ocular refraction of his clients. Now the Central Association of Ophthalmic Opticians had to start action. To avoid that this decree became legally binding an appeal had to be made against it. The case went through all instances and it took seven years until the highest administrative court came to the final decision on 20th January 1966. It was decided that the ophthalmic opticians have the right to determine ocular refractions and that this activity does not violate the non-medical practitioner law.

The ophthalmic opticians had argued firstly that an anomaly of the ocular refraction was no disease in the sense of the law and secondly that the determination of this refraction was no medical activity but a mere optical and technical procedure. The high court took no decision on the first question but it agreed to the second argument which was also proved by the fact that the optician's trade still belonged to the ministry of economics and not to the ministry of health. Therefore the law in question could not be applied.

Another argument which the ophthalmologists put against the ophthalmic opticians was that the opticians might overlook an eye-disease when determining the ocular refraction. Here the high court took the view that the main question was: "What is today's purpose of the non-medical practitioner law?". Obviously the purpose of the law is to protect the public health. Experience had shown, however, that in this respect only a negligible danger if any at all resulted from the activities of the ophthalmic opticians. Therefore this argument of the ophthalmologists did also not justify an application of the non-medical practitioner law. Moreover, every non-medical practitioner in the sense of that law and also every general practitioner is allowed to determine ocular refractions though they have no special training in that direction. And these people may also overlook an eye-disease.

After the highest administrative court had settled this vital question the time was ready for the decree on the optician's trade which was issued in 1969 and which has already been quoted in the first part of this lecture.

However, the ophthalmologists did not leave it at that and tried the third and last legal possibility. An individual ophthalmologist took an action against an ophthalmic optician who ran his shop in the neighbouring house. He took the case to the civil court and accused the optician of unfair competition quoting again the non-medical practitioner law and stating that the decision of the highest administrative court in 1966 was incorrect. But he lost his case in the court of first instance in 1969 and thereupon he appealed against the court's decision. Finally, on 4th February 1972, the highest civil court also decided against the ophthalmologist. After all, the question whether ophthalmic opticians have the right to determine ocular refractions is now judicially settled on all levels and sight-testing remains part of the work of the ophthalmic optician. But one has to bear in mind that a judicial decision does not automatically become a law. Therefore the last word will eventually be spoken in the European parliament of the Common Market.

It seems, however, that especially among the younger ophthalmologists a positive tendency towards the ophthalmic opticians can be noticed. In the long run this will probably bring about a good and cooperative relationship.

Part IV: Present situation and outlook

1) Vision care, education facilities, and organizations

The vision care is divided between ophthalmologists and ophthalmic opticians mainly according to medical and optical aspects. As far as ocular diseases are concerned the vision care is completely in the hands of the ophthalmologists. But they also measure the ocular refraction and prescribe spectacles. The fitting and selling of spectacles is only done by ophthalmic opticians. The opticians are also permitted to test the sight of their clients in order to prescribe spectacles but the health insurance only pays for spectacles which have been prescribed by an ophthalmologist. Therefore only a certain percentage of the spectacles that are fitted and sold by ophthalmic opticians are determined and prescribed by the opticians themselves. Contact lenses have to be prescribed by ophthalmologists and are sold by them as well as by ophthalmic opticians. When an ophthalmologist measures the ocular refraction of his patient he will generally use a cycloplegic to induce relaxed accommodation. The ophthalmic optician, however, is forbidden to apply any drug to the eyes of his client.

The situation of the professional education for opticians has not changed very much during the years. At present the apprentice must have finished 9 years of general school education. The apprenticeship in a master's shop takes three and a half years or less if the apprentice has had a longer general school education. It is reduced to three years with a previous general education of ten years and to two and a half years when the apprentice had attended the general school for thirteen years. The apprenticeship is accompanied by the compulsory attendance of a vocational school once a week and finishes with the "Assistant Examination for the Ophthalmic Optician Handicraft'' ("Gehilfenprüfung für das Augenoptiker-Handwerk"). After five years of assistantship the "Master examination for the Ophthalmic Optician Handicraft" ("Meisterprüfung für das Augenoptiker-Handwerk") can be taken. Both examinations are in the hands of the chamber of handicrafts (Handwerkskammer). Only a master is permitted to open a shop and to train apprentices.

The attendance of a technical school is not required but only the graduates of such a school possess the best scientific education and get the title "state-examined ophthalmic optician". Moreover the full-time tuition at these schools is a far better preparation for the master examination than any of the special short courses which are offered from time to time by the schools or other organizations. In fact, the graduates of a technical school have the privilege to be exempted from the theoretical part of the master examination. And nowadays the attendance of a technical school bears no financial problems for the students as the state pays very reasonable scholarships.

The entrance requirements are the same for the three technical schools for ophthalmic optics in West-Germany. They comprise ten years of general school education, the assistant examination for ophthalmic opticians and two years of assistantship. The three schools lead to the same graduation which still has no legal value of its own. To ensure them their legal rights the school graduates have to take the master examination in addition to the final school examination. The reason lies in the fact that the trade of the ophthalmic optician still belong to the chamber of handicrafts.

There are three important optician's organizations in West-Germany today. One organization is the "Central Association of Ophthalmic Opticians" (ZVA: "Zentralverband der Augenoptiker") which is a combination of the local guilds and represents the majority of the over 4000 German optician's shops. About half of them are one-man shops. On the average there is one ophthalmic optician to ten thousand residents. The next organization is the "Union of Employed Ophthalmic Opticians" (BNA: "Bund nichtselbständiger Augenoptiker") which is the trade union of the opticians. And last but not least there is the "Scientific Association for Ophthalmic Optics and Optometry" (WVAO: "Wissenschaftliche Vereinigung für Augenoptik und Optometrie") which is the successor organization of the former "German Society for Optometry" which had been founded in 1948 and the former "Scientific Association of Ophthalmic Opticians" which had been founded in 1949. Both organizations united in 1968 since they served the same purpose which is the continued professional education of all ophthalmic opticians. To that end the regional groups hold monthly meetings and the big event is the annual congress of the Scientific Association.

2) The situation in the European Economic Community

On 25th March 1957 the foreign ministers of Belgium, France, Germany, Italy, Luxembourg, and the Netherlands signed the treaty of the European Economic Community (EEC). The object of the treaty was to establish the freedom of movement for labour and capital among the member states. It was scheduled to finish this task within the following 15 years at the most. Therefore all necessary regulations will have to come into force by 1973. Particular difficulties, however, arose from the different situation of the optician's trade in the six member states. Not all countries regard the optician's trade as a craft being controlled by the ministry of economies as it is in Germany. In Belgium, France, and Italy the optician's trade belongs to the so-called "paramedical" professions which are controlled by the ministry of health. Moreover, the attendance of a technical school for opticians is compulsory in these countries. Neither the EEC regulations for industry and craft of 1964 nor those for the retail trade of 1968 can therefore be applied to the optician's trade in the European Community. One section of the treaty of 1957 states that regulations for a paramedical profession can only be issued after the member states have coordinated the conditions for practicing that profession. This coordination is made difficult because the system and the quality of the professional education as well as the legal status of the opticians differ from country to country.

To represent the common interests of the opticians of the six member states an association called GOMAC ("Groupement des Opticiens du Marché Commun d'Europe'") was founded in the year 1960. GOMAC means "Association of Opticians in the European Common Market, and members of the GOMAC are the six national optician's associations. The German ophthalmic optician Leon Hauck has been president of the GOMAC from the beginning. There was complete agreement among the members on the ideas for the future of the optician's trade. These ideas are based on the German interpretation of the optician's activities. It means that sight-testing and fitting of all kinds of visual aids form a unit which falls within the professional scope of the qualified ophthalmic optician. There was also mutual agreement on equalizing and raising the standards of the professional education.

During the past years the GOMAC successfully promoted the interests of the ophthalmic opticians in the European Community. And now the time has come for the EEC council of ministers to decide upon the present draft of the regulations for ophthalmic opticians. The health committee and the economic and social committee have already agreed to this draft. Only the legal committee has not yet given its opinion. Therefore the ophthalmic opticians in the Common Market still wait for the decision of the council of ministers. The drafted regulations permit the use of objective and subjective methods for sight-testing but they still contain two restrictions.

That is sight-testing for people under 16 years of age and fitting of contact lenses shall only be allowed according to a medical prescription which must not be older than six months. And, of course, no treatment for ocular diseases has to be given by ophthalmic opticians.

It would exceed my abilities to predict the further development of the optician's trade in the Common Market and hence in Germany. But it seems likely that the draft of the EEC regulations will be accepted until the final date in 1973, perhaps with a few minor alterations. Another possibility, however, is a further delay of some years which may be brought about by the integration of four new members into the Common Market. Especially the British ophthalmic opticians object to the present draft of the EEG regulations because of their different status. For instance, a university education is compulsory for the ophthalmic optician in Britain. In the future the optician's trade will certainly continue to be under discussion. And it is to be hoped that the final result represents mutual agreement on all levels.

This brings my lecture to a close and I am greatly indebted to you, Ladies and Gentlemen, for being such an attentive audience.

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