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Lessons from History

Rudolf Schindler—A Man for All Seasons

Rudolf Schindler (1888–1968) was a brilliant individual possessed of a formidable intellect, a perspicacious mind, and an occasionally irascible nature. An intriguing amalgam of sophistication, high intellect, and exotic eclecticism he was a synthesis of two very different cultures and the product of two centuries. Although his behavior vacillated between that of a Prussian autocrat and a sensitive humanist, he was a brilliant teacher much revered by his patients. In addition to being a conchologist, philatelist, and salamanderphile, he spoke six languages (German, English, French, Latin, Greek, and Portuguese), played bridge and chess at a professional

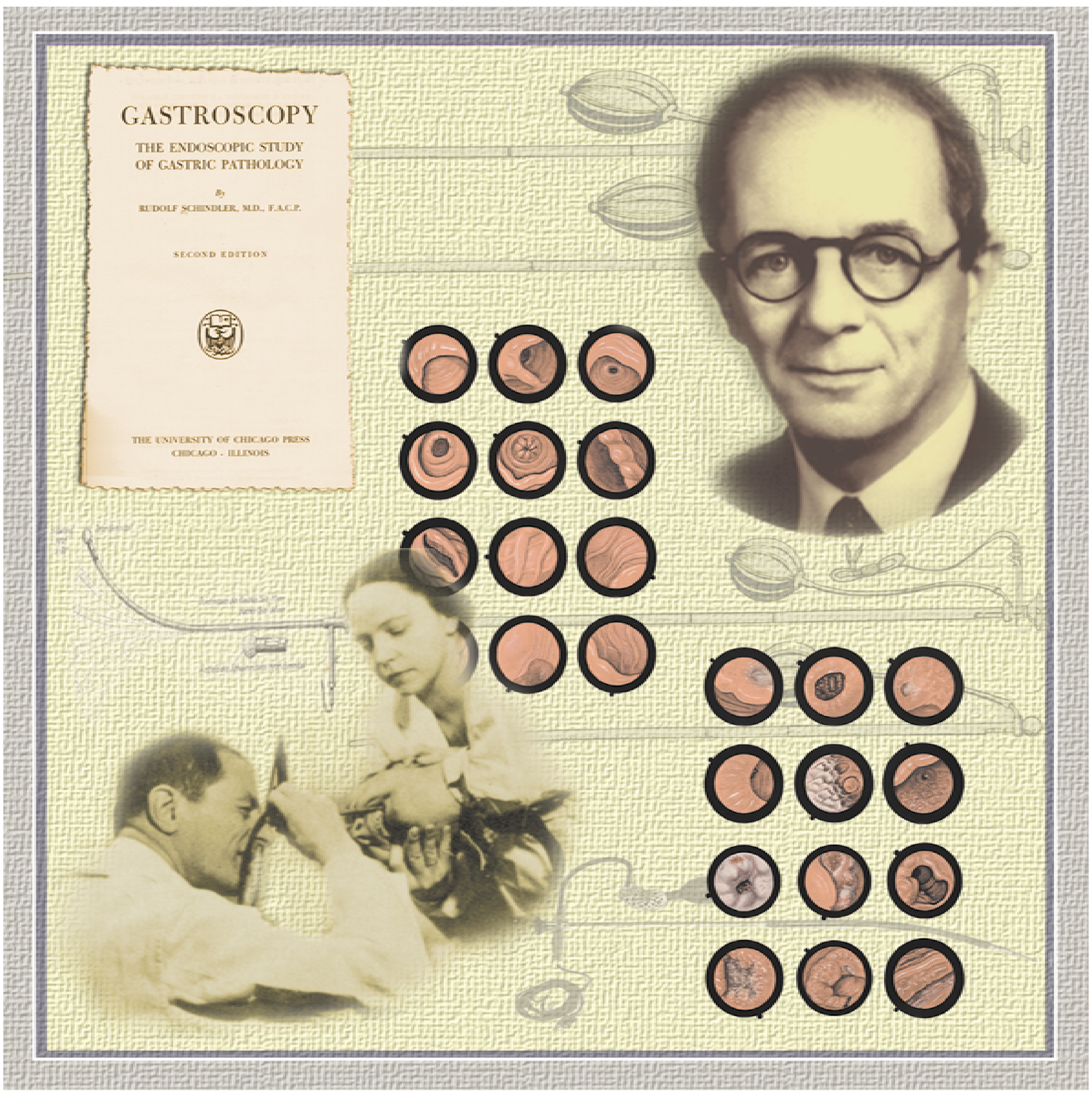

FIG. 1. Schindler collage.

level, and was a musician of consummate skill. At the time of the award of the American Medical Association's Gold Medal in 1937, he could rightly lay claim to have led the way into a new endoscopic era. As a young man he perceived the limitations of clinical gastroenterology and by dint of energy, foresight, and ingenuity drove the development of endoscopy to the point where it became a viable diagnostic entity. Resilient, innovative, consumed by curiosity, and gifted with extraordinary insight and perspicuity he strove and succeeded in extending the endoscopic boundaries of diagnosis. Having progressed from the Schwabing Hospital of Munich to the Billings Clinic of Chicago University Medical School, he engendered a personal and professional legend whose legacy will long remain. None who worked with him would ever forget him and, whether he engendered love, admiration, or sometimes-even frustration, his outstanding contributions would forever change the way physicians viewed *le milieu interieur*. A worthy first president of the American Gastroscopic Club, Schindler might rightfully claim, as did Newton of Hooke, "that I saw further by standing on the shoulders of the giants who had gone before me."

EARLY DAYS

Rudolf Schindler was born in Berlin on May the 10th, 1888; the son of a Jewish banker (Richard) and an artistically gifted Lutheran mother (Martha Simon). Raised in a cultured and sophisticated background, his early interests included poetry, natural history, and classic music.

Having studied at the Kaiser Wilhelm Gymnasium in Berlin, he graduated in 1905 and thereafter moved to the University of Freiburg. Influenced by his uncle, Richard Simon, who was a Berlin ophthalmologist, Schindler studied medicine, although natural history and marine zoology were of particular interest to him. During his medical training, Schindler received—as was the European custom—a broad general medical education and in addition became particularly adept in the area of histology. The latter skill would serve as a basis for his subsequent interest in the elucidation of gastric physiology and pathology, especially gastritis.

After graduating from medical school, the young Schindler became battalion surgeon of the 12th Bavarian Infantry Regiment and a pathologist in the 6th Army of the World War I German armed forces. As a result of his own dysentery and the gastrointestinal ailments of the soldiers, he became obsessed with the need to identify the precise source of symptoms. His curiosity was piqued by the pervasive inability to identify any cause for the common abdominal complaints that soldiers suffered from as well as the question of whether there existed any organic or even gastric basis for such problems. Schindler came to the conclusion that many of the gastrointestinal maladies of the soldiers were diet-related; and indeed, after his own bout with dysentery, he became further convinced of the relationship between military service and gastric disease. This almost obsessional preoccupation with gastric disease, gastritis, and military personnel would remain a consistent feature of his clinical focus throughout his life. Indeed, in the subsequent years later he would use the gastroscope he developed to demonstrate that military service both initiated and exacerbated certain types of gastric disease.[1]

At the termination of the war, Schindler accepted an appointment in the Schwabing Hospital at Munich and, by 1920, had become expert in the use of the rigid Elsner gastroscope. Dissatisfied with the technical characteristics of this instrument, Schindler arranged for the manufacture of his own endoscope by the firm of Reining, Gebbert and Schall in Munich. With this instrument, he investigated the vast morass of vague and undiagnosed stomach disease that he believed was caused by a variety of different types of gastritis. Driven by the belief that gastroscopy would provide a unique diagnostic window to the resolution of gastric disease, Schindler displayed such enthusiasm and commitment to the subject that by 1923, he had already published an atlas of gastroscopy, *Lehrbuch und Atlas der Gastroskopie*.[2]

This first and classic contribution to the clinical and diagnostic assessment of the stomach would mark the initiation of his subsequent 45-year focus on demonstrating the utility of gastroscopy in the elucidation and identification of gastric disease. During a long and often tempestuous life, Schindler directed his attention to assuring not only the technological improvement of the instruments but also the development and teaching of appropriate clinical techniques for their use. He was particularly committed to the concept of clinical scholarship and came early to recognition of the necessity to obtain detailed documentation of gastroscopic experience for publication and critical evaluation. At his death in 1968, his exemplary record as a teacher, skilled gastroenterologist, and innovator deservedly earned him the sobriquet of "*The Father of Gastroscopy*."

In 1922 at the age of 34, Schindler married Gabriele Winkler who, although untrained in the medical profession, would become his most important clinical assistant and would play a critical role in the development of gastroscopic practice. Indeed, such was her skill with patients that if Gabriele was unavailable Schindler, even in later years, would defer endoscopic examination of a patient. In this context his family played a considerable role. Thus while Gabrielle was his chief clinical assistant his son, Richard, and his daughter, Ursula, were them-

selves important contributors to his gastroscopy program. Schindler credited Richard at the tender age of 11 as being the first to suggest that adequate anesthesia of the patient's throat might best be achieved by construction of a tube with perforations placed along its length rather than only at its tip. This innovative suggestion allowed for anesthetic spray to be simultaneously delivered throughout the length of the throat instead of simply at the area adjacent to the tip. Richard was also involved in the development of Schindler's slide projection system, whereas Schindler's daughter, Ursula, helped not only in slide shows but also in the typing of manuscripts.[3]

ENDOSCOPIC DEVELOPMENT

Having acquired a reputation not only as a gastroenterologist of insight but as a skillful gastroscopist, Schindler embarked on what was to become his lifework—the establishment of gastroscopy as a worthy discipline. In particular, he was determined that appropriate indications for gastroscopy be decided and that both the instrument and the operator be regarded as safe. The latter concerns reflected the somewhat cavalier approach that had become associated with some of the early proponents of the technique. In 1922, a brush with his colleague, Wilhelm Sternberg, produced an unfortunate incident that highlighted the nature of this problem. In seeking to persuade older and influential physicians of the utility of the technique, Schindler had embarked upon a series of demonstrations. Having successfully demonstrated the use of his rigid instrument to Ernst Sauerbruch, a former student and close friend of Mikulicz, Schindler thereafter refused to appear on the program with Sternberg whose skills and instrument design had given him cause for concern. As Schindler predicted, Sternberg exercised poor judgment in undertaking to endoscope an unsuitable patient and the esophageal tear culminated in mediastinitis and demise of the patient. The influential and outspoken Sauerbruch, while complimentary of Schindler's technique, seized the opportunity to publish the outcome of the demonstration and widely denounced gastroscopy as a procedure capable of a "deadly outcome." Indeed, the significant opposition of an influential surgeon such as Sauerbruch combined with Schindler's belief that gastroscopy should be undertaken in an office setting rather than operating room played a substantial part in diminishing the initial role of surgeons in the development of this technique.

Despite his early success and acclaim, it was apparent to Schindler that the potential problem of stomach perforations and esophageal tears with rigid instruments would be the rate-limiting factor in the development of the discipline. This recognition was further amplified by discussions with two American gastroenterologists, Marie Ortmayer and Grant Laing of Chicago, who visited him in 1924 in Munich. Ortmayer and Laing were touring medical centers in Europe and, during their sojourn in Vienna, serendipitously unearthed a copy of Schindler's *Lehrbuch* in a Vienna bookshop. Impressed with the possibilities contained therein, they elected to travel to Munich and, on meeting with him to further explore the subject, were struck with his knowledge and skill of gastroscopy. This chance meeting was to lead to a subsequent encounter with Walter Palmer, Chairman of the Department of Gastroenterology at the University of Chicago, 2 years later. The latter concluded that a rigid gastroscope would be too risky for use in the United States and, in 1928, Schindler undertook to develop a safer instrument.

As a result of his own experience and discussions with others, Schindler became convinced that the resolution of the issue of instrument "flexibility" was the critical variable necessary for the development of successful gastroscopy. Strongly motivated by this concept, he sought out George Wolf (1873–1938), the Berlin manufacturer who had initially produced the Sussmann "*flexible gastroscope*" of 1911. Although Wolf had demonstrated unusual mechanical ingenuity in the actual construction of this device, it had proved unwieldy to use and of little clinical use. Wolf's next step was to use a fascinating proposal of Michael Hoffman who, in 1911, had reported that vision was not only possible in a linear environment (rigid tube) but could be undertaken under conditions of "curvature" if numerous prisms were inserted into a movable tube. Based on the concept of Hoffman, Wolf thereupon constructed a gastroscope with a tip that could be moved backwards and forwards through an angle of 180°, without diminishing the clarity of view. Despite the fact that the visual acuity was considerably improved, this instrument was as clumsy as the Sussmann gastroscope and there was little interest or demand for it from physicians. Wolf thereupon dropped the idea and, for the next 15 years, confined himself to producing rigid instruments according to modifications provided by Huebner, Hohlweg, and Elsner.

The subsequent relationship with Schindler rekindled Wolf's belief in the need for a flexible gastroscope. Together they sought to produce a thin, flexible tube whose length and flexibility would not only enable lenses to be mounted in such a fashion that flexion would not interfere with vision but would retain adequate length to comfortably reach the stomach. To accommodate these criteria, Wolf produced six individual gastroscope prototypes between 1928 and 1932. Thus, on July 13, 1930, patent #629,590 was awarded to George Wolf for the development of the first fully flexible gastroscope, which

contained a sequence of lenses screwed to the sides of the tube. A further modification resulted in yet another patent filing and on July 7th, 1932, patent #662,788 was similarly awarded to George Wolf for his design of a semi-flexible gastroscope. The latter model was unique in that it contained lenses that were displaceable along the interior of the tube after the transmission of an elastic pressure provided by a bronze coil located at the distal end. Thus, increasing the tension on the coil allowed the lenses to be pushed against the upper end into a space separating the rigid and flexible segments. Such was the success of this design that the introduction of the instrument resulted in (to quote Schindler) ". . . *a rapid, almost explosive, spread of the gastroscopic method.*" Not unaware of the staggering potential of his device, Wolf had within 3 years successfully applied for, and received an U.S. patent for this gastroscope. Thus, on March 17, 1935, the U.S. patent #1,995,196 was awarded for the invention of a semi-flexible gastroscope.[4]

PATENTS AND LENSES

Although the mechanical issues of flexibility had been overcome to a degree, the significant obstacle that remained was the maintenance of visual acuity. In particular, the precise arrangements of the lenses located in the flexible portion still posed a design issue of considerable magnitude. As early as 1916, Lange of the Berlin optical company, Goertz, had described that "*thick convex lens would transmit a picture through a flexible tube and through exchangeable curves*." Although Schindler was initially unaware of this information, Wolf was swift to perceive the application of this observation and used the technique in the construction of the flexible gastroscope. Thus, the flexible component of the endoscope consisted of six equal elements, each of which contained three spaces with two of the spaces carrying double convex lenses and one a simple convex lens, resulting in a total of 31 lenses. Each space was 15 mm apart and articulated with the adjacent one by a ball and socket joint. Thus, in the 24 cm of the flexible area, the six elements each produced a real image in its last focal plane that remained intact when the entire system was bent into an arch of up to 34°. The entire gastroscope consisted of 51 optical elements and it was the critical spacing of the lenses that would become the rate-limiting factor in determining the evolution of gastroscopy up until the advent of fiberoptic technology. The mathematical proof and raw diagrams delineating the precise lens details (distances, thickness, glass type, refractive index, etc.) required for each lens in the flexible section was subsequently the subject of a detailed patent specification submitted to the U.S. patent office by J.H. Hett on February 16, 1949. The final patent was granted to ACMI (his employer) on August 22, 1950 (USA #2,519,760). These modifications allowed for the amplification of the original Wolf design in that the angle to which the instrument could be bent could now be increased to 55° before loss of image.

By 1934, Schindler had become accepted in Munich as a gastroscopist of consummate skill and his instrument was widely used in many of the city hospitals and clinics. In addition, he had trained more than 50 physicians from different parts of the world who had visited Munich to study gastroscopy in his clinic. Such individuals would spend a period of time ranging from weeks to months with Schindler before returning to their own countries to spread the discipline. Schindler regarded Francois Moutier of Paris as one of the most promising of his trainees and, in 1935, Moutier published a widely accepted textbook on the subject of gastroscopy. Another trainee, Samuel Weiss of New York, became an advocate of gastroscopy but became involved in some acrimony regarding endoscope design.[4]

SAMUEL WEISS

Some American controversy in regard to the design of the flexible optic system for the gastroscope arose from the association of Samuel Weiss with Schindler and Wolf. An innovative physician, Weiss graduated from Long Island Medical College in 1907 and, by 1914, had turned his attention to gastroenterology and to becoming one of the first physicians in New York to install an x-ray machine in his office. He subsequently became the editor of the *Am J Gastroenterol*, a position he held for 33 years with considerable acclaim. Having spent some time with Schindler between 1925 and 1927 he thereafter campaigned vigorously in an attempt to persuade American physicians to accept gastroscopy.

Not only did he publish a paper entitled "A New Gastroscope"[5] but he also invested considerable time and effort on the design problems of the flexible optical system. Having initially visited Schindler in 1925, he subsequently returned in 1927 with his own sketches relating to the design of a new gastroscope. Schindler advised him to discuss his plans with Georg Wolf and, as a result, Weiss met with Wolf and left him copies of this proposed contrivance. Some months later Wolf declined by letter to further pursue the proposal. The missive indicated that he considered the designs of Weiss to be impractical for the construction of a gastric endoscope. The subsequent publication and patent filing of Wolf's gastroscope dismayed Weiss who was adamant in the belief that his designs had been incorporated into the new instrument without appropriate acknowledgment. Weiss, however, was unstinting in his support of gastroscopy and such was his enthusiasm in the promotion of the instrument and its clinical use that in 1932 he demon-

strated the use of the rigid gastroscope on no less than six prisoners at Sing Sing State Penitentiary in Ossining, New York!

MUNICH TO CHICAGO

Despite the emancipated intellectual environment of Germany, the advent of political instability and egregious racism would temporally engulf the career of Rudolf Schindler in a penumbra of potentially numinous doom. The advent of Hitler and the Brown shirts generated a subversive environment in which even the most innocent found themselves the victims of the most debased. Thus, shortly after introduction of the semi-flexible gastroscope and his recognition as physician of international consequence, Schindler was denounced to the "*authorities*" by his housekeeper. Angry at the termination of her employment she countered by claiming that Schindler was a subversive responsible for the perpetration of crimes against innocent German citizens. The fact that Schindler is claimed to have endoscoped her many times may have led to some personal disappointment, but the reasons for her behavior remain hidden in the *nebel und nacht* of those dark days.

As the son of a Jewish father and a Lutheran mother, Schindler was considered "*tainted*" and the Nazis accused him of being an enemy of the State. Using the age-old euphemism for politically sanctioned thuggery, he was thereupon placed in "*protective custody*" in no less salubrious an environment than Dachau. The explanation was that a full investigation of the charges that had been made against him was required and that such custody was simply "protective" lest "*the righteously indignant citizens of Munich would do harm to him.*" Clearly the problems faced by endoscopy, namely rigidity and dim vision, were also endemic to the politics of the time!

Aware that protective custody of this type was often associated with inexplicable accidents and disappearances, his wife Gabriele exerted considerable efforts in an attempt to obtain his release. Nevertheless, despite the obvious international scandal that would follow his "disappearance," 6 months were to elapse before Schindler would be able to leave the country. Fortunately, Marie Ortmayer became an ardent advocate of his request to join the staff of the University of Chicago and obtained support from donors to subsidize such an appointment. Thus in 1934, the Schindler family departed Nazi Germany and he assumed an appointment as visiting professor at the University of Chicago under the Chairmanship of Walter Palmer.

Financial subsidy for this venture was provided by George Baehr, Chairman of the Refugee Physician's Fund, and other Chicago physicians. Of particular benefit was the support provided by Mrs. Charles Morse and Mrs. Martha Fisher who were anxious to underwrite research that would lead to the early diagnosis of stomach cancer. Indeed, a decade earlier both had covered the costs of the publication of the color plates contained in Schindler's first publication, *The Atlas of Gastroscopy*.[3,6]

CHICAGO, 1934–1943

Schindler was well received in Chicago not only as a surviving victim of persecution but also as a substantial clinician and a teacher of great experience and skill. In addition to having trained over 300 physicians in the use of both the rigid and semi-flexible instrument, he was well versed in the arts of gastroscopy. Thus warmly supported by his family and friends, as well as embraced by respectful colleagues and a politically emancipated environment, Schindler soon regained his highly productive work ethic. As such, he became responsible for a daily private clinic at the Billings Hospital and continued to undertake gastroscopy and to write productively. Palmer provided considerable support in helping the German speaking Schindler convert to facile English and Marie Ortmayer remained an important professional and personal friend.[6] Gabrielle amplified her role as his professional assistant and became adept at both preparing his patients for gastroscopy as well as managing them during and after the procedure. Indeed, a number of accounts of this time recall how critical Gabrielle was in Schindler's successful performance of gastroscopy. Her empathic persona and technical skills were important both for reassuring patients as well as for maintaining the critical positioning of the head during the endoscopic procedure.

Nevertheless, the environment was not entirely conducive to relaxation and success. The milieu of Chicago in the 1930s and 1940s differed somewhat from that of the sophistication of Munich. Furthermore, concerns of territorial primacy and imperative relating to the influx of foreign-trained physicians to America also provided some discomfort. Some of the medical incumbents of Chicago raised commercial and trade issues involving client base and remuneration due to the influx of skilled European physicians. Thus, gratitude for professional and personal salvation was often diluted or even obscured in the anxiety and pressure generated by different work attitudes and the lack of familiar support systems. Nevertheless, despite the obstacles provided by the necessity of obtaining U.S. citizenship and the need to secure acceptable medical accreditation, Schindler succeeded at both a personal and professional level. Although the subliminal and often overt discrimination by American physicians against the medical refugees of this

time produced some difficulties, Schindler's name would soon become a household word and his contributions to gastroscopy would become both nationally and internationally recognized. In this respect, a great debt of gratitude is owed to the clinical perspicuity and intellectual and moral generosity of Marie Ortmayer. Without her and her supporters it is likely that the rightful advent of gastroscopy might not only have been significantly delayed but Schindler—like Ismar Boas, the founder of the discipline of Gastroenterology—would have perished as a victim of the Holocaust.[6]

THE FOUNDATION OF THE AMERICAN GASTROSCOPIC CLUB

Although there had been an ongoing interest in gastroscopy in the United States since the beginning of the century, Schindler's arrival in Chicago in 1934 provided the critical momentum in its development. During the first 5 years in America, it became apparent to Schindler, as well as a number of his colleagues interested in gastroenterology, that gastroscopy had not been accepted as an important part of gastroenterology.

Late in 1940 and during the early part of 1941, Leon Schiff of the University of Cincinnati suggested, to several individuals in the United States who were interested in gastroscopy, that a gastroscopic society be formed. It was proposed that a meeting under the sponsorship of John Renshaw be undertaken to consolidate this proposal in June of 1941 at the Cleveland Clinic. Although Schindler was initially a proponent of this idea, he subsequently withdrew his support because he was concerned that such a society might be viewed as establishing gastroscopy as a separate specialty and thus limit its use rather than expand its availability.

In mid-February of 1941, Schindler formally communicated to his colleagues that he was against the proposed Cleveland meeting and suggested that it be canceled until appropriate groundwork with the different societies had been undertaken. Therefore, it was agreed that the meeting be postponed until Schindler had contacted the various relevant medical administrative organizations. As a result of having successfully undertaken the necessary groundwork over the next 3 months, it was agreed by all that the initial exploratory meeting should be scheduled to take place in Chicago in November 1941.

On September the 11th, 1941, Schindler distributed a carefully drafted letter to a number of individuals whom he perceived would be interested in forming a gastroscopic society. Its contents outlined the rationale for the formation of the organization and indicated that the purpose of the meeting would be to determine the need for the establishment of a formal group. Ever the astute diplomat, Schindler also provided background information in regard to the different societies that had been contacted "*to protect our little convention against misinterpretation*." Because funding was an issue [as always], Schindler proposed that the meeting be held in his apartment and that if it was concluded that no organization was necessary the group should adjourn to the nearby Windermere Hotel (three blocks from his apartment) where a good dinner could be had for $1–1.50. Alternatively if the participants decided that an organization might be of merit, the dinner could be dispensed with in favor of drafting a constitution, developing bylaws, electing a governing board, and other appropriate administrative issues.

On October 14, a second letter containing the agenda for the meeting was sent to potential participants. Edward Benedict of Boston, who was widely regarded as a major protagonist of gastroscopy, was asked by Schindler to speak against the concept of advancing the gastroscopic method and thereby provide the basis for an open debate. Other members were asked to address issues such as the teaching of gastroscopy, the construction and design of gastroscopes, and the relationship of the subject to the practice of gastroenterology in general. Sensitive to the difficulties that the introduction of gastroscopy had experienced in his native Germany, Schindler proceeded cautiously with the plans for the inception of the society. Input was obtained from a number of colleagues and a reasonable preliminary consensus was arrived at in regard to critical issues such as membership, training, and teaching. Schindler believed that a critical requirement for safe and effective gastroscopy would be an extensive initial training in gastroenterology, medicine, or surgery before further instruction in endoscopy be undertaken. In an attempt to safeguard the external concept that gastroscopy might be regarded as a specialty in the making, it was agreed upon that consideration should be given to dissolving the society as soon as its goals were achieved.

On November 9, 1941, at 2:30 P.M., the first meeting of the fledgling endoscopy group (16 individuals plus Schindler) took place at Schindler's home in 5608 Blackstone Avenue near the University of Chicago. Those present included R. Schindler, Crawford F. Barnett (Atlanta, GA), Edward B. Benedict (Boston, MA), James Borland (Jacksonville, FL), James B. Carey (Minneapolis, MN), Allan L. Cohn (San Francisco, CA), John H. Fitzgibbon (Portland, OR), Charles A. Flood (New York, NY), John T. Howard (Baltimore, MD), Roger Keane (Portland, OR), Bruce Kenamore (St. Louis, MO), Joseph B. Kirsner (Chicago, IL), Herman J. Moersch (Rochester, MN), Marie Ortmayer (Chicago, IL), John F. Renshaw (Cleveland, OH), Leon Schiff (Cincinnati, OH), and Roy Sexton (Washington, DC). The opening discussion of the meeting featured a "*debate*" between

Schindler and Benedict as to whether there was any need for such a society. Benedict proposed that the existence of a society would lead to over specialization and isolation but Schindler argued that the state of gastroscopy in the United States was deteriorating because the technique and its use were not only misunderstood, but for the most part undertaken by individuals without appropriate training. He was particularly concerned that it was becoming regarded as a mere technical procedure and that there was little recognition of the fact that sophisticated interpretation requiring both specialized technical and diagnostic skills was required. Schindler was particularly emphatic that the most appropriate way to ensure quality was to set reasonable standards and by making membership synonymous with expertise: "*if it becomes known that a gastroscopic organization takes in as a member everybody who has studied gastroscopy carefully and who is able to carry out gastroscopy in a decent way and who can prove, for instance, by presenting his gastroscopic protocols that in a series of examinations he has had good results and really knows what he sees, then the fact that a man does not belong to this organization would show that he is not yet entitled to carry out gastroscopies . . . .*" Indeed, this initial discussion regarding the question of standards for training and practice would become an area that over subsequent years continued to be pivotal in the evolution of the goals of the society.

After some hours of discussion, it became apparent to the participants that a general consensus existed in support of the formation of an organization. Debate rose at this stage as to what it should be named. Among the suggestions entertained were The Association of Gastroscopy, Association for the Advancement of Gastroscopy, American Gastroscopic Research Organization, and American Gastroscopic Society. Although Schindler favored the latter, the majority of his colleagues believed that the word "*club*" should be used because it was less pretentious. Sensitive to the associations of the word "*club*" in his native Germany, Schindler believed that this title lacked dignity. Nevertheless, the proposal by James Brolin that the organization adopt the title of "The American Gastroscopic Club" was seconded by Ortmayer and, thereupon, was accepted by the group. Schiff cast no votes because he favored an informal discussion group and Renshaw abstained with the result that the motion carried by six votes. In the aftermath of the vote, Schindler was elected President, Benedict, Vice President, and Joseph Kirsner, the Secretary Treasurer. Thereupon, the meeting adjourned for dinner at the Windmere Hotel and, in the early evening, the group returned to the apartment where Schindler entertained them with his piano playing skills and others (it is claimed) sang selections from Gilbert and Sullivan operettas.[8]

FINAL MOVES

Unfortunately in 1943 little less than a decade after his triumphal arrival, Schindler now an Associate Professor on the faculty of the University of Chicago Medical School departed Chicago, having been ignominiously refused tenure. This unfortunate situation reflected the culmination of some years of personal and professional tension emanating both from Schindler's autocratic European style and his dogmatic assertions concerning gastritis that were decried by the Chairman, Walter Palmer. Schindler and Palmer had long nourished a mutual animus regarding Schindler's fascination with the topic of gastritis. The publication in 1942 by Palmer of a paper entitled *"The Stomach and Military Service*,"[9] which disparaged the limited evidence supporting Schindler's theories of gastritis, provided the final denouement to this already tenuous relationship. Dissatisfied with Palmer's feelings and incensed at the perceived lack of support, Schindler moved in 1943 to Los Angeles and the College of Medical Evangelists, now known as the Loma Linda University.

Ensconced in the salubrious environment of Southern California he continued his practice at the College, while continuing to provide professional support for instrument corporations as well as the Veterans Administration medical system and a number of private clinics. Approaching the retirement age and still interested in new experiences Schindler in 1958, accepted an invitation from a former pupil, Milton Machado Mouras to become Professor of Medicine at the University of Minas Gerais in Belo Horizonte, Brazil. Rapidly mastering the Brazilian language, he successfully taught there for 2 years until the failing health of Gabriele dictated his return to the United States in 1960. Thereafter, he became a consultant at the Long Beach Veterans Administration Hospital until 1964 when, upon the demise of Gabrielle, he once again sought the familiar pastures of his youth. In 1965, Schindler remarried an old friend of his Munich days, Mary Koch, and retired to Munich where he died in 1968.[10]

CODA

During his lifetime, Schindler produced more than 170 manuscripts and 5 books including the seminal *Lehrbuch* of 1923. In 1937, he published his classic monograph on gastroscopy and, in 1947, a controversial publication on gastritis. He produced the widely accepted *Synopsis of Gastroenterology* in 1957, which detailed not only the contributions of endoscopy but placed Schindler's own personal views on the subject in perspective. In this respect, he recognized the special merit of gastroscopy in the early detection of gastric disease but fully accepted the necessity for the interface between

both radiology and gastroscopy in the accurate and early diagnosis of stomach disease. It is worth emphasizing that although Schindler was engrossed in details of the technical design of the endoscope, he was also a great proponent of appropriate training and the development of technique. In particular, Schindler was a strong advocate of the introduction of a formal education in gastroscopy and insisted that individuals trained in the discipline be regarded as clinicians and gastroenterologists primarily lest they be regarded as only gastroscopists or "mere technicians." In this endeavor, he went to great lengths to promote teaching and education in the area of gastroscopy and sought to embrace his colleagues and secure their support in this venture. By the time of his death on September 6, 1968, in Munich, the world of endoscopy had been dramatically altered by the introduction of fiber optic endoscopy. Nevertheless, his legacy in founding the American Gastroscopic Club and catalyzing the acceptance of endoscopy in the United States would remain as enduring monuments to his memory.

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REFERENCES

1. Schindler R. On the importance of the gastroscope in the diagnosis of gastric diseases in the army. *BMJ* 1940;17:243–247.
2. Schindler R. *Lehrbuch und Atlas der Gastroskopie.* Munich: JF Lehmans, 1923.
3. Davis AB. Rudolf Schindler's role in the development of gastroscopy. *Bull Hist Med* 1972;46:150–70.
4. Kirsner JB. *The development of American gastroenterology.* New York: Raven Press, 1991.
5. Weiss S. A new gastroscope for visualization and photography. *Am Med* 1930;15:547–548.
6. Gordon ME, Kirsner JB. Rudolf Schindler, pioneer endoscopist. Glimpses of the man and his work. *Gastroenterology* 1979;77:354–61.
7. Schindler R, Ortmayer M. Classification of chronic gastritis with special reference to the gastroscopic method. *Arch Intern Med* 1936;57:959–78.
8. Gerstner P. The American Society for Gastrointestinal Endoscopy: a history. *Gastrointest Endosc* 1991;37:S1–26.
9. Palmer ED. The stomach and the military service. *JAMA* 1942;119:1155–9.
10. Kirsner JB. American gastroscopy—yesterday and today [editorial]. *Gastrointest Endosc* 1991;37:643–8.