

have about the same probability of making a nonentertaining, nonrelevant film as does Hollywood's "overengineered" establishment. They may risk less money, but it hurts just as much or more if they lose it.

The SMPTE may not be the proper forum for this kind of discussion because we are not the decision makers in this area. Perhaps we should enter this area, because we deal with the laws of nature which demand rigid adherence to rationality. To the rational, nothing lies outside the realm of reason. I believe that very early in life many of the more rational minds gravitated to science and engineering where they found an ordered, objective world. If so, who is left to manage all the other aspects of life, including motion-picture production?

Frankly, I believe that our objective methods, which are so successful in solving technological problems, may be applied to solving any problem, including a determination of what constitutes entertainment, and what is relevant to man's emotional needs. Would this not be a challenging new field for the practitioners of technology to examine? I believe it is, and the Research Center has already entered it.

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Biographical Notes



**Sidney P. Solow lecturing
to his class at USC**

Sidney P. Solow, President of Consolidated Film Industries and Professor of Cinema at the University of Southern California since 1947, has been made an honorary member of Delta Kappa Alpha in recognition of "meritorious and humanitarian" services to the motion-picture industry during many years. Delta Kappa Alpha, a professional cinema fraternity founded at the University of Southern California in 1936, presents honorary membership awards annually to individuals who have made outstanding contributions to the industry and especially to those who have shown their willingness to share their knowledge and experience with young people.

During the quarter of a century that Mr. Solow has been on the USC faculty, his influence on his students and, indirectly, on the advancement of the industry has been immeasurable. He is an outstanding and an unusual educator. His methods are advanced but are extremely successful. For example, he never gives a test. He explains that 25 years ago he realized that when a course, such as a survey of motion-picture technology, contains so much information that it would be possible to give only a very superficial test it

must be taught by a different method. He decided then, he said, that his objective would be to let the students write their own textbook from his lectures.

The work of the students consists of taking notes during the class and then, during the week, transcribing the notes into rather a complete form, aided by additional appropriate references that might be consulted. Almost all of his students are "A" students. During the first week or two, if a student shows that he is not really interested or does not have the ability or incentive to do well in the course, Prof. Solow speaks with him after class and suggests other fields where the student might feel more at home. Of course not all of his students are of equal ability but, since "this is a senior and graduate course, there is a certain level of talent that I can expect," he explained. He remembers with appreciation "an Egyptian student who wrote a notebook that could have been reproduced and sold as a textbook. He turned out later to be the outstanding cameraman in Egypt. . . ."

Mr. Solow was born in Jersey City, N.J., September 15, 1910. He graduated from high school at the age of 15 and entered New York University in 1926, majoring in chemistry. He was graduated in 1930 at the beginning of the Depression. He recalls 1927, when he was in the university, as a significant year because of the introduction of sound in motion pictures. "As a student of the scientific periodicals of that time," he said, "I became cognizant of sound recording techniques and the sound recording aspect of motion pictures and I remember giving a lecture to an undergraduate scientific society on how sound is recorded for motion pictures."

In 1930, when he was graduated from the university, there were almost no jobs to be had. He helped his mother, a widow, in their stationary store until 1932 when he applied for a job as chemist with Consolidated Film Industries at Fort Lee, N.J. He was hired at a salary of \$15.00 a week ("the going rate for college graduates in 1932"). Within a year he had been promoted to chief chemist of the plant and in

December, 1936, he was transferred to CFI's Hollywood laboratory. Less than a year after he arrived in Hollywood, he was made plant superintendent. In 1939 he was responsible for the installation of 16mm processing equipment and he began to take an active interest in the infant medium of television. He became General Manager of CFI in 1942.

During World War II, CFI was heavily involved with government contracts, but at the end of the war, Mr. Solow again turned his attention to television. In 1947, CFI processed the first TV film for a Hollywood-produced series and a year later the laboratory was geared to produce the first kinescopes on the West Coast.

In 1948, Mr. Solow made a million-dollar bet on TV — he recommended construction of a separate building for the processing of television film. Republic Pictures, CFI's parent company, backed him, and the new building opened its doors in 1953. The gamble paid off. There was a sudden increase in Hollywood TV production and CFI had ideal facilities to accommodate the resultant flood of 16mm film.

In 1954, Mr. Solow became Vice-President of Republic Pictures while remaining General Manager of CFI. In 1960, he was elected to the Board of Directors of Republic Pictures and in 1964 he became President of the CFI division.

Mr. Solow joined the Society in 1934. He was made a Fellow in 1943. His Society activities include service as Secretary-Treasurer of the Pacific Coast Section (1942-1947) and Chairman (1948-1949). In 1959, he served as Treasurer of the Society. He is co-author of two *Journal* papers (both with E. H. Reichard) — "A Modern Laboratory for 16mm Film" (April 1955) and "An Automatic 35mm A&B Composite Color Printer" (October 1964).

Other organizations of which he is a member include Association of Cinema Laboratories (of which he is a former president), the Academy of Motion Picture Arts and Sciences, the Academy of Television Arts and Sciences, the American Society of Cinematographers, and the American Cinema Editors (of which he is an honorary member). — *Herbert E. Farmer*



Eric M. Berndt

Eric M. Berndt was born in Berlin, Germany, in 1903. He received his early training in mechanical engineering and motion-picture technology as an apprentice at Siemens-Schuckert, Berlin.

Emigrating to the United States in 1922, he worked as a camera repairman for the Adam Archinal Corp. in New York City.

His interest in photography and his close association with Carl Gregory led to a job with Kislyn Color Corp., New Rochelle, N.Y., designing special printers for use in making release prints for the firm's lenticular additive color process. The Kislyn Color Corp. was operating under the Berthon patents to produce 35mm additive color motion pictures.

In 1930 the rights to this process were sold to Siemens Corp. in Germany, and Mr. Berndt left the company to work for the research department of RCA Photophone. In 1932 the company merged with the RCA Victor Company and Eric decided to go into business for himself. He leased property at 112 E. 73 St. in New York City and formed the Eric M. Berndt Company, which specialized in the design and building of special motion-picture equipment.

His first professional 16mm sound-on-film camera, announced in December 1932, resembled a cross between a Bell & Howell studio camera and an RCA-Photophone recording head. It was fitted with a 400-ft external magazine of professional type. The camera was hand-cranked but could be driven by either a wild or a synchronous motor if desired.

In addition to the camera, the company also built and sold a 16mm combination sound and picture printer. The new printer had separate printing apertures for sound-track and for picture. The sound was printed by the continuous contact system, whereas the picture was printed by step contact. A novel feature was the incorporation of a gate relief mechanism whereby the normal gate pressure on the film was lifted while the film was in motion between the periods of exposure. Automatic light change and compactness were other features.

Other items produced included a recording galvanometer, complete with optical system and exciter lamp, which was fully adjustable and operated from a six-volt battery. Also offered was a conversion for the Bell & Howell projector to allow for

sound-on-film reproduction. The adaptation consisted of a take-up extension arm, a sound head, an amplifier finished to match the projector and an external speaker.

During this period, Mr. Berndt built a 16mm sound-on-film camera for Richard Grozier, owner and publisher of the *Boston Post*. This sale resulted in a lasting friendship between Mr. Berndt and Mr. Grozier which later helped to make possible the formation of the Berndt-Maurer Corp. The camera, which was a studio-type unit, produced variable-area, single-system sound. Other features were a prism-type finder, provision for fades and lap dissolves, and 200-, 400- and 1000-ft interchangeable external magazines. It was equipped with a four-lens turret containing 15mm, 25mm, 35mm and 75mm Zeiss lenses. The amplifier incorporated a two-channel mixer and used the new brush crystal microphone. It was equipped with a visible monitor for the soundtrack so that the operator could observe the galvanometer while recording.

In 1935 Mr. Berndt announced plans to widen the scope of his company's activities with the addition of John M. Maurer to the company. This new association changed the corporate name of the company to Berndt-Maurer Corp. The firm, which remained at the same location, manufactured sound cameras, galvanometers, recorders and other motion-picture apparatus, and was almost single-handedly responsible for the development and growth of a professional 16mm motion-picture industry.

F. O. Calvin, in a letter written in October 1935, described a 52-min, dramatic film produced in 16mm. In this letter he said, "In fact, we have had some difficulty in explaining and convincing that it was not made on 35 and reduced to 16mm. Mr. Berndt, I am giving a great deal of this credit to you and your associate, Mr. Maurer."

The first 16mm sound camera employed for newsreel photography (July 1933) was manufactured by Eric Berndt. The first sound pictures taken in a mine more than a mile and a half beneath the surface of the earth were made in October 1936, at the Koppers Coal Company Mine, Grant Town, West Virginia, using a Berndt-Maurer 16mm sound-on-film camera.

During this period, the Berndt-Maurer Corp. acquired and operated Precision Laboratories in New York as an adjunct to their manufacturing and filmmaking activities.

In 1939 Mr. Berndt moved to the West Coast. While maintaining his interests in the Berndt-Maurer Corp. in New York, he formed the E. M. Berndt Corp. to meet the growing demand for high-quality 16mm sound-on-film equipment. This company was established primarily as a sales and service agency for Berndt-Maurer equipment and also made available engineering and consulting service covering all phases of 16mm sound and motion-picture work.

In 1940 he resigned as President of the Berndt-Maurer Corp. and formed Berndt-Bach, Inc. in California. The firm manufactured and marketed a full line of Auricon 16mm sound cameras and recorders. He remained as President of this company

until 1960 when he resigned and sold his interest in the company in order to work on special-development projects.

Among the several projects completed during this time was a sub-miniaturized motion-picture camera using 3mm film. This camera, and all of the associated equipment necessary to produce the film, was manufactured by Mr. Berndt. It was used in a special cockpit photography application by the United States Air Force at Edwards Air Force Base. His latest development is a new super-16 system which employs super-8-perforated 16mm film to produce a picture having an available blow-up area of 0.332 × 0.560 in.

In 1933 Mr. Berndt purchased from cameraman Billy Bitzer the Pathe camera which was used to photograph *The Birth of a Nation*. This started a collection of motion-picture apparatus considered to be one of the best in the world. He was the cofounder, with Irving Browning, of the Society of Cinema Collectors and Historians (1954). In 1965 Mr. Berndt was named honorary curator of the motion-picture section of the Hollywood Museum.

Society members attending the 1968 spring conference at the Century Plaza Hotel will recall that the Berndt collection of motion-picture apparatus was displayed there under the auspices of the Society. Shortly after that time, the Berndt collection was acquired by Universal Studios, which also acquired the Mogens Skot-Hansen pre-cinema collection. Selected pieces from the combined collections were exhibited at the 1969 fall conference, also held at the Century Plaza Hotel in Los Angeles.

At the present time, the combined collections are on loan to the California State Museum of Science and Industry in Los Angeles. Mr. Berndt, who serves as a consultant to Universal Studios, worked closely with the museum's permanent exhibits display designer, Frank Glisson, to make this first public showing a significant contribution to both the professional and nonprofessional who are interested in motion-picture equipment.

Mr. Berndt has been a member of the Society since 1927. He became a Fellow in 1939.

In 1956 he was honored by the Calvin Company at their 10th Annual Workshop as one of eleven film industry pioneers who contributed most to the development of 16mm as a professional medium.

In 1966, the 50th Anniversary Year of the Society, he was honored as one of those individuals who were elected to SMPTE membership between the years 1916 through 1930.

In 1968 he was honored by membership in the Delta Kappa Alpha, the University of Southern California Chapter of the National Honorary Cinema Fraternity.

In 1972 Mr. Berndt was awarded the Eastman Kodak Gold Medal for his development of 16mm sound recording equipment within the economic means of educational and independent filmmakers at a time when professional equipment was beyond the resources of most such organizations.—*Roderick T. Ryan*