soon as possible. There appears to be a critical age in strabismus. J. Kagan (Cambridge, Massachusetts) described the cognitive development of the young human and showed that patterns of behavior become manifest relatively early in life and are maintained consistently as the child grows. This suggests the possibility of predicting at an early age which children will have reading problems. L. P. Lipsitt (Providence) discussed the paper "Pattern perception in early infancy" by Robert Fantz, who was absent, and presented his own studies on making young infants work to obtain increased visual stimulation. The results suggest that enriched visual environments are sought by the young human and may be important to his development.

The relation between spoken language and visually perceived language was discussed by I. J. Hirsh (St. Louis) who stressed the necessity of early speech and reading training in deaf or blind children. He suggested that similar early training in normal children may be effective in improving reading performance. W. A. Mason (Covington, Louisiana) described the development of behavior sequences in normal and visually deprived monkeys, and generalized on possibilities that may apply equally well to humans.

Final sessions brought the conference's attention to reading disabilities. T. T. S. Ingram (Edinburgh) defined dyslexia and its many-faceted nature, touching on some of the different problems included under this general heading. A. A. Silver (New York) described some types of visual defects, visual motor dysfunction, and visual memory problems in reading difficulties, tracing the history of several persons with such disabilities as they have grown older. The neurologic aspects of reading disabilities, as discussed by Ingram and Silver, were elaborated on by R. L. Masland (New York). He believes that the fact that language is supported in one hemisphere while spatial organization is in the opposite hemisphere is very important for the understanding of some visual reversal problems.

The interdisciplinary and social implications of understanding and helping children with difficulties in visual information processing were outlined. B. H. Richardson (Washington, D.C.) emphasized the importance of better delivery of educational and health services, which could be brought about by increased cooperation and exchange of knowledge. The conference concluded with a panel discussion on several types of studies of reading performance, the relationship between the early experiences of children and their later reading performance, and the importance of developing wide research approaches to reading problems. Satisfactory selection techniques are available for identifying children with reading problems and for pinpointing the types of problems. Unfortunately, the development of normal reading behavior has not been sufficiently studied, and it may also be necessary to look more closely at both the sociologic aspects of the environment, and the psychologic aspects of the developing visual environment, before understanding the nature of visual information processing and its relation to the reading problem.

The conference was supported by the National Institute of Neurological Diseases and Stroke, and suggested several possibilities for future programs. One of the most intriguing comes from observed differences in how boys and girls solve problems in spatial orientation. Is this related to the preponderance of reading problems in boys? Another specific area that would be fruitful to develop in depth is the coordination of verbal and visual learning. The manuscripts, circulated before the 2½-day conference, and the proceedings will be published.

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Calendar of Events

Courses

Workshop in **Heat Transfer Computer Programs**, Los Angeles, Calif., 19–30 May (section I) and 15–26 September (section II). Is intended to provide experience and confidence in the application of adaptable, general-purpose digital computer programs to a broad range of heat transfer analysis and design problems representative of modern practice. This course is for thermal system designers, thermal test engineers, and managers of thermal design groups. Is of particular interest to engineers and scientists working in space vehicle design, infrared, lighting, combustion, radiant heating, weapons effects, human engineering, food processing, and other areas concerned with heat transfer. Enrollment in each section is limited to 30. Fee: $375 for each section. *Deadline for applications: 12 May.* (Engineering and Physical Sciences Extension, Room 6115, Mathematical Sciences Building, University of California, Los Angeles 90024)

Liquid Crytsals, Pittsburgh, Pa., 16–17 April or 18–19 June. The purpose is to present a background of basic theory to give participants an understanding of the properties of liquid crystals plus practical applications through a "beginner's laboratory kit" with which "students" will conduct basic experiments showing some uses and applications of liquid crystals. Enrollment is limited to 30 in each session. Fee: $140. (Continuing Education, Pennsylvania State University, 3550 Seventh Street Rd., New Kensington 15068)

Marine Science, Port Aransas, Tex. There will be two 6-week sessions for graduate and advanced undergraduate students. Courses in the first period (3 June–12 July) are general marine science, ecology of fishes, and structure and function of marine animals; courses in the second period (16 July–23 August) are marine microbiology, marine geology, and estuarine ecology. *Application deadline* for enrollment and requests for financial aid is *1 May.* (Director, University of Texas Marine Science Institute, Port Aransas 78373)

Workshop on **Laser Interaction and Related Plasma Phenomena**, East Windsor Hill, Conn., 9–13 June. It will provide physicists and engineers on a graduate and postgraduate level with an introduction to the field of laser interaction with solids for different applications as, for example, film technology, power switches, and also research in studying the possibilities of controlled thermonuclear fusion research. The following topics will be treated: lasers, preparation of targets, evaporation technique with lasers, switch control by lasers, scattering of laser radiation, ion energies due to laser irradiation, magnetic field interaction, theory of laser interaction, and possibilities for controlled thermonuclear fusion using lasers. (Prof. H. J. Schwarz, Rensselaer Polytechnic Institute–Hartford Graduate Center, East Windsor Hill 06028)

Electron and Light Microscopy, Ithaca, N.Y., 14–25 July. This is an introductory course for professional personnel, with primary emphasis on electron miscroscopy. Enrollment will be limited to 16 in order to permit extensive laboratory practice. The topics covered will include principles of optics, microscope operation and performance, photographic techniques, standard methods of specimen preparation, selected-area electron diffraction, and interpretation of micrographs. Equipment will include light and electron microscopes, vacuum evaporators, an ultramicrotome, and the necessary auxiliary equipment and laboratory facilities. Fee: $400. (Director of Continuing Education, College of Engineering, 251 Carpenter Hall, Cornell University, Ithaca 14850)

Gel Permeation Chromatography, St. Louis, Mo., 25–26 April. The subject areas covered include current theory and practice of gel-permeation chromatography from first principles to current applications. Covers choice of gel materials, pore structures, solvents, column sizes and operation, detectors and supplemental instrumentation, practical chromatograph interpretation in terms of molecular size and weight distribution and detail, considerations of polymerization kinetics, reactor design, polymer properties in processing and use. Fee: $130. (Dr. G. L. Esterson, Box 1048, Washington University, St. Louis 63130)