"The Uses of Color" is not in and of itself a topic in computer-assisted cartography. The computer, however, has facilitated the production of color maps by reducing both the time and the cost involved. It has also facilitated mapping techniques which demand preplanned and complicated symbol systems for which colors, with their multiple visual dimensions, are most useful. The prospect of increased numbers of color maps causes us to look at the processes involved not only in their production but in their design and their capacity to convey information to the map user as well.

This seminar brought together specialists from several disciplines to look at and discuss the ways in which we perceive and use color. Discussion topics ranged from the psychology of color perception to color scaling for the printing process. In the middle of this spectrum of interest is that of the cartographer, who must decide on the colors to be used on maps to promote effective communication of information.

LLOYD KAUFMAN, professor of psychology at New York University, stated that the average quality of maps can be improved if scientific knowledge is brought to bear on the task. He then described some basic concepts involved in the study of color vision, including ways in which we perceive color. Although a great deal is known about the visual system, little is known about the application of these studies to real life situations and more studies are required in this area.

OTTO STOESSEL of the Defense Mapping Agency's Aerospace Center in St. Louis discussed the Department of Defense's activities with the use of colors. His presentation, entitled "Standard Printing Color and Screen Tint Systems for Department of Defense Mapping, Charting and Geodesy," described a color identification system for lithographic printing and a system of dot screens with visual tones of equidistant increments. His 57-page paper of the same title has been printed by the Department of Defense and requests for copies should be sent to Mr. Stoessel, Defense Mapping Agency Aerospace Center, St. Louis Air Force Station, 2nd and Arsenal Streets, St. Louis, Missouri 63118.

In their presentation, "The Selection of Color for the U.S.S.R. Agricultural Atlas," HOLLY BYRNE and RONALD SUMMARS of the Central Intelligence Agency explained the technical and aesthetic solutions to color problems encountered in producing this atlas. For those who may be interested in the specific color combinations chosen, specifications have been included to accompany the text of their paper.

DAVID CUFF of Temple University, Philadelphia, Pennsylvania, discussed "Conflicting Goals in Choosing Colors for Quantitative Maps." Two major and seemingly conflicting goals were identified: first, color should be distinctive or distinguishable, and secondly, color should provide a strong sense of quantity (e.g., more or less). For quantitative purposes the color schemes that seem best are compromises that satisfy both major goals adequately: colors that are distinctive enough one from another, yet seem related and progress logically in darkness and intensity.

JUDY OLSON, associate professor of geography at Boston University, was a former visiting scholar at the Bureau of the Census, conducting research in the field of color perception. Her paper, "The Organization of Colors on Two-Variable Maps," described the structure of the color schemes on two-variable maps such as those produced by the Bureau of the Census using computer-assisted techniques. This type of map is intended to show the interrelationship of the variables while maintaining the identity of each. The color scheme used to encode the distributions provides a case study in the use of color as a cartographic symbol system.