CAPS PANEL ON COMPLEXITY AND CYBERNETICS

Organizers: Stuart Umpleby and Lowell Christy

The fields of complexity and cybernetics are similar in that they are located outside the traditional disciplines. Their concerns are transdisciplinary. Cybernetics started in the late 1940s; complexity in the 1980s. In the 1960s cyberneticians held a series of meetings on self-organizing systems (Von Foerster, 1960; Ashby, 1962). This work has been continued in the field of complexity, aided by advances in computers. Early interest in cybernetics came from engineering, particularly automatic control processes. Later work emphasized the man-machine interface, management and the biology of cognition. More recently work in cybernetics has been concerned with design and with the philosophy of science. Meanwhile the work in complexity has greatly extended the earlier work on self-organizing systems. More interaction in the future among the various transdisciplinary fields will be beneficial to everyone.