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BIOTIC FEEDBACK: PRIORITY AND SUPREMACY IN NATURE, SCIENCE, AND SOCIETY

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This article presents a new cybernetic concept, *biotic feedback*, meaning a process of *bipolar*, *mutual*, and *hierarchical* interactions. Natural and human processes invariably include both positive and negative feedback, and typically involve *mutual* feedback between systems that stand in a *hierarchical* relation. Simple processes have priority and generate complex processes that acquire supremacy. Mathematical models indicate that *bipolar* (positive <u>and</u> negative) feedback generates *bios*, a non-stationary aperiodic pattern characterized by measurable features of creativity that uniquely resembles the patterns found in physiological, socioeconomic and other empirical data. Bipolar feedback may thus be a creative process present in many natural and human systems. The concept of biotic feedback is here advanced as descriptive of many natural and social interactions, and as prescriptive for institutional and political governance. In science, objective reality has priority; interpretations have supremacy. In medicine, biological processes have priority and psychological ones supremacy. Socioeconomic processes are co-determined by physical and biological environment and by culture and ideology. Participatory democracy offers an alternative to top-down governance.