Human occupation as a complex system

Yury Arenis Olarte Arias, M. I. Balaguera, Mercedes Gaitan, Jenny Paola Lis Gutierrez, Amelec Jesus Viloria Silva, Ana Hernández Chací

Abstract

The present work justifies the change in theoretical approach required to use the concepts, principles and methods of artificial intelligence and computational science in order to deal with problems centered in social systems, such as studying the relation between human occupation and social stability and the validation of hypotheses about sociocybernetics strategies applied to governability. In order to model and study human occupation as a complex system, this document describes the autonomous components and the set of behaviors whose simultaneous and concurrent occurrence produce dynamical bifurcations (chaos) and emerging events in the Human Occupation, understood as a complex system between the triad: people - occupations - contexts, which expresses sensitive phenomena, impossible to be known completely and univocally. The components of the occupation are developed conceptually and relations of composition and condition of the given behaviors between these components are established, in order to establish human occupation as a complex system and in such a way that decision making and the prediction of occupational dynamics and behaviors in the individual and social levels can be modeled and simulated.

keywords

Complex system, Complexity, Hierarchy in complex systems, Human occupation, Nonlinearity, Occupational science, Occupational system