

Ilan Golani is Professor emeritus in the department of zoology, faculty of life sciences and Sagol School of Neuroscience, Tel Aviv University. Using the Eshkol Wachman Movement Notation in the analysis of movement of fruit flies, mice, rats, jackals, wolves, Tasmanian Devils, honey Badgers and human infants, Golani discovered the ground plan (set of homologies) shared by vertebrates and arthropod locomotor behavior.



Abstracts

pre-walking human infants' exploration in reference to mother

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In vertebrates, origin related exploration consists of excursions that are performed from a place termed "a home base" marked by the highest cumulative time spent in it, the highest number of visits paid to it, and several behaviors that are performed only in that place. Similar behavior has been reported by Bowlby in the fifties in pre-walking human infants in reference to mother. The current study, reporting the results of a collaboration between the Mifne center staff, a computational ethologist, and statisticians skilled in exploratory data analysis focuses on structural features of infant origin-related exploration. We examine Typically Developing (TD) infant exploration and Non Typically Developing (NTD) infant exploration in the ethological perspective of origin related exploration described in vertebrates.

Algorithmic and computational analysis of half hour video-tracked sessions of infant behavior reveal that TD infant behavior is characterized by spending long cumulative time with mother, a high number of visits to mother, multiple episodes of physical contact and long durations of physical contact with mother and a high number of excursions performed from and back to mother. In contrast, NTD infants' behavior is characterized by low cumulative dwell time with mother, low number of visits to mother, hardly any physical contact, and few if any excursions from and back to mother. Origin related exploration of TD infants shares several features with vertebrate origin related exploration.

Presentation of the results will be accompanied by visualizations and animations of the behavior of the infants.