1145-91-124   **Surajit Borkotokey*** (`surajitbor@yahoo.com`), Department of Mathematics, Dibrugarh University, Dibrugarh, Assam 786004, India, and **Dhrubajit Choudhury**, **Loyimee Gogoi** and **Rajnish Kumar**. *Group Interactions in TU games : The k-lateral value.*

In this paper, we propose the k-lateral value for TU cooperative games that accounts for simultaneous k-lateral interactions among players. The Shapley like values implicitly assume that players are independent in deciding to leave or join a coalition. However in many real life situations, players are likely to be influenced by their peers in making such decisions. Thus group interactions and group contributions are also important in determining players' shares in the total resource they generate. Following Shapley's rule of counting we first consider the marginal contributions of the players over all possible permutations of coalitions. Next we count the number of ways of forming groups of any size within each such coalition. The largest allowable size of a group within the coalitions is defined as the index of the group formation. All possible marginal contributions of the groups of a pre-defined index k are obtained. Our value then gives a player her share from each group of index k equally divided among the group members. The Shapley value is a particular value of the k-lateral value when $k = 1$. We give a characterization of the k-lateral value with a set of standard axioms. (Received August 05, 2018)