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Using ecological ideas to explain the diversity of on-line social groups

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Abstract: Ecological models often explain species abundance patterns through niche partitioning. Similarly, human communities comprise social groups of varying sizes that reflect these distinct abundance levels. In this study, we fit several ecological models to empirical data from PTT, a major online human community, to account for observed heterogeneity in social group sizes. The power fraction model provides the best fit among all evaluated models. Under this model, larger social groups are more likely to undergo random binary partitioning than smaller ones. We provide a sociological explanation for this mechanism: large groups naturally contain individuals with diverse viewpoints, and driven by homophily, individuals gravitate toward similar peers, leading to the emergence of smaller, cohesive subgroups.

Keywords: *social group size, niche partition, PTT*