

1135-91-509

**Alexander Munson\*** (munson3141@gmail.com), 329 East King St., 2nd Floor, Chambersburg, PA 17201. *A Rigidity Theorem in Pillage Games*. Preliminary report.

We settle a question posed by MacKenzie, Kerber, and Rowat by proving that a continuous n-person pillage game cannot have infinitely many stable sets under a forward dominance condition. We do so by proving a rigidity theorem on dominance relations. Using this property, we derive a weak convergence theorem on the power set of the allocation space. Combining these results, we prove that pillage games with continuous power functions are essentially determined by its local behavior, leading to the main impossibility theorem. We also discuss the extension of our results in the wider scope where the continuity condition is lifted. (Received September 06, 2017)