Paper assessment by Jang Woo Park, Ph.D.

"Focused Power: Experiments, the Shapley-Shubik Power Index, and Focal Points," by Chris R. Geller, Jamie Mustard, and Ranya Shahwan.

The paper is a nice attempt to use cooperative game theory on laboratory experiments and tries to test if human behavior approaches the equilibriums to such game, more specifically the Shapley Shubik Power Index. It has a nice introduction, Literature review, and a nice overview of such Index.

As hard as it is to accomplish such test, there are many points that put in doubt the results found. The main issue is the exclusion of the effects of variation among the subjects who were purposely taken out due to "characteristics incompatible with the SSPI assumptions and to use instructions (Appendix 1) that promoted behavior consistent with the assumptions" (page 11). These subjects were classified by psychological orientation, efficiency, additivity, risk, language proficiency, and experience after the games were played.

The results would be more robust if such classification was conducted before the games were played and used only the filtered participants. However, the analysis were conducted using all the subjects available, and the process afterwards was just of eliminating data points that were not in accordance with the assumptions. Such steps are not well justified.

Elimination of data points from an event are neglecting other effects like expectations from the players whose decisions are very well affected; for instance, the presence of a proctor who supervised all the dealings online, a human component rather than a simple unbiased statement make by machines without emotions. "After each six rounds, the proctors submitted messages instructing subjects to minimize their Group Chat and Vote Vector and open the alternative version of each proceed for six more rounds with new identities" (page 16).

The anonymity is claimed to be maintained by changing the identities of the subjects every six rounds. However, this is a not a clean set up where deception is definitely avoided. The exclusion of Deception is one of the important rules for experiments using money to be valid. The results vary significantly.

In page 15, "Proctors could end a round without any payment to enforce the rules, but they never had to exercise such punishment." This rule gives the game a whole new dimension affecting expectation; that is, it is a variant of the Ultimatum game, and such game is not addressed in this paper or covered adequately.

Rather than allowing 12 or 24 times in each session of the experiments. I agree that 24 times is a nice set up for four players, 4! = 24 possible orders to vote. If the experiments use 6 subjects, I would think that to keep the number of possible outcomes given the expectations, 6! = 720 possible orders to vote. It is not so fitted for such calculations.

This paper claims that "social complexities" are dealt with; yet the process by which it was is not well performed and is not convincingly portrayed. There is more than just calculations for behavioral measurements; there is psychology, neurobiology, etc.