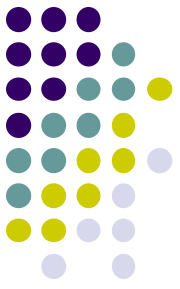


NIMBY: When Public Goods Go Bad

Mark Isaac, Douglas Norton, Svetlana Pevnitskaya

Florida State University

Department of Economics, IESES and xs/fs



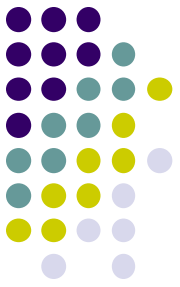
Not In My Backyard (NIMBY):

Classical interpretation: waste facility

Recent examples: coal plant, biomass plant

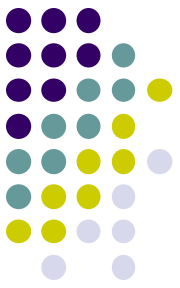
Public Goods for Some People Are Actually Bads for Others

NIMBY in the process of siting of public goods



- Public goods, with very heterogenous preferences (sometimes polar)
- Siting of alternative energy facilities is a very contentious issue (see Biomass, Tallahassee) and is considered very important
- Conventional wisdom is that a lot of process (meeting, talking, voting, etc.) HELPS ---this is testable.

What happens when the public good is a bad to some people?

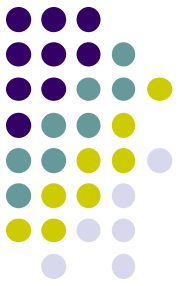


Do mechanisms allow for the manifestation of opposing preferences?

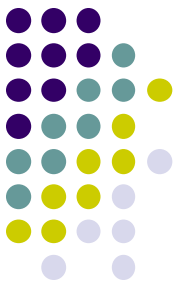
There may be

- censoring in outcomes (i.e. there may or may not be an option to have “negative” provision or an alternative).
- censoring in messages
- creation of a parallel effort to “block” the undesired outcome.

Research Phases



- **Part 1:**
- Behavior in “GVCM” (Generalized Voluntary Contributions Mechanisms) with positive and negative valuations, positive and negative messages, and (in some cases) positive and negative levels of provision.
- **Part 2:**
- Identity formation: can a preliminary stage - “process” affect behavior?



Model of the GVCN

N players endowed with z tokens each and can allocate them among 3 options: 1) keep; 2) allocate to x (increases G); or 3) allocate to y (decreases G).

Given the provision level, G , the payoff to each person is

$$\pi_i = z - x_i - y_i + a_i G$$

where $a_i > 0$ for those who favor the provision and

$a_i < 0$ for those who are against the provision

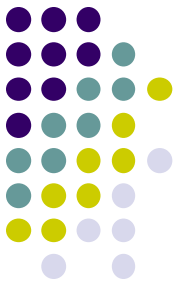


We consider 3 manifestations of the GVCM:

1. Continuous (censored) PG: $G = \max \left\{ 0, \sum_i x_i - \sum_i y_i \right\}$

2. Continuous (uncensored) PG: $G = \sum_i x_i - \sum_i y_i$

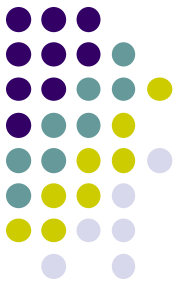
3. Provision point (zero or fixed amount): to be added



Questions (Research Phase 1):

- * Investigate 4 types of potential asymmetries:
 - Positive vs. Negative valuations
 - Majority vs. Minority status
 - Censored vs. Uncensored mechanism
 - Symmetric vs. Asymmetric interests

Progression of Stages

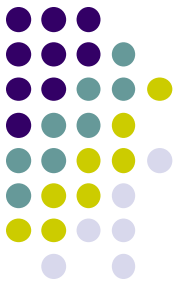


STAGE 1 : Two groups: 6 “+” and 3 “-” MPCR
6 “-” and 3 “+” MPCR.

STAGE 2 : Everyone has “+” MPCRs.

STAGE 3 : Same design as Stage 1 (but reverse types)

STAGE 4: Same as Stage 2

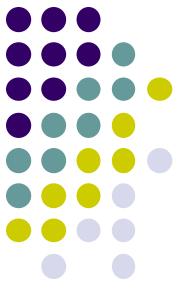


Results to Date

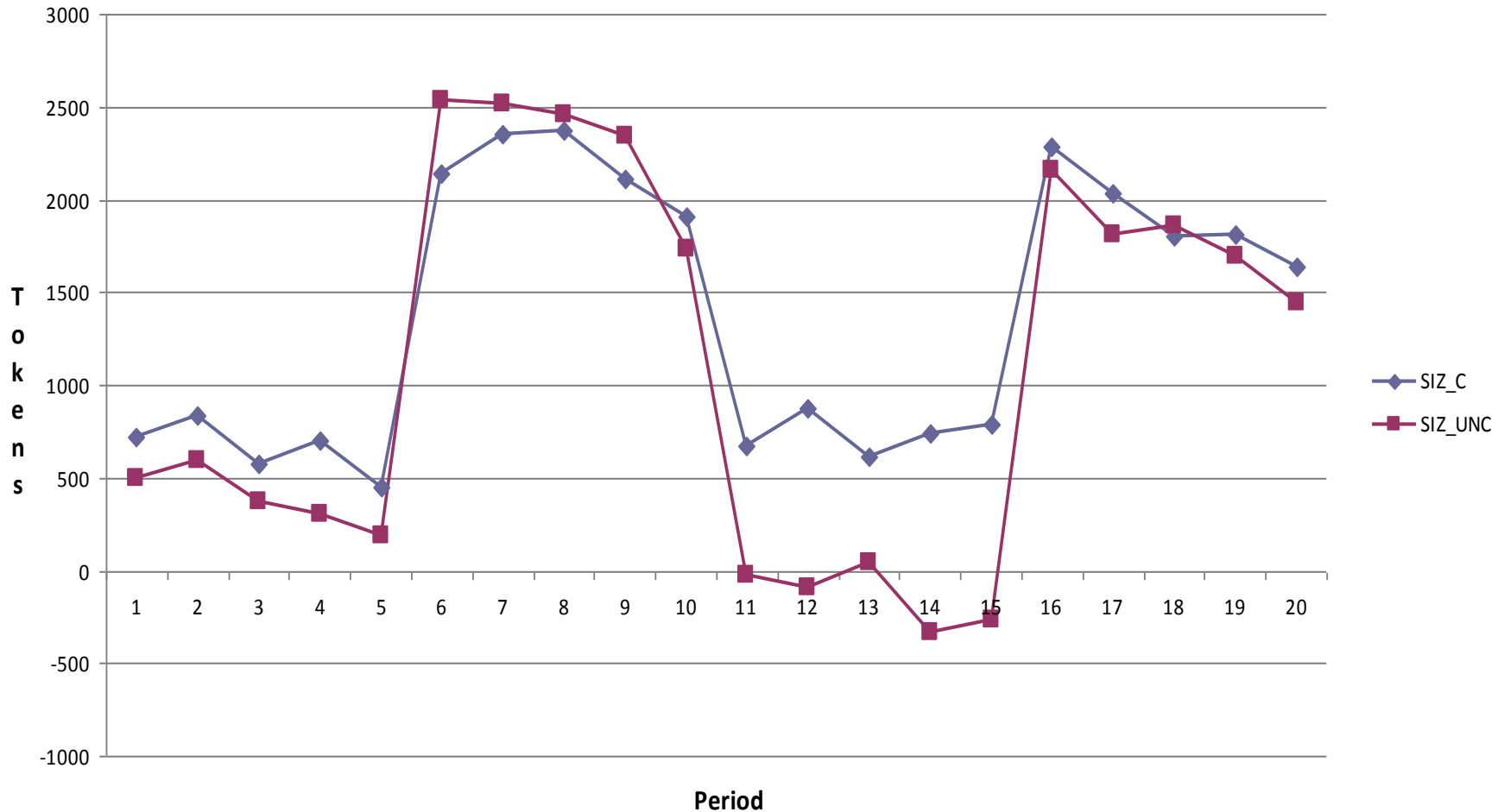
Experimental design

	CENSORED	UNCENSORED
SYM $+.3/- .3$	2 Sessions	2 Sessions
SYM $+.4/- .4$	2 Sessions	2 Sessions
ASYM $+/- .4/.8$	2 Sessions	2 Sessions

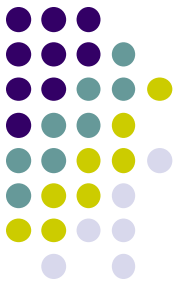
Size of Public Good (e.g. average net # of trees)



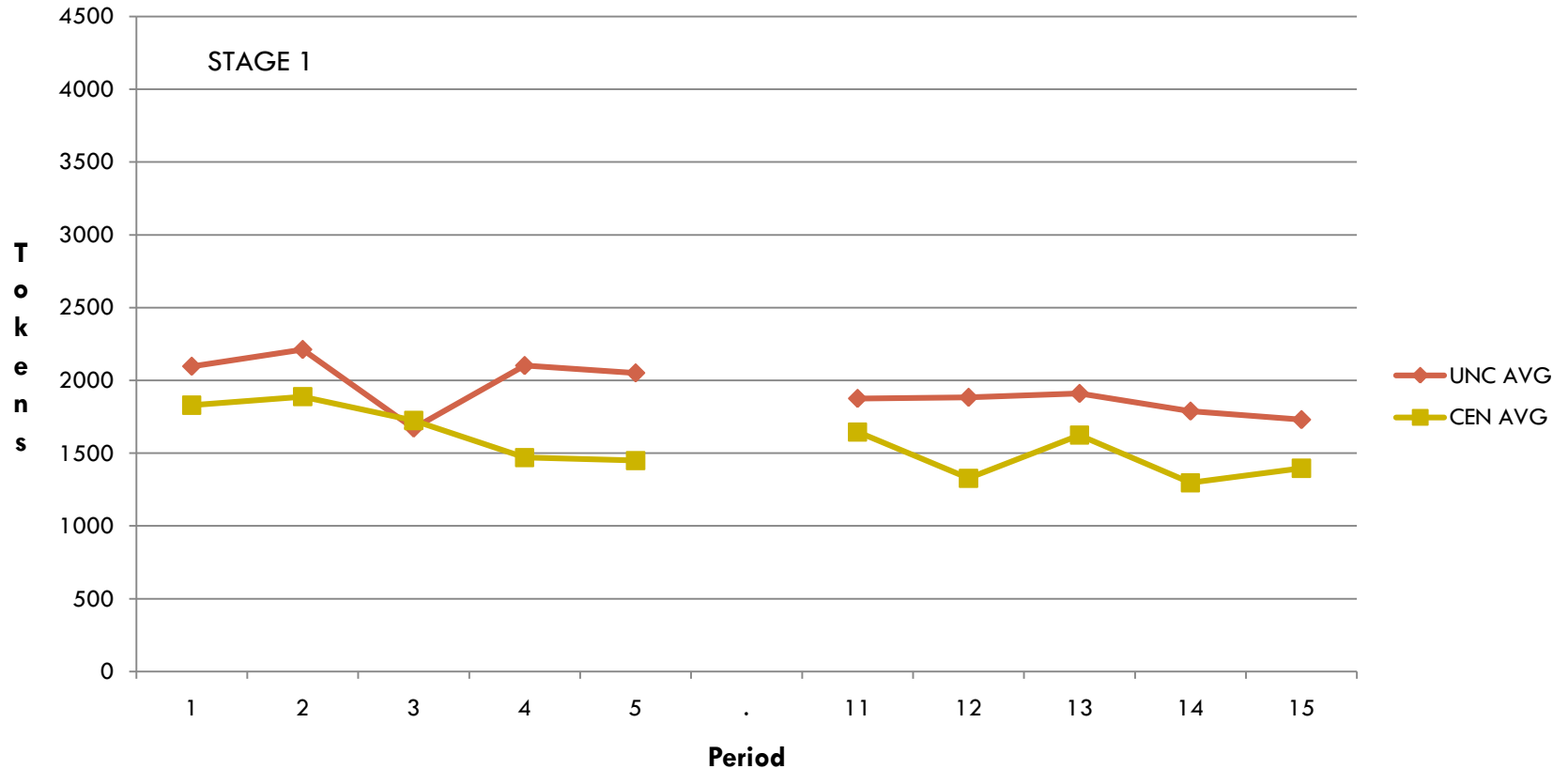
Average Group Size



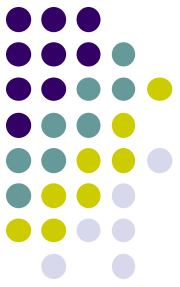
Aggregate Result: Number of Tokens Moved (e.g. resources mobilized by both sides)



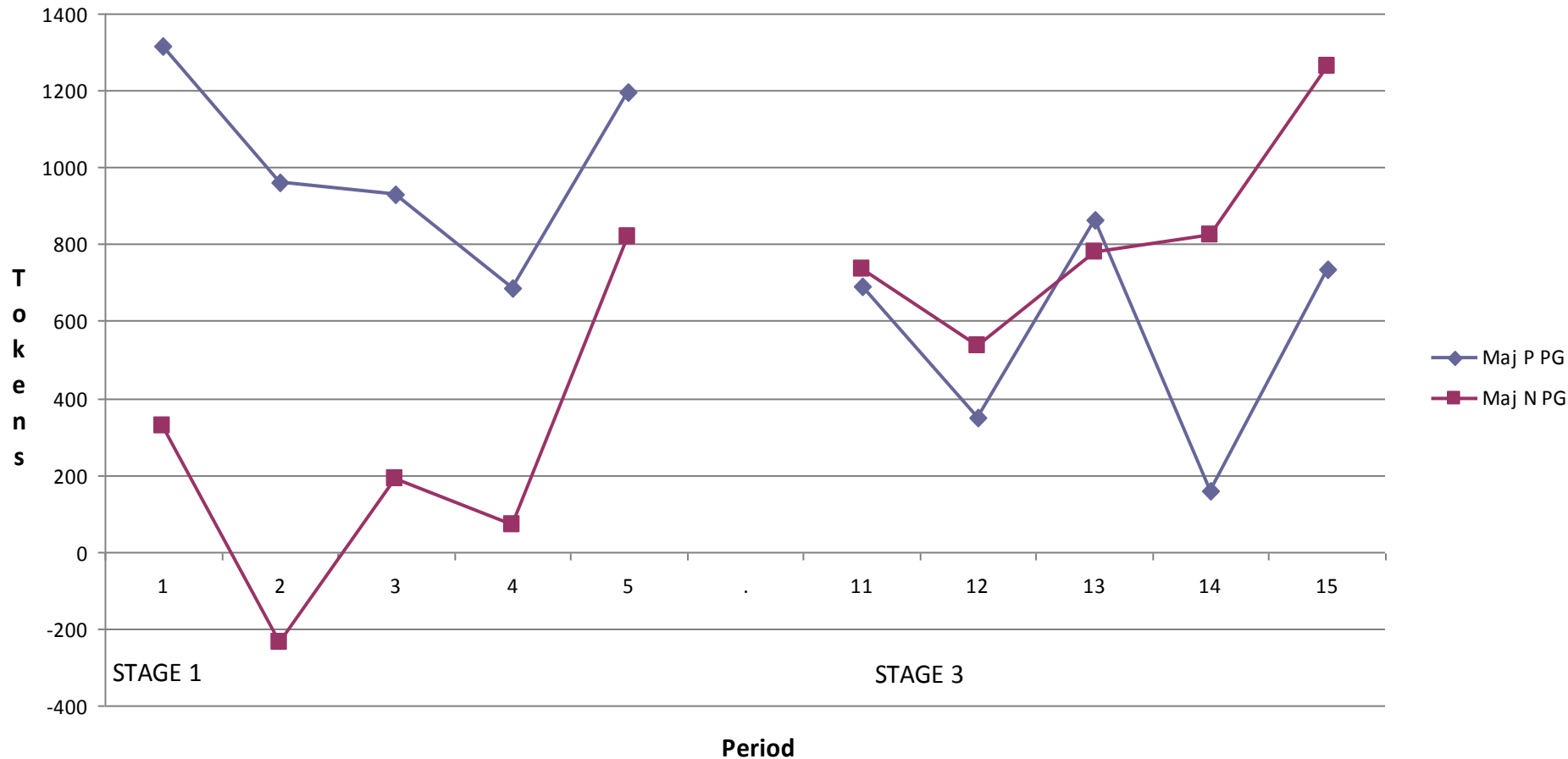
Average Total Tokens Moved



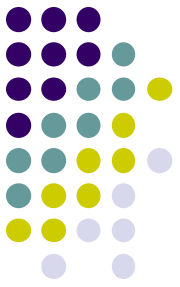
Aggregate Results: Size of Public Good in Opposite Polarity Groups



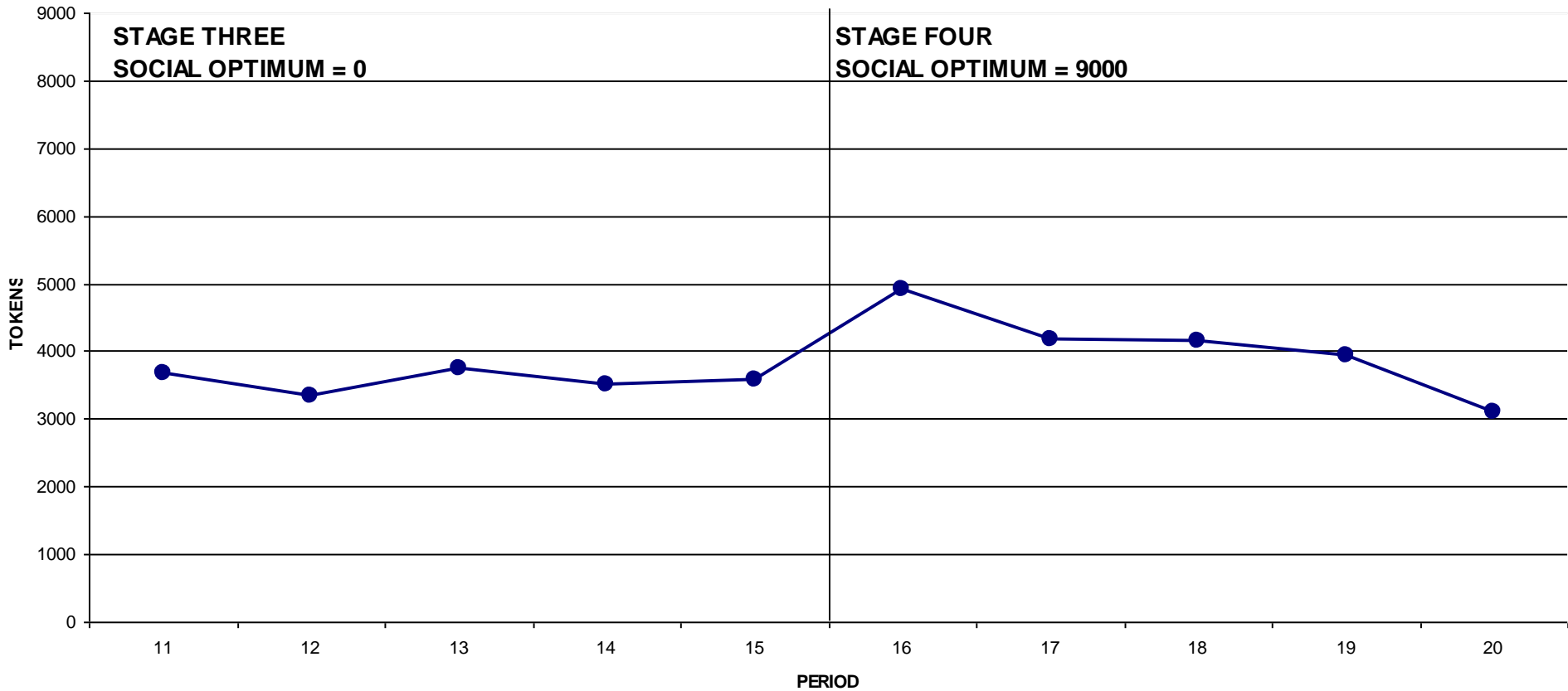
Uncensored: Public Good Size Pos vs Neg Groups

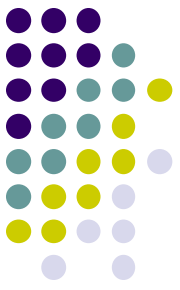


How's that Social Optimum Working Out For You?



TOTAL RESOURCES MOVED: ASYMMETRIC MPCRs





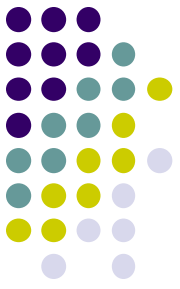
Regression results

Allocation towards PG (absolute value)

	Censored .4/.4	Uncensored .4/.4	Censored .4/.8	Uncensored .4/.8
PG_N (min/neg)	- 188.46 ***	- 77.26	- 146.52 ***	- 64.77 *
NG_P (min/pos)	- 119.76 ***	- 35.28	- 74.22 *	- 26.2
NG_N (maj/neg)	- 172.89 ***	3.18	- 146.09 ***	- 48.83
Constant (PG_P)	222.89 ***	158.63 ***	226.02 ***	225.17 ***

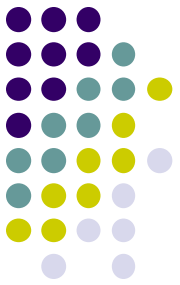
In the *censored outcome treatment* there are significant effects of majority/minority and positive/negative roles, while the effect (of both) is not significant in the *uncensored outcome treatments*.

Individual Results: Descriptive Statistics



- Censored Treatments: Positive Players Contribute More than Negative Players
- Censored Treatments: Positive Majority Players Contribute More than Positive Minority Players
- (Majority/Minority Status May Be By Itself a Source of Group Identity)
- Some Effects of Asymmetry

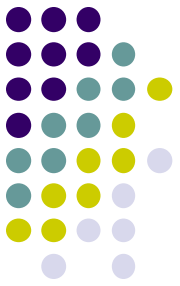
Individual Averages



	Censored .4/.4	Uncensored .4/.4	Censored .4/.8	Uncensored .4/.8
PG_N negative minority	34.43 {26.77}	81.37 {35.10}	79.5 {26.80}	160.41 {28.76}
NG_P positive minority	103.13 {23.69}	123.35 {23.14}	151.8 {26.64}	198.97 {33.14}
NG_N negative majority	50 {16.54}	161.81 {23.16}	79.93 {16.8}	176.33 {20.41}
PG_P positive majority	228.89 {17.45}	158.63 {19.32}	226.02 {17.66}	225.17 {16.96}

(Standard errors are in brackets)

Foundation for Future Work



Enlarge the scope for group identity:

- communication,
- voting,
- external references, etc.