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by

**Werner Güth
Hartmut Kliemt**

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Friedrich Schiller University Jena
Carl-Zeiss-Str. 3
D-07743 Jena
www.uni-jena.de

Max Planck Institute of Economics
Kahlaische Str. 10
D-07745 Jena
www.econ.mpg.de

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Fairness That Money Can Buy¹

Procedural Egalitarianism in Practice

Werner Güth und Hartmut Kliemt

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Abstract (86<100 words)

We suggest that procedures of monetarized bidding can facilitate co-operation in Elinor Ostrom type common(s) projects without crowding out communitarian faculties of “self-governance”. Axioms securing *procedurally egalitarian bidding* on the basis of declared monetary evaluations are introduced. They guarantee that all realized changes of a status quo are in an “objective” (pecuniary) sense *equally* advantageous for all members of the community. Some empirical evidence that procedurally fair bidding can promote communitarian co-operation rather than crowding it out, is presented. The practical scope and limits of procedural egalitarianism need further empirical exploration, though.

JEL Classification: H4, H61, D62, D63, D71

Key words: Fair Procedures, Egalitarian Mechanisms, Unanimity, Constitutional Political Economy, Non-State Communities, Governing the Commons, Crowding out

1. Introduction and background

Elinor Ostrom’s work demonstrates empirically that under certain conditions communities can manage their own affairs informally and without centralized state institutions (see Ostrom 1990). In particular, neither a *protective state* defining property and enforcing contracts (thereby creating large markets) nor a *directive state* telling citizens what to do when facing common(s) problems are necessary to avoid the “tragedy of the commons” (see Hardin 1968). Neither formal markets – as created by the protective state’s formal enforcement of legal norms – nor formal bureaucratic organization – as created by the directive state – are necessary to manage common(s) problems. Often citizens can get by without the helping hand of a formal state institution. However, *formal non-state*

¹ Our title alludes to Michael Sandel’s influential criticism of formal organization and the use of the „measuring-rod of money“ see again Sandel 2012. We believe – in ways contray to Frey 1997 – that it is „not just the money“ but rather the violation of egalitarianism and norms of interpersonal equal respect that matter. Formal organization and the use of the measuring-rod of money may be appealing to adherents of the maxim that „small is beautiful“ if basic egalitarian values are transparently embodied.

organization relying on the “measuring-rod of money” may still help self-governance without crowding out voluntary participation.²

To understand how humans can self-organize even when facing the severe scarcities of potentially tragic commons’ problems, Elinor Ostrom used a whole array of methods reaching from field studies to game theory and experiments (see Ostrom 2012, in RMM, 2012/3, 51-65). Doing so she convinced herself and others that self-governance beyond “market and state” can be viable without leading to over-exploitation of common pool and other resources. Her bottom up approach was complementary to her husband’s top down approach in his “political theory of a compound republic” (V. Ostrom 1962). Contrary to Vincent, Elinor Ostrom was not – at least not primarily – thinking in terms of constitutions and legal mechanisms. Where his work was firmly rooted in the American tradition of constitutional design (see classically “The Federalists”), design principles and their implementation were not driving her case oriented research agenda.

Elinor Ostrom conceived of her empirically oriented work as complementary to the theoretical issues of constitutional design addressed by Vincent Ostrom, and so do we. When digging a tunnel starting from both sides is generally a good idea provided that “ends meet”. Starting from the theoretical side we focus on the formal and normative aspects of mechanisms of self-governance. We axiomatically characterize and transfer the most central ideals of contractarian Constitutional Political Economy, *CPE*, (see Buchanan and Tullock 1962) of “great societies” to smaller community contexts. Procedurally fair formal bidding mechanisms may be impractical and partly utopian for great societies. Yet they could conceivably be implemented in small communities by an act of deliberate constitutional choice.

Implementing formal mechanisms exhibiting “communitarian procedural egalitarianism”, *cpe*, is a viable strategy to solve common(s) problems without state or contract and in non-hierarchical ways. Yet one may still be afraid that implementing formal mechanisms could crowd out the ability to self-organize.

Whether relying on formal bidding procedures, will or will not crowd out the self-organizing abilities of communities cannot be answered in theory. Our hypothesis that the sense of

² It may be noted in passing that B.F. Skinner’s „Walden Two“ as an essay on utopian organization relied on formal organization as well; see Skinner 1976/1948.

equal mutual advantage conveyed by fair procedures of formal organization and monetary bidding does not stand in the way of self-organization and may even further it must be empirically (experimentally) studied. Though we will provide a few hints on first empirical results (see section 4.) the subsequent argument focuses on the theoretical exposition of how the informal communitarian egalitarianism of small-scale societies can be formalized and adapted to organizational purposes by relying on monetary measures of value.

2. Contractarianism in Communities

Whereas the unanimity requirement of philosophical contractarianism and CPE cannot³ plausibly be applied to large-scale state action and the “great society”⁴ it seems entirely appropriate for the smaller (sub-)communities of states envisioned in Elinor Ostrom’s work on governing the commons. These communities are anarchical in that their organization does not (at least not directly) depend on the state and/or contracts enforced by it. As opposed to large-scale interaction for which the notion of a social contract is always a mere fiction they in fact do embody something like an ongoing contract leading to a process of real rather than merely fictitious “politics as exchange”.

2.1 Contractarianisms

“*Communitarian contractarianism*” accepts any change of an otherwise prevailing status quo as legitimate if within a given community of bearers of veto-rights no veto has been issued. In communitarian contractarianism the unanimity requirement is regarded as sufficient to render the position “contractarian” even though neither membership in the (moral and/or legal) community nor the veto-rights themselves arose from contract. Communitarian unanimity differs from the unanimity requirement of a “private contract” of a self-select arbitrary number of individuals.

The self-selection to a group forms the basis of an individualist contract in the narrow sense. In such “*club-contractarianism*” membership in the relevant group is endogenous to the contract among those who agree to act. According to club-contractarianism individuals

³ At least not without fictitious assumptions that make it vulnerable to the standard objection that fictitious consent is no more consent than fictitious bread is bread.

⁴ Even though it formed its original focus and expresses the egalitarian ideals of small community life of our original human adaptation.

can freely associate to pursue some project or other without endorsing the communitarianism of granting a veto to those who are not included by agreement.⁵

It seems obvious to us, though not widely understood, that the type of contractarianism popular in Public Choice and Constitutional Political Economy is not of the club-contractarian but rather the communitarian variety.⁶ “The Calculus of Consent” deals with “the logical foundations of constitutional democracy” (Buchanan and Tullock 1962) in the presence of original veto-power and thus with decision-making in an exogenously given, pre-defined community:⁷ First, Buchanan seems to believe that it is necessary and sufficient for the normative acceptability of collective decisions that they are or (at least can be) based on the (conceivable) agreement of *all* individual members of a moral community or “polity” (*communitarian contractarianism*). Second, since according to Buchanan, beyond agreement of the members of the “polity” there is no moral standard of right and wrong,⁸ criteria of acceptability must be procedural rather than substantial (*proceduralism*). Third, all members of the moral community have fundamental political rights to individually and separately veto collective decisions. Each individual is in that sense a moral and political equal to each other (*egalitarianism*).

2.2 CPE and cpe

To spell out explicitly the implications of *communitarian procedural egalitarianism* (or “cpe”) for public projects we shall rely on intuitively appealing axioms. They can be used to characterize schemes of collective decision-making that conjoin (in the spirit of Wicksell 1896/1996) the financing and the specification of collective projects: Bidding procedures that fulfill the axioms determine for all bid vectors along with payments and transfers a “set of acceptable projects” (if according to bids the project set is empty the status quo is maintained).

The axioms introduced characterize specific bidding and compensation cum contribution schemes independently of their truth-revealing properties. The underlying procedures are not evaluated in welfare economic terms, in particular not in terms of

⁵ There is no community basis for that kind of contract.

⁶ see on this in more detail, Kliemt 1994. James M. Buchanan personally pointed out that ascribing to him substantive instead of procedural egalitarianism would be mistaken. He is, of course right. The substantive egalitarian values operate on the level of choosing the procedurally egalitarian rules that may lead to substantially unequal results of any kind.

⁷ Neglecting Tullock’s possibly diverging views on the matter we shall focus on Buchanan henceforth.

⁸ Not even a welfare function, in particular not a “welfarist” one.

preferences over their results. Except for the fact that a result emerges under a procedure without being vetoed there is no standard by which to assess whether it is an improvement for each individual member of the community (as compared to a status quo that will emerge or persist without agreement). In short, ours is not a contribution to the theory of mechanism design based on standard welfare economic criteria.

Next we will spell out precisely, certain Constitutional Political Economy, *CPE*, ideals of unanimous agreement. We axiomatically characterize formal “bidding mechanisms” that will secure that all individuals (according to their overt bids) gain equally by any change of the status quo – in terms of monetary bids minus monetary transfers.⁹ Such mechanisms procedurally express egalitarian democratic ideals of consensual politics. For great societies they are – as all contractarian theory – expressive of a theoretical standard of opinion formation yet cannot be implemented in institutional practices. For non-hierarchical small communities like those described in “governing the commons” they could conceivably be implemented in practice and, if implemented, in fact support a shared sense of perceived fairness and the communitarian feeling of being “in it together”.

3. Characterizing the procedure

3.1 Basic model of bidding for a collective measure

Let $i = 1, 2, \dots, n$ (≥ 2) denote individuals who are all members of the exogenously fixed community I of participants in a collective decision. The decision is to be binding on all members of I . Assume that the members of the community I participate in the selection of a non-empty subset S of projects from a finite non-empty set of possible projects¹⁰ $\Omega = \{a, b, c, \dots\}$; $S \neq \emptyset, S \subseteq \Omega, |\Omega| < \infty$.

For each non-empty $S, \emptyset \neq S \subseteq \Omega$, the members of I are assumed to bid $b_i(S) \in \mathbb{R}$. The bid b_i of individual $i \in I$ is a list of the form

⁹ Our approach should not be mistaken as an exercise in conventional mechanism design: a. Contrary to conventional mechanism design we are exclusively concerned with overt behavior. b. We do not address a social planner (benevolent or other) who uses the mechanism as an instrument to achieve a given goal (e.g. maximizes a given welfare function). c. There is no technocrat who construes (incentive compatible) procedures to bring about certain results for the collectivity. d. We do not need to start and do not start from a well-defined game under common knowledge assumptions. – In short, the mechanisms considered here are not evaluated as instruments of maximization but according to their procedural properties alone regardless of the consequences.

¹⁰ Subsets – expressing the bundling or exchange of assent -- could as well be interpreted as possible projects.

$$b_i = (b_i(S) \in \mathbb{R}: \emptyset \neq S \subseteq \Omega).$$

The vector of all such individual bids – the “bid vector” – is accordingly

$$b := (b_1, b_2, \dots, b_n).$$

In the setting envisioned here everything is described in objective terms, in particular monetary units. Nothing is said about subjective perceptions, “true” evaluations and preferences. We restrict ourselves to dealing with *game forms rather than games proper*.

This seems adequate since constitutional analysis should focus on constitutions and these are basically game forms. So, for the time being, we shall not enter game theory proper but rather stick to game form analysis and express *cpe*-values concerning such game forms in objective terms by three axioms.¹¹

3.2 Axioms and derivation of rules

The bids $b_i = (b_i(S) \in \mathbb{R}: \emptyset \subset S \subseteq \Omega)$, $i = 1, 2, \dots, n$, are observable in overt behavior. These stated values rather than some subjective private values form the relevant value information for participants in the interaction. *All further considerations are “wrb” or “with respect to bids”*. Let us define for convenience:

$S^* = S^*(b) \subseteq \Omega$, chosen set S^* of projects according to the bid vector b , and

$\forall S, \emptyset \neq S \subseteq \Omega: C(S)$, “costs” of the project S , $C(S) \in \mathbb{R}$, *wolg* $C(\emptyset) = 0$,¹²

$\forall b: (C(S^*(b)))$, “costs” if according to the bid vector b the set of projects $S^*(b)$ is implemented,

$\forall i \in I: c_i(S^*(b), b)$, individual compensation/costs in case of implementing $S^*(b)$

With these preliminary definitions in mind, consider the three axioms for an arbitrary bid vector $b \in \mathbb{R}^n$:

Axiom P(profitability and efficiency wrb):

(a) *If* $\forall S, \emptyset \neq S \subseteq \Omega: \sum_{i=1}^n b_i(S) < C(S)$

¹¹ Our purely procedural perspective should not be confused with familiar discussions of demand revealing mechanisms in Public Choice Theory; see for an overview Mueller 2003.

¹² External “costs” can be negative if a public project yields positive revenue as for instance in case of exploiting natural resources or making some other gain by the project. Note also, that even then it may be necessary to compensate those who are opposing the project.

then $S^*(b) = \emptyset$ and $\forall i \in I : c_i(S^*(b), b) = 0$

(b) otherwise $S^*(b)$ with $\sum_{i=1}^n b_i(S^*(b)) \geq C(S^*(b))$ and

$$\sum_{i=1}^n b_i(S^*(b)) - C(S^*(b)) \geq \sum_{i=1}^n b_i(S) - C(S) \text{ for all } S, \emptyset \neq S \subseteq \Omega$$

is implemented.

If the (“external”) costs of all non-empty sets of projects are not covered by the sum of bids no project will be implemented ($S^*(b) = \emptyset$) and no payments are made ($\forall i \in I : c_i(S^*(b)) = 0$). Otherwise the non-empty set of chosen projects $S^*(b) \neq \emptyset$ is not dominated by a – wrb – “more profitable” set.

Axiom C(ost balancing wrb):

$$\text{If } S^*(b) \neq \emptyset \text{ then } \sum_{i=1}^n c_i(S^*(b), b) = C(S^*(b))$$

Whenever $S^*(b) \neq \emptyset$ the sum of the payments will cover the external cost. We could also speak of a balanced budget requirement.

Axiom E(galitarian symmetry wrb -- see Güth, 2011):

$$\text{If } S^*(b) \neq \emptyset \text{ then } [\forall i, j \in I: b_i(S^*(b)) - c_i(S^*(b), b) = b_j(S^*(b)) - c_j(S^*(b), b)]$$

According to bids all individuals profit equally from implementing a set of projects $S^*(b) \neq \emptyset$. Implicitly $S^*(b) = \emptyset$ amounts to maintaining the status quo. The latter may be egalitarian or inegalitarian. The egalitarian symmetry wrb is imposed only on changes or, in monetary terms, net gains compared to the status quo brought about by collective action (or the politics of the “productive state”).

For an arbitrary vector $b = (b_1, b_2, \dots, b_n) \in \mathbb{R}^n$ axioms E, C, P imply:

(a) If $\forall S, \emptyset \subset S \subseteq \Omega: \sum_{i=1}^n b_i(S) < C(S)$ then $S^*(b) = \emptyset$ and $c_i(S^*(b), b) = 0, i = 1, 2, \dots, n$.

(b) If $S^*(b) \neq \emptyset$ then the surplus $\sum_{i=1}^n b_i(S^*(b)) - C(S^*(b))$ is non-negative and maximal with

(ba) compensation payments

$$c_j(S^*(b), b) = b_j(S^*(b)) - \frac{\sum_{i=1}^n b_i(S^*(b)) - C(S^*(b))}{n}, j = 1, 2, \dots, n \text{ satisfying}$$

(bb) $c_j(S^*(b), b) \leq b_j(S^*(b)), j = 1, 2, \dots, n$

Proof:

Axiom E allows to set $\Delta := b_i(S^*(b)) - c_i(S^*(b), b)$ for all $i = 1, \dots, n$.

Aggregating over i we get $\sum_{i=1}^n b_i(S^*(b)) = \sum_{i=1}^n c_i(S^*(b), b) + n\Delta$

Axiom C for $S^*(b) \neq \emptyset$ yields

$$\sum_{i=1}^n b_i(S^*(b)) = C(S^*(b)) + n\Delta$$

which is equivalent to $\Delta = \frac{\sum_{i=1}^n b_i(S^*(b)) - C(S^*(b))}{n}$

Axiom P implies $\Delta \geq 0$

Which yields $\frac{\sum_{i=1}^n b_i(S^*(b)) - C(S^*(b))}{n} = b_j(S^*(b)) - c_j(S^*(b), b) \geq 0$ and thus

$c_j(S^*(b), b) \leq b_j(S^*(b)), j = 1, 2, \dots, n$; nobody “pays” more than his bid.

Those individuals i who submit $b_i(S) < 0$ for some S will – should that S become the chosen $S^*(b)$ – get compensated at least according to their demand, i.e. “negative bid”. We assume that after bidding individuals are forced (“taxed”, if you will) to pay according to these rules. However, since they are free to bid as low as they like, they can always see to it that a project will not be implemented (i.e. veto it).

Under certain provisions individuals could be required to post a kind of hostage before participating in bidding as envisioned here. So, if $S^*(b) \neq \emptyset$ will be implemented, they will have already made the “down payment”, $B_i(S^*(b))$, of what they will have to pay in case the project will be implemented. A credible institutional commitment not to abuse the “down payments” but rather to pay them back if no project is realized would be necessary then. This might be something to be exogenously provided by a state enforced legal order in which the cpe process envisioned here may be embedded.

4. Theoretical and experimental conclusions

4.1 Theoretical

The preceding axiomatic characterization spells out explicitly and precisely¹³ *widely accepted normative views of communitarian procedural egalitarianism, cpe*. Like in much of traditional constitutional and legal theory the framing was in objective terms. Nothing had to be said about the subjective perceptions and evaluations of individual members of the community.

More formally speaking, and as emphasized already, we have been dealing with game forms rather than games.¹⁴ These game forms *procedurally* embody certain values, most prominently that of interpersonal respect: no group of individuals is entitled to impose its will on others as an externality without having to seek agreement of each and every individual.¹⁵

The axioms presented in the preceding section imply agreement-seeking by requiring monetary transfers to compensate for externalities according to bids. In the context of the communities to which Elinor Ostrom refers in particular in her discussions of managing common pool resources the framework can be practically implemented.¹⁶ Since individual actions are significant for collective results the veto power embodied in the rules is backed up by something real and not a mere fiction in small as opposed to large communities. If in large communities formal organization based on the measuring-rod of money (operating through markets etc.) is a practical necessity it may be crowding in rather than out co-operation in the small-group contexts envisioned by Elinor Ostrom.

For those accepting the values expressed in the axioms the procedures characterized by them bestow legitimacy on its results whatever they are.¹⁷ There is no standard of

¹³ The axioms “explicate” in the sense of Carnap, 1956, core background concepts of the Calculus of Consent.

¹⁴ The tradition of conventional mechanism design is certainly important but it focuses on different questions not directly relevant to the issues of procedural legal design addressed here.

¹⁵ In Kant’s original case this would be the community of all rational beings. In the case at hand one may think of a productive state with compulsory membership. Due to compulsory membership it can go beyond what individuals can do by organizing “clubs”. In line with the Wicksellian ideals of Buchanan this productive state – though having the power to tax -- is ideally restricted to “politics as exchange”.

¹⁶ Though the axioms express the values underlying the Buchanan-Wicksell-framework, too, corresponding procedures could hardly be implemented in great societies. The conventional assumption that a social planner would step in and design mechanisms that would let citizens reveal their preferences truthfully to him or some other benevolent despot in some equilibrium or other throws the baby (general constitutionalism) out with the bathwater (no benevolent despot).

¹⁷ This is again in the spirit of the „Calculus“ and of Buchanan who in conversations would often tend to make remarks like „whatever comes out comes out“. Results of a procedure that is deemed acceptable

improvement independent of the procedures. But implementing them may improve interactions that are not formally but merely informally ordered according to the egalitarian small group values expressed in the axioms. The transparent and simple way in which egalitarian respect is embodied in procedures fulfilling the axioms should appeal to the basic egalitarian instincts that evolved with human kind and let us manage our common problems better without making use of the formal and central enforcement process embodied in the protective or the directive state.

4.2 Experimental

As expressed in our introductory remarks we believe that relying on schemes of egalitarian bidding might in many cases facilitate co-operation in small communities. The procedurally egalitarian bidding mechanism, derived here, has been implemented experimentally under varying conditions. The variations concern

- how many public projects are possible
- whether public projects are pure public goods or harming some and benefiting others,
- whether evaluations are common knowledge or private information and, in the latter case, whether a commonly known prior is experimentally induced or not,
- how public projects with negative costs (gains) fare compared to more efficient projects whose costs are positive.

The robust findings (see the survey of Güth et al., 2012) are that

- regularly the most efficient project is implemented, except when the most efficient project is competing with a less efficient one whose costs are negative,
- the procedural mechanism works well independently of whether or not a Bayesian game is experimentally induced or not,
- fair procedures only crowd out other regarding concerns when not only the procedure is fair but also the game proper is (a priori) symmetric¹⁸.

independently of its specific outcomes are to be accepted. In short: „The path legitimizes the endpoints and not vice versa.“

¹⁸ When implementing an asymmetric game experimentally and assigning the more or less favorable roles randomly, the „manna from heaven“ tradition of experimental economics, participants might want to compensate for bad luck (see Güth and Kliemt, (L)abstraction does not guarantee generality).

These findings suggest that monetary bidding per se does not crowd out communitarian voluntary cooperation if the procedure is egalitarian fair. The nowadays again very popular reservations against the “monetarization” (see again Sandel 2012 and also earlier Satz 2009) of social relations may be misguided. The culprit may be the lack of equality in bidding power on markets and other forms of real world free contracting rather than the monetary values. The conceivability of communitarian procedural egalitarianism seems to indicate this in theory and even to provide a remedy in practice. This is philosophically interesting since it separates dimensions of social evaluation that should not be conflated and at the same time suggests ways of organization that are communitarian in spirit yet rely on “the measuring rod of money”.

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