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Constitutional Democracy and Public Judgements

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Abstract: This paper proposes a new conceptual framework of a liberal social order, which emphasizes the *freedom of action in social interaction* and the *freedom of participation in social rule-making process*. Our articulation of public decision-making process can be interpreted as a formal way of capturing the essence of constitutional democracy, which is an impure mixture of *constructivist rationalism* and *evolutionary rationalism*, since we are bringing what is spontaneously evolved through individual experiments into the stage of public design and social choice of a new institutional set of rules. It is also construed as an impure mixture of *perfect procedural fairness* and *pure procedural fairness*, since the public judgements to be formed through public deliberations should pay due attention to the intrinsic value of procedures in conferring *agency freedom* to individuals, as well as to the instrumental value of procedures in expanding *well-being freedom* of individuals.

1. Introduction

There are two conceptual frameworks in the analysis of the social order in general, and the liberal social order in particular, which were neatly identified and sharply contrasted by Friedrich von Hayek (1960; 1973).[1] The first framework, which von Hayek (1973, p.5) aptly christened the *constructivist rationalism*, recognizes all social orders as the product of deliberate human design, whereas the second framework, the so-called *evolutionary rationalism* whose contemporary representative is von Hayek himself, regards all social orders as the outgrowth of spontaneous evolution through unconscious human experiments. In the special context of the liberal social order, the constructivist rationalism embodies the belief that freedom can be realized and maintained only through the rational design of social decision-making rules that embodies libertarian social values, whereas the evolutionary rationalism finds the essence of freedom in spontaneity and the absence of external coercion.

The constrast between these two conceptual frameworks seems to have been made too sharply. Indeed, in their extreme forms, they are both too rigid to be of help in properly understanding the social order. On the one hand, von Hayek (1960, p.54 & p.61) maintained throughout his entire career that the constructivist rationalism in its extreme form is outright wrong: "Though freedom is not a state of nature but an artifact of civilization, it did not arise from design. The institutions of freedom, like everything freedom has created, were not established because people foresaw the benefits they would bring ... . Those who believe that all useful institutions are deliberate contrivances and who cannot conceive of anything serving a human purpose that has not been consciously designed are almost of necessity enemies of freedom." On the other hand, it can hardly be denied that the line separating the evolutionary rationalism from the blind acceptance and offhanded admiration of the *status quo* is not at all clear. It was Lionel Robbins (1961, p.71) who acutely observed in his review of von Hayek's *Constitution of Liberty* (1960) that "Hayek's emphasis on the spontaneous and non-rational origin of important elements in the social order is of quite fundamental importance for the liberal outlook, but ... it is liable to become the foundation of an illiberal mysticism rather than 'true' liberalism unless it is understood that such elements are subject at all times to critical scrunity from the standpoint of the requirements of public utility."

It is worthwhile to recollect in this context that "public utility", which Robbins referred to in his remark on von Hayek's evolutionary rationalism, is precisely the franchise of Kenneth Arrow's (1951/1963; 1987) social choice theory. According to Arrow (1951, pp.22-23):

> To the nominalist temperament of the modern period, the assumption of the existence of the social ideal in some Platonic realm of being was meaningless. The utilitarian philosophy of Jeremy Bentham and his followers sought instead to ground the social good

on the good of individuals. The hedonist psychology associated with utilitarian philosophy was further used to imply that each individual's good was identical with his desires. Hence, the social good was in some sense to be a composite of the desires of individuals. A viewpoint of this type serves as a justification of both political democracy and laissez-faire economics or at least an economic system involving free choice of goods by consumers and of occupations by workers.

As an analytical vehicle to articulate this concept of "social good" or "public utility", Arrow introduced his justly famous tool of a *social welfare function,* which is a process or rule f associating a *socialpreferenceordering* R with each profile of individual preference orderings $\boldsymbol{R}^N = (R_1, R_2, ..., R_n)$, where n $(2 \leq n < +4)$ denotes the number of individuals in the society, and R_i is individual i's preference ordering: $R = f(\boldsymbol{R}^N)$. Given a social preference ordering R thus constructed, and given an *opportunity set* S of available social alternatives, a socially chosen alternative $x^* \, O \, S$ is such that x^* is at least as good as any other alternative x in S when the evaluation is made in accordance with R. In this analytical scenario, once a social welfare function f is rationally designed, and a profile $\boldsymbol{R}^N$ of individual preference orderings is aggregated into a social preference ordering $R = f(\boldsymbol{R}^N)$, there is no further room for spontaneity on the part of the individuals composing the society. What is left to them is nothing other than to implement silently the socially chosen alternative $x^* \, O \, S$. In other words, instead of complementing the evolutionary rationalism à la von Hayek through "critical scrutiny [of the social order] from the standpoint of the requirements of public utility" as was required by Robbins, this common interpretation of the Arrow social choice theory seems to lead us to the other polar extreme of the constructivist rationalism.

To find a way out of this apparent impasse, let us remind ourselves of the two senses in which we can reasonably talk about individual freedom in the liberal social order. In the first place, we may say that individuals are assured of freedom when they are not prevented from pursuing spontaneous experiments in the game-theoretic social interaction with other individuals subject only to the universally applicable set of rules of the game. It is clear that this is the sense in which von Hayek (1960; 1973) talked about individual freedom in the liberal social order. Let us christen this first sense of freedom as the *freedom of action in social interaction.* It goes without saying that the real substance of this sense of freedom hinges squarely on the prescribed set of rules of the game. Indeed, even when individuals are fully warranted of this first sense of freedom, it may well be the case that individuals might have been forced into this game-theoretic social interaction in the first place without making voluntary choice of their own, or the universal set of rules of the game might have been designed by external authority without allowing any say to individuals participating in the specified game-theoretic social inter-

action. Thus, the analysis of freedom in the liberal social order is obviously incomplete if this first sense is the only sense in which we can talk about individual freedom.

In the second place, we may say that individuals are assured of freedom when they are entitled to participate in the social decision-making processes through which the set of rules of the game to be played among them is publicly designed and socially chosen. This second sense of freedom received great emphasis by Isaiah Berlin (1958, pp.15-16) in his famous essay on liberty when he wrote as follows: "[T]he connexion between democracy and individual liberty is a good deal more tenuous than it seemed to many advocates of both. The desire to be governed by myself, or at any rate to participate in the process by which my life is to be controlled, may be as deep a wish as that of a free area for action, and perhaps historically older. But it is not a desire for the same thing. So different is it, indeed, as to have led in the end to the great clash of ideologies that dominates our world." Let us christen this second sense of freedom as the *freedom of participation in social rule-making processes*.

The purpose of this paper is to propose a conceptual framework for the social choice theoretic analysis of the liberal social order by making effective use of these two concepts of freedom. The plan of the paper is as follows. Section 2 reiterates the two concepts of freedom we have just identified in some further details. Amartya Sen's (1970a, Chapter 6 & Chapter 6*; 1970b; 1992) pioneering contribution to the analysis of libertarian values in the social choice theoretic framework is neatly evaluated in this context. Section 3 expounds an alternative game form articulation of freedom of choice in social interaction, whereas Section 4 is devoted to the game form articulation of freedom of participation in social rule-making processes. Section 5 makes some observations on the concept of constitutional democracy and that of procedural justice in the light of our game form articulation of freedoms. In Section 6 we conclude the paper with some remarks.

2. Two Concepts of Individual Freedom

The fundamental value premise this paper is that the liberal social order must be such that individuals composing the society should be warranted of the two identified senses of freedom, viz. the freedom of action in the game-theoretic social interaction, on the one hand, and the freedom of paricipation in social rule-making processes, on the other.

The importance of the first sense of freedom has been discussed extensively since the time of John Stuart Mill (1859/1977), if not before, and we may find its eloquent contemporary adovocate in von Hayek (1960; 1973). It was he who reminded us of the instrumental value of the freedom of action in social interaction in that it enables individuals to try out their respective life chance by making independent and spontaneous experiments. We should also emphasize that the freedom of action in social interaction is indispensable for individuals to maintain self-

respect as personal agencies of themselves. How can one maintain self-respect if he cannot but silently implement an action which was dictated to him by an external authority? In this sense, it is the freedom of action in social interaction that helps individuals nourish themselves to grow into fully-fledged and responsible social entities.

No less important is the second sense of freedom, through which past experience of individual experiments can exert influence on the public design and social choice of a new set of rules of the game, or the revision of the existing set of rules, thereby enabling the universally applicable rules of the game to be constantly subjected to the "critical scrutiny from the standpoint of the requirements of public utility" as well as to reflect the spontaneous order generated through social interaction among free individuals. The second sense of freedom is also valuable from the viewpoint of individual self-respect, since it enables individuals to feel that they are taking active part in the basic design of the liberal social order. How can one maintain self-respect if he is not allowed to take part in the processes through which the universally applicable set of rules regulating his life is publicly designed and socially chosen, even if the game designed and chosen without his active participation happens to be impeccably "fair"?

The more we emphasize the importance of these two senses of freedom, however, the possible conflict between these two desiderata to be satisfied by the liberal social order, to which Berlin called our attention, will become that much more serious. It was Sen (1970a, Chapter 6*; 1970b; 1992) who showed in terms of a social choice theoretic framework that this conflict is not simply possible, but in fact logically inevitable. This was a pioneering attempt to introduce the libertarian values into the social choice theoretic framework along with the democratic values which Arrow introduced. As an auxiliary step in orienting our own conceptual framework, it seems worthwhile to examine Sen's path-breaking attempt.[2]

Sen's articulation of the two senses of freedom starts with the description of social states, which goes as follows. Let X_0 be the set of impersonal features of the world, and let N be the set of all individuals in the society, viz. $N = \{1, 2, ..., n\}$, where n $(2 \leq n < +4)$ is the number of individuals composing the society. For each individual $i \in N$, let X_i be the set of i's personal features of the world. Then the set of social states is described by $X = X_0 \times X_1 \times \cdots \times X_n$. Thus, each social state $\boldsymbol{x} \in X$ is a list $(x_0; x_1, ..., x_n)$ of impersonal and personal features of the world. Given any social state $\boldsymbol{x} = (x_0; x_1, ..., x_n) \in X$, and for each individual $i \in N$, let $\boldsymbol{x}_{-i} = (x_0; x_1, ..., x_{i-1}, x_{i+1}, ..., x_n)$. Then, $\boldsymbol{x}$ can be represented as $(x_i; \boldsymbol{x}_{-i})$. In what follows, we will say that the two social states $\boldsymbol{x}, \boldsymbol{y} \in X$ are i-variants for any $i \in N$ if and only if $\boldsymbol{x}_{-i} = \boldsymbol{y}_{-i}$ holds true. Intuitively speaking, the two social states $\boldsymbol{x}$ and $\boldsymbol{y}$ are i-variants for some individual $i \in N$ if and only if $\boldsymbol{x}$ and $\boldsymbol{y}$ differ only in the specification of i's private matter.

Let K denote the family of non-empty subsets of X, each element of which denotes an *opportunity set* of available social states. A *choice function* defined on K is a functional relationship C such that, for each $S \in K$, $C(S)$, to be called the *choice set* from S, is a non-empty subset of S. Modifying Arrow's original conceptual framework slightly, let f^* be the *collective choice rule* that maps each profile $\mathbf{R}^N = (R_1, R_2, \ldots, R_n)$ of individual preference orderings on X into a social choice function on K: $C = f^*(\mathbf{R}^N)$.[3]

Within this modified Arrovian framework, Sen captures the essence of the freedom of participation in the social rule-making processes by means of the following two conditions imposed on the collective choice rule f^*. The first condition is that of **Unrestricted Domain** to the effect that individuals are free to express whatever preferences they want to be reflected in social choice, as long as these preferences satisfy the logical properties of completeness and transitivity.[4] The second condition is for the minimal effectiveness of the first condition, and it requires that the expressed individual preferences must be positively reflected in social choice, as long as these preferences coincide in claiming that a social state $\boldsymbol{x}$ is better than another social state $\boldsymbol{y}$. To be more precise, the second condition can be expressed as follows:

Weak Pareto Principle

For every profile $\mathbf{R}^N = (R_1, R_2, \ldots, R_n)$ of individual preference orderings, for every pair of social states $\boldsymbol{x}, \boldsymbol{y} \in X$, and for every opportunity set $S \in K$, if $(\boldsymbol{x}, \boldsymbol{y}) \in P(R_i)$ for all $i \in N$, then $\boldsymbol{y} \cup C(S)$, as long as $\boldsymbol{x} \in S$, where $C = f^*(\mathbf{R}^N)$.[5]

Sen's articulation of the freedom of action in social interaction proceeds by means of the power of local decisiveness in social choice. To begin with, let us say that a group $D \subseteq N$ of individuals is *locally decisive* over a pair $\{\boldsymbol{x}, \boldsymbol{y}\} \subseteq X$ of social states if and only if D can secure that $\boldsymbol{y}$ (resp. $\boldsymbol{x}$) does not belong to $C(S)$, where $C = f^*(\mathbf{R}^N)$ and $S \in K$, as long as $\boldsymbol{x}$ (resp. $\boldsymbol{y}$) is available in S, by expressing unanimous preferences within D for $\boldsymbol{x}$ (resp. $\boldsymbol{y}$) against $\boldsymbol{y}$ (resp. $\boldsymbol{x}$). If it so happens that a singleton set $\{i\}$ is locally decisive over $\{\boldsymbol{x}, \boldsymbol{y}\}$ for some $i \in N$, we say that individual i is locally decisive over $\{\boldsymbol{x}, \boldsymbol{y}\}$.

Sen's Minimal Liberty Principle

There exist at least two individuals, say $i, j \in N$, in the society such that, for each of them $k \in \{i, j\}$, there exists at least one pair $\{\boldsymbol{x}^k, \boldsymbol{y}^k\}$ of social states which are k-variants and k is locally decisive over $\{\boldsymbol{x}^k, \boldsymbol{y}^k\}$.

The best intuitive illustration of this principle is given by Sen (1970b, p.152) himself: "Given other things in the society, if you prefer to have pink walls [in your own bedroom] rather than white, then [the] society should permit you to have this, even if a majority of the community would like to see your walls white. Similarly, whether you should sleep on your back or on your belly is a matter in which the society should permit you absolute freedom, even if a majority of the community is nosey enough to feel that you must sleep on your back."

Sen's justly famous *Impossibility of a Paretian Liberal* now reads as follows.

Sen's Impossibility Theorem

There exists no collective choice rule which satisfies Unrestricted Domain, Weak Pareto Principle and Sen's Minimal Liberty Principle.

Since Sen's Minimal Liberty Principle is an analytical formulation of the freedom of action in the game-theoretic social interaction, whereas Unrestricted Domain and Weak Pareto Principle jointly capture the minimal essence of the freedom of paricipation in the social rule-making processes in the social choice theoretic framework, Sen's impossibility theorem sends us an unambiguous signal that the liberal social order, which embodies the two senses of freedom, is hard to come by, to say the least. The Berlin-Sen problem is certainly deep and far-reaching.

Before proceeding any further, two remarks on Sen's articulation of the two senses of freedom are in order. In the first place, there are acute debates on whether or not Sen's Minimal Liberty Principle is an appropriate articulation of the freedom of action in the game-theoretic social interaction. Robert Sugden (1985), and Wulf Gaertner, Prasanta Pattanaik and Kotaro Suzumura (1992) claimed that it was not, and they proposed an alternative game form articulation of individual freedom. We do not want to enter into this old battleground once again; suffice it to say that Sen's original insight, viz. the logical conflict between the two senses in which we can talk reasonably about freedom, robustly survives even if we replace Sen's original articulation with the alternative game form articulation.[6]

In the second place, Sen's Minimal Liberty Principle articulates the freedom of action in the game-theoretic social interaction in terms of the requirement which should be embodied in the designed collective choice rule, just as Unrestricted Domain and Weak Pareto Principle articulate the freedom of participation in social rule-making processes in terms of the conditions to be satisfied by the designed collective choice rule. In this sense, Sen's approach treats the two senses of freedom on a par with each other without giving any logical priority to one sense of freedom over the other. In contrast, we will depart from this symmetric approach to the two senses of freedom by introducing the two stage structure of the liberal social order, where the two senses of freedom are placed in some logical sequence.[7]

3. Game Form Articulation of Freedom of Choice

The alternative articulation of the two senses of freedom makes use of the following three basic concepts: the *game form*, the *game*, and the *design of a fair game form*.

The *game form* is a triplet $\Theta = (N, \boldsymbol{M}, g)$, where $N = \{1, 2, ..., n\}$ $(2 \leq n < +4)$ is the set of *players*, $\boldsymbol{M} = M_1 \times M_2 \times \cdots \times M_n$ is the set of *strategy profiles* with M_i standing for the set of *admissible strategies* for the player $i \in N$, and g is the *outcome function* which maps each strategy profile $\boldsymbol{m} \in \boldsymbol{M}$ into the set X of *outcomes*: $g(\boldsymbol{m}) \in X$. Although the game form neatly describes what are admissible for each player as well as what outcome will materialize when a strategy profile is specified, it does not describe the strategy which each player will choose in the situation of social interaction.

Let $\boldsymbol{R}^N = (R_1, R_2, ..., R_n)$ be the profile of individual preference orderings on the set of consequential outcomes. Then the pair $(\Theta, \boldsymbol{R}^N)$ is a fully-fledged *game*, which describes not only the possibility of strategic choices which are open for each player and the outcome to be associated with each strategy profile, but also the underlying motivations which propel each player to choose his admissible strategy in the situation of social interaction. To proceed from this *description* of strategic social interaction to the *prediction* on the strategy profile which will be realized as a result of social interaction, however, we further need an *equilibrium notion*, say ε, prevailing in the society. Given the equilibrium notion ε, a strategy profile $\boldsymbol{m}^*$ and an outcome x^* are called an *equilibrium strategy profile* and an *equilibrium outcome*, respectively, if and only if $\boldsymbol{m}^* \in \varepsilon(\Theta, \boldsymbol{R}^N)$ and $x^* \in g(\varepsilon(\Theta, \boldsymbol{R}^N))$ hold true, where $\varepsilon(\Theta, \boldsymbol{R}^N)$ stands for the set of equilibrium strategy profiles and $g(\varepsilon(\Theta, \boldsymbol{R}^N)) := \{g(\boldsymbol{m}^*) \mid \boldsymbol{m}^* \in \varepsilon(\Theta, \boldsymbol{R}^N)\}$. In this context, we are able to put forward an alternative game form articulation of the first sense of freedom, viz. the freedom of action in the game-theoretic social interaction.

From the point of view of each player, however, a game form is the objective description of strategic social interaction into which he happens to be cast, and he is not in the position to say anything about the structure of the game form itself. To say anything concrete about the fairness, or the lack thereof, of the game form, we need a logically prior stage in which the design of a fair game form is publicly debated and socially chosen. It is in this context of the logically prior stage of public design and social choice that we are able to present an alternative articulation of the second sense of freedom, viz. the freedom of participation in social rule-making process. This aspect of our proposal will be discussed in Section 4.

Back, then, to the freedom of action in the game-theoretic social interaction. Note that there are two aspects of this class of freedom which deserve to be carefully distinguished. In the first place, the *freedom of action in the narrow sense* means that each player is free to

choose his admissible strategy as he sees fit. In the second and wider sense, it means that each and every player is warranted of the freedom to choose his beings and doings, viz. his *functionings* in the sense of Sen (1980; 1985a; 1985b; 1985c; 1993) to pursue the life which he chooses on deliberation.[8] This wider sense of the freedom of action, which Sen (1985b) christened the *well-being freedom*, is important enough to warrant a precise analytical formulation.

To lend concreteness to our exposition, consider a simple production economy consisting of n ($2 \leq n < +4$) individuals. Let $N = \{1, 2, ..., n\}$ denote the set of individuals. Only one good $y \in \mathbb{R}_+$ is produced from one input, viz. labour, where $\mathbb{R}_+$ denotes the set of non-negative real numbers. The production function $\pi : \mathbb{R}_+^n \to \mathbb{R}_+$ maps each vector of labour inputs $\boldsymbol{x} = (x_1, x_2, ..., x_n) \in \mathbb{R}_+^n$ into an output $\pi(\boldsymbol{x}) = y \in \mathbb{R}_+$, where x_i for each $i \in N$ denotes i's contribution of labour time. Individuals have the same total time x^0 ($0 < x^0 < +4$) which they can use either for labour, or for leisure. Individual i's consumption vector is denoted by $\boldsymbol{z}_i = (l_i, y_i) \in [0, x^0] \times \mathbb{R}_+$, where $l_i = x^0 - x_i$ denotes his leisure, and y_i denotes his output share. Assume that there are m ($2 \leq m < +4$) types of functioning in the society, which are commonly regarded to be relevant from the viewpoint of well-beings. Let $\boldsymbol{C} = (C_1, C_2, ..., C_n)$ denote the profile of individual capability correspondences, where $C_i : [0, x^0] \times \mathbb{R}_+ \to\to \mathbb{R}_+^m$ for each individual $i \in N$ denotes a correspondence which describes his ability to utilize the consumption vector to attain various functioning vectors. Thus, for any given consumption vector $\boldsymbol{z}_i \in [0, x^0] \times \mathbb{R}_+$ for each individual $i \in N$, he can choose freely any functioning vector in the set $C_i(\boldsymbol{z}_i) \subset \mathbb{R}_+^m$. Throughout the rest of this paper, we assume that the production function π and the profile $\boldsymbol{C}$ of capability correspondences are given from outside and are fixed.

Given an *objective economic environment* $\boldsymbol{e} := (\pi, \boldsymbol{C})$, let $Z(\boldsymbol{e})$ be the set of all feasible resource allocations under $\boldsymbol{e}$, which is defined as follows:

$$(1) \qquad Z(\boldsymbol{e}) = \{\boldsymbol{z} = (\boldsymbol{z}_1, \boldsymbol{z}_2, ..., \boldsymbol{z}_n) \mid \forall i \in N : \boldsymbol{z}_i = (l_i, y_i) \in [0, x^0] \times \mathbb{R}_+ \;\&\; \sum_N y_i \leq \pi(\boldsymbol{x}), \text{ where } l_i = x^0 - x_i \text{ and } \boldsymbol{x} = (x_1, x_2, \ldots, x_n)\}.$$

To capture the freedom of action in the narrow sense, we have only to define the game form $\theta = (N, \boldsymbol{M}, g)$ by $M_i = [0, x^0]$ for each $i \in N$ and $g : \boldsymbol{M} \to Z(\boldsymbol{e})$. Then we may assert that the freedom of action in the narrow sense is fully warranted by allowing each individual to choose without external constraints whichever labour-leisure portfolio he sees fit.

We are now ready to describe the freedom of action in the wide sense, viz. well-being freedom in the sense of Sen, within our conceptual framework. Given the game form θ, the equilibrium notion ε prevailing in the society, an objective economic environment $\boldsymbol{e} = (\pi, \boldsymbol{C})$, and a profile $\boldsymbol{R}^N = (R_1, R_2, \ldots, R_n)$ of individual preference orderings over $Z(\boldsymbol{e})$, let $g_i(\boldsymbol{m}^*)$ be the consumption vector of individual $i \in N$ when an equilibrium allocation $\boldsymbol{z} = g(\boldsymbol{m}^*)$ is realized through the equilibrium strategy profile $\boldsymbol{m}^* \in \varepsilon(\theta, \boldsymbol{R}^N)$. Define $g_i(\varepsilon(\theta, \boldsymbol{R}^N)) := \{g_i(\boldsymbol{m}^*) \mid \boldsymbol{m}^* \in \varepsilon(\theta, \boldsymbol{R}^N)\}$. Then we may say that i is assured of the freedom of access to the set $C_i(g_i(\varepsilon(\theta, \boldsymbol{R}^N)))$ of functioning vectors, viz. *capability* in the sense of Sen.

Note that the extent of well-being freedom of each and every individual hinges squarely on

(1) the objective economic environment $\boldsymbol{e}$ and the profile $\boldsymbol{R}^N$ of individual preference orderings;

(2) the equilibrium notion ε prevailing in the society; and

(3) the game form θ.

Among these crucial factors, which determine the extent of well-being freedom in the liberal social order, only the game form is an institutional framework which is essentially due to deliberate human design. In order to deepen our analysis of well-being freedom à la Sen, therefore, we must now proceed to the analysis of public deliberation processes for public design and social choice of the fair game form.

4. An Alternative Articulation of Freedom of Participation

Sen's criticism against traditional economic theory is multifaceted, but one of his crucial points is that the traditional theory has *too little* structure [Sen (1977; 1982, p.99)]:

> A person is given *one* preference ordering, and as and when the need arises this is supposed to reflect his interests, represent his welfare, summarize his idea of what should be done, and describe his actual choices and behaviour. Can one preference ordering do all these things? A person thus described may be 'rational' in the limited sense of revealing no inconsistencies in his choice behaviour, but if he has no use for these distinctions between quite different concepts, he must be a bit of a fool. The *purely* economic man is indeed close to being a social moron. Economic theory has been much preoccupied with this rational fool decked in the glory of his *one* all-purpose preference ordering. To make room for the different concepts related to his behaviour we need a more elaborate structure.

Recollect that our game form articulation of individual freedom of action was baseed on the profile $\boldsymbol{R}^N = (R_1, R_2, ..., R_n)$ of individual preference orderings defined on the set of consequential outcomes $Z(\boldsymbol{e})$.[9] Since the role played by these preference orderings is to guide individuals in their choice of admissible strategies in the game-theoretic social interaction, these preference orderings may well be construed as their *subjective preferences* in the sense of John Harsanyi (1955), viz. preferences which express what they would regard as good from their own personal points of view. However, in the context of public design and social choice of universal set of rules in the game-theoretic social interaction, viz. game form, we require quite different and elaborate structure concerning individual preferences to be taken into consideration by social rule-making process as the informational basis thereof. There are at least two reasons for invoking such an elaborate preference structure.

In the first place, these preferences should pay attention not only to the consequential outcomes to be generated through the instrumental use of the game form, but also to the intrinsic value of the game form itself. One need not be a devoted non-consequentialist to recognize the intrinsic value of procedures along with their instrumental values. Indeed, "an individual may have a positive preference for achieving a given distribution through the free market mechanism over achieving the same distribution through rationing by the government. If the decision process is interpreted broadly to include the whole socio-psychological climate in which social decisions are made, the reality and importance of such preferences, as opposed to preferences about the distributions of goods, are obvious [Arrow (1951, p.90)]." Our analytical framework should be elaborate enough to find a room for accommodating such intrinsic value of the game forms along with their instrumental value.

In the second place, freedom accompanies responsibility, and the freedom of participation in social rule-making processes seems to accompany the responsibility of its own.[10] The rule to be publicly designed and socially chosen should work as a universal code of behaviour for individuals in their game-theoretic social interaction. Thus, those who are endowed with the right to participate in the social rule-making process should base their opinions not on the prospective personal benefits which would accrue to them if the rule could be tailored to serve to their personal needs and desires, but on the impersonal procedural features such as the equal treatment of equals, impartiality, transparency, accountability, verifiability, informational efficiency, and privacy-respecting. To put it somewhat differently, it is the collaborative responsibility of those who participate in social rule-making process to form and express their deliberate *individual public judgements*, rather than *subjective individual preferences* of their own.

The first step in formulating the social decision procedure for public decisions is to give analytical substance to what we have just christened the individual public judgements. Let

Θ stand for the set of all game forms with the same set of players N such that, for each $\theta \in \Theta$ and an equilibrium notion ε prevailing in the society, $g(\varepsilon(\theta, \mathbf{R}^N)) \subseteq Z(\mathbf{e})$ for each admissible profile $\mathbf{R}^N = (R_1, R_2, ..., R_n)$ of individual preference orderings.

A pair $(\mathbf{z}, \theta) \in Z(\mathbf{e}) \times \Theta$ is called an *extended alternative*, which signifies that an allocation $\mathbf{z} \in Z(\mathbf{e})$ is attained through a game form $\theta = (N, \mathbf{M}, g) \in \Theta$. In particular, given $\mathbf{e}$ and $\mathbf{R}^N = (R_1, R_2, ..., R_n)$, an extended alternative $(\mathbf{z}, \theta)$ is said to be *attainable* if and only if, given the equilibrium notion ε prevailing in the society, $\mathbf{z}$ can be realized through θ in the sense that $\mathbf{z} \in g(\varepsilon(\theta, \mathbf{R}^N))$. The set of all attainable extended alternatives, given $\mathbf{e}$, $\mathbf{R}^N$ and ε, is denoted by $\mathbf{A}(\mathbf{e}, \mathbf{R}^N: \varepsilon)$.

We are now ready to define the crucial concept of an *extended ordering* Q on the space of attainable extended alternatives, viz. $\mathbf{A}(\mathbf{e}, \mathbf{R}^N: \varepsilon)$, where $(\mathbf{z}^1, \theta^1) Q (\mathbf{z}^2, \theta^2)$ holds for any $(\mathbf{z}^1, \theta^1), (\mathbf{z}^2, \theta^2) \in \mathbf{A}(\mathbf{e}, \mathbf{R}^N: \varepsilon)$ if and only if realizing a feasible allocation $\mathbf{z}^1$ through a game form θ^1 is judged at least as good as realizing an alternative feasible allocation $\mathbf{z}^2$ through an alternative game form θ^2 according to the public judgements expressed by Q.

The concept of an extended ordering is flexible enough to accommodate the *extreme consequentialism* to the effect that $(\mathbf{z}, \theta^1) I(Q) (\mathbf{z}, \theta^2)$ holds true for any $(\mathbf{z}, \theta^1), (\mathbf{z}, \theta^2) \in \mathbf{A}(\mathbf{e}, \mathbf{R}^N: \varepsilon)$, where $I(Q)$ is the indifference relation corresponding to Q.[11] In another words, an extreme consequentialist judges two attainable extended alternatives to be indifferent with each other as far as their consequential outcomes remain the same. Likewise, our concept of an extended ordering can also accommodate the *extreme non-consequentialism* in the sense that $(\mathbf{z}^1, \theta) I(Q) (\mathbf{z}^2, \theta)$ holds true for any $(\mathbf{z}^1, \theta), (\mathbf{z}^2, \theta) \in \mathbf{A}(\mathbf{e}, \mathbf{R}^N: \varepsilon)$.[12] In another words, extreme non-consequentialist judges two feasible extended alternatives to be indifferent with each other as far as the procedures which lie behind their consequential outcomes remain the same. Barring these polar extreme cases, however, any extended ordering represents the public judgements which are consequence-sensitive as well as procedure-sensitive.

Since individual public judgements must provide the informational basis in the stage of public rule-making, where all possible profiles of individual preference orderings must be taken into consideration, we introduce the concept of *individual public judgements function*. For each $i \in N$, let ζ_i be a function which is defined on $\tilde{a}$, where $\tilde{a}$ stands for the class of all logically possible profiles of individual preference orderings, and takes on values in the space of individual public judgements on the set $\mathbf{A}(\mathbf{e}, \mathbf{R}^N: \varepsilon)$ of attainable extended alternatives: For each $i \in N$,

(2) $Q_i = \zeta_i(\boldsymbol{R}^N) \; d \; \boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon) \; H \; \boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon)$ for all $\boldsymbol{R}^N \; 0 \; \tilde{a}$,

where Q_i satisfies the requirements of being an ordering, viz. completeness and transitivity. Given the profile of individual public judgements functions $\zeta^N = (\zeta_1, \zeta_2, ..., \zeta_n)$, the *public rule-making procedure*, to be denoted by Ψ, should aggregate this profile into the *social public judgements function*: $\zeta = \Psi(\zeta^N)$. Thus, for each actual expression of the profile $\boldsymbol{R}^N$ of individual preference orderings, $\zeta(\boldsymbol{R}^N)$ stands for the social public judgements on the set of attainable extended alternatives $\boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon)$, which is based on the social amalgamation of individual public judgements.

Putting all pieces together, we are now in the position to describe the *modus operandi* of the liberal social order we are envisaging in this paper.

Step I: Individuals gather together to deliberate on the institutional set of rules that should be universally applied in the stage of the game-theoretic social interaction. They form their individual public judgements functions over the set of attainable extended alternatives. The profile $\zeta^N = (\zeta_1, \zeta_2, ..., \zeta_n)$ thus formed is socially amalgamated through public deliberations into a social public judgements function $\zeta = \Psi(\zeta^N)$, where Ψ stands for the public rule-making procedure.

Step II: Once a profile $\boldsymbol{R}^N$ of individual preference orderings is realized, the socially chosen set of rules, viz. game form, may be identified as follows. Let $\Gamma(\boldsymbol{R}^N)$ be the set of all attainable extended alternatives at $\boldsymbol{R}^N$, which are socially judged as at least as good as any other attainable extended alternatives, where the evaluative judgements are made in accordance with the social public judgements $\zeta(\boldsymbol{R}^N)$. This can be formally defined as follows:

(3) $\Gamma(\boldsymbol{R}^N) = \{(\boldsymbol{z}^*, \theta^*) \; 0 \; \boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon) \mid \acute{u}(\boldsymbol{z}, \theta) \; 0 \; \boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon):$

$(\boldsymbol{z}^*, \theta^*) \zeta(\boldsymbol{R}^N)(\boldsymbol{z}, \theta)$, where $\zeta = \Psi(\zeta^N)$ $\}$.

Then the set $\Omega(\boldsymbol{R}^N)$ of game forms which are judged socially best at $\boldsymbol{R}^N$ can be defined by:

(4) $\Omega(\boldsymbol{R}^N) = \{\theta^* \; 0 \; \Theta \mid \tilde{o} \; \boldsymbol{z}^* \; 0 \; Z(\boldsymbol{e}) : (\boldsymbol{z}^*, \theta^*) \; 0 \; \Gamma(\boldsymbol{R}^N)\}$.

Step III: Once the socially best game form is chosen and proclaimed to be the basic set of rules which is universally applied to all individuals without discrimination, individuals in the society are equally endowed with the freedom of action in the game-theoretic social interaction. To be more specific, if the socially chosen and proclaimed game form is $\theta^* = (N, \boldsymbol{M}^*, g^*)$ when the realized profile of individual preference orderings is $\boldsymbol{R}^N = (R_1, R_2, ..., R_n)$, then individual $i \in N$ is assured of a full freedom of choice over his set M_i^* of admissible strategies. Furthermore, he is fully endowed with a full freedom of access, viz. well-being freedom, to his capability $C_i(g_i^*(\varepsilon(\theta^*, \boldsymbol{R}^N)))$. This is the basic scenario of the *modus operandi* of the liberal social order we are envisageing. ||

There are four remarks which we think are relevant in clarifying our conceptual framework.

In the first place, it would be rather awkward if the publicly designed, socially chosen, and universally proclaimed game form $\theta^* = (N, \boldsymbol{M}^*, g^*) \in \Theta$ should have to be switched to another game form, say $\theta^{**} = (N, \boldsymbol{M}^{**}, g^{**}) \in \Theta$, whenever there were any change in the profile $\boldsymbol{R}^N$ of individual preference orderings. Therefore, an important research agenda seems to be to locate a set of conditions under which we can ensure the existence of a public rule-making procedure Ψ such that

$$(5) \qquad 1\{\Omega(\boldsymbol{R}^N) \mid \boldsymbol{R}^N \in \tilde{a}\} \neq \emptyset$$

is guaranteed. If (5) is satisfied, then there exists a socially best game form, say θ^{**}, which can serve as the universally applicable set of rules which is valid for all profile $\boldsymbol{R}^N$ as long as the objective economic environment $\boldsymbol{e}$ remains the same.

In the second place, it may well be wondered where exactly the capability approach in the analysis of well-being freedom plays an active role in our conceptual framework. It plays a crucial role in specifying the conditions to be satisfied by the social public judgements function, which is obtained from the profile of individual public judgements functions through the application of the public rule-making procedure. A concrete example, which was worked out in full analytical details in a paper by Reiko Gotoh, Kotaro Suzumura and Naoki Yoshihara (2000), is the Rawlsian public judgements function which is characterized by the following two conditions. To begin with, let us say that a game form $\theta = (N, \boldsymbol{M}, g)$ is *labour sovereign* if, for all $i \in N$, all $x_i \in [0, x^0]$ and all $\boldsymbol{m}_{-i} \in M_{-i}$, where $\boldsymbol{m}_{-i} = (m_1, ..., m_{i-1}, m_{i+1}, ..., m_n)$ and $M_{-i} := M_1 \times \cdots \times M_{i-1} \times M_{i+1} \times \cdots \times M_n$, there exists a strategy for i, say $m_i \in M_i$, such that

$g_{i1}(m_i; \boldsymbol{m}_{-i}) = x^0 - x_i$.[13] Let Θ_{LS} be the set of all labour sovereign game forms. Then the first condition we impose on the public judgements function can be given as follows:

Priority of Labour Sovereignty

For all $\theta^1 \in \Theta_{LS}$ and all $\theta^2 \in \Theta \setminus \Theta_{LS}$, we must have $(\boldsymbol{z}^1, \theta^1) P(\zeta(\boldsymbol{R}^N))(\boldsymbol{z}^2, \theta^2)$ for all $(\boldsymbol{z}^1, \theta^1), (\boldsymbol{z}^2, \theta^2) \in \boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon)$.

Since the labour sovereign game form enables each individual to secure the labour/leisure portfolio as he sees fit, this condition seems to be an attractive feature of this game form from the viewpoint of the Rawlsian principle of equal basic liberties. The second condition we impose on the public judgements function is meant to capture the essence of the Rawlsian difference principle in the Sen space of functionings rather than in the Rawls space of social primary goods. Let us define the crucial concept of common capability by

(6) $CC(\boldsymbol{z}) := \bigcap \{C_i(z_i) \mid i \in N\}$, where $\boldsymbol{z} = (z_1, z_2, \ldots, z_n) \in \boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon)$.

We are now in the position to introduce the following:

Consistency with Capability Maximin

For all $(\boldsymbol{z}^1, \theta^1), (\boldsymbol{z}^2, \theta^2) \in \boldsymbol{A}(\boldsymbol{e}, \boldsymbol{R}^N: \varepsilon)$, where either $\theta^1 \in \Theta_{LS}$ or $\theta^2 \cup \Theta_{LS}$,

(i) $CC(\boldsymbol{z}^1) \supseteq CC(\boldsymbol{z}^2)$ implies $(\boldsymbol{z}^1, \theta^1) \zeta(\boldsymbol{R}^N)(\boldsymbol{z}^2, \theta^2)$; and

(ii) $CC(\boldsymbol{z}^1) \supseteq\supseteq CC(\boldsymbol{z}^2)$ implies $(\boldsymbol{z}^1, \theta^1) P(\zeta(\boldsymbol{R}^N))(\boldsymbol{z}^2, \theta^2)$.

Since the common capability can be interpreted as the minimal capability to which even the least favoured individual, whoever he may happen to be, is assured to have free and equal access, the Rawlsian flavor of this condition seems to be substantial. We will say that a public judgements function is *Rawlsian* if and only if it satisfies the Priority of Labor Sovereignty and the Consistency with Capability Maximin. The research agenda is now to locate a set of conditions under which there exists a "reasonanle" public rule-making procedure Ψ such that the social public judgements function generated by Ψ is Rawlsian in the specified sense.[14]

In the third place, in sharp contrast with the Arrow-Sen theory of social choice which focuses on the social choice of consequential outcomes, our scenario of the liberal social order assigns quite different role to the public rule-making procedure. Indeed, what is to be socially chosen is the basic set of rules of the game, and the consequential outcomes are determined in

the decentralized fashon through the game-theoretic social interaction among individuals under the publicly designed, socially chosen, and universally promulgated basic set of rules of the game. In the context of the theoretical articulation of the liberal social order, it seems to us that this two stage framework has much to recommend itself.

In the fourth place, the interest of our two stage framework lies not just in its theoretical curiosity, but also in its natural correspondence with some social choice procedures actually in use in domestic as well as international arena. Apt concrete examples abound, but suffice it to quote an instance from competition law and competition policy in the domestic arena. The right to participate in the fair game of competition, thereby trying one's own life chance at one's own risk, is a valuable entitlement, and competition policy authorities are entrusted with the task of ensuring that this entitlement is open to all willing and elligible agents by preparing fair and transparent competitive field. To cope with this crucial task, competition policy authorities legislate a set of competition laws through public design and social choice, and monitor and enforce, if necessary, sincere observance of the fair rule of competition in the market place. Put otherwise, the task of competition policy authorities is not to arrive at any social choice of consequential outcomes, but to prepare the fair competitive field in which decentralized competition will spontaneously discover consequential outcomes through individual experiments. This seems to fit naturally in the two stage framework we have tried to develop in this paper.

5. Constitutional Democracy and Procedural Justice

As an auxiliary step in crystallizing the implications of our two stage framework from the viewpoint of institutional design and social choice, let us remind ourselves of the fact that there exist two contrasting approaches to the fairness of resource allocation rules. The first approach starts from some *outcome morality* that enables us to define the concept of fairness in the space of consequential outcomes, viz. allocations, and derive the concept of fair allocation rules therefrom: an allocation rule is fair if it can bring about fair outcomes for each economic environment.[15] In this approach, the outcome morality is defined independently of, and prior to the allocation rule.[16] It should be clear that this first approach bestows on the allocation rules only the instrumental value in materailizing the presupposed outcome morality. It should also be clear that most if not all preceding contributions to fair allocation rules in welfare economics and social choice theory are based on this first approach. The second approach reverses the order of logical inference altogether, and regards an allocation to be a fair consequential outcome if it is brought about through the intermediation of a fair allocation rule. In this approach, it is the procedural fairness of allocation rules that is logically prior to the fairness of allocations, and the concept of fair allocations is made subordinate to the fairness of allocation rules.[17] It should be clear that this second approach bestows on allocation rules the

intrinsic value of their own, which is then imputed to the outcomes thereby generated. Needless to say, the second approach to fair allocation rules is empty of contents until and unless we can define the fairness of allocation rules without invoking anything like an outcome morality. This is the crucial point of bifurcation among alternative theories of public decision-making procedures.

Recollect that Rawls's (1971) theory of justice, which is widely regarded as a representative as well as most influential attempt in substantiating the viewpoint of pure procedural approach, hinges on his expectation that there should exist an unanimous agreement among individuals on the two principles of justice in the primordial stage of rule selection behind the veil of ignorance. Quite to the contrary, our proposed two stage approach does not assume unanimity among individuals who participate in the public rule-making process, neither do we exclude due considerations of the consequential outcomes generated by the allocation rule to be publicly designed and socially chosen in the first rule-making stage. In other words, we recognize not only the importance of the intrinsic value of procedures in conferring the agency freedom to individuals, but also the instrumental value of procedures in conferring the well-being freedom to individuals. Instread of the Rawlsian unanimity, what we require in our theoretical scenario are two-fold. In the first place, we require that the individual public judgements, on the basis of which the public rule-making procedure should operate to identify the socially chosen allocation rule, should be impersonally and reflectively formed, responsibly expressed, and flexibly adjusted and/or corrected through the public deliberation process. In the second place, the public rule-making procedure itself should be duly constrained by some axioms of procedural justice such as the equal conferment of the agency freedom of participation, as well as by some axioms of substantive justice such as the equal conferment of the well-being freedom. On the basis of these two requirements of the equal conferment of the two senses of freedom, one procedural in nature and the other substantive in nature, our two stage articulation of the public rule-making process turns out to be a crystallization of the concept of *constitutional democracy*.

The basic standpoint of constitutional democracy seems to have been best stated by von Hayek (1960, p.181):

> Constitutionalism means that all power rests on the understanding that it will be exercised according to commonly accepted principles, that the persons on whom power is conferred are selected because it is thought that they are most likely to do what is right, not in order that whatever they do should be right. It rests, in the last resort, on the understanding that power is ultimately not a physical fact but a state of opinion which makes people obey.

Although we are in full agreement with von Hayek as long as this basic perception of constitutionalism goes, there is a crucial difference between us concerning the value to be attached to constitutional democracy. The reason why von Hayek values democracy is not for any intrinsic value thereof, but for its instrumental value in implementing spontaneous order generated through individual experiments into the basic set of rules through majority decision, thereby negating the existing set of rules, as well as those who are geting personal benefits from the continuation of the status quo that is turning out to be a straightjacket constraining innovative spontaneous experiments. In contrast, we recognize not only the instrumental value of constitutional democracy, but also the intrinsic value thereof, in that it is a unique social decision procedure which embodies the agency freedom of participation in public rule-making process. Even though we are both supporting constituinal democracy as a public rule-making process, the reasons behind our respective support seem to be rather different.

6. Concluding Remarks

Let us conclude by summarizing the main messages of this paper.

(1) In the liberal social order, there are two senses of freedom that are of crucial importance, viz. the *freedom of action in social interaction*, and the *freedom of participation in social rule-making process*.

(2) The first sense of freedom, viz. the freedom of action in social interaction, can be subdivided into the *freedom of action in the narrow sense*, viz. freedom of choosing one's admissible strategies in the game-theoretic social interaction, and the *well-being freedom* in the sense of Sen. The second sense of freedom, viz. the freedom of participation in social rule-making process, is tightly connected with the *agency freedom* in the sense of Sen. Both freedoms are of crucial importance as the social basis of self respect of individuals in the liberal social order.

(3) It was Berlin who warned us that these two senses of freedom may well conflict with each other. Sen's *impossibility of a Paretian liberal* demonstrated that this conflict is not just possible, but is logically inevitable if we articulate these two senses of freedom in terms of the social choice framework à la Arrow, where these two senses of freedom are formulated as two separate axioms to be imposed on a par with each other on the admissible class of collective choice rules.

(4) An alternative articulation of the two senses of freedom can be developed, where the crucial role is played by the concepts of *game form*, *game*, and the *design of a fair game form*. In this conceptual framework, the freedom of action in the narrow sense is warranted by allowing each individual to choose freely any one of his admissible strategy in the game theoretic social interaction; the well-being freedom is warranted by allowing each individual to have free access to the set of *functionings*, viz. *capability*, corresponding to the equilibrium outcome of the game;

and the agency freedom of participation in public rule-making process is warranted by allowing each individual to form and express his individual public judgements, which are then to be aggregated into the social public judgements. The social choice of a game form, viz. a set of universally applicable rules of social interaction, is made in full accordance of these agreed-on social public judgements.

(5) Our two stage framework of public decision-making process can be interpreted as a formal way of articulating the essence of constitutional democracy. Unlike von Hayek, for whom the value of constitutional democracy lies mainly in its instrumental role in implementing the newly evolved spontaneous order, it is our belief that the constitutional democracy is not only of value for its instrumental role, but also important for its intrinsic value of embodying the agency freedom of participation in the public rule-making process.

The proposed analytical scenario of *constitutionaldemocracy* is an impure mixture of *constructivist rationalism*, on the one hand, and *evolutionary rationalism*, on the other, since we are bringing what is spontaneously evolved through individual experiments into the stage of public design and social choice of a new institutional set of rules. It is also an impure mixture of *perfect procedural fairness*, on the one hand, and *pure procedural fairness*, on the other, since the public judgements to be formed through public deliberations should pay due attention to the intrinsic value of procedures in conferring *agency freedom* to individuals as well as to the instrumental value of procedures in expanding *well-being freedom* of individuals. In view of this structural characteristics of the proposed analytical scenario, the best way to conclude this paper seems to be to cite the following passage from Sen (1970a, p.200): “Both from the point of view of institutions as well as that of frameworks of thought, the impure systems would appear to be relevant. ... [W]hile purity is an uncomplicated virtue for olive oil, sea air, and heroines of folk tales, it is not so for systems of collective choice.”

Footnotes

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[1] See also Robert Sugden (1989).

[2] For more detailed overview and evaluation of the huge literature, which followed Sen's original contribution, those who are interested are referred to Sen (1992) and Suzumura (1991; 1996; 2001b).

[3] The Arrow framework and the Sen framework can be linked with each other through the assumption of *collective rationality*. Given a choice function C on K, suppose that there exists a preference relation R such that, for every $S \in K$, we have:

(1*) $C(S) = \{ x^* \in S \mid (x^*, x) \in R \text{ holds for all } x \in S \}$,

which means that the choice described by $C(S)$ can be construed as that of optimization of the underlying preference relation R over $S \in K$. If (1*) holds for the given (C, K), we say that the choice function C on K is a *rational choice function*, and R is the *rationalization* of C. If the rationalization R satisfies the axioms of an ordering to be stated in footnote 4 below, the choice function C on K is said to be *full rational*. If an additional assumption of full collective rationality is made, the Sen framework can be connected to the Arrow framework through (1*), where $C = f^*(\mathbf{R}^N)$ and $R = f(\mathbf{R}^N)$. Without this additional assumption, however, the Sen framework is conceptually much wider than the Arrow framework. For more details about the theory of rational choice functions, see, among many others, Richter (1971), Sen (1971) and

Suzumura (1983, Chapter 1).

[4] A binary relation R on X is *complete* if and only if $(x, y) \in R$ or $(y, x) \in R$ holds for all $x, y \in X$, whereas R is *transitive* if and only if $(x, y) \in R$ and $(y, z) \in R$ imply $(x, z) \in R$ for all $x, y, z \in X$. R is an *ordering* if and only if it satisfies completeness as well as transitivity.

[5] For any binary relation R, $P(R)$ denotes the *asymmetricpart* of R, viz. $(x, y) \in P(R)$ if and only if $(x, y) \in R$ and $(y, x) \notin R$.

[6] See Suzumura (1983, Chapter 7; 1996) for more details on this and related points concerning the impossibility of a Paretian liberal.

[7] In an early attempt to find a way to resolve Sen's impossibility theorem, Robert Nozick (1974, p.166) made the following important observation: "Individual rights are co-possible; each person may exercise his rights as he chooses. The exercise of these rights fixes some features of the world. Within the constraints of these fixed features, a choice may be made by a social choice mechanism based upon a social ordering; if there are choices left to make! Rights do not determine a social ordering but instead set the constraints within which a social choice is to be made, by excluding certain alternatives, fixing others, and so on. ... *How else can one cope with Sen's result?"*

To the extent that Nozick tried to resolve Sen's impossibility theorem by assigning quite different role to the two senses of freedom, his proposal has something in common with what we are proposing in this paper, but the similarity ends there. Our approach in its totality is very different from Nozick's constraint view of rights, which will become clearer as our theoretical scenario unfolds.

[8] According to Sen (1985a, pp.10-11), "[a] functioning is an achievement of a person: what he or she manages to do or to be. ... [It] is ... different both from (1) having goods (and the corresponding characteristics), to which it is posterior, and (2) having utility (in the form of happiness resulting from that functioning), to which it is ... prior." The *capability* of a person is the set of functioning vectors from which he is capable of choosing.

[9] Each individual being warranted of well-being freedom, viz. freedom of choice of any functioning vector from his capability $C_i(g_i(\varepsilon(\theta, \boldsymbol{R}^N)))$, we will have to introduce a judgement criterion in the space of functioning vectors, in terms of which he will make a reasoned deci-

sions on the choice of functioning vector in his capability. This is yet another arena where we need more elaborate preference structure in order to develop a fully-fledged theory of the liberal social order.

[10] Freedom of action in social interactions also accompanies the responsibility of its own, which has been extensively discussed in the recent literature of *responsibility and compensation.* See an informative survey by Marc Fleurbaey and Francois Maniquet (2002).

[11] An illuminating and witful example of an extreme non-consequentialist preference ordering was suggested by Joseph Schumpeter (1942, pp.190-191): "[C]onvinced socialists will derive satisfaction from the mere fact of living in a socialist society. Socialist bread may well taste sweeter to them than capitalist bread, and it would do so even if they find mice in it."

[12] For any binary relation R, $I(R)$ denotes the *symmetric part* of R, viz. $(x, y) \in I(R)$ holds if and only if $(x, y) \in R$ and $(y, x) \in R$ hold.

[13] $g_{i1}(m_i; \boldsymbol{m}_{-i})$ denotes the leisure component of i's consumption vector $g_i(m_i: \boldsymbol{m}_{-i})$.

[14] Gotoh, Suzumura and Yoshihara (2000) also identified conditions under which the crucial property (5) is satisfied by the essentially Rawlsian public rule-making procedure.

[15] Let μ stand for the prespecified outcome morality, which enables us to identify the set of fair allocations $\mu(\boldsymbol{R}^N) \subseteq Z(\boldsymbol{e})$ for any profile $\boldsymbol{R}^N \in \tilde{A}$. Then a game form $\theta = (N, \boldsymbol{M}, g) \in \Theta$ is a fair allocation rule if and only if $g(\varepsilon(\theta, \boldsymbol{R}^N)) \subseteq \mu(\boldsymbol{R}^N)$ holds for any $\boldsymbol{R}^N \in \tilde{A}$.

[16] In the terminology of John Rawls (1971, p.85), this first approach seems to embody the standpoint of *perfect procedural justice*: "First, there is an independent criterion for what is a fair division, a criterion defined separately from and prior to the procedure which is to be followed. And, second, it is possible to derive a procedure that is sure to give the desired outcome."

[17] This second approach seems to embody the standpoint of *pure procedural justice* in the sense of Rawls (1971, p.86): "[P]ure procedural justice obtains when there is no independent criterion for the right result: instead there is a correct or fair procedure such that the outcome is

likewise correct or fair, whatever it is, provided that the procedure has been properly followed."

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