

THE POSSIBILITY OF A COASIAN LIBERAL: A SOLUTION FOR A TRAGEDY?

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ABSTRACT. The paper compares the Sen's paradox on the Paretian liberal (1970) with the standard version of the Coase theorem (1960). We formulate some definitions of right and externality which show a possibility result for a Paretian Liberal by applying the Coase Theorem. Then we point out that a Paretian Liberal shows also the conditions for the impossibility result of a Coasian Liberal.

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"Zeus on Olympus dispenses many things.

Gods often contradict our fondest expectations.

What we anticipate does not come to pass.

What we don't expect some God finds a way to make it happen"

EURIPIDES, Medea

1. INTRODUCTION

This paper compares the Sen's paradox on the Paretian liberal (1970) and the Coase theorem (1960). We show that if we agree with Coase theorem we have to deny the Sen's Paradox: in fact, we investigate the possibility for a Paretian Liberal by applying the Coase Theorem.

Sen (1970) argues that "*in a very basic sense liberal values conflict with the Pareto principle. The well-known consequence of his paradox is that "if someone does have certain liberal values, then he may have to eschew his adherence to Pareto optimality"*. Liberal values are there defined as personal liberty over certain matters in which each person should be free to decide what should happen, no matter what others think, so that the choice of that person over that matters must be taken to be the better for the society as a whole. Nevertheless, as Sen (1970, 1976) has shown, trying to link individual liberties with the Pareto principle produces cyclical social preferences. Since defending individual liberty on the 'protected sphere' seems quite reasonable, Sen argues that the Pareto principle might not always reveal a robust normative criterion. However, we think that the impossibility of a Paretian Liberal is built over a very restricted idea of rights: rights are defined as the possibility of an individual to choose among pair of alternatives, independently of others' choices (or preferences), which, however, still persist and may affect the real set of options. Roughly speaking, the very common idea of a right is quite different (see e.g. Binmore, (1994)). A right is something that assigns to the holder a liberty that is preserved from others' interference. For instance, in the case of

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property rights, a (property) right of agent i always implies that agent j has a correlated duty to allow i to exercise her right. In a sense, a (property) right of i erases j 's (opposite) preferences over the exercise of that right. When there is a right for i , his preferences over the use of that right are all that matters in order to properly define that right. So why should one take into account j 's preferences over i 's exercise of his own right? If, in the Lady's Chatterly's Lover famous case, there is just one book and one owner, the non-owner's preferences over the use of the book simply should not matter in order to define owner's liberty over the use of the book. This should seem a paradoxical argument toward the illiberality of (property) rights. However, depicting individual rights as illiberal seems quite controversial, because a right is a socially respected convention that acts as a safeguard of holder's liberty against non-holders' interference. Moreover a right has always another feature which concerns not only with holder's liberty but also with non-holders' preferences: it gives the holder the possibility "to alienate" it according to holder's and non-holders preferences' matching (see e.g. Gibbard (1974)).

As a consequence, if i 's exercise of her right affects j 's preferences ranking, then j may ask to i to alienate her right so as to satisfy j 's preferences over i 's right exercise. When rights' exchange implies gains from trade between i and j , at least one of them will be better off after the trade. All in all, this is the well-known lesson of the Coase theorem, which says that when a claim-right over a pair of alternative social states makes possible for non-holders to reverse social preferences through rights' exchange, then it is possible to reach a Pareto outcome.

In the present paper, we show that, defining libertarian claims as claim-rights produces a possibility result for a Paretian Liberal by simply applying the Coase Theorem. This result is more than a Paretian liberal (consistency of minimal liberty and Pareto), it is a Coasian Liberal: it links minimal liberty and the Pareto principle through free market exchange. A Coasian liberal defines minimal liberty as the liberty to acquire, exert and alienate individual well-defined rights. This conclusion is reached by adopting a definition of a right which is quite different from previous formalizations. A right, in our setting, implies a corresponding set of duties that eliminates conflicting preferences over the set of choices. On the contrary, in Gibbard (1974), for example, the definition of an 'alienable right' is somehow circular since it depends on the notion of externality which in turn depends on the notion of an alienable right. We provide a definition of right which is independent of that of an externality and that represents a weaker version of the notion of *minimal liberalism* (ML^*) adopted by Sen (1970). Moreover, we notice that, as Gibbard (1974) has shown, if minimal liberties are defined as alienable right to choose over a given choices domain, then minimal liberty is consistent with the Pareto principle. Our explanation of why this is possible is provided by using the Coase theorem: given an externality, if alienable rights are well-defined (and transaction costs are zero), then parties' bargaining will produce an outcome which is Pareto-efficient, independently of initial rights' assignment. This is a complex definition of right which links together the ex-ante and the ex-post sets of choices and externalities. The intuition behind this is that I have a right to choose as long as it does not conflict with an externality which, in fact, modifies my set of choice. If this externality does not occur then the ex-ante and the ex-post set of choice are the same and social preferences reveal that right. When the externality

occurs, on the contrary, I will not have anymore a right to *freely* choose. However, what is hidden in this definition is the alienability character of my ex-ante right. The reason why, once an externality has grown, I have no rights over the ex-ante choice domain is that I am forced to alienate my original right in order to do not suffer from a *reciprocal externality*. This is exactly why, after an externality has emerged, the consequence of having a right over a pair of possible options does not hold anymore. We argue, according to the above discussion on an alienable right, that given an alienable right, others' preferences will follow the preferences of the right's holder (social preferences will follow rights) unless an externality occurs; when an externality does emerge the preferences of the right's holder will follow others' preferences by exchanging alienable rights (rights will follow social preferences).

In both cases (with and without externality), minimal liberty and Pareto principle will be consistent: when there is no externality the right's holder will reveal his right by his preference orderings which coincides with social preference orderings; when there is an externality, the right's holder will reveal his preference orderings by alienating his right, according to the Coase theorem prediction.

The rest of the paper is devoted to illustrate intuitively as well as analytically the foregoing arguments. Section 2 introduces a paradoxical example that provides an illustration of how Coase Theorem solves Sen's Paradox of Paretian Liberal, a result formally proved in section 3. Some remarks conclude the paper.

2. MORE THAN A PARADOX... A TRAGEDY

Let illustrate the conflict between liberal values and the Pareto principle by using a very simple example suggested by the famous Euripides' tragedy Medea.

The story takes place in the years just before the Trojan War (about 1300 BC). Medea, daughter of Aietes, king of Colchis left her native city to travel to Greece with her lover Jason. Medea helped Jason to take the Golden Fleece and then escaped with him. Medea was credited with knowledge of potions and witchcraft which she uses to help Jason. She not only betrayed her father, but also killed her brother. And all this, she made for Jason. Once got the Golden Fleece, Jason and Medea had settled in the Greek city of Corinth, and when the Euripides' play opens they have been living in Corinth for some time, long enough to have had two little sons, maybe six or seven years old. At this point, however, the king of Corinth, Creon, asked Jason to marry his daughter, Creusa. Creon had no sons, so he proposed a deal to Jason: marrying Creusa would have given Jason the kingdom of Corinth. Seeking the chance to become the future king, Jason agreed to marry Creusa, forgetting, in just one second, Medea.

When Medea found out that Jason was going to marry Creusa, she became quite angry: Medea thought they were 'de facto' married (the Greeks had no marriage ceremony). Desperate, she opposed unsuccessfully to Jason's decision, but the decision was taken: after all, Jason said, they were never be married since a barbarian like Medea was not entitled to marry a Greek like Jason. As a consequence, Jason invited Medea to accept his decision and to leave Corinth and their sons with him. At that point Medea got even more angry than she was before. She made a beautiful magic dress for Creusa, and sent her sons to bring it to Creusa. When Creusa dressed it, though, it suddenly turned into fire and burned her up together with the royal palace. But thing went even worst: Medea also killed her sons: if she couldn't

have them, couldn't either. The tragedy then explodes with all its sadness: Jason and Medea lose everything in one shot: the glory, the family, the love.

Let us try to understand why Jason and Medea were not able to avoid such bad consequences of their actions at the very beginning of the story.

We have here three social states:

- romantic choice, R : Jason refuses the proposal of king Creon and remains with Medea and his sons;
- opportunistic choice, O : Jason accepts to marry Creusa and to leave Medea;
- tragic choice, T : Medea's vengeance against Jason's marriage.

We have also the choices available to Jason and Medea:

- J J has to choose between the romantic and the opportunistic choice, i.e. between remaining with Medea or marrying the daughter of the king;
- M M has to choose between to retaliate, with her murderous revenge, or not to retaliate notwithstanding Jason decided to abandon his family for marrying Creusa.

Let us assume the following preference orderings denoted as \succ :

- (1) for agent J , $O \succ R$ (read O preferred to R),
 (2) for agent M , $T \succ O$.

Since the actions of Medea are strictly dependent on the choice of Jason, we can assume that Medea would not act if Jason would have decided to remain with her. So we can write the following preference ordering for Medea, $R \succ T \succ O$.

Now let us assume that Jason ignores the tremendous project of Medea (i.e. he ignores that a state of the world like T is possible), being quite confident that she will accept his decision to marry the daughter of the king, Creusa. Being rational, Jason will thus marry Creusa, since $O \succ R$. However, at that point, since for Medea $T \succ O$, a tragedy would happen and a state of the world like T will close the scene. The moral is that Jason, by ignoring a possible relevant state of the world, has made a decision not consistent with a 'complete' list of possible contingencies or externalities coming from his choice: his ex-ante decisions were made in a world with zero-externalities (i.e. in a world where the proud Medea simply accomplish Jason's decision). However the ex-post consequences of his choices, if expected ex-ante, would probably have induced Jason to remain with Medea rather than marrying the daughter of the king, since for him $O \succ R \succ T$. What Jason regrets, in fact, is not having applied the Pareto principle: the choice of the state of the world which both Jason and Medea prefer to the worst outcome: $R \succ T$. The Pareto principle here should be viewed as a Deus ex-machina rule that would have avoided the tragedy. The externality produced by Medea's action on the initial Jason's domain choice would have limited the ex-ante liberty of Jason so as to avoid ex-post the social worst outcome. Thus we should ask: is the emergence of an ex-post externality really a limitation of Jason's ex-ante liberty? Does knowing ex-ante all the possible ex-post externalities reduces Jason's liberty either it gives Jason a more complete choice domain over which exerting his liberty? The rest of the paper is devoted to answer to such questions.

If we think that Medea's action is a limitation of Jason's liberty to marry (which is a typical personal matter), we should have a world in which ex-post consequences do not affect ex-ante Jason's choice $O \succ R$ (i.e. a non-regret assumption over Jason's behavior). But this is not the case here, since for Jason $R \succ T$. In other

words, a limitation of Jason's liberty should regard only his ex-ante choice with respect to ex-post states of the world. If Jason knew that choosing O select a state as T (marring the daughter of the king implies a tragedy) he would probably correct his choice, and thus his (ex-post) liberty would simply imply the decision not to marry the daughter of the king. So why we should prefer ex-ante liberty to ex-post liberty, if it is the latter that is the one which (ex-post) brings to socially optimal outcomes? The tragedy here is generated by Jason's inability to take onto account ex-post externalities induced by his action. In this sense, ex-post externalities induces liberty to choose among the ex-post relevant state of the world and in this context liberty is accrued, and not reduced, if exerted over the 'true' state of the world. If we think that Medea's action limits Jason's liberty we are implicitly assuming that there is an externality which would have not changed the choice of Jason (no-regret assumption).

What is hence the relationship between liberty and externality ?

One possible answer is the following. If the emergence of an ex-post externality would not change my initial choice (no-regret assumption) but it would affect my choice domain than that externality is a limitation of my liberty. However, if given the ex-post externality, I would have changed my ex-ante choices, then ex-post choices are not limited by others' behavior, since the latter simply re-define the choice domain over which my liberty is expressed. Going back to Medea and Jason, Jason's liberty is given simply by his decision to marry or not to marry the daughter of the king. Medea's preferences do not interfere directly with this choice, but produce, according to Medea's liberty, some ex-post outcome which was simply ignored ex-ante by Jason.

2.1. Searching for a Deus ex-machina: The Coase Theorem solves the Sen Paradox. Let now change the Euripides story and allow a Deus ex-machina to give another chance to Medea and Jason. In order to avoid the worst outcome, Jason may credibly decide to renounce to marry the daughter of the king so as to prevent any murder by Medea. This decision implies that in order to internalize ex-post externalities Jason renounces to exert his right to marry the princess (which implies Medea to renounce to her tragic decisions). In other terms, Deus ex-machina allows agents to reach the ex-post optimal social state, which is the same selected according to the Pareto principle. However, what does, in fact, the Deus ex-machina is simply applying the Coase theorem: given the ex-post externality T , Jason and Medea bargain each other in order to reach the outcome R . The bargaining between Jason and Medea requires Jason exchanging his right to choose between the O and R with Medea's right to choose between T and O . In this setting, not only thus ex-post externalities do not limit ex-ante liberties, but ex-ante liberties are necessary (as alienable rights) in order to absorb ex-post externalities. The tragic outcome is thus generated by parties' inability to appropriately use (and alienate) their liberties according to ex-post preferences orderings: they are prisoners of their ex-ante preferences orderings made in a isolated context (zero externalities). Liberty in this case is a blind non-renegotiable commitment to choose according to ex-ante preferences orderings.

The above example of Jason and Medea, thus show how the impossibility result depends on a very restricted idea of rights, defined as the liberty to choose only ex-ante preference orderings. In order to show thus a possibility result for a Paretian Liberal we have to remove this assumption and to define a minimal liberty which

is consistent with ex-post preference orderings: in the above example, we look for a deus ex-machina which gives Jason the liberty to limit his liberty. A right is something that assigns to the holder a liberty that is preserved from others' interference. A right of individual i always implies that individual j has a correlated duty to allow i to exercise her right. In a sense, a right of i erases j 's (opposite) preferences over the exercise of that right. When there is a right for i , his preferences over the use of that right are all that matters in order to properly define that right. So why should one takes onto account j 's preferences over i 's exercise of his own right? Roughly speaking, in the Lady Chatterly's Lovers case (See Sen (1970)), if there is just one book and one owner, the non-owner's preferences over the use of the book simply should no matter in order to define owner's liberty over the use of the book. In a sense, rights' assignment aligns owner's preferences with the Pareto principle. If we define, as in Sen's setting, libertarian claims as the i 's claim-rights, then conflicting preferences simply no matter and a possibility result is always obtained (social preferences follow rights). Social preferences cycles are thus broken by rights assignment (see e.g. Gibbard, (1974)). Assigning thus a right over a pair, gives more than just minimal liberty over that pair: it gives a 'bundle' of rights over all pair of social possible situations. What is important here to stress is that a Coasean interpretation of the Sen theorem reveals why liberal values generally invoke the free market mechanism as an efficient tool to defend liberties. In this respect, the inability to define alienable rights over social states, inhibits Pareto optimality.

In such a context, the Sen paradox of Paretian Liberal, thus, seems evident to regard only cases in which rights are not properly defined in the first instance. On the opposite, any allocation of (alienable) right with transaction costs assumed to be zero seems to be a sufficient condition in order to obtain Paretian Liberal: a possibility result for a Paretian Liberal is thus obtained by simply applying the Coase Theorem.

We define the possibility result obtained for a Paretian Liberal as a Coasian Liberal: that is a social configuration in which minimal liberty (defined as the liberty to acquire, exert and alienate individual rights) and the Pareto principle are made consistent through market exchange of alienable well-defined rights.

In what follows, we analytically prove that.

3. NOTATION AND DEFINITIONS

Let us represent the above discussion in a formal setting:

A society S is a list $\langle N, X, \rho, \alpha, \gamma \rangle$, where:

- (1) $N = \{1, \dots, n\}$ is the set of members of S ;
- (2) X is the finite set of social states;
- (3) $\rho = \{\rho_1, \dots, \rho_r\}$ is the finite set of rights and ρ^i is the set of rights of a group of individuals i ;
- (4) $\alpha : 2^N \rightarrow 2^\rho$ is the assignment of rights to groups of individuals;
- (5) $\gamma : 2^N \times 2^\rho \rightarrow 2^X$ is the set-valued function (a correspondence then), which determines the set of attainable social states by groups of members of S as a function of their rights.

Let us reformulate the paradox of the Paretian Liberal in this new setting:

Condition 1 (U). Every logically possible set of individual orderings of the social states is included in the domain of the set-valued function γ .

Condition 2 (P). If every set of individuals selects any alternative social state A to another alternative B , then society must choose A to B , namely if for any $i \in 2^N$ and any $A, B \subset 2^X$, $\gamma(i, \rho^i) = A$ then $\gamma : 2^N \times 2^p \rightarrow A$.

Condition 3 (ML). For each group i of members of a society S , there is at least one pair of options A and B such that if this group selects A to B , then society should choose A with respect to B , namely

$$\forall i \in 2^N, \exists! A, B \subset 2^X : \text{if } \gamma(i, \rho^i) = A \text{ then } \gamma : 2^N \times 2^p \rightarrow A.$$

From the above conditions it follows the well-known result:

Proposition 1 (Impossibility of Paretian Liberal (Sen (1970))). *There is no social selection correspondence γ that can simultaneously satisfy conditions U, P and ML.*

Sen paradox however regards a case in which rights are defined in a very restrictive way. Actually, people have the possibility to exert, alienate and bargain their right. In fact, the definition of a right, we stress below, assigns to the holder a set of choice that may not be violated by any other agent. Only the right holder may decide to renounce to that set of choices, when the emergence of an externality (others' claim over another contingency) redefines his set of choices so as to induce him to alienate that right. The definition, we propose, is then a definition of alienable rights that solve any conflict among preferences over a pair of alternatives. Then, a *right* is defined as follows:

Definition 1 (R). Let $i \in 2^N$ be a group of members of S and let $A \subset 2^X$ be a set of social state. i 's right to A is i 's possibility to select A , independently on what could be the (set of) social states chosen by the rest of society, namely

$$\gamma(i, \rho^i) = A \text{ whenever } B = \gamma(2^N \setminus \{i\}, 2^p) \text{ for any } A \neq B \subset 2^X.$$

In word the foregoing definition says that a right for some people is the liberty to choose among many (finite) options what they enjoy/like more although the rest of the society could not agree or select such a set of social states as the most suitable/palatable opportunity.

Lemma 1. *ML implies R.*

Proof. It is trivial as the choice set 2^X for the society after individual i chooses in condition R is not forced to be only a subset $A \subset 2^X$ as under condition ML . \square

However, the following result shows that a statement similar to the Sen's Impossibility Theorem (see Proposition 1) can be also obtained by using the weaker notion of rights R :

Proposition 2. *There is no social selection correspondence that can simultaneously satisfy conditions U, P and R.*

Proof. Same as the proof of Sen (1970) theorem II pg.154 \square

Unfortunately, the practice to exercise a right is not costless. Our right to smoke forces other no-smoking people to smoke passively. According to the Medea's example, we notice that the exercising of a right by someone indirectly reduces

(limits) the set of possible social states that anyone else could attain: Medea, after Jason choice to get married with Creusa, cannot select state R anymore. In few words, our exercising of a right may prevent the exercising of a right of someone else. It means that our action directly affects the well-being of a consumer or the production possibilities of a firm in the economy, i.e. the practice of a right produces an externality. Formally:

Definition 2 (E - unilateral externality). *Let $A = \gamma(i, \rho^i)$ be the social states selected by exercising the set of rights ρ^i by i . Then, there exists a γ' such that: $\gamma' : 2^N \times 2^\rho \rightarrow 2^X \setminus \{B\}$, for some $B \subset 2^X$ whenever in γ , $\gamma(\rho^N \setminus \{i\}, 2^N) = B$ with $A \neq B$.*

We state then:

Proposition 3. *U and R imply E .*

Proof. Suppose $\gamma(i, \rho^i) = A$ and $\gamma(\rho^N \setminus \{i\}, 2^N) = B$ with $A \neq B$ then if i exerts his right to have A by ML $\gamma : 2^N \times 2^\rho \rightarrow A$. As ML implies R and no $B \neq A$ can be socially selected, we get the required result. \square

The notion E is however a notion of unilateral externality, since it does imply that non-holders have not the possibility to prevent holders exercise of the rights. According to Coase (1960) the very notion of externalities is always reciprocal in nature. With the Medea's example in mind, it is evident that the choice O by Jason produces a negative externality on Medea that is now abandoned, but such abandonment forces the desperate Medea to kill Creusa and her sons, action that represents an externality for Jason. It comes out that a definition of reciprocal externality is needed in such a framework:

Definition 3 (Reciprocal Externality RE). *Let 2^ρ be the set of rights profiles that α has assigned to the members of society. Let $A = \gamma(i, 2^\rho)$ be the social states selected by i and let $B = \gamma(j, 2^\rho)$ be the social states selected by $j \subset 2^N \setminus \{i\}$ with $A \neq B$. Then, there exists a γ' such that:*

$$\begin{aligned} \gamma' : 2^N \times 2^\rho &\rightarrow 2^X \setminus \{B\}, \text{ whenever in } \gamma, \gamma(j, 2^\rho) = B \\ \gamma' : 2^N \times 2^\rho &\rightarrow 2^X \setminus \{A\}, \text{ whenever in } \gamma, \gamma(i, 2^\rho) = A. \end{aligned}$$

Conflicting preferences produce reciprocal externalities.

Lemma 2. *U , R and E implies RE .*

Proof. It is omitted since it is trivial. \square

However, according to the tragic outcome of the Mesea' story, it is generated by parties' inability to appropriately use (and alienate) their liberties according to ex-post preferences orderings: they are prisoners of their ex-ante preferences orderings made in a isolated context (zero externalities). Liberty, in this case, is a sort of blind non-renegotiable commitment to choose according to ex-ante preferences orderings. If minimal liberties are defined as alienable right to choose over a given choices domain, then minimal liberty is consistent with the Pareto principle. The reason why this is possible could be explained by the Coase theorem. According to such a result, if we define minimal liberty as an alienable right, then we link together the ex-ante and the ex-post sets of choices and externalities. The intuition behind this is that people have a right to choose as long as it does not conflict with

an externality, which, in fact, modifies their set of choice. When the externality occurs, Jason and Medea will not have anymore a right to choose between O and T , because, given the alienability character of their ex-ante right, Jason and Medea have alienated their right over O and T , in order to obtain at least R , and not suffer for T . If the conflicts are solved by market exchange, and rights' ex-post allocation will follow social preferences, independently of the initial assignment of rights, it is as if we are bargaining in a Coasian market. Hence:

Condition 4 (CS - Coasian Selection). *Assume that i has a right to A and $2^N \setminus \{i\}$ has a right to B , with $A \neq B$, such that a reciprocal externality is produced. Then, if there exist a $C \subset 2^X$ and γ' such that:*

$$\gamma' : j \times 2^p \rightarrow C \subset 2^X \setminus \{B\}, \text{ for some } B \subset 2^X \text{ whenever in } \gamma, \gamma(j, 2^p) = B$$

and

$$\gamma' : i \times 2^p \rightarrow C \subset 2^X \setminus \{A\}, \text{ for some } A \subset 2^X \text{ whenever in } \gamma, \gamma(i, 2^p) = A.$$

then the selection of γ' defined on the set of social states $2^X \setminus \{A\}$ realises a Coasian selection.

Proposition 4 (Coase Theorem). *For any RE if CS then P.*

Proof. Suppose, without loss of generality, our society is composed of two persons (as in the Medea's tragedy). If both individuals select two social states A and B with $A \neq B$ such that a RE is produced, and a set-valued function γ' determines that both individuals select a third social state C when their respective sets of attainable social states do not contain anymore A and B respectively (CS then), then this two-individual society chooses C as suitable social state (i.e. P) respecting the exercising of of their rights. \square

Corollary 1 (Coasian Liberal). *There exists a social selection correspondence γ that can simultaneously satisfies U, R, P, CS .*

Proof. It derives through the following chain of implications:

- 1) U and $R \rightarrow E$;
- 2) E and $(U \text{ and } R) \rightarrow RE$;
- 3) RE and $CS \rightarrow P$. \square

However, if from one side the possibility of a Paretian Liberal generates the possibility of a Coasian Liberal, from the other what generates an impossibility of a Paretian Liberal also extends to the impossibility of a Coasian Liberal as well.

There are at least two main origins for the impossibility of a Coasian Liberal: (i) a high level of transaction costs; (ii) the impossibility to define alienable rights in the first instance.

When rights' bargaining involves high transaction costs, market exchanges might be inhibited and thus agents may fail in promoting the socially optimal outcome and minimal liberty may contrast with the Pareto principle. As a consequence high transaction costs may reduce minimal liberty, but this has nothing to do with Sen's intuition, rather it has to do with the (in)efficiency of the market mechanism. What is important here to stress is that the Coasian interpretation of the Sen theorem reveals why liberal values generally invoke the free market mechanism as an efficient tool to defend liberties. However, as in the Coase message, when transaction costs

are high, market failures might require some state intervention in order to restore Pareto optimality and to defend minimal liberties.

The second source of the impossibility of a Coesian Liberal, i.e. the inability to define alienable rights over social states, undermines the Coase Theorem via the Sen Theorem.

We have just seen how an appropriate definition of alienable rights and a sustainable level of transaction costs seem to be a sufficient condition in order to have a Paretian Liberal. Nevertheless, if there is no definition of alienable rights in the first instance, it is possible to show that social preferences are cyclical, externalities would emerge and each individual preferences ordering over a pair of alternatives will conflict with at least another agent's ordering. This means that in such a world the impossibility of a Paretian Liberal will emerge with all his tragic outcome.

4. CONCLUSIONS

In a world of zero (alienable) rights, conflicting preferences will persist unless any hierarchy of social preferences is introduced by any allocation of alienable rights. This system should define, for every couple of possible contingencies, an alienable right over that couple. But who will introduce such a system? Who will have the right to introduce such a system? The system of rights should be one that will be respected by all other agents, and thus should provide a credible enforcement system. Who will pay for this system to be generated? These questions show how the assumption of having well-defined alienable rights in the first instance is very strong and could be justified only as an ad hoc assumption (as in the Coase theorem). As a consequence, when agents fail to introduce any well-defined allocation of property rights over the relevant resources, conflicting preferences persist and the impossibility of a Paretian Liberal will extend to a Coesian Liberal as well: the absence of any system of alienable right will inhibit the Paretian efficient outcome even in a world of zero transaction costs. This is a result that was made explicit by R. Coase (1960) for his theorem to work. However, here, it is the Sen Paradox which explains why: the absence of a system of alienable rights defined over the social choice domain produces the same Pareto-inefficient outcomes of having inalienable rights and a world of conflicting preferences very rarely will be able to produce a system of alienable rights. This outcome leads thus to the impossibility of a Coesian Liberal, an outcome which is independent of the level of transaction costs. In this setting, the emergence of any definition of alienable rights has the purpose to solve any conflict among preferences over a pair of alternatives. On the opposite side, when a rights system is not defined, conflicting preferences over the same set of choices will remain, the Coase theorem will be inhibited and the Sen Paradox will persist.

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