

THE IMPOSSIBILITY OF A COASIAN LIBERAL?  
MINIMAL LIBERTIES, MAXIMAL STATE, AND THE MARKET

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# The Impossibility of a Coasian Liberal? Minimal Liberties, Maximal State, and the Market.

by  
ANTONIO NICITA \*

## ABSTRACT

The paper compares the Sen's paradox on the Paretian liberal (1970) and the standard version of the Coase theorem (1960). The comparison of the two theorems is somehow puzzling: if we accept Sen then we have to forget Coase and vice-versa. Following the analysis of Hillinger and Lapham (1971), Nozick (1973, 1974) and Gibbard (1974), among others, the paper first shows a *possibility* result for a *Paretian Liberal* by applying the Coase Theorem in its hard version and then shows an *impossibility* result for a *Coasian liberal* by applying the Sen Theorem. What generates a possibility result for a Paretian Liberal shows also the conditions for an impossibility result for a Coasian Liberal unless any hierarchy of social preferences is introduced by any allocation of rights in order to induce *social preferences to follow rights*. This conclusion leads us to show the relevance of *ex-ante* (alienable) rights definition for a Coasian market to work and the necessity of a *maximal state* (which properly defines an alienable right for every relevant state of the world) - instead of the Nozick's *minimal state* - to enforce *minimal liberty* when agents fail to properly define a complete (alienable) rights allocation over the social choice domain.

*D23, D62, D63, D 71*

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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 standard version of the Coase theorem (1960). The comparison of the two theorems is somehow puzzling: if we agree with the Coase theorem we have to abandon the Sen's Paradox, and vice-versa<sup>1</sup>.

We investigate the *possibility* for a *Paretian Liberal* by applying the Coase Theorem and then analyse the *impossibility* of a *Coasian liberal* by applying the Sen Theorem to the problem of absorbing Pareto-relevant externalities by market exchange in a world of incomplete (alienable) rights.

In 'the Impossibility of a Paretian Liberal', Sen (1970) argues that “in a very basic sense liberal values conflict with the Pareto principle<sup>2</sup>. If someone takes the Pareto principle seriously [...] then he has to face problems of consistency in cherishing liberal values”. 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. Liberal values thus imply, according to Sen (1970), that each person, for at least certain matters, should be protected against others' externality over his choice domain: “given other things in the society, if you prefer to have pink walls rather than white, then society should permit you to have this, even if a majority of the community would like to see your walls white”<sup>3</sup>.

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<sup>1</sup> See also Mueller (1989).

<sup>2</sup> The Pareto principle is defined by Sen (1976) in the following way: if everyone in the society prefers a certain social state to another, then the choice of the former must be taken to be better for the society as a whole.

<sup>3</sup> Sen (1970, p.152).

In his famous example, a copy of *Lady's Chatterley's Lover* is available to be read by two potential readers (A, the prude, and B, the lascivious). Three social states are possible: (a) A reads LCL and B does not; (b) B reads LCL and A does not; (c) neither reads it. Agents' preferences are as follows: for A,  $c \succ a \succ b$ ; for B,  $a \succ b \succ c$ .

Now, if we believe that the decision of reading a book is a personal matter in which each person should be free to decide what should happen, we have to compare two cases: if the decision is given to A, he will choose  $c \succ a$  and if we believe that individual freedom selects the social better choice,  $c$  will be socially better than  $a$ ; if the decision is given to B, she will choose  $b \succ c$  and if we believe that individual freedom selects the social better choice,  $b$  will be socially better than  $c$ . However, given that both A and B prefer  $a$  to  $b$ , by the Pareto principle  $a \succ b$ , and thus we have a cycle<sup>4</sup>: each choice is dominated by another one.

According to Sen (1970, 1976), this is a consequence of the fact that we are trying to link together A's individual liberty, B's individual liberty and the Pareto principle. If we want thus to preserve liberal values we have to abandon the Pareto principle; if want to keep the Pareto principle we have to renounce to individual liberty (that is 'the impossibility of a Paretian Liberal')<sup>5</sup>.

Since defending individual liberty on the 'protected sphere'<sup>6</sup> seems quite reasonable, Sen argues that the Pareto principle, often invoked by economists, might not always reveal an optimality feature in terms of the social choices selected according to it<sup>7</sup>. Individual liberty, also defined as minimal libertarianism, is sometimes defined by Sen as a right to choose in the 'protected sphere'. However, the impossibility of a Paretian

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<sup>4</sup> See also Mueller (1989) for a simple formalisation.

<sup>5</sup> Sen's impossibility theorem involves three well-known conditions ( $U, P, L^*$ ) and shows that there is no social function that can simultaneously satisfy those conditions. Condition  $U$  (Unrestricted domain) implies that "every logically possible set of individual orderings is included in the domain of the collective choice rule"; condition  $P$  (Pareto principle) implies that "if every individual prefers any alternative  $x$  to another alternative  $y$ , then society must prefer  $x$  to  $y$ "; condition  $L^*$  (Minimal liberalism) implies that "there are at least two individuals such that for each of them there is at least one pair of alternatives over which he is decisive, that is, there is a pair of  $x$  and  $y$ , such that if he prefers  $x$  (respectively  $y$ ) to  $y$  (respectively  $x$ ), then society should prefer  $x$  (respectively  $y$ ) to  $y$  (respectively  $x$ )".

<sup>6</sup> Hayek (1960).

<sup>7</sup> However, as Sen (1976) complains, the extraordinary number of contributions raised after his *Impossibility*, were mainly aimed at preserving Pareto against minimal liberty rather than at abandoning the Pareto principle.

Liberal is built over a very restricted idea of rights. According to this idea, rights are merely defined as the possibility of an individual to choose among pair of alternatives, independently of others' choices or preferences, which, however, still persist<sup>8</sup>.

Roughly speaking, the very common idea of right is quite different. A right is something that assigns to the holder a liberty that is preserved from others' interference. A (property) right<sup>9</sup> of Alpha always implies that Beta has a correlated duty to allow Alpha to exercise her right<sup>10</sup>. In a sense, a (property) right of Alpha erases Beta's (opposite) preferences over the exercise of that right. When there is a right for Alpha, 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 Beta's preferences over Alpha's exercise of his own right?

If, in the *Lady's Chatterley's Lover* case, there is just one book and one owner<sup>11</sup>, 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, in Sen's setting, libertarian claims as the above Alpha'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 (Gibbard, 1974).

Is this a paradoxical argument toward the *illiberality* of (property) rights?

Sen (1976) argues that an analogous consequence of assigning (true) rights over a pair of alternatives to be chosen, might be obtained in the case of the *Paretian Epidemic*: "in the presence of the Pareto principle, no one, it seems, can be given an inch without being given an ell"<sup>12</sup>. Assigning thus a (true) right over a pair, gives more than just minimal liberty over that pair: it gives a 'bundle' of rights over all pair of social states<sup>13</sup>.

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<sup>8</sup> This means that even if non-holders cannot choose, social preference function still includes non holders' preference orderings in the social decision function domain. However, as we will show later on, defining (alienable) claim rights does not necessarily imply a domain restriction.

<sup>9</sup> For the sake of simplicity we refer to property rights, but the argument might be extended to all those rights which are alienable claim-rights (Hohfeld, 1913).

<sup>10</sup> Hohfeld (1913), Commons (1924), Pagano (2000).

<sup>11</sup> See also Mueller (1989), p.403.

<sup>12</sup> Sen (1982), p. 295.

<sup>13</sup> *Paretian Epidemic* is defined (Sen, 1976) in terms of 'semidecisiveness': "if a person prefers  $x$  to  $y$ , then  $x$  is judged to be socially at least as good as  $y$ . A still weaker requirement is 'potential decisiveness', which requires that, given certain configurations of individual preferences over *other* pairs, if this person

Moreover, it seems, not only that well-defined rights are consistent with the Pareto principle, but also that they make it possible.

Defining thus libertarian claims<sup>14</sup> over a pair of alternatives as claim-rights over that pair allows a not only a Paretian liberal, but also, a *Paretian Epidemic* either *illiberal* or *dictatorial*, since holder's rights erase non-holders' preferences.

However, depicting individual rights as illiberal seems quite controversial: after all, a right is a socially respected convention that acts as a safeguard of holder's liberty against non-holders' interference.

Moreover a (property) right has always another feature which is consistent not only with holder's liberty but also with non-holders' preferences: it gives the holder the right to alienate it according to holder's and non-holders preferences' matching.

As a consequence, if Alpha's exercise of her right induces a negative externality<sup>15</sup> over Beta (in terms of preferences' ranking), Beta may ask Alpha to alienate her right so as to satisfy Beta's preferences over Alpha's right exercise. When rights' exchange implies gains from trade between Alpha and Beta, at least one of them will be better off after the trade (*rights follow social preferences*). This is simply the well-known lesson of the standard Coase theorem<sup>16</sup>.

As a consequence: defining a claim-right over a pair of alternative social states erases contradictory preferences over that pair (social preferences follow rights) and also make it possible for non-holders to reverse social preferences through rights' exchange in order to reach a Pareto outcome (rights follow social preferences). At the end of this

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prefers  $x$  to  $y$ , then  $x$  is judged socially at least as good as  $y$ , no matter how other rank  $x$  *vis-à-vis*  $y$ . [...] if social preferences cycles are to be avoided no matter what individual preferences are, then the Pareto principle, even in its weakest form, implies that a person who is decisive both ways over *any* pair of social states whatsoever must be potentially semidecisive both ways for all pairs of social states”.

<sup>14</sup> Gibbard (1974).

<sup>15</sup> Hillinger and Lapham (1971), show that in conditions of interdependence, as in the case of externality, “we cannot conceive of any ‘principle of liberalism’ which would govern what actions are to be left to individuals independently of the majority preferences of the individual concerned”, p. 1405.

<sup>16</sup> The ‘Stigler version’ as Coase (1988, p.12) refers: “if rights to perform certain actions can be bought and sold, they will tend to be acquired by those for whom they are most valuable either for production or enjoyment. In this process rights will be acquired, subdivided, and combined, so as to allow those actions to be carried out which bring about that outcome which has the greatest value on the market. Exercise of the rights acquired by one person inevitably denies opportunities for production and enjoyment by others, for whom the price of acquiring the rights would be too high. [...] if transaction costs were assumed to be zero and rights of the various parties well defined, the allocation of resources would be the same in both these situations”.

process (which however, as Coase (1988) refers, might virtually never start “so that eternity can be experienced in a split second<sup>17</sup>”), libertarian claims and the Pareto principle are consistent, independently of the initial allocation of rights over a given pair of alternatives, so that *the real question with the Paretian Liberal is not who shall decide at the very beginning (the prude or the lascivious) or whose’ minimal liberty is to be defended but how rights are defined in the first instance (what the reader may or may not do with his book)*<sup>18</sup>.

Defining libertarian claims as claim-rights produces a *possibility* result for a *Paretian Liberal* by simply applying the Coase Theorem<sup>19</sup>.

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 - which is based on Gibbard (1974)<sup>20</sup> - is simply reached by showing that when a right is properly defined over the choice of a given social preference relation and transaction costs are zero, social preferences will always determine an allocation of (property) rights which is consistent with the Pareto principle *and* with minimal liberty. This is a simple consequence of the Coase Theorem when transaction costs are zero: if (property) rights are well-defined, conflicting preferences are solved by market exchange, and rights’ ex-post allocation will follow social preferences, independently of the initial assignment of rights. As long as the initial distribution of preferences induces gains from trade, the free exchange of (property) rights will follow agents’ desires and (property) rights will follow preferences.

The Sen paradox, thus, seems to regard only cases in which rights are not properly defined in the first instance. In a world of zero rights, conflicting preferences will persist and the Sen paradox will emerge with all his tragic consequences.

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<sup>17</sup> When transaction costs are zero.

<sup>18</sup> However, when transaction costs matter, then the question is whether or not the original rights’ assignment precludes further market exchanges. However, in this case, individual liberties and the Pareto principle may be inconsistent not due to Sen’s argument but to the level of transactions costs, and to the inability of the market to ensure social preferences. We assume here zero transaction costs.

<sup>19</sup> Provided that transactions costs make trade viable.

<sup>20</sup> We refer also to Hillinger and Lapham (1971), Nozick (1973, 1974). For a critical survey see also Sen (1976).

In this case the paradox might be solved only by introducing a hierarchy of social preferences through any allocation of rights in order to ensure that social preferences will follow rights. At that point, according to Coase, if transaction costs were assumed to be zero and the rights of the various parties were well-defined, the allocation of resources would be the same in any possible ex-ante allocation of rights. What is needed thus in order to have a possibility result is to obtain just one possible allocation of property rights on the first instance.

*However, this means that what generates a possibility result for a Paretian Liberal shows also the conditions for an impossibility result for a Coasian Liberal: when agents fail to introduce any well-defined allocation of (property) rights over the relevant set of choice, conflicting preferences persist and the impossibility of a Paretian Liberal will extend to a Coasian Liberal as well.*

This conclusion leads us to pose the following question: how a system of (property) rights might be properly defined, starting from a world of conflicting preferences over the initial allocation of that rights?

The Coase theorem simply ignores the point by introducing the *ad hoc* assumption of well-defined property rights: it simply asserts that given a system of well-defined property rights and a viable level of transaction costs, rights will (always) follow social preferences.

But what happens when agents have to decide what is a right and who has to hold it? When rights are not defined, who shall decide matters, the Coase theorem does not work, and the market exchange fails to provide its allocative function. As a consequence, when property rights are not defined, the Sen theorem will generate the impossibility of a Coasian liberal: the market will not generate the first best outcome.

The impossibility of a Coasian liberal thus leads us to show the relevance of ex-ante property rights definition for a Coasian market to work and the incoherence of liberal theories on the emergence of a minimal state from individual rights, as in Nozick's theory. Whereas, minimal state in Nozick's view evolves from individual rights and grows by market exchange, we stress, following Coase (1988), the institutional nature of the market, suggesting how any well functioning market needs a pre-existing authority which defines and assigns individuals' property rights: from a logical point of

view this authority should precede and not follow (as in Nozick's view) individuals' rights assignment. Moreover, the impossibility of a Coasian liberal shows how this authority should be a *maximal authority* instead of a *minimal state*, since it has not only to enforce contracts, but also to define a system of complete rights for every contingency.

## **2. Liberties and externalities: a 'tragic' example of the Sen Paradox**

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,  $W_J$  : Jason refuses the proposal of king Creon and remains with Medea and his sons;
- opportunistic choice,  $W_M$  : Jason accepts to marry Creusa and to leave Medea;
- tragic choice,  $W_T$  : Medea's vengeance against Jason's marriage.

We have also the choices available to Jason and Medea:

- $J$  has to choose between the romantic and the opportunistic choice<sup>21</sup>, i.e. between remaining with Medea or marrying the daughter of the king;
- $M$  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 ordering:

for agent  $J$ ,  $W_M? W_J$ ,

for agent  $M$ ,  $W_T? W_M$ .

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,  $W_J? W_T? W_M$ .

Now let assume that Jason ignores the tremendous project of Medea (i.e. he ignores that a state of the world like  $W_T$  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

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<sup>21</sup> Thus *romantic* and *opportunistic* choices are mutually excludable.

Creusa, since  $W_M \succ W_J$ . However, at that point, since for Medea  $W_T \succ W_M$ , a tragedy would happen and a state of the world like  $W_T$  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  $W_M \succ W_J \succ W_T$ .

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:  $W_J \succ W_T$ . The Pareto principle here should be viewed as a *Deus ex-machina* rule that would have avoided the tragedy<sup>22</sup>.

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?

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  $W_M \succ W_J$  (i.e. a non-regret assumption over Jason’s behaviour). But this is not the case here, since for Jason  $W_J \succ W_T$ .

In other words, a limitation of Jason’s liberty should regard only his ex-ante choice in a world of incomplete information with respect to ex-post states of the world. If Jason knew that choosing  $W_M$  select a state as  $W_T$  (marrying the daughter of the king implies a tragedy) he would probably correct his choice, and thus his (ex-post) liberty would

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<sup>22</sup> According to Sen (1976) this would probably be a consequence of *ad hoc* motivations underlying agents’ preferences in our example.

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*).

Put it differently, recalling the Sen's example: If I prefer to have pink walls rather than white in my house, liberal values imply that society should not affect this decision: however, if all my friends hate watching pink colour so as to kindly deny any invitation to my party, I may want to take this externality onto account: still I prefer a pink house without friends to a white house full of people? And in the case I decide to change colour, are really others' preferences over my walls a limitation of my liberty? Either the decision to change colour, given others' preferences interdependence, is the very expression of my liberty? After all, I can still be free to have pink walls in an empty house. What is hence the relationship between liberty and externality<sup>23</sup>?

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 (I don't care about having pink walls in an empty house but nobody wants to sell me a pink paint can!).

However, if given the ex-post externality, I would have changed my ex-ante choices, then ex-post choices are not limited by others' behaviour, 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

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<sup>23</sup> Interdependence or externalities affect the ex-post social choice domain and thus ex-post liberty. According to Hillinger and Lapham (1971), "whenever the choices of one individual impinge on the welfare of others there is no general presumption in favour of freedom of individual choice", pp. 1403-4.

with this choice, but produce, according to Medea's liberty, some ex-post outcome which was simply ignored ex-ante by Jason.

### 3. Searching for a *Deus ex-machina*: using the Coase Theorem to solve 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 internalise 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 ( $W_T$ ),  $J$  and  $M$  bargain each other in order to reach the outcome  $W_J$ . The bargaining between  $J$  and  $M$  requires  $J$  exchanging his right to choose between the  $W_M$  and  $W_J$  with Medea's right to choose between  $W_T$  and  $W_M$ . 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.

Suppose, on the contrary, that either Jason was not free to choose between  $W_M$  and  $W_J$  (the king forced him to marry Creusa against his will) either that Medea was not free to choose between  $W_T$  and  $W_M$  (she was possessed by a cruel and foolish desire to start a murderous revenge in any case)<sup>24</sup>: in that case nobody could restore the Pareto optimality. The paradox, in this case, would be that Jason (or Medea) would be a prisoner of his liberty. Minimal liberty in this case would go against ex-post preference orderings and Jason would have not the *liberty to limit his liberty* (by alienating the right to choose a given state of the world, he would credibly commit himself not to exert his liberty to choose that state in the first instance).

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<sup>24</sup> This is equivalent to the assumption of no-regret.

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 at the same time the opposite of liberty and something more than just liberty: it 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*.

One way of introducing a *Deus ex-machina* would be to restrain the choice domain<sup>25</sup> so as to erase non-holders preferences. Under this setting to give a claim right to Alpha, implies imposing a correlated duty on Beta to allow Alpha to exercise her right. However this implies that the original *complete* definition and allocation of claim rights has been done by a Grand-Enforcer ("*Zeus on Olympus dispenses many things*") who has taken onto account, at the time of rights' definition and assignments, all possible social states and externalities. The consequence, thus, appears too strong and might produce the same consequences of the *Paretian Epidemic*. Moreover, the consequence will be quite puzzling: the idea that the definition and assignment of individual rights – which normally are interpreted as the most powerful instrument to realise and defend individual liberties – generates an illiberal world seems quite controversial. In such a world, the question of social choice and minimal liberty nonetheless results in a tautology: as Sen observes (1976), "when we 'rule out' a preference configuration, that is only a refusal to open our mouth in that case, and obviously has no bearing on whether that configuration will, in fact, arise or not". If we had excluded Medea from projecting her murderous vengeance, Euripides would probably never has written the story.

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<sup>25</sup> This means acting on Condition *U* (unrestricted domain) in the Sen theorem.

We are thus interested in defining claim rights (and correlative duties) which erase non-holders' preferences in a very particular way: they do not erase non-holders' preferences from the 'unrestricted domain', rather they simply impose that non-holders' preferences ordering's realisation is subject to acquiring a claim right over that ordering: if  $A$  has a claim right to choose over  $(x,y)$ ,  $B$ 's preferences over  $(x,y)$  might emerge only by acquiring  $A$ 's claim right.

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<sup>26</sup>.

The reason why this is possible is simply explained by the standard 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.

Now in order to define minimal liberty as an alienable right, let follow Gibbard (1974) again and propose a revised version of his definition<sup>27</sup>.

#### Definition of Alienable Right

To say that  $J$  has an alienable right to  $W_M$  over  $W_J$  is to say the following.

If

- (1)  $J$  prefers  $W_M$  to  $W_J$  (ex-ante choices domain) and
- (2) There is no  $Z$  such that
  - (a)  $J$  prefers  $W_J$  to  $Z$  (ex-post choices domain) or is indifferent between them, and
  - (b) Others claim  $Z$  over  $W_M$  (externality),

then  $W_M \succ W_J$ .

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 (others claim over  $Z$ ) which, in fact, modifies my set of choice (other claims over  $Z$  imply that my set of choice is not given

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<sup>26</sup> But see Basu (1984) for a critique.

<sup>27</sup> See also Binmore (1994, pp.126-7), Sugden R. (1985) and Mueller (1989, pp.402-3).

anymore by  $W_M$  and  $W_J$ , but by  $W_J$  and  $Z$ ). 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 choose between  $W_M$  and  $W_J$ . However, what is hidden in this definition is the alienability character of my ex-ante right. The reason why, once an externality has grown (others claim over  $Z$ ) I have no rights over the ex-ante choice domain is that given  $Z$ , and my preference over  $Z$  and  $W_J$ , I have alienated my original right over  $W_M$  and  $W_J$ , in order to obtain at least  $W_J$ .

This is exactly why, after an externality has emerged, the consequence of having a right over  $W_M$  and  $W_J$ , i.e.  $W_M \succ W_J$ , does not hold anymore.

According to Gibbard, thus, what generates the Sen's impossibility of a Paretian Liberal is the idea of having defined minimal liberties as *inalienable* rights<sup>28</sup> to choose between two alternative states of the world (so that  $W_M \succ W_J$  even when an externality  $Z$  has emerged) or, recalling the Coase theorem, the idea that high transaction costs inhibit efficient rights' alienability in order to absorb externalities<sup>29</sup>.

We can thus conclude, according to the above definition of an alienable right, that given an alienable right, others' preferences will follow the preferences of the right's holder (*social preferences will follow rights*)<sup>30</sup>; at the same time, given an externality 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

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<sup>28</sup> To say that  $J$  has an *inalienable right* to  $W_M$  over  $W_J$  is to say the following. If  $J$  prefers  $W_M$  to  $W_J$  then  $W_M \succ W_J$ , independently of any others' claim  $Z$  over  $W_M$ .

<sup>29</sup> This conclusion, however, does not undermine the argument provided by Sen (1970) as he argues "the difficulties in achieving Pareto optimality in the presence of externalities are well known. What is at issue [...] is the acceptability of Pareto optimality as an objective in the context of liberal values, given certain type of externalities".

<sup>30</sup> This is the Pareto-consistent libertarian claim provided by Gibbard (1974). See Gibbard (1974) for a proof.

externality, the right's holder will reveal his preference orderings by alienating his right, according to the Coase theorem prediction.

What is needed, as in the Coase theorem, is that at the very starting point, there has been a definition of rights to choose over all the relevant states of the world. *Given the Coase theorem, thus, an appropriate definition of alienable rights 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.

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 Coasian Liberal, i.e. the inability to define alienable rights over social states, will be analysed in the following section.

#### 4. Does the Sen Paradox undermine the Coase Theorem?

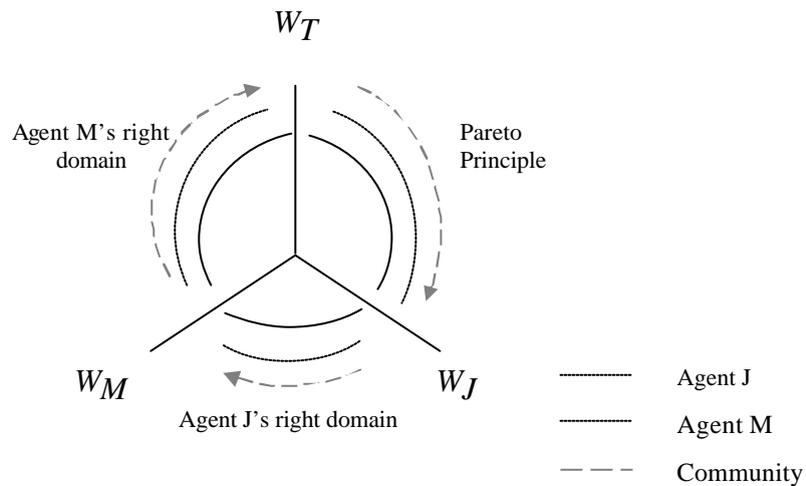
We have just seen how an appropriate definition of alienable rights and a sustainable level of transaction costs seem to be a sufficient condition in order to have a Paretian Liberal. However, how strong is this condition? Let imagine, in the above example, that there are two agents,  $M$  and  $J$ , three states of the world,  $W_J$ ,  $W_M$  and  $W_T$  and the following preference orderings:

for agent  $J$ ,  $W_M \succ W_J \succ W_T$ ,

while for agent  $M$ ,  $W_J \succ W_T \succ W_M$ .

Let us assume that there is no definition of alienable rights in the first instance. Absent any right, social preferences will show a cycle  $W_M \succ W_J \succ W_T \succ W_M$ .

Fig. 1 - Social preferences cycle



What, in fact, a system of alienable rights produces is to broke the cycle at the step that invokes the Pareto principle (Gibbard, 1974).

In the above figure, for agent  $J$  to have a right over  $(W_J, W_M)$ , means to impose a duty to  $M$  and society to allow  $J$  to exert that right. The same for agent  $M$  over  $(W_M, W_T)$ . In both cases community choice should reflect holder's preference orderings. However, if

Agent J gives up his right over  $(W_J, W_M)$  in exchange of the right of agent M to give up her rights over  $(W_M, W_T)$ <sup>31</sup>, then, in each right domain, will prevail the opposite preference ordering so that a social state like  $W_J$  (the ex-post socially optimal choice) will prevail.

Suppose now that alienable rights are not defined in the first instance so that it is impossible to determine, in agents' right domain, whose rights social preferences have to follow. As a consequence, agents might even ignore what is the relevant set of choice (i.e. what are the two alternative states of the world over which a choice is possible), when an externality is emerging and how to behave in order to select the ex-post socially optimal outcome: if alienable rights are no defined, no choice can be made to exert a right or to alienate it.

*In a world in which alienable rights are not defined, only externalities would emerge and each ordering over a pair of alternatives by an agent will conflict with at least another agent's orderings.*

This means that in such a world the impossibility of a Paretian Liberal will emerge with all his tragic outcome. How then it would be possible to introduce a system of alienable rights in such a world?

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 Coasian Liberal as well: the absence of any system

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<sup>31</sup> In the above example, however, it seems sufficient that only one of the two agents gives up his rights.

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 Coasian 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. The definition of an alienable right 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. Any ex-ante right definition, thus, implies a corresponding set of duties that eliminates conflicting preferences over the *same* set of choices and shapes the *status quo* (default point) of agents' bargaining.

For instance, if agent J has the right over  $(W_M, W_J)$ , others' preferences over the *same* set belong to an empty set and their preferences over  $(W_M, W_J)$  will follow J's preference ordering coming from his right. However if other agents (M) have the right to choose over a set  $(W_J, W_T)$  and their choice induces J to alienate his right in order to obtain at least  $W_J$ , then others' claim will affect J's decision and his right will follow his preferences.

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.

## **5. The impossibility of Coasian Liberal and the institutional nature of the market**

The impossibility of a Coasian Liberal depends on two main features:

- (a) High level of transaction costs in a system of well-defined alienable rights;

(b) Non-existence of a system of alienable rights.

In both cases, a possibility result, which restores Pareto optimality and minimal liberty, could be obtained only by a *Deus ex-machina* intervention.

However the two sources of the impossibility of a Coasian Liberal seem requiring distinct forms of intervention.

Whereas case (a) seems consistent with interventions aimed at minimising transaction costs and at limiting the role of the state to those activities which increase the role of parties' bargaining through market exchange; case (b) seems consistent with measures which reduce the role of parties' bargaining towards a hierarchical definition of any system of alienable rights.

The minimal liberty defence seems thus twofold: from one side, it requires to enhance the role of market exchange (when alienable rights are well defined) and to minimise any interference by the state; from the other it requires to minimise the role of the market (when alienable rights are not defined) and to increase an authoritative intervention aimed at introducing a system of alienable rights.

The first requirement seems to confirm the liberal market primacy over the state (which has only to intervene in order to reduce transaction costs), whereas the second, outlines the state primacy over the market, in the sense that market creation always requires a state intervention in order to properly define alienable rights and to 'defend', as a consequence of the Coasian Liberal, minimal liberty through market exchange. Some liberal heavy fathers have often neglected this second requirement of minimal liberty, as Nozick.

In the minimal state society (Nozick, 1974) each agent in a society should be free to do what he has right to do, while the function of the 'nightwatchman state' should be limited to grant a defence to individual rights to non-interference with self and property, and to ensure contract enforcement and procedural justice. According to this theory, the minimal state evolves not through individual rights' violations but as the result of a voluntary rights' transfer from individual to the state. As a consequence, from one side the minimal state could arise without violating anyone's rights; from the other, anything beyond a minimal state would violate people's right. Finally, in Nozick's theory, the minimal state grows as the result of market forces that induces geographically separated minimal authorities to merge into a unique protection agency.

In the minimal state theory, individual rights create thus, by market exchange, the minimal state. This conclusion differs in some respect from that reached by Sen (1970) for which libertarian claims often contrast with the ‘allegedly mildest of the welfare-economic principle’, i.e. the weak Pareto principle<sup>32</sup>.

The emergence of the impossibility of a Coasian Liberal shows that the optimal attributes of (perfect competitive) markets, as its allocative efficiency, always require as a pre-condition, a well-defined system of alienable rights, i.e. a maximal state which for every possible action or issues defined over all possible contingencies, provides a system of property rights, a system of rules for market exchange and a system of public enforcement when controversies come out<sup>33</sup>. As Coase (1988) stresses, “for anything approaching perfect competition to exist, an intricate system of rules and regulations would normally be needed. [...] Markets such as those that exist today require more than the provision of physical facilities in which buying and selling take place. They also require the establishment of legal rules governing the rights and duties of those carrying out transactions in these facilities. [...] Those operating in these markets have to depend, therefore on the legal system of the State”<sup>34</sup>.

The necessity of a pre-existing state as a pre-condition for having well-functioning markets and obtaining the possibility of a Coasian liberal, rarely might be obtained in a Lockean world in which rights originally come with (and within) individuals before that something recalling the state has been created. As we have shown above, individual rights are always *social* rights, in the sense that they need mutual recognition: any right implies a correlative duty, so as to eliminate conflicting preferences over the exercise of that right. Why, thus, natural rights should have always this social connotation without an enforcement system that imposes duties against rights? And if natural rights require an enforcement system, how to realise a system of ‘social rights’ in a world of conflicting preferences?

Nozick’s critique to Sen’s argument reflects a conception of rights which from one side gives to holders a very powerful instrument to choose among alternatives; but from the other it is obtained without a pre-existing enforcement system. Thus the question is

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<sup>32</sup> Sen (1982), p. 27.

<sup>33</sup> On this point see also Pagano (2000).

<sup>34</sup> Coase (1988), p. 10.

how, in the Nozick's world, conflicting preferences over the same pair of alternatives are solved so as to let social preferences to follow individual rights. Nozick's solution is to build a system of social ordering as a residual choice. As Nozick outlines, with reference to Sen's argument "the trouble stems from treating an individual 's right to choose among alternatives as the right to determine the relative ordering of these alternatives within a social ordering. [...] A more appropriate view of individual right is as follows. Rights are always co-possible: each person may exercise his rights as he chooses. The exercise of these rights fixes some features of the world. Within the constraint of these fixed features, a choice may be made by social choice mechanism based upon a social ordering; if there are any choices left to make<sup>35</sup>".

In this theory, a right is 'enforced' by a 'first choice' mechanism: first comers become holders, erasing latecomers'<sup>36</sup> preferences over the some pair of alternatives, and there is never interdependence, or externalities, among agents' actions. For the same reason the Nozick's system seem to propose a sort of Paretian Epidemic or *the Tyranny of first choice*: who chooses first determines certain amount of world features which are consistent with his first choice: the consequence is that late comers liberty is subject to first comers liberty and rights co-possibility ends up to the illiberality of this system of rights.

Moreover, it is not clear how to enforce such a system: why latecomers (whose rights are co-possible in the first instance) should accept to belong to a world in which first comers decided quite everything. If latecomers do not accept a given feature of the world they may want to exercise their rights in an opposite direction (as if rights were not well defined in the first instance): how do agents face the emergence of externality? Rights' exchange may be successful only if rights are well-defined, i.e. only if rights are not co-possible but alienable and impose on non-holders a duty not to interfere. However for a system of alienable rights to work well a pre-existing system, which properly defines what a right is, is needed. In a world of alienable rights first comers and late comers solve their conflicts through market exchange, according to the Coase theorem, and the socially optimal outcome is independent of being first comer or late comer.

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<sup>35</sup> Nozick (1974), pp.165, 166. See also Sen's critique to the above (1976).

<sup>36</sup> Here latecomers extend also to first comers new choices over the past pair of alternatives.

When rights are simply described as the possibility to choose among alternatives (and not as a right which imposes a correlative duty over others not to interfere), then conflicting preferences bring to the Sen Paradox and to the impossibility of a Coasian liberal, thus hindering not only the emergence of a minimal state but even the emergence of a well functioning market.

As a consequence, in Nozick's theory, economic liberties (i.e. the market) cannot be defined outside of a system of coercion (i.e. the state) and minimal liberties require maximal authorities (*maximal state*). This result here is addressed revising the well-known impossibility result of Sen (1970), by showing that minimal (economic) liberties and allocative efficiency in (perfect competitive) markets might be jointly reached, only if a well-defined system of property rights is provided for every possible action or issues defined over all possible contingencies<sup>37</sup>. Absent this pre-condition we have that minimal liberties are inconsistent with allocative efficiency (the Paretian rule). This is what we call the *impossibility of a Coasian Liberal*: the impossibility of reaching Pareto equilibrium by market exchange (by the liberty to sell or buy property rights in a perfect competitive market) when a world of complete property rights is not defined in the first instance.

This conclusion leads us to show the relevance of ex-ante property rights definition for a Coasian market to work and the necessity of a *maximal authority* (which properly defines a property right for every relevant state of the world) - instead of the Nozick's *minimal state* - to enforce *minimal liberty* when agents fail to properly define any property rights allocation. Even when transaction costs are zero and there are no other problems, for the market to perform its function we need first a maximal authority which defines that system of complete rights and act as a public good in gaining economic resources to be spent for the well-functioning of the system (Holmes and Sunstein, 1999). In its strongest form, thus, market efficiency always requires a maximal authority that, defining alienable rights, realises the pre-requisites for the market to perform its function and reach a Pareto-efficient outcome. Moreover, this process of rights defining is not something that is needed only at the very beginning, rather it is a continuous process of definition and re-definition of rights, bundling and

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<sup>37</sup> Pagano (2000).

unbundling of the same as Coase (1988) outlines, since “people can always negotiate [...] to acquire, subdivide, and combine rights [...]”. As a consequence, maximal state can assume several distinct forms showing how, the degree of market regulation very often raises with liberalization process as long as the process of market creation always requires a correlated process of rights re-definition.

To conclude, libertarian claims, in order to be consistent with the Pareto principle need a maximal authority that properly defines individual rights as alienable claim rights. Only when this process has been settled, and maximal rights are defined, minimal liberties might be pursued. The paper thus concludes that the traditional dichotomy between the state and the market, which has been for a long time the genesis of the libertarian tradition should thus be absorbed and reformulated.

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