William K. Kapp and Ronald H. Coase: a reconciliation[1]

By

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- ABSTRACT -

This paper offers a reflection on some aspects of Kapp's theory through a parallel re-examination of Coase's contribution.

Kapp's approach – referable to as the Institutionalism – is here revisited and interpreted as a precursory contribution to the more recent economic analysis of the law.

According to institutional economics, Kapp rejects the neo-classical paradigm, and in particular, the postulation of a closed economic system able to assure *market clearing outcomes*.

Sections 1 and 2 provide a brief survey of Kapp's theoretical approach. Section 3 presents a critical comparison between Kapp's and Coase's results. In section 4 we try to attenuate the differences between the two authors, underlining the points of accordance.

In the last section we show how the contributions of the two authors can be treated together in a wider and more useful way, and we derive significant insights (based upon the concept of *interdependence* as intended by Kapp). These provide some operational tools for the economic analysis of the law - in general - and for the comparative institutional analysis - in particular.

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1. Kapp's theory

1.1 The "*open system*" perspective

The cornerstone of Kapp's thought is the conception of the economic system as an *open system* - in the sense that there is a bidirectional exchange between physical and social systems – as opposed to the economic system interpreted by the modern economic thought as a closed system; in particular the neo-classical (and neo-walrasian) paradigm, but also the neo-ricardian one. The originality of Kapp's position lies in the empirical analysis of the closed system thesis.

Closed system economists believe that the ratio between the economic system and other systems is parametric. Such a parametric system is assumed to be a datum. Kapp criticizes this description for being random, partial and formalist. It is random because the parameters of the description do not express the structure of the issues under analysis; it is partial because it considers using single subsets of the reference system as parameters; it is formalist because it applies concepts which have no empirical content. Kapp's approach, on the other hand, is based on an *open system* perspective; this is in order to be systematic, complete and substantial.

Kapp's perspective states that economic analysis can not neglect three main points. First, the relations (or ratios) are interdependent; every parameter – describing the physical system – depends on (or, in other words, is affected by) other variables – describing the economic process. Second, among the elements of every system there exists circular (or cumulative) causation. Finally, interdependencies are dynamic: there are repeatedly exogenous variations in the system, amplified subsequently by cumulative causation processes.

In Kapp's view the choice of the closed system perspective has scratched from the agenda of study a complete class of phenomena rising from the fact that the effects of the economic process on the elements of the natural system have a value of use, and not a market value of exchange. What generates the discrepancy between value of use and value of exchange is the fact that individual choice can produce effects that go beyond private realm, creating rise to public good consequences – or interdependencies, in Kapp's words – that a market-based system could only partially consider, or even neglect. For a correct consideration of interdependencies we should first understand what the value of use is.

1.2 Value of use and value of exchange

The main point of the neo-classical approach is the concept of "optimality". This definition is based on the possibility of representing the economic process as a price-based market system. In every real or virtual market, a price system – represented by a vector of equivalence ratios among goods – is associated to the market system. According to this theory, it is possible to define the optimal economic outcome as in the sense of Pareto. However, in order to reach the optimum the system must be "complete". This condition is necessary even if we assume the satisfactory approach rather than the maximizing one. So, in Kapp's view, the main mistake of the orthodox theory is assuming that the system is always complete, and, if not, that the problem is how to complete it. In other words, assuming that the possibility of defining an equivalence ratio among the totality of goods in the economic process always exists.

On the contrary, Kapp argues that, for the correct development of a social outcome, it is necessary, first, to individulize what socio-economic goods are relevant in achieving social welfare improvement; second, to determine for what of these goods there is an actual or potential market; finally, to evaluate, using a trans-disciplinary and substantial methodology, the relevance of the discrepancy between the set of selected goods and the allocation deriving from the market system.

The same critique targets the concept of economic efficiency, which - given market incompleteness - does not account for *every* effect giving rise to the discrepancy between value of use and value of exchange.

An adequate functioning of the value of use in economic analysis foresees the creation of a complex system of social indicators (or social indices) that can transmit information about the elements of the physical and social world. The investigation of social indexes is an important aspect of the research program from an institutional economics perspective. For, if it is possible to provide a correct system of social indices, it is also possible to define the effects and the variations that the economic process creates on the system of value of use.

These effects are heterogeneous, so they cannot be confronted through rationality. Those indices constitute only the base of the political process of choice. So Kapp introduces the concept of social cost, which includes all negative effects from the economic process – in particular its variation, traditionally defined "economic development" – on the system of value of use and therefore on social welfare. Through empirical investigations, he sustains that the big extension, complexity, and ramification of these effects, and the negative effects of the value of use can all be proved.

1.3 Kapp's contribution to environmental economics

Kapp affirms that the validity and pertinence of the standard model in explaining the deterioration of the environment, followed by orthodox Economists, hides a misjudgement that is hard from which to escape. The orthodox environmental economics determines irrelevant, or even noxious, theoretical results and prescriptions because it is based upon an inadequate representation of the ratio between the economic process and the natural environment.

This misinterpretation has produced the increasing environmental deterioration and the crisis characterizing our modern society. In this way, Kapp defines environmental deterioration as the loss of value of use (produced by the adoption of value of exchange or market) of the elements constituting the natural environment.

As the economic process and the ecological equilibrium are equally necessary, environmental economics and the theory of environmental politics *must* constitute a forced passage into the modern social analyses, and the notion of social cost should be the tool used to analyze the phenomena of environmental deterioration.

Kapp relied on a value premise: capabilities to sustain human life must remain unchanged. It is, therefore, necessary to establish the relationships between physical and socio-economic systems that function to achieve the above stated objective. The goal of environmental policy is to modify the economic process so that the process of social reproduction is not threatened by the economic process.

Kapp's position is a clear anticipation of the concept of sustainable development. Moreover, it is necessary to single out the criteria that distinguish essential goods – which satisfy fundamental needs and are functional to the purpose of social reproduction – from non-essential goods. So, production of essential goods has the same ethical value as preserving ecological equilibria. The purpose is to make both of them simultaneously achievable.

In fact, Kapp argues that technological innovations, regardless of their private efficiency, should be sorted, before their introduction, on the basis of criteria of environmental compatibility – stated in terms of environmental standard according to a precautionary principle. Therefore, environmental policy must address three guide-lines:

- solicit the adoption by firms of "alternative technologies";
- stimulate the development of technologies compatible with the environment;
- pre-select the adoptable technology.

After addressing these policies, the focus should not be based on reaching an optimal pollution level or a standard of pre-determined pollution, but, quite the opposite, to insure that the productive process does not alter the main capabilities of the natural environment.

1.4 The supremacy of Ethics

Kapp shows the necessity to introduce a criterion - independent from the economic process - that acts as term of reference in the evaluation of the economic process results.
The significance of ethics in economics is a fundamental aspect of Kapp's studies. But Kapp's critique, and in general that of Institutionalisms – one of the few approaches that does not confuse price theory with value theory, and does not consider the market as the unique institution which attributes value[3] – does not envisage a euthanasia of economics. The solution he arrives at is based on considering some specific needs as objectives, which can be achieved only through the definiiton of the actual meaning of values.
According to Kapp, economic process' evaluation should be based upon two essential ethical norms:

1. continuation of human life must not be endangered;
2. human suffering must be minimized.

The first norm is essential in valuating the ratio between economics and sustainability: it states that the configuration of economic process at any given time should be compatible - given the knowledge of that time - with maintaining the capacity of the environment to sustain human life. The second is instead fundamental to orient development policy (which Kapp called "planning of the development").
This approach favours a greater consciousness from governments about the economic effects of their policies, increasing the level of responsibility and awareness of their commitments.

2. Interdependency and cumulative causation.

Kapp focuses his analysis on the concept of interdependency. In defining this concept he starts with the definition of economic science given by Gruchy:

[3] For more details on this issue see Kapp 1967.

> *[...] the study of the structure and functioning of the evolving field of human relations which is concerned with the provision of material goods and services for the satisfaction of human wants. […] it is the study of the changing patterns of cultural relations which deals with the creation and disposal of scarce material goods and services by individuals and groups in the light of their private and public aims.* (Kapp 1976, pp. 72-73).

Moreover, Kapp affirms that:

> *[...] hence whereas the neoclassical definition selects rational human conduct as criterion, Gruchy makes it clear that economics is concerned with a much broader range of problems, namely the interdependencies of a great number of variables within a dynamic process of human and socio-cultural (interpersonal) relations resulting from changing modes of production, distribution and social reproduction. Not a particular form of behaviour serves as the criterion of differentiation of economic analysis and determines its scope and approach but rather a particular set of interconnected dynamic problems which arise in the satisfaction of individual needs and public objectives*[4]. (Kapp 1976, p. 73)

In other words, Kapp (1976) considers the economy

> *as an open system in continuous dynamic interaction with a more comprehensive social and political as well as physical system from which economic processes receive important organising (and disorganising) impulses and upon which they exert their own negative and positive influences.*

Moreover, Kapp, while stressing the virtues of the open economic system, implicitly criticizes the mechanical and self-regulating character of the economic process and asks for a wider trans-disciplinary involvement of other social and natural sciences in the analysis of the economic process[5].

[4] Kapp points out that *homo-oeconomicus* enthrones in the neo-classicism as *institutional-man* does in the Institutionalism (Kapp 1967)
[5] See Stigler (1951) for a dissenting opinion on the trans-disciplinary and inter-disciplinary,

According to this view the study of interdependencies and their interactions (defined by Kapp as coefficient of interaction[6]) becomes the central issue to be addressed in order to provide a correct analysis.

Kapp underlines that Institutionalism differs from the neoclassical approach, in particular from the mechanicistic neoclassical theory of equilibrium, because it is based upon the principle of circular causation, whose peculiarity is described by the author as follows:

> *For the principle of interlocking circular interdependencies within a process of cumulative causation is at the same time a new theoretical framework which rejects and replaces the traditional equilibrium framework and an analytical tool which permits the solution of concrete problems (i.e. of problematical, indeterminate situations) which have, so far, remained anomalies which could not be adequately accounted for in terms of the traditional "disciplinary matrix".* (Kapp 1976, p. 76)

Kapp specifies that in order to evaluate the effectiveness of the results of the economic policies, they must be based on the study of

> *interaction and responsiveness of productivity and conditions of production to changes of the level of living, institutions and policy measures".* (Kapp 1976, p. 79)

In this sense the principle of "interlocking circular interdependencies" in a context of cumulative causation is able to provide and characterize a ranking of the relevant elements in the study of the economic process.

As stated by Kapp, the importance of the concept of interlocking circular interdependencies and cumulative causation derives from the explicit rejection of the notion of stable equilibrium as stated in the mechanicistic approach.

> *…the principle of cumulative causation and circular interdependencies offers a logical explanation why, under certain conditions, relatively "small" changes are capable of bringing about comparatively "big" effects or transformations in socio-economic as well as ecological processes.* (Kapp 1976)

[6] Kapp 1976, p. 79

It follows that for a policy action to be effective it must be based on the concept of *inverted utilitarianism*, that is to say that the minimization of the human suffering must be enhanced to the limit at which all individual and collective essential needs are considered[7].

In this way he unequivocally pointed out how, in a modern economy, the expansion of the economic, social and technological interdependence determines an increase of the common resources and public goods' area. Similarly, he showed the wrongfulness of the assertion that only markets can assure the emergence of the public interests from the individual ones.

3. Kapp versus Coase

After a brief survey of what we consider the main points in Kapp's theory, we now focus on the aspects that, at a first look, seem to be in contrast with the results provided by Coase, whose contribution lies at the root of the economic analysis of law[8]. Building upon this parallel re-examination we derive some practical insights.
In comparing the two authors, our line of reasoning develops from the following arguments:

Equilibrium and efficiency – As stated before, Kapp rejects approaches based on the concept of a stable equilibrium, nevertheless he denies those that postulate efficient equilibria[9]. On the other hand, the Coasean analysis focuses on efficient equilibria, because goods' rivalry allows the

[7] For a more detailed definition of this concept we recall Kapp's own words (1976) that, in our opinion, can be considered as a sort of *inverted utilitarianism* manifesto*:*

> *Not maximization of pleasure, but the satisfaction of basic human needs or the minimization of human suffering seems to me to constitute such a first principle which could guide practical policies and serve as a yardstick of social efficiency. For, unlike happiness and welfare human suffering is utterly concrete […]. To wipe out hunger and sickness, unemployment and poverty, illiteracy and ignorance can give rise to practical political action on a national and international scale. It is this "inverted utilitarianism" which has been suggested as the first principle which must be our value premise today and in future if we want to come to terms with problems of social and ecological disruption as well as growing national and international disparities, inflation, unemployment, poverty, and last but not least the threat to world peace…No analysis in purely economic terms which abstracts from these institutional factors is able to come to terms with the circular interdependecies between these factors and the cumulative causal interaction which delay and arrest the processes of development.*

[8] Even if Coase (1993) states:

> *It is generally agreed that this article [The Problem of Social Cost] has had an immense influence on legal scholarship, but this was not part of my intention. For me, "the Problem of Social Cost" was an essays on economics. What I wanted to do was to improve our analysis of the working of the economic system…I had no intention of making a contribution to legal scholarship. I referred to legal cases because they afforded examples of real situations as against the imaginary ones normally used by economists in their analysis.*

[9] It is possible to find another contribution on the meaningless of Pareto efficiency in Calabresi (1991). In Calabresi, in fact, Pareto efficiency is a meaningful concept only if it is directed in order to extend the Pareto frontier, while it is meaningless to use this concept when the Pareto frontier is already given. But Calabresi's thought on Pareto efficiency can go together with Kapp's if we consider the option of an extension of the Pareto frontier as an opportunity cost; then an analysis with unpaid (opportunity) cost *à la* Kapp is wrong as well as an analysis without regard to the options of an extension of the Pareto frontier as in Calabresi (1991).

emergence of a situation where marginal rates of substitution for both parts are equal. That is, the point is of equilibrium. Moreover, as underlined by Coase, any institution – namely the firm, the market or the state – could reach that equilibrium point. But different institutions have different costs of functioning that must be compared. So, in a comparative institutional analysis, efficiency is obtained by choosing the institution that achieves equilibrium at the lowest cost. In cases where every institution faces costs that exceed benefits, Coase suggests *inertia*, which, also represents an efficient solution.

Capitalistic system – Kapp focuses on a pungent criticism of the capitalistic system. Instead, when Coase makes a distinction among the institutions and their functioning, he never describes the prevailing (meta)economic model in which they operate. In other words, in the world of Coase there is never a description of what a capitalistic, communist, or any other system is. In fact the Coasean institutions could exist and work in each of these (meta)economic systems[10]. For example, as Hodgson (?) observes Coase and Williamson's analysis would apply to any firm involving *multiple* agents, organized together in some manner – hierarchical, cooperative, participatory (Aoki, 1988), or whatever – but not through the market. In other words the coasean analysis concerns the firm in a wider way than capital firm notion[11].

An Unpaid Costs Economy causes winners and losers – As stated by Kapp

> *[C]apitalism must be regarded as an economy of unpaid costs, "unpaid" in so far as a substantial proportion of the actual costs of production remain unaccounted for in entrepreneurial outlays; instead they are shifted to, and ultimately borne by, third persons or by the community as a whole* Kapp (1950)[12].

Kapp focuses on a third party considered as to be the loser or, in other words, subjected to a counterpart which, instead, is the winner. That is to say, the social optimality criterion is no longer assured.

On the contrary, in the Coasean approach it is always possible to reach an equilibrium point that is (also) socially efficient. In fact, every institution guarantees that any marginal variation for subject A is redistributed to subject B, who bears the opposite variation (or else, the same result holds if subject B pays subject A to prevent her from varying her position).

[10] We could say that institutions, as described by Coase, can disappear only in an anarchic (meta)economic system.

[11] Defining capitalist firm, in accordance with Marx (1976), an institutions where:

1. *the worker works under the control of the capitalist to whom his labour belongs,*
2. and *the product is the property of the capitalist and not that of the worker.* (Marx (1976), pp. 291-292)

[12] See also Nicita A. and U. Pagano (2003).

This framework describes an economy where all costs are paid and there cannot be winners and losers. This result is assured by the efficiency criterion that requires a unanimity rule in making choices. This rule allows only those changes that improve utility for at least one subject leaving the others in the same position, or those for which the improvement for some subject or group of subjects is high enough to compensate the loss born by other subject(s).

Supremacy of the state – It seems that the two authors have strikingly different positions about the role of the state: Kapp prefigures a strong involvement of the state, while Coase[13] seems to limit its supremacy[14] .

The differences we have underlined so far lead to a different prescription of the objectives to be pursued, giving rise to some further consequences to which the next section is devoted.

Maximization vs. minimization

Given the above mentioned characteristics of the Coasean approach, welfare maximization improvement is undeniably correct. Even more, through individualistic utility maximization we achieve social welfare maximization. Meanwhile, Kapp's approach exploits a "reversed utilitarism", which foresees human suffering minimization. We provide a representation[15] of this discrepancy in figure 1.

The curve OP in figure 1 shows the maximum utility one can achieve given the level of satisfaction of the other, for every feasible optimal allocation of the resources. Where x_1 and x_2 represent the *expectations* of agent 1 and agent 2. Therefore, OP represents the contribution to x_2's *expectation* made by a greater expectation of x_1, in other words the curve OP represents the maximum utility.

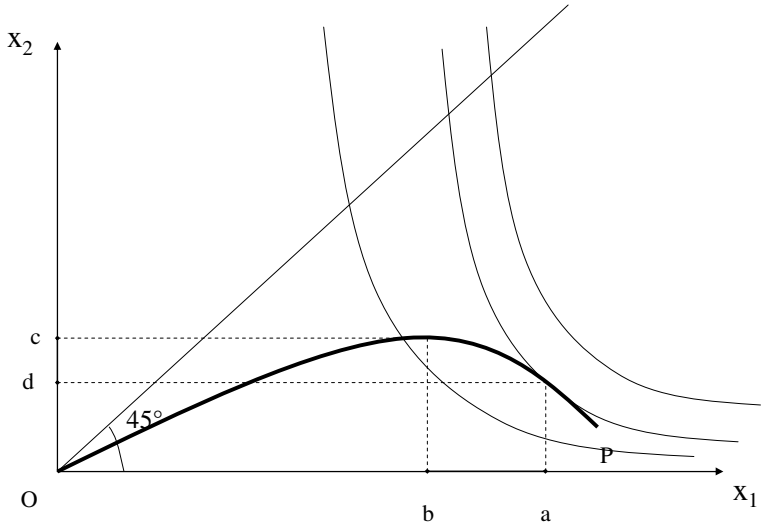
[13] It is necessary to underline that this is a drastic scheme, and may also be wrong, but it is needed to simplify the exposition. However we want to attenuate this opposition citing the Authors. For instance Coase: *When the transfer of rights has to come about as a result of market transaction carried out between large number of people or organizations acting jointly, the process of negotiation may be so difficult and time consuming as to make such transfers a practical impossibility…In these circumstance it may be preferable to impose special regulations. (Coase 1959)*
And Kapp (1950 p. 24): *We wish to make it clear that in tracing the social costs of private enterprise we are not implying that regulation and economic planning would necessarily eliminate these costs. Nor are we comparing unregulated private enterprise with a system of economic planning. Whether or not a system of economic planning would avoid the social costs of production depends upon whether the planners wish to avoid or neglect them.*

[14] Hart (2001) underlines that transaction cost economics is inclined to see the market as the first choice, when it is feasible .

[15] In our formalization we start with Acocella's (1994) analysis that is a re-elaboration of Rawls' (1971), on the difference principle.

The classical utilitarian solution is the point (a;d), because the OP curve is tangent to the highest indifference curve[16] that it touches. The reversed utilitarian solution is the point (b;c), because the contribution to x_2's expectation made by the greater expectation of x_1 is maximum.

Figure 1



The shape of the OP curve means that after a first segment which, for a given collective resource endowment, utility increases for agent 2 lead to an utility improvement for agent 1 also, due to external positive economies. This ceases to be true after the maximum of the OP curve is reached. In fact, after that point, external economies produce negative impacts on agent 1 leading to a social loss[17].

We provide a theoretical game example for a further explanation of the implications deriving from this example:

[16] Indifference curves are here presented as convex to express the fact that either agent gain relative to the other is decreasingly valuable from a social point of view.

[17] Acocella (1994) maintains that the idea behind the OP curve is that society, even if within certain limits, can exploit collaborative assets producing advantageous results for all its members.

$$\begin{array}{c|cc} \text{Agent 1} \backslash \text{Agent 2} & \text{Left} & \text{Right} \\ & \overset{NE}{} & \overset{PCS}{} \\ \text{Up} & a,d & e,e \\ \text{Down} & b,c & 0,0 \\ & \underset{K}{} & \underset{SPG}{} \end{array}$$

With $a \succ b \succ c \succ d \succ e \geq 0$.

The (0;0) pay-off represents the hypothetical state in which all social primary goods (SPG) are distributed equally. The (e;e) pay-off represents the pure conflict state (PCS) or the Hobbesian world.

In the present game we observe one dominant strategy for each agent: *Up* for agent 1 and *Left* for agent 2. This strategy vector leads to a Nash equilibrium (NE). Kapp's solution (K), instead, is represented by the strategy vector (Down;Left), in which inequality and suffering are minimized.

We can now distinguish three relevant cases:

- Case 1. If $[(a+d)>(b+c)] \Rightarrow$ The Nash equilibrium is Pareto optimal (PO).

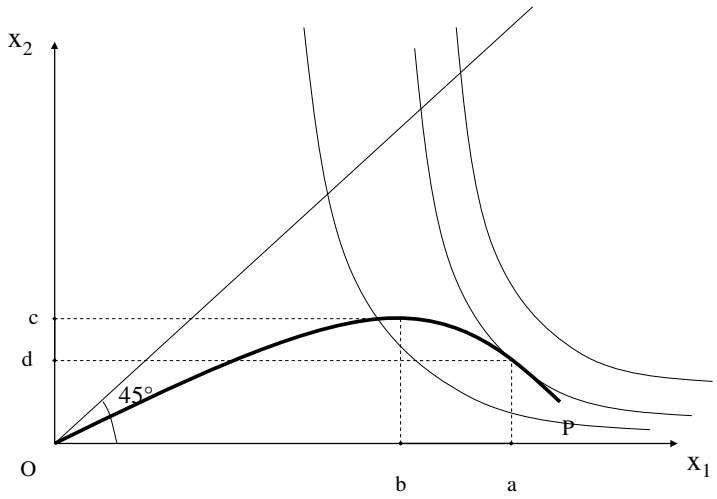
$$\begin{array}{c|cc} \text{Agent 1} \backslash \text{Agent 2} & \text{Left} & \text{Right} \\ & \overset{NE\text{-}PO\text{-}C}{} & \overset{PCS}{} \\ \text{Up} & a,d & e,e \\ \text{Down} & b,c & 0,0 \\ & \underset{K}{} & \underset{SPG}{} \end{array}$$

Here, Coase's solution (C) is the market[18], because individual choices lead to the optimal solution (Up;Left).

The following figure 2 represents this circumstance:

[18] Since Nash Equilibrium and coasean market are both determined by individual calculus.

Figure 2



In this case we find a discrepancy between Coase and Kapp's prescriptions, that is to say there is a trade-off between welfare maximization and human suffering minimization.

When the market yields a social welfare value greater than that deriving from a hierarchical institutional structure, Coase's solution will prevail, leading to a social optimum outcome.

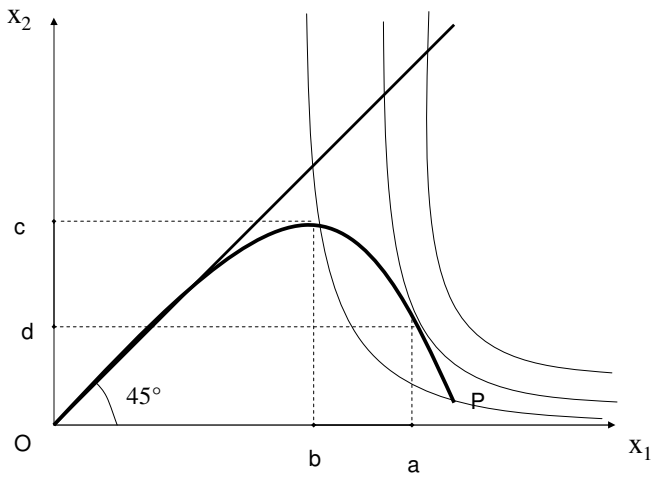
But, even if the market achieves efficiency, fairness can be endangered. If inequality is perceived as a social cost, this loss, according to Kapp, will remain unpaid.

- Case 2. If $\left[(a+d)<(b+c)\right] \Rightarrow$ The Nash equilibrium is not Pareto optimal.

$$
\begin{array}{cc}
{}_{Agent\,1}\backslash^{Agent\,2} & \begin{array}{cc} \text{Left} & \text{Right} \end{array} \\
\begin{array}{c} \text{Up} \\ \text{Down} \end{array} & \begin{bmatrix} \overset{NE}{a,d} & \overset{PCS}{e,e} \\ \underset{K\text{-}PO\text{-}C}{b,c} & \underset{SPG}{0,0} \end{bmatrix}
\end{array}
$$

Here, Coase's solution is a hierarchical structure (the firm or the state), for individual choices lead to the optimal solution (Down; Left). But, this coincides with Kapp's prescription.
Figure 3 represents this case.

Figure 3



When the market yields a social welfare value lesser than that deriving from a hierarchical institutional structure, welfare maximization and human suffering minimization can be jointly exploited, but only under a hierarchical arrangement.

In other words, in this circumstance the market solution will fail twice: in terms of efficiency as well as fairness. The reason for this failure can be explained by the presence of high transaction costs[19].

- Case 3. If $[(a+d)=(b+c)] \Rightarrow$ The Nash equilibrium is Pareto optimal.

$$
\begin{array}{cc}
{}_{Agent\,1}\backslash^{Agent\,2} & \begin{array}{cc} \text{Left} & \text{Right} \end{array} \\
\begin{array}{c} \text{Up} \\ \text{Down} \end{array} & \begin{bmatrix} \underset{NE\text{-}PO\text{-}C}{a,d} & \underset{PCS}{e,e} \\ \underset{K\text{-}PO\text{-}C}{b,c} & \underset{SPG}{0,0} \end{bmatrix}
\end{array}
$$

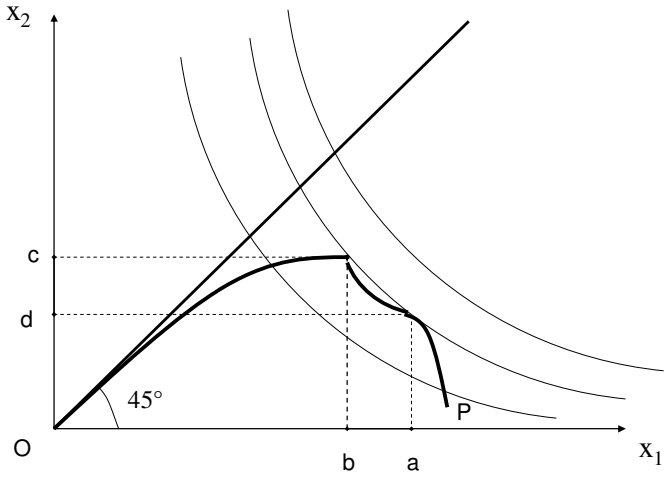
Here, hierarchical and decentralized solutions can lead to the same Pareto optimal result, leaving Coase indifferent among the different institutions[20]. Kapp's solution, on the contrary, is unique.

[19] If the hierarchical solution worked costless, then transaction costs (or functioning costs of market) would be represented by the difference: $[(b+c)-(a+d)]$.

[20] There is only a comparative cost of the functioning estimation problem.

In the representation of the present case (figure 4) it is necessary to change the peculiarities of the curves with respect to the above figures. In fact, in order to hold the hypothesis we must assume non-continuous functions and/or dissimilar concavities in comparison to the above OP curve and/or welfare function. In the following figure we represent one of the possible alternative assumptions: OP curve with both concave and convex lines.

Figure 4



When both the market and the hierarchical structure yield the same social value, it is possible to analytically calculate the unpaid cost of inequality.

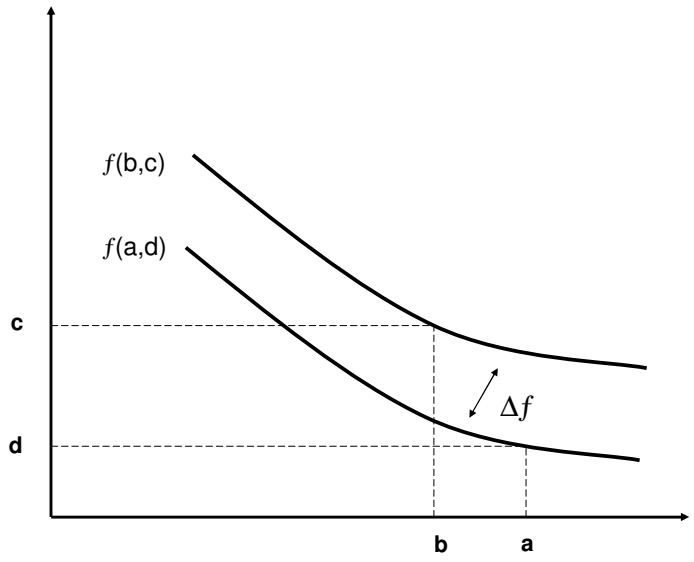
Let f be a utility function for equality (with $f' < 0$, and $f'' \geq 0$),

$\Delta f = \left\| f(b,c) - f(a,d) \right\|$ represents the unpaid cost of inequality (see figure 5).

So, given the same level of social value produced, a welfare maximization objective would neglect distributive costs, while human suffering minimization could be assured along with the minimization of the distributive costs[21].

[21] In this situation it would be more *convenient* to have an ordering between efficiency (deriving from the maximization) and fairness (deriving from human suffering minimization), in which fairness is hierarchically superior to efficiency. For other reasoning on this perspective see Denozza (2004).

Figure 5



4. Reconciling Kapp with Coase

Focusing on the concepts of interdependency and transaction costs given by the two authors, we pave the way towards a reconciliation of the two approaches. Our point is that interdependencies exist when it is not possible to circumscribe the borders of a transaction, that is to say, when transaction costs prevent an unambiguous and verifiable (or enforceable) definition of rights.
Applying at the farmer/rancher agreement studied by Coase (1960), we can assume that the parts are not able to account for all the effects deriving from their agreement and affecting *third parties*. This means that something remains outside of the bargaining and gives shape to a persistent level of externality.

It is worth noting that Coase in the article "The Federal Communications Commission" (1959), from which the Coase theorem arises, exactly affirms:

> *never entered my head to add the qualification that if the demand for mushrooms of the possible claimants to the cave differed and if their expenditure on mushrooms (or banking services or natural gas) was an important item in their budgets, and if their consumption of these products was a significant part of total consumption, the decision concerning ownership of a newly discovered cave would affect the demand for banking*

services, natural gas, and mushrooms. As a result the relative prices of banking services, natural gas, and mushrooms would change: such a change might affect the amount which the various businesses concerned would be willing to pay for the use of the cave, and this might possibly affect the way in which the cave was used. It cannot be denied that it is conceivable that a change in the criteria for assigning ownership to previously unrecognized rights may lead to changes in demand which in turn lead to a difference in the allocation of resources, but, apart from such cataclysmic events as the abolition of slavery will normally be so insignificant that they can safely be neglected.

Therefore, we can affirm that while in Coase, interdependencies are weak and do not affect equilibria (which can transcend from any meta-economic model), in Kapp, interdependencies are strong to the point that they create and sustain never-ending disequilibria that need the enforcement of a stable (but sub-optimal) economic model (i.e. capitalism).
Using these considerations we can find a way to unite these two contributions: the difference in the degree of interdependency provides the criterion for the choice between applying Coase's or Kapp's approach. In order to better exploit this idea we derive two main policy propositions:

Proposition 1. In a framework characterized by low interdependency, we should choose the coasean institution that foresees welfare maximization bearing the lowest cost – ex-post protection of rights and high self-determination through individual rationality.

Proposition 2. In a framework characterized by high interdependency, we should choose the coasean institution that foresees human suffering minimization bearing the lowest cost – ex-ante protection[22] of rights and low self-determination through individual rationality.

We can now go a step further in our examination by saying that interdependencies exist whenever transaction costs exist. Consequently, a *first best* outcome turns out not to be achievable, and the only attainable outcome is a *second best*. According to the *second best* literature[23], it is interesting

[22] The crucial difference between ex-ante and ex-post systems is that under the former regime, the burden of initiating the negotiation is on the interfering party, while under the latter, it is on the right holder. If there are no asymmetries both systems exert exactly the same level of protection. However, whereas wealth and power may be significant in determining relative bargaining positions, there is no reason to presume that the outcomes will be symmetrical. In fact, it seems reasonable to suggest that rights are less well protected from interference under an ex-post system than under an ex-ante regime.

[23] In few words, according to Lipsey and Lancaster (1956):
It is well know that attainment of a paretian optimum requires the simultaneous fulfilment of all the optimum conditions. The general theorem for the second best optimum states that if there is introduced into a general equilibrium system a constraint which prevents the attainment of one of the paretian conditions, are, in general,

to note that we can get a second best outcome using different policies[24], even those conflicting with the one used to achieve first best results.

We justify utility maximization wherever not-verified or not-verifiable external effects are negligible, that is to say in circumstances characterized by low interdependency and where counterparts exercise a *strong contractual capability*. On the contrary, human suffering minimization should be applied wherever not-verified or not-verifiable external effects assume a consistent value, that is to say in high interdependency circumstances where counterparts exercise a *weak contractual capability*. If all the parties involved in a transaction possess a strong contractual capability, then a welfare maximization approach would be preferable; while if one or more subjects exhibit weak contractual capability, then welfare maximization could discourage weak counterparts from participating in the transaction, giving rise to a process of cumulative causation with socially deplorable consequences. In this latter case, human suffering minimization could be a more successful objective in granting protection to weaker parties, leading to higher levels of overall social welfare.

So far, our parallel re-examination of Kapp and Coase's contributions can help us understand easier the role institutions play in a socio-economic context. In fact, institutions' goals can be explained as a mix of maximization and minimization processes. Unquestionably market is the symbol of a maximization approach, while the state is (or should be) emblematic in minimizing human suffering. But, while it is well known that the state in many of its functions foresees also welfare maximization, it is less trivial to observe the market pursuing human suffering minimization[25].

Moreover, one of the most important natural consequences deriving from the presence of interdependencies is *power*. Both with positive interdependencies, and with negative interdependencies, there are two possible circumstances: 1) if we do not internalize the interdependency, somebody will enjoy a privilege – that is, a display of power; 2) if we internalize the interdependency in terms of efficiency and welfare maximization, the power needs to be

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no longer desirable. In other words, given that one of the paretian optimum conditions cannot be fulfilled, then an optimum situation can be achieved only by departing all the other paretian conditions. The optimum situation finally attained may be termed a second best optimum because it is achieved subject to a constraint which, by definition, prevents the attainment of a paretian optimum.

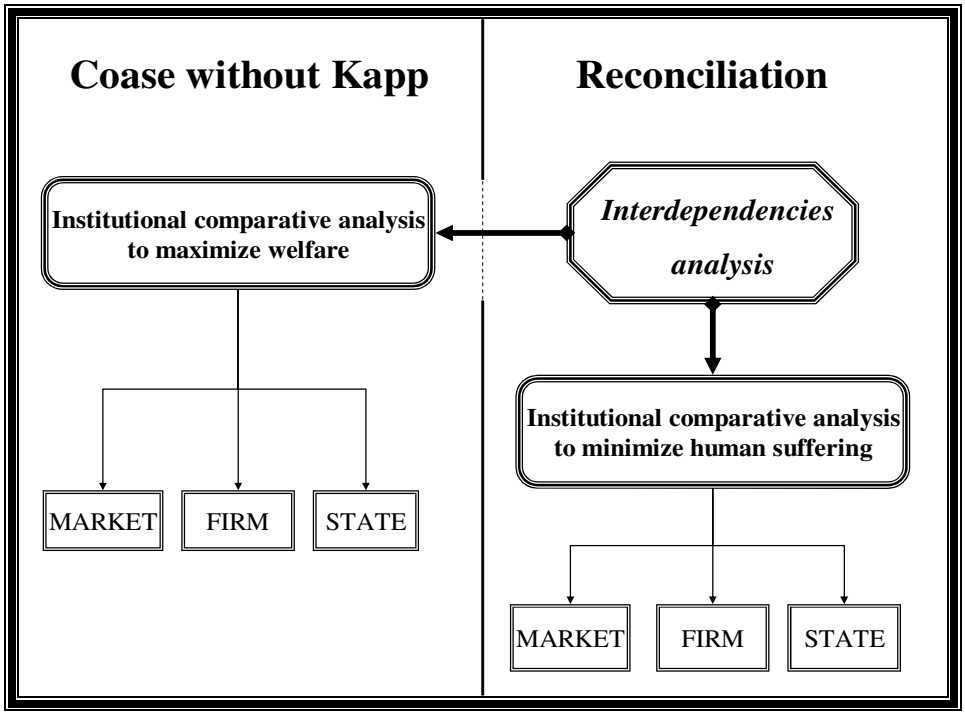
[24] Paradoxically, we could have regulation policies that, while attempting to respond to some market failures, can generate other market failures.

[25] We can find it, for instance, if we look at ethical investors. In such a case, we infer that, after a proper costs of functioning comparative analysis, the market is preferred to the state in fulfilling non-maximizing functions – using lobbying techniques.

allocated[26]. In addition, if we assume that power[27] will be subject also to a process of cumulative causation, then human suffering minimization can likely avoid power distortions more effectively.

In other words, the degree of interdependency is directly related to the choice of the objective to be pursued, but this does not make the choice of the institution to adopt irrelevant. In this perspective we can apply Kapp in choosing the objectives to be pursued and Coase's analysis in choosing the institution[28] that is better suited to reach those objectives.

In so doing, we unify Kapp and Coase's main innovative contributions in defining a new policy rationality[29]; applying Kapp we can add human suffering minimization to individual maximization as another possible objective to be pursued (in particular in terms of minimization of power distortions), and with Coase's institutional comparative analysis we can choose from different institutions. In other words, if Kapp can suggest *what* the objective, Coase can suggest *how* to achieve it.



[26] In Hart's (1995) model, for instance, complementarity – a particular form of interdependency – between physical and human assets is internalized by the allocation of residual rights, in other words, by the allocation of power to decide the surplus sharing.
[27] Calabresi (see *supra* note 8) distinguishes two typologies of power: power by wealth and power by authority.
[28] Williamson (1979) states: *the assesment of transaction costs is a comparative institutional undertaking*
[29] In this perspective, Franzini (2004) suggests that *we need to take seriously the challenge of social costs and social rights, thinking of them as the starting point for designing richer institutional settings, where decision mechanisms are more collectively oriented than the market and property rights systems are more subservient to the fulfilment of social rights*.

Indeed, the *market* and the *state* can be placed on opposite sides, but policy contaminations are found. In between we find the firm which presupposes a much greater mixture of objectives to sustain its functioning. For instance, job contracts, generally, exhibit a remuneration based on a variable portion – justified by the maximization purpose – and a fixed one – justified by suffering minimization – which wants to protect a social minimum. Labour law – widespread in the continental European countries – is intended to lower transaction costs deriving from the asymmetries arising between employers and employees.

Finally, Kapp's conjecture favours the introduction of concepts like ethics, proportionality, fairness, justice and human needs protection – those traditionally belonging to legal theory – into the economic analysis, making them powerful tools of reasoning and particularly appropriate for the economic analysis of the law in particular, and for a closer interaction between legal and economic sciences in a broader sense.

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