INTRODUCTION

This paper discusses the nature of, and relation between, the concepts of Externality and Pareto-Efficiency. The importance of these concepts in economic theory needs no introduction. The relevance of this analysis to 'the law' is essentially two-fold:

1. In so far as the economic analysis of the law depends upon such concepts.
2. In so far as the legal and institutional framework is often instrumental in creating what has been termed 'market failure' and that changes in that framework are often proposed as remedies.

Coase's seminal paper developed in detail the relation between externality and the legal and institutional framework and a considerable body of literature has developed since that time. These relations are therefore not dwelt upon here, the concern being to examine the basic concepts.

Morgenstern noted that Pareto Optimality was: 'a basic concept of contemporary economic theory which has not been sufficiently explored'. It is argued here that different conceptions of Pareto Optimality (often implicit) are instrumental in generating different theoretical structures and different policy conclusions; inadequate concepts can very easily generate misleading policy prescription.

It is frequently argued that a separation can be made between the positive and normative parts of theory; the 'New' Welfare Economics sought to build a theoretical structure from 'minimal' basic value judgments which were then conjoined with positive theory to provide policy recommendations. It is argued here that this is incorrect and that additional or more complex value judgments must always be made; the classical Pareto principle per se is seen to be fundamentally inoperable.

The approach used is to examine the writings of the Pigovian, Paretian and so-called neo-institutionalists on 'Externality' with the purpose of defining, comparing, contrasting and criticizing their concepts of 'optimality' and 'externality.' Section II discusses the neo-classical concept of externality and relates it to the concept of Pareto Optimality; III examines the status of the classical Pareto principle; IV introduces the neo-institutionalist analysis of Externality; V the neo-institutionalist concept of 'Objective Cost' and VI draws together the conclusions, focusing in particular upon the implications of the analysis for the practical approach to policy.

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II. THE CONCEPT OF EXTERNALITY IN NEO-CLASSICAL ECONOMICS

A convenient starting point for examining the relation between Pareto Optimality and Externality in the writings of the Pigovian/Paretian Welfare economists is the debate between Buchanan/Stubblebine (B-S) and Shibata (S). The basic model used in developing the concept of externality here is well understood (see for example Buchanan and Stubblebine; Shibata; Nath gives a full presentation of the basic model involved in the original debate). The following is a brief verbal outline of its key features.

Consider two particular individuals $g$, $r$ in a population of $S$ individuals. Each individual $i$ initially holds commodities $x^i = (x^i_1, \ldots, x^i_n)$ and factors $y^i = (y^i_1, \ldots, y^i_m)$. Assume just one externality effect between $g$ and $r$ over the consumption of $x_k$: individual $g$ is affected by $r$'s consumption of $k$. The individuals' utility functions may be represented as:

$$U^g = U^g(x^g, y^g, x^r); \quad U^i = U^i(x^i, y^i) \quad i = 1, \ldots S$$

$$i \neq g$$

There is a production frontier, product transformation function

$$T(X_1, \ldots, X_n; V_1, \ldots, V_m) = 0$$

where $X_i, V_i$ are the sums of the individual holdings:

$$i.e. \quad X_i = \sum_{p=1}^{S} X^{p, i}$$

The conditions for Pareto Optimality can be derived by maximizing utility for any particular individual whilst holding the utility levels of all the others constant (also subject to the commodity, factor and transformation function constraints). Basically, if trade is possible, a Pareto Optimum will be realized (given suitable properties for the various functions) and this can be characterized by the usual ratios of partial derivatives. Externality is introduced by the assumption that the two individuals $g$ and $r$ are for some reason (institutional, technological, etc.) unable to trade. This fundamental change implies that $g$ and $r$ must reach their personal equilibrium without inter-trading: in the partial equilibrium diagram of Figure 1, the result is that the externality output occurs at OQ rather than at OE (see later for fuller discussion).

The question then is, as Rowley puts it:

Does the desire for trade between two parties involved in a single externality relationship always be viewed as proof that the existing solution is not Pareto optimal?

The crux of the matter lies with the imposition of the constraint (for institutional, technological, etc. reasons) that the individuals $g$ and $r$ cannot enter into trade.

Within the above analytical model, the introduction of this 'constraint' on trading possibilities does not appear to affect the Transformation function. This seems to be where an important difference occurs between Buchanan-Stubblebine (B-S) and Shibata (S) since B-S clearly suggest these functions should change:
Social product transformation functions have meaning only when 'built up' from the set of constraints faced by the individual actor/decision-maker participating in a given socio-economic universe. Along with technological consideration, such constraints must incorporate inextricably the set of (property) rights — or legal constraints — extant in that universe. ... These positions of Pareto optimality in any system depend not only on the technological production and preference relationships, but also on the structure of rules, or institutions, within which individuals are forced to behave.6

Property rights are modified by the introduction of the tax-subsidy scheme. The positions that qualify as Pareto optimal depend always on the rules that constrain individual behaviour, and any change in that set of rules will change the boundaries of the Paretian set.9

Shibata10 disagrees.

... the Pigovian tax ... does not lessen the physical resources available to the economy, so that it leaves the RPT confronted by the economy unchanged.

In a sense the disagreement over the nature of what constitutes a Product Transformation function is semantic: the change may be conceptualized as being in the 'form' of the function itself (a 'parametric' shift) or through changes in the constraints set (whilst leaving the basic function unaffected). However, and more importantly, the concept of Pareto Optimum (PO) also differs as between the two views: PO in the Shibata sense (call it POS) is a 'wider' concept in which the search for optimality includes changes in rights and, presumably (in other contexts), also changes in the rules of the game. Pareto Optimum in the Buchanan-Stubblebine sense (call it POBS) is clearly intended to be a concept which functions within the rules of the game, the disposition of rights and so on (see Buchanan-Stubblebine11 above).

Consider the case of the imposition of a Pigovian tax as in Figure 1. The law is taken to be permissive12 so that, in the absence of trading possibilities, the chosen externality output will be OQ.

Fig. 1. $f_1$: marginal benefit function of externality producer; $f_2$: marginal loss function of individual adversely affected by the externality; and $f_3$: marginal benefit function after the imposition of the 'optimal' Pigovian Tax.
Now $E_i$ is the output that maximizes joint benefits and in the absence of 'Transactions costs' (whose definition is deferred until the discussion of Section IV) trade, were it possible would realise precisely, $E_i$. Coase\textsuperscript{13} showed that if transactions costs were zero then equally if the rights were initially vested with the Recipient (so that initially output is zero) then trading were it possible would also realise the 'Pareto Optimal' position of $E_i$ (ignoring possible income effect divergences).

B-S argue that after the tax imposition, $E_i$ is still non-Pareto optimal: the individuals, were they able to trade, would be able to move to the position $E_2$ with mutual gains being realized. Thus to render $E_i$ Pareto Optimal requires a bilateral tax-subsidy approach.

The B-S concept of PO, POBS, can probably be best understood as an attempt to anchor the concept within the rules of the game and to avoid the ‘deus ex machina’ PO concept which is otherwise implied. Shibata argues that $E_2$ is suboptimal and the reason B-S do not recognize this is that they ignore the destination of the (lump sum) tax proceeds. Thus if the tax proceeds were received by some third party, then the trading movement from $E_1 \rightarrow E_2$ implies a loss to him — if he could identify its source he could enter the trade and position $E_1$ could be restored. If the subsidy is truly lump sum then there is an information gap; the third party perceives no incentive to trade. With \textit{truly} lump sum redistribution then $E_2$ is Pareto Optimal in the B-S sense — at $E_2$ no-one can see any further potential gains from trade.

POBS is thus \textit{individualistic} in the sense that there can be no Pareto Optimum whilst there are perceived potential gains from trade by the individual actors. Of course if the lump sum were perceived as \textit{marginal} by the third party, then $E_i$ becomes POBS since in this case the individuals perceive potential gains from trade between the three of them.

Clearly, POBS and POS are not the same animal — the question then is, which is likely to be the more ‘fruitful’. POBS is conditional upon the rules of the game — individual product transformation functions (in the above model, feeding into $\partial T/\partial X_i/\partial T/\partial X_j$) shift with any changes in the distribution of rights, rules and endowments. Now, $E_1$ can be identified as the initial POBS point (if the actors could trade), and after the imposition of the Pigovian tax, $E_2$ becomes the new POBS. The problem is that B-S cannot really discuss the difference between these two different positions because an ‘institutional’ change has occurred in the interim. Yet it is also clear that B-S regard $E_2$ as ‘less good’ than $E_1$ in some sense. They identify this problem when they write:

> Limited trading does not exploit, in itself, the more inclusive gains-from-trade that might accrue to parties from a major rule change.\textsuperscript{14}

Thus it appears that POBS is hardly a very desirable state of affairs; it is indeed virtually empty of any normative content. Indeed it would appear that B-S cannot logically use POBS to justify their tax-subsidy solution (to maintain the position $E_i$). Thus they can invoke POBS to suggest $E_i$ is the initial Optimum and they can invoke it to suggest $E_i$ is \textit{not} the Optimum (and that $E_2$ is) after the application of the tax. However, POBS is silent when it comes to choosing between the two positions since B-S have to in effect resort to some wider notion (viz. the Pigovian concept of Pareto optimality) to suggest $E_i$ is preferable, after which POBS can be used to show there is a need for a bilateral tax-subsidy solution.

Turning to Shibata’s POS concept, which is essentially the Pigovian optimality concept, it is clear that here $E_i$ is always the Optimum — and that rule changes, etc.
are all allowed in searching out this optimum. It may be that the Optimum is unstable in that private individuals may have incentives to deviate from ‘ideal’ behaviour but this is rather a problem for practise. Only if the concept of Pareto Optimality is defined to stand independently of the ‘institutional’ structure (rules, rights, etc.) can changes in that structure be examined. Clearly, Shibata’s concept, the Pigovian concept, of Pareto Optimality does stand so independent.

So far, the POS concept of optimality seems to promise to be more fruitful. Whether this is an illusion or not is examined in Section III. At this point it is perhaps worth noting that it does have connotations of ‘Deus ex machina’; the optimal position is essentially that perceived by the omniscient social planner; individuals may perceive potential gains from trade but only the Social Planner can tell whether overall there are such gains or not. It is precisely such a conception that B-S wish to avoid (POBS is a conception consistent with the B-S position of methodological individualism).

Buchanan recognizes that the Pareto criterion can be defined to have different fields of application — from the case where the rules etc. are completely given (where it is ‘useful . . . in dispelling ignorance or irrationality’) to the case where no rules or restrictions are placed upon individual’s possible behaviour. He suggests that, in general, economists have used the criterion for the case where certain rules and institutions are given. The problem is to decide upon which are to be taken as given. The Wicksellian unanimity criterion is proposed whereby changes in rules etc. are permissible only if unanimously agreed upon.

This above discussion makes much more sense of the B-S position — in that a two stage process is envisaged of lower level optimization ‘within the rules of the game’ followed by higher level ‘optimization’ of the rules of the game. Whilst it makes sense of POBS, this still leaves the concept of externality somewhat problematic, as the preceding analysis makes clear. This discussion of the debate over ‘Externality’ follows in the neo-classical tradition and does not enquire into the reasons why individuals faced with ‘externality’ are unable to trade. The neo-classical approach starts out from the pure competitive model and poses the question ‘what happens if there is some form of interdependence not accounted for by the market? Will the system still generate a Pareto Optimum?’ A negative answer is followed by policy prescriptions (tax, subsidies, etc.) intended to realise the original ‘optimal’ state of affairs.

The neo-classical study of externality is of interest in that it identifies one of the many deviations of the real world from the ideal market model. It is helpful in understanding the structure and functioning of that model. However, being so closely identified with the competitive market model (paradigm) focuses attention, it may be argued, upon the symptoms rather than the causes of what constitutes ‘Externality.’ For example it seems reasonable to ask why the individuals concerned did not/could not trade. Further, in so far as the model does not correspond well to the real world, the policy prescriptions must also be called into question. These points are amplified in Section IV where the contribution of those writers who might loosely be dubbed ‘neo-institutionalist’ is examined.

III. THE CLASSICAL PARETO PRINCIPLE

The Pareto principle states that a change is socially desirable if it makes at least one individual better off without making others worse off. A useful starting point for
discussion here is Ng's defence of the principle:

If one reflects on the Pareto principle, one will probably agree that it takes a rather peculiar ethic to reject it. Since some individuals are made better off and no-one is made worse off, why reject the change? However, some economists come out strongly against the Pareto principle. It seems that their objections to the Paretoian value judgment are based on somewhat misleading interpretations of it. For example, consider the following quotation:

'If we adopt a series of economic policies which make the rich group richer but have the poorer group at the same absolute level, then according to a Pareto-type Social Welfare function . . . we would be necessarily raising the level of social welfare.' (Nathzo)

This assertion of Nath follows only from his rather peculiar interpretation of the Paretian value judgment as 'if any change in the allocation of resources increases the income and leisure of everyone or at least one person (or more strictly, one household) without reducing those of any other, then the change should be considered to have increased social welfare.' However, the actual Paretoian value judgment is that 'a change is desirable if it makes someone better off without making others worse off.' This will yield Nath's interpretation only if an additional factual assumption is made, viz that there is no externality in consumption. (If there are external effects in consumption, an individual may be worse off even if his own income stays unchanged . . .). In other words, Nath confuses the value and factual parts of the usual assumptions made by economists.

This appears to be a strongly argued defence of the Pareto principle, yet an important objection can still be lodged against it. Pose the question 'can we understand the Pareto principle in isolation?': if yes, then we may approve of the principle in itself — but so what? — it still needs to be rendered operational; if no, then the 'understanding' of the principle must derive from its use in some specific model. Whichever is the case, the principle is inoperable unless combined with some factual model.

I would argue here that the classical conception of the Pareto principle, as presented in the above, is in practice impossible to apply: how is it possible to identify whether an individual is 'better off?' — since questioning him cannot be relied upon to elicit truthful answers. Certainly also the Social Planner cannot establish it by examining the 'facts' or revealed behaviour since to be able to deduce anything from such 'facts' requires theory: events only become facts when interpreted in the light of the theory. This makes sense of Nath's position (in the above quote) since he may be understood to be criticizing a model which assumes away 'externalities in consumption' when they may be relevant to the social decision.

No model can perfectly mirror the real world. In so called 'Positive' economics, 'inessential' features are abstracted from; such features are deemed 'inessential' because they presumably do not affect the predictive power of the model. In 'normative' economics however this abstraction, these 'approximations,' are instrumental in deriving policy conclusions. Ng's criticism of Nath — that he confuses the value judgment from the factual parts is not really fair — since to abstract from certain real world phenomena must in this context be inherently part of the 'value judgment' embodied in the model.21

Perhaps the above is worth emphasis: the point is that a set of abstractions,
approximations (such as solipsistic self-interest) may in itself not constitute a value judgment; the selection of a particular set, to be conjoined with 'primitive' value judgment such as the Pareto principle, does constitute a value judgment, or, at least, a part of a value judgment. The choice of a particular model formulation is in itself a recommendatory procedure.

Different sets of supposedly 'positive' model approximations and assumptions can give rise to differing policy conclusions (for example, contrast the neo-classical and neo-institutional welfare economic conclusions which stem originally from the same primitive Pareto value judgment). One might I suppose argue that one set of assumptions should be preferable to another because the model performs better in its predictions of empirical facts — in this sense the selection of a set of assumptions could be regarded as being simply the methodological value judgment as to what constitutes a 'better' theory. However, in the first place this seems to beg the question of what constitutes 'truth' in the social sciences and whether one set of assumptions can be expected to out perform all others in all the possible areas of application. In the second place it is the case that falsification is extremely difficult in the social sciences, particularly in the case of the higher level axioms/approximations, and so in normative theory one has to choose a particular set.

For an individual, his adoption of certain primitive or basic value judgments may be viewed as part of a two-way process, involving intuitions about the value judgment and also intuitions about the desirability of the policy conclusions. The two-way process presumably tends to modify intuitions so that there becomes increasing consistency between the assessment of the value judgments and the assessment of the policy implications. It seems likely that any individual would also tend to select assumptions so as to improve the above correspondence. If this is accepted, then it appears misleading to present normative theory as simply evolving from the primitive value judgments alone.

Whether one wishes to call the choice of the assumptions/approximations set a value judgment in itself, or whether one attaches qualifications to the primitive value judgments (e.g. for the Pareto principle, the qualification 'where individuals are taken to be motivated solely by self interest') seems essentially a semantic point. In either case however, the set of value judgments no longer appears so compact and simple.

The above discussion thus has argued that it is illegitimate to support the Classical Pareto principle on the basis that per se it is an appealing principle — that the principle must be mediated through some economic theory of man and what is deemed to constitute his welfare. The two main points are:

1. The classical Pareto principle is inoperable in its original form.
2. Additional value judgments are in effect being made in the necessary selection of the positive theory which provides the linkage between the primitive value judgment and the policy recommendations.

In comparing the Shibata/Pigovian concept of Pareto Optimality as mediated through their 'model' of the world with that of Buchanan-Stubblebine the former may appear to be somewhat 'closer' to the classical conception of the principle in that in asking the question of 'making someone better off and no-one worse off,' more elements are allowed to vary. There are however important features inherent in the real world situation which are being abstracted from, or rather, ignored by these models. These features are examined in the next section.
IV. EXTERNALITY: THE ‘NEO-INSTITUTIONALIST’ APPROACH

Buchanan-Stubblebine require that, under POBS, the ‘desire for trade’ should have disappeared. This idea of a desire for trade, which the individuals are unable to realize, is not examined any further in the neo-classical formulation which is thus missing an important element. To help bring the model to a closer correspondence to the ‘real world’ the neo-institutionalists here introduce new concepts — transactions, administration, information and search, policing and enforcement costs, etc. Of course it does not follow conclusively that because a theory ignores certain elements, the policy conclusions are necessarily faulty. It does however suggest that the analysis may benefit from the inclusion of such elements.

To be consistent with the individualistic approach, it seems reasonable to introduce these factors into the individual’s decision calculus. ‘Market failure’ is significantly related to these costs as some of those writing more in the neo-classical tradition have acknowledged:

We cannot ignore the costs of institutions in making social decisions since these costs are now the primary reason the externality is there in the first place. (Heller and Starrett)

The introduction of the above elements must be treated carefully since, if injudiciously handled, they can quite easily confuse rather than clarify the issues involved. Thus Coase argues that if negotiation is possible (and game theoretic behaviour is absent) then the outcome must be Pareto Optimal. It is a small step from the observation that individuals do not trade to the inference that there is no desire for trade because the ‘costs’ of setting up the negotiation and trade outweigh the potential benefits.

In the case where there is no trade the new view of the externality situation causes the neo-classical definition of ‘externality’ to break down; as Demsetz points out:

[The] absence of a market or of a price can be consistent with efficiency when optimality theorems are appropriately interpreted.

Most welfare propositions concerned with side effects are based on an invalid use of the optimality theorems, i.e. they ignore the cost of some of the goods.

In Revealed Preference theory one can in principle test for internal consistency yet in practice the theory is inherently untestable. It is a simple matter to find, for each case of apparent inconsistency, that some of the basic antecedent assumptions which define the test to be a real test have not held (changing tastes, the definition of the ‘thing’ chosen, etc.). The Demsetzian and neo-institutionalist conception of efficiency is clearly closely related to RP theory:

Voluntary negotiations in the market place, whether an exchange is concluded or is not leads to a maximization of economic value and efficiency. Non-pecuniary aspects are not ignored, but are indirectly included in this concept of efficiency. (Demsetz)

The reduction in economic value that might be associated with an externality or a monopoly must be less than the cost of contracting; if the loss of
economic value were larger, agreements would be made between those involved to reallocate resources so as to reduce the loss in value to the cost of contracting. (Demsetz)

The Coase Theorem seemed to imply, and was interpreted by many to imply, that environmental quality would be provided at the unique optimal level in the market, if only the market were permitted to function within a structure, any structure, of rights conducive to such outcomes. Where externality was observed to exist, uncorrected, that must be because the transactions costs of making the correction exceed the net benefits, and therefore the correction itself would be inefficient. (Randall)

Sen pointed out that individual preferences seem to be used in two different ways: firstly as determinants of behaviour and secondly as the basis for welfare judgments. Behaviour is assumed to be determined by preference orderings, but also, in welfare theory it is frequently taken that a preferred position implies a higher level of welfare for the individual. This is clearly, from the above quotations, a basic neo-institutionalist tenet: inference is continually being made from observed behaviour to welfare propositions. For example:

Slavery must have been efficient; if not, the slave could have mortgaged his expected lifetime earnings and bought his freedom. (Randall)

Randall is concerned to criticize the analysis as value-laden in that it tends to glorify, strengthen and entrench the 'status-quo.' These charges have some force — yet the whole framework of welfare economics is based upon such a status quo and the criticism hardly applies to the neo-institutionalists alone. Such a criticism is thus not apposite here. The more relevant criticism of the neo-institutionalist position (i.e. vis a vis the alternatives) lies with the fact that the concept of preference cannot perform all the functions required of it. Sen demonstrates that choices need not be bound to preferences and that in general they are not — Man, being fundamentally a social animal, does not choose in accord with his preferences alone; the act of choice is always a social act. All that can be inferred from individuals' choices are their 'as-if preferences' (to use Sen's term).

Letting 'preference' have a dual role in choice and welfare provides a very simple, tautological and empty concept of efficiency — whatever people do, they are doing the best they can, given the rules of the game, and no potential Pareto improvement seems to exist! Critics of this institutionalist position have tended to rest their case upon the observation that what glorifies the status quo cannot be good; the above discussion however identifies the weakness of the institutionalist conception of optimality in the dubious dual role demanded of the preference concept.

This discussion seems to suggest that the introduction of further elements (transactions costs, etc.) does not at all help in the analysis of the problem of externality. It is certainly the case that Pareto Optimality in the above context is tautological and empty of content. However once this is recognized, the approach has the advantage of placing the emphasis upon the structure within which the actors play.

As shown above, the neo-institutionalist (NI) conception of individual choice behaviour seems to deny the possibility of Pareto improvement and connotes a strange conception of equilibrium (it would appear that the system could never be in 'disequilibrium' if transactions cost were 'appropriately' interpreted: the characterization of equilibrium and its relation to such costs is clearly problematic).
creates a difficulty, except where the virtues of the free market system are being extolled, because it provides no obvious means of calculating whether one (Pareto Optimal) outcome is preferred to another. The NI solution to this difficulty is to invoke a concept of 'objective cost,' a criterion by which one can choose between alternative 'structures.' A discussion of this is presented in Section V whilst the following considers some interesting conceptual differences between the neo-classical and neo-institutional view of the world.

THE CONCEPT OF MARKET

A market is any group of buyers and sellers communicating offers to exchange goods. . . People must be in contact and they must be interested in exchanges of goods and money. (Golladay*)

The above definition is typical, although for most neo-classical writers little attempt is made to define the concept — presumably it is deemed to require no definition — or that the definition is self evident.

According to this definition, a sufficient condition for market existence is the observation of exchange. It is presumably not a necessary condition. A necessary and sufficient condition for market existence is the observation of an interaction between individuals over the commodity in question whether or not trade then takes place. It may often be the case that interactions between potential traders are difficult to define and also to observe. In the absence of information about such an interaction, the absence of trade does not allow one to distinguish between the absence of a market and the existence of a market in which, at equilibrium, there is no trade.

In the context of neo-classical Externality theory, therefore, it is not sufficient to observe zero trade in the externality. It is necessary to be confident that no interaction of any kind occurs between the relevant parties before one can suggest the market is absent and thus a case of market failure. The existence of a market at equilibrium with zero trade would imply the externality had been 'internalized.' This point is not usually emphasized by neo-classical writers who tend to assume a market is absent if they see no market trading taking place.

The neo-institutionalists by contrast do emphasize that trade does not have to take place for a market to exist. It would appear however that they are often prepared to go even further; with the introduction of transactions costs, the individual may deem it not even worthwhile to attempt to identify and interact with the other relevant parties.

The voluntary decision not even to interact, let alone trade, is thus seen to be a potential rational decision of the individual. This has implications for the concept of 'market'; viz now the existence of the market is a basic tenet of the model. 'Equilibrium' in the market is also a tenet; if individuals are seen not to interact or trade in a particular good (or externality) then it is inferred to be because they perceive no gains from so doing. The outcome is clearly 'efficient' by definition — a corollary of the logical choice theory which underlies the model. All externalities are assumed to be internalized.

'Externality has generally been regarded as a case where some form of intervention may be necessary. The definition of externality should therefore help in identifying areas of potential 'market failure.' The above discussion suggests that it
is not as simple as observing interdependence and zero trade even on the neo-
classical view; also required is that no form of interaction should have taken place.
Under the neo-institutionalist view, externality as market failure seems to disappear
completely. The NI resolution of this latter 'paradox' is discussed in the next
section.

V. THE NI CONCEPT OF 'OBJECTIVE' COST

The NI concept of 'Optimality within the rules of the game' was shown in Section IV
to be relatively empty of content (i.e. reduced to 'dispelling ignorance and irrational-
ity'). Such an approach does not provide a useful method of distinguishing
between different outcomes; to overcome this, the NI have typically adopted a
notion of objective cost as a criterion for deciding if one outcome is preferable to
another. For example (c.f. Demsetz), if individuals do not bargain with a
monopolist to encourage him to operate in a competitive manner, then this may be
'optimal' in the sense that the NI can infer that the costs to the individuals (including
the negotiating and transaction set up costs) may outweigh the potential benefits,
but equally it may be possible to change the rules of the game and other elements in
the system so that some of these costs may be reduced or eliminated.

The NI thus emphasize the costs which underpin the economic system and
recognize that these must be included in any assessment of social change; the aim is
to minimize total systems costs.

In treating an allocative problem such as 'Externality' the NI approach focuses
attention upon the real world situation. Thus the need is seen to be to assess all
of the costs and benefits of the alternatives. With a tax 'solution' there would have to
be included such elements as the administration and enforcement costs (and the
latter would presumably have to be 'optimized' jointly with the tax level). With rule
changes, the assessment would include the costs of determining with whom one
wishes to negotiate, the negotiating, drawing up contracts and enforcement, etc.
costs.

In the NI discussion of the above matters, costs always appear to be 'real,'
tangible. Yet clearly in many situations, some of the 'costs' will have to be inferred
or 'revealed' through the behaviour of individuals. These are thus not objective
and the inferences are not necessarily valid — as was noted in IV. Schmid presents
another criticism of the NI notion of objective cost in that:

There is a cost minimization for each property rights distribution. Cost
minimization then cannot be a guide to the choice of that distribution.

The argument is thus directed against 'glorifying' the status quo and pointing out
that the NI tend to ignore certain property rights and emphasize others; of the latter,
salability clearly ranks highly, yet non-salability is equally a property right, as
Schmid points out:

The right to market is the right to create costs for the parties not repre-
sented in the market (that is, to ignore costs not protected by a property
right except that of non-marketability). The right to market cannot be a
value free blanket policy recommendation unless the analysis is a partial
one.
There lies the need to choose between competing alternatives requires a measure which is invariant to the changes being contemplated: the argument goes. To see why the measure is not invariant: It is the case that the 'results' are fundamentally conditioned by the initial disposition of rights, rules and so on. It is clearly evident that some form of social welfare function must be invoked in any recommendation of change in which (property) rights are changed/created/ destroyed. Judgments about distribution thus cannot be disentangled from distribution; that is, the allocation process. In spite of the above criticism however it remains true, as we saw, that the Pareto has focused attention upon certain facets of the economic process which have tended to be ignored in neo-classical economics (and to the resulting neglect of a variety of lexicographic judgments). Perhaps it is the case that the NI position has not been proved to be right: but amongst all this there is no escaping the core of the model: efficiency cannot be disentangled from the market structure, within which it is embedded; that it is not possible to have an economy without it. All lexicographic judgments, the distribution of income, wealth and the property of the land must be implicit or explicit, upon which they are founded.

VI. CONCLUSIONS

The purpose of this paper has been to examine the content and function of certain key welfare concepts; in particular reference to their application to the phenomenon collectively known as 'Externalities.' The Pigovian, Paretoian and neo-institutionalist positions have been examined in this respect.

The neo-classical definition of externality was criticized for ignoring certain elements which are crucial to an important part of the so-called Externality problem. The definition of 'externality' in this framework was deemed to be inadequate for this reason and also because the definition is not particularly helpful in identifying potential Externality problems and presumably a definition ought to help in such identification. The presence of absence of an externality in itself does not necessarily imply the presence of an externality: it seems typically necessary to identify an externality by other means (the nature of the costs involved) before one can be neo-classically categorized as such. The definition may also be misleading in its policy thrust since it tends to imply as a corollary that where markets do exist then this is necessarily the optimum state of affairs. In practice, as the neo-institutionalist view recognizes, certain institutional arrangements may well be 'socially preferable.'

This study policy change involves the choice between (generally somewhat discrete) alternative institutional arrangements. Recognizing this suggests that a concept of externality which is not independent of such structures is of dubious value — the absence needs to be among the more fundamental institutional 'variables' involved. Perhaps this is the key theory is now moving (Huller and Starrett) suggest as much, namely through the wrong channel by taken so long is that theorists have stuck to 'formal analysis of the misleading, macroeconomic analysis.

The neo-institutionalists, however, that 'Externalities' exist because of costs and that institutional theory of an alternative to seek to reduce these costs is not produced and have precisely because. The alternative is basically that such a structure is essentially a matter of fact to identify and explain the various forms other than those that exist under any particular circumstance. The critique of the NI externally presents here is that the only any claims of 'optimality' or 'efficiency' which are rooted in the theory are essentially empty and that the economic concept of 'minimizing overall system costs, where all the
costs are to be included, runs into the problem that the measure of cost is not system independent. Such measures tend to be conditional upon the status quo and the notion that certain rights (especially the right to a market) are fundamentally preferable to others.

The NI critique of the neo-classical approach thus suggests that the analysis is essentially between alternative systems of allocations, where system is taken not in the sense of the highly discrete comparison of (say) the market mechanism and some form of central planning but rather as a particular structure (including all the elements which serve to characterize the structure: the property rights, rules, taxes and so on). The development of neo-institutionalist theory here seems convergent with that of the literature in the economics of planning. This approach seems more theoretically appropriate in that it is more comprehensive than the traditional approach; the criticism that the cost measure is not invariant is perhaps not too strong where only marginal changes are being considered. The Status Quo orientation has of course always to be accepted if any use at all is to be made of Welfare Economics.

Finally, apart from examining/comparing the differing uses of the concepts of the Pareto principle, Efficiency and Externality, the above discussion points to the fact that even quite subtle differences in concept formulation can be instrumental in generating potentially divergent policy conclusions. This is because they inherently tend to bring the focus of the model to bear on particular elements to the possible omission or under-emphasis of others. In terms of the theories discussed, compare the solutions to the `externality problem'; Pigou/Shibata's `tax-alone,' Buchanan-Stubblebine's `tax-subsidy' and the neo-institutionalist 'No real problem' solutions. All this seems to be the legacy of the fact that `pure' value judgments have to be mediated through some `positive' economic theory.

REFERENCES AND NOTES

3 Protagonists of competing paradigms often find it difficult to communicate — one of the reasons for this is that although they often use the same terms, these terms do not have the same meaning (thus Einstein could speak of space as being `curved') — see T. S. Kuhn, *The Structure of Scientific Revolutions*, Chicago University Press (1970) p. 94. In the Buchanan-Stubblebine/Shibata debate much of the disagreement stemmed from the different meaning ascribed to the same theoretical terms (Pareto optimality, transformation functions, etc.).
5 'Pareto Optimality, Trade and the Pigovian Tax,' (1972) 39 Economica 198.
8 J. Buchanan and C. Stubblebine, 'Pareto Optimality and Gains from Trade: A Comment,' (1972) 39 Economica 203, 204.
9 Ibid.
10 Supra note 5, p. 194.
11 Supra note 8.
12 In this paper I am not concerned with the many important elements of the externality
situations which are well understood — the (property) rights disposition, income and other
effects.

Thus a bilateral tax subsidy approach may be safer, more stable: this is the interpretation
of the B-S/S debate given by C. Rowley et al., ‘Pareto Optimality and Gains from Trade:
A Public Choice Interpretation,’ (1978) Public Choice 149. They suggest that B-S are
looking for stability whilst S is technically correct. This seems to stem from a confusion
between ‘real world’ and ‘model world.’ There may be an ‘incentive’ to undermine E,
under the Pigovian tax regime in the real world — but in the model world, a static entity, if
it is assumed that individuals cannot trade, then they simply cannot trade — dynamic
considerations do not figure. Stability is thus a relevant question in a dynamic theory and
as a real world issue — but as I see it, it is not at the heart of the debate B-S/S — my view
is that it stems from differing interpretations of key concepts.

This does seem a valid criticism of Shibata’s assumption that the transformation functions
are simply technologically based — such functions are inevitably and inextricably
contingent upon a certain set of rights, rules, etc. as B-S suggest.

Clearly there has to be a starting point, an initial disposition of rules — the Status Quo is
suggested by Buchanan supra note 16.


Nath (supra note 6, p. 1) suggests, ‘any statement which implies a recommendation of any
kind is a value judgment.’ He goes further than many in counting persuasive statements as
value judgments, e.g. ‘a country grows faster if profits are taxed lightly.’ Clearly the terms
here are value loaded — but most economists would not call such a statement a value
judgment — it is in principle a falsifiable proposition, given clear concept definitions. Of
course any statement or term such as ‘growth’ may be persuasive but this is generally
because the term has been used by individuals for persuasive purposes rather than in and
of itself.

If one accepts Hume’s Law then, if the elements can be called into question by empirical
evidence, they cannot be called value judgments: the choice of the set of such elements is a
value judgment however.

The sufficient condition for accepting any policy conclusion is that one accepts both the
choice of primitive value judgments and the choice of model assumptions. Accepting the
primitive value judgments alone is not in itself sufficient (neither, of course, are necessary
conditions!).

Unless possibly one is a fully fledged Utilitarian and believes in the future possibility of a
Utility meter (see Ng, supra note 19, p. 5 for example); even here, until the meter is finally
developed, the Classical Pareto principle is inoperable as it stands.

The term ‘neo-institutionalist’ was coined by A. Randall, ‘Property Institutions and
Economic Behaviour,’ (1978) 12 J. Econ. Issues 1, to categorize a fairly heterogeneous
group of economists of whom the principle exponents were Coase and Demsetz. The
general theoretical emphasis is upon the inter-relation of property institutions and
economic behaviour.

Which would be akin to arguing that to understand anything about economic behaviour
requires a theoretical starting point in physics.

‘The Nature of Externalities,’ (p. 21) in the book of readings edited by S. Lin, Theory and

Supra note 1.

H. Demsetz, ‘The Exchange and Enforcement of Property Rights,’ (1964) 7 J. Law and
Econ. 11, 13.

See for example Sen’s writings: ‘Behaviour and the Concept of Preference,’ (1973) 40
32 H. Demsetz, ‘Contracting Cost and Public Policy,’ (p. 227) in Staaf and Tannian (eds.) 
33 Ibid., p. 226.
34 Supra note 26, p. 10.
36 Supra note 26, p. 11.
37 Supra note 35.
38 A particular example discussed by Sen is the famous ‘Prisoners’ Dilemma.’
39 Sen (supra note 35) discusses this usage of the concept of preference in greater depth and detail in the context of a critical analysis of Samuelson’s Revealed Preference Theory.
40 Strictly there is still the role Buchanan (supra note 16) identified with this limited concept — of ‘dispelling ignorance or irrationality.’
42 ‘Some Aspects of Property Rights,’ (1966) 9 J. Law and Econ. 61, 64.
43 See for example H. Demsetz, ‘Towards a Theory of Property Rights,’ (1967) 57 Am. Econ. Rev. 347, 348. For instance; ‘In a lawful society the prohibition of voluntary negotiations makes the cost of transacting infinite.’
46 Externality being defined as ‘some form of interdependence for which there is no market’ — it is unpriced. Simple interdependence alone is rejected as unuseful as a definition since the market copes naturally with many types of interdependency.
47 Supra note 28.