The policy making process has to pass through the social welfare analysis. The right allocation of resources is a hard feat to handle for the policymaker: this gets harder when the social choice it is due to lobbying activity. In this essay we are going to demonstrate the weak power of Pareto optimality in Social Choice with professor Sen's Paradox, then we will show that note from professors Kaplow and Shavell “Any Non Individualistic Social Welfare Function Violates the Pareto Principle” conflicts especially in its outcomes with the processes of Policy Making and Social Choices; finally we examine professor Chang’s theory of a Fair Paretian.
1. Introduction

Each undergraduate student learns from any course of Public Economics or Microeconomics the so called Arrow's Paradox (1951) which argues the impossibility of a Social Choice which can represents the rankings of the whole community without counterpointing the following principles: unrestricted domain, non-dictatorship, independence of irrelevant alternatives and Pareto Principle, that replaced non imposition and monotonicity in a later version (1963).

Professor Amartya Sen in 1970 proposed the removal of Pareto Principle using the Liberal Paradox.

It explains the impossibility of a Social Choice respecting (1) the Pareto Principle and (2) the possibility of a veto on social outcomes by any individual (Minimal Liberalism).

Professors Kaplow and Shavell indeed, state the impossibility of an non-individualistic Social Welfare function to be Pareto Efficient. They try to demonstrate the Pareto superiority of the welfaristic Social Welfare Function above any Social Welfare Function which incorporates any non-individualistic notion (as, they said, Fairness).

This essay wants (1) to better examine the concept of Pareto Superiority and its feasibility to be applied to Social Choice looking also at professor Sen's thesis about the futility of Pareto Principle in Social Choice; then (2) to demonstrate that the outcomes of Kaplow and Shavell's paper are quite surrealistic; finally we (3) show the possibility of the “Fair Paretian” described by professor Chang.

In fact, in real life, we assist to another kind of choice where gatekeepers (Political parties, Social Movements and Interest groups) let people choose their preferences in a menu of preference set that brings the winner party (supported maybe by other gatekeepers) to the policy adoption then to an output which will be very different from what people voted, indeed it will hardly be consistent with Pareto Principle. Assuming
2. Pareto Optimality and Sen's thesis in social choice.

Over the last two centuries, the social optimum issue has been widely discussed and major economists had researched various aspects of social optimality. The main stream was carried out by the English economist Jeremy Bentham (1748-1832) and the utilitarian school. They defined the social optimum as the allocation where the sum of individual utilities is greatest. Whereas John Stuart Mill (1806-1873), the father of Liberal thought, stated that there’s always a trade-off between social equity and the efficiency of an economy. However, in disagree with Mill’s statement, income can be redistributed without sacrificing efficiency. For instance, the adoption of a “lump sum tax” implies that all tax-payers contribute with the same amount of money, and no distinction is made among the various incomes perceived. This system assures that individuals’ choices remain unbiased, although social equity is not granted. The latter is feasible in the case of adopting a progressive taxation system, that provides high income recipients to pay higher taxes with respect to low income recipients, and implies that individual decisions are biased. As a consequence, we observe a decrease in the economic efficiency.

As the “lump sum taxation” assures unbiased individual decisions, therefore implying a constant level of efficiency, Mill would certainly be in favor of this system.

At this point, we examine the contribution of the Italian scholar Vilfredo Pareto (1848-1923), who formulated the two well-known theorems of Welfare Economics (1906):

(i) **First Fundamental Welfare Theorem (the efficiency theorem):** every competitive equilibrium is Pareto optimal.

As we can see in the Edgeworth-Pareto box (Figure 1), point G shows an inefficient allocation, while point F shows an efficient allocation. In fact, with respect to the origin \(O_y\), considering point G, it always exists an indifferent curve \(Y'\), higher than \(Y\), that keeps
X's utility indifferent. The limit position for Y' curve is the tangency point with curve X, i.e. point F in Figure 1.

FIGURE 1

(ii) Second Fundamental Welfare Theorem (the equity theorem): every Pareto optimal allocation can be reached as a competitive equilibrium after a suitable redistribution of initial endowments.

In Figure 2 below, we observe two Pareto optimal allocations: point C and point D. Both C and D represent two possible equilibria, however they are reached through by two different resource allocations. This implies that it is possible to choose the initial allocation of resources in order to achieve the desired degree of equality. The origin points $O_A$ and $O_B$ represent two extreme cases: when the optimal allocation coincides with point $O_A$ ($O_B$), the individual B (A) owns all available resources in the economy. A “planner-engineer” would arrange for the initial distribution of endowments in order to achieve the social optimum, and then let the private competitive market find its own way to the equilibrium.
However, the Swedish economist Wicksell (1851-1926) criticizes his contemporaneous:

"With such a definition it is almost self-evident that this so-called maximum [Pareto-optimality] obtains under free competition...But this is not to say that the result of production and exchange will be satisfactory from a social point of view or will, even approximately, produce the greatest possible social advantage." ¹

Among the infinite possibilities of Pareto optimal allocations, exists one only which guarantees the social optimum equilibrium.

Subsequently, the English economist Robbins (1898-1984) argued that social welfare should not be a subject of economic study at all.

"As utility is not comparable across individuals, then the choice of social optimum is necessarily a normative concern, a value judgment and thus it is not within the scope of economic "science". It is fundamentally distinct from Ethics." ²

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¹ Wicksell (1934) Manual of Political Economy vol.1, p.82-83

And:

“The Paretian welfare theorems, which rest comfortably on ordinal utility, was deemed the only acceptable criterion.”

However, many Paretians were dissatisfied with Robbins's conclusion and proposed the "New Welfare Economics" in 1930s. They accepted the argument that utility is not comparable across people, but vigorously believed that welfare judgments could nonetheless be made by appropriate modifications of the concept of Pareto optimality. Nevertheless, the utilitarian school has not disappear. The English economist Little (1918-) argued that individual utilities are comparable in a scientific manner, and thus the choice of social optimum is a positive issue which economists must analyze. As he writes:

"interpersonal comparisons of satisfaction are empirical judgments about the real world, and are not, in any normal context, value judgments" (Little, 1950: p.66).

Another critical essay to Paretian optimum was provided by Indian Nobel laureate Amartya Sen, who demonstrated with a paradox the impossibility of Paretian liberal, in 1970. The logic scheme is based on Arrow’s impossibility theorem. Sen considers two individuals, A and B, and three possible actions for each individual:

1) A reads a book
2) B reads a book
3) nobody reads a book.

A prefers action 3) over action 1) and action 2) (3>1>2), while B prefers action 1) over action 2) and action 3) (1>2>3). Therefore, the Paretian optimum solution is action 1) prevailing over action 2) (1>2). However, a liberal society shares two relevant values:

3
Ibidem.

4
Little (1950), A Critique to Welfare Economics, p. 66
• not to force A to read a book, hence action 3) wins over action 1)
• allow B to read, hence action 2) prevails over action 3).

As a consequence, the Liberal optimum solution is action 2) prevailing over action 1) (2>1), nevertheless that is in contrast with the Paretian optimum solution.

3. **Analysis of point (2): Kaplow and Shavell's surrealistic outcomes**

In professors Kaplow and Shavell's note it is used a utility function, saying nothing about its properties: it is reasonable to assume the standard properties for it.

In the conclusions Kaplow and Shavell propose fairness -example of non individualistic element- as embodied in utilitarian elements of Social Welfare Function F(.)

According to them we may assume that even for that value will be desirable the conditions for any other individualistic good.

But let us assume for a while a non individualistic value that increases more and more as “crime punishment”. This increase will generate a greater control of the State over the people, then this “individualistically embodied value” will be less desirable at some point such that \( U(v) > U(v + \varepsilon) \), that is against the principle of monotonicity or non satiety at aggregate level due to an externality at singular level. So it is impossible to treat any non individualistic value under any welfaristic view.

We shall indeed assume the non individualistic value as a normalized individualistic good \( v \in (0,1) \). The Social Welfare Function \( F(m_1, m_2, v) \) will become a shifted by a value \( u_v \) as in figure 2 depending from \( U(v) \) that is the utility obtained by the value. Considering utility as an ordinal notion we may state that there can be a state with two limit possibilities so that in this case \( U(v) \) will be a dummy variable. We will examine the two cases:

a) \( U(v) = 1 \) the Social Welfare Function \( F(m_1, m_2, v) \) gets shifted upwards and we get the continuous function. That is against properties of Social Welfare Function.
b) $U(v)=0$ the Social Welfare Function $F(m_1, m_2, v)$ collapses in only one function and the problem would not even exist.

In a 2002 paper, *Why Welfare Depends on Fairness*, professor Dorff analyses the question under a philosophical-juridical point of view: the first element he points out from Kaplow and Shavell’s theory is the too broad conception of welfare. They extend welfare to everything which is able to be valued by the agent so that “taste for fairness is fundamentally no different from any other taste, whether for Colonial houses, cheeseburgers, or red wine.” Furthermore, he argues that Pareto Principle is “largely irrelevant in policy making because it is almost never true that a change in policy will make everyone better off”.

Dorff has comments also for social welfare function: Kaplow and Shavell prohibit in their model any social welfare function: “any social welfare function that either (1) takes into account any factor other than well-being or (2) fails to count all individuals’ welfare equally.”

Fleurbaey, Tungodden, Chang argue that Kaplow and Shavell’s implication of their model are not so broad: the non individualistic Social Welfare Function can be Pareto Optimal but cannot be continuous or coherent with independence. They say Kaplow and Shavell contribute to a literature about the restrictions of the use of non-welfaristic functions given by Pareto Principle but do not go beyond with further political implications.

In his paper “Why be fair when you can have Welfare?” , written exclusively against the book derived from the note, professor D’Amato argues the same concept starting from the *j’accuse* the two scholars did about fairness against welfare.


6 Id. p. 859

7 Id. p. 865
The reason that taking fairness into account—or if you will, unfairness—must lead to policies that fail to make everyone better off, is precisely because Kaplow/Shavell have defined it to come out that way. Since they define $W$ as the optimal policy, any other policy $X$—whether $X$ stands for fairness, unfairness, or sublime indifference—will perforce be suboptimal. After a mountain of labor (427 pages with 1,047 footnotes), Kaplow & Shavell have brought forth a definition.11 It turns out to be exactly the same definition they started with. At least no one can say that their article lacks focus. However, one might very well ask: what happens under their own definition if in a particular case $X$ turns out to be equivalent to $W$? Can we then say that $X$ may on occasion be just as good as $W$? Well, if that happens, Kaplow & Shavell say in a footnote, the fairness principle “collapses” into the welfare principle, so presumably we don’t need fairness. I confess that when I read this footnote I was momentarily snowblinded by the chutzpah.8

Another caveat professor D’Amato points out is the assumption Kaplow and Shavell make saying that they propose just a method not a specific welfaristic function. They state Rawlsian approach as one which is framed to increase the utility of the worst-off person. D’Amato counterpoints them because he argues that Rawlsian theory was oriented to fairness as money transfers from the rich to the poor and do not treat utility at all.

Professor D’Amato argues even stronger against their paper stating that the solution they give is in reality the problem, that is the aggregation of utilities, furthermore, the whole world they created is fake. This world was so consistent with their thesis that became irrelevant.

Another point of view comes from the work of Dixit, Grossman, Helpman (1997) who analyses the problem of agency in Policy making. The policymaker in common theories uses a Benthamite Social Welfare Function, which supposes no concerns about income inequality: furthermore, a weighted sum of utilities will have higher weights to utilities of groups able to lobby (the wealthiest and best organized, as industry association,}

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8 A. D’Amato (2001), Why be Fair when You can have Welfare, Public Law and Legal Theory Research Paper Series Research Paper No. 03-14; p.5
finance world, professional categories, etc.). Following this approach we will get the minimization of less organized interest groups down to subsistence level and an indeterminate result for organized groups. These outcomes are quite unrealistic. So, assuming a utilitarian Social Welfare Function with lobbying activity would rule to a Pareto Efficient solution which is not first coherent with reality, then assumes a so strong inequality which will never be able to embody a non-individualistic notion such as fairness.

4. Professor Chang’s Possibility of the “Fair Paretian”

In his paper Howard F. Chang claims the possibility of a fair Paretian. He refers to the standard definition of welfarism - the one adopted by social choice theorists - that "restricts the information that can be utilized in ranking social states to utility information corresponding to those social states."

Professors Kaplow and Shavell alike refer to this concept, however they contrast welfarist theories including the notions of fairness, which:

"are based, at least in part, on factors unrelated to individuals' well-being" such that "knowledge of the effects of a legal rule on each individual's well-being will not generally be sufficient to assess the fairness of the rule."

It is necessary to point out that professors Kaplow and Shavell use "well being" and "utility" as synonyms.

Farther, they state that "any conceivable notion of social welfare that does not depend solely on individuals' utilities" is likely to violate the Pareto principle.

Professor Chang - however - shows that this claim is false, as he provides a conceivable notion of social welfare that does not uniquely depend on individual utilities, that complies with the Pareto principle: (proof)

"Under either $F^*$ or $F^{**}$, the rankings of alternatives will depend on information other than individual utilities. This fairness information may include, for example, the source
of the utility produced by each alternative, which would be relevant if our fairness
criterion $F$ is liberal consequentialism. This information is necessary under $F^*$ or $F^{**}$,
because the rankings under each theory require the identification of the fairness
optimum to partition the set of alternatives. If we change the fairness information
 corresponding to each alternative, then even if the utility information corresponding to
each alternative remains unchanged, the fairness optimum changes, and thus so do
our rankings. Therefore, the rankings are a function of information other than
individuals' utilities."

As a consequence, professor Chang states, Kaplow and Shavell don't show that "any
non welfarist method violates the Pareto principle", i.e. they don't show "any", but
"some" non welfarist theories violate the Pareto principle. In particular "they can show
only that non-welfarist theories that comply with independence and continuity
conditions over an unrestricted domain must violate the Pareto principle."

To this argument, Kaplow and Shavell replied denying that "either $F^*$ or $F^{**}$ is " a
Pareto-conflict-free notion that is not solely based on individuals' well-being." Chang
considers this claim not to be built on sound enough basis. However, they are seeking
to expand their definition of welfarism to include $F^*$ and $F^{**}$, add further restrictions to
their definition of fairness and allow rankings to depend on more information than just
individual utility levels.

First, in Kaplow and Shavell's paper rankings could depend on information about
individuals. In that case social choices could give more to one individual because
he/she has a specific preference, and less to another because his/her preferences are
objectionable. However, Chang believes that this concession is not sufficient to
bring $F^*$ and $F^{**}$ within the definition, even assuming that the definition of welfarism
allows such information about the characteristics of individuals to be morally relevant.
Indeed, "$F^*$ and $F^{**}$ require not information about individuals but information about
the effect of each alternative on the type of utility enjoyed by each individual." Under
either $F^*$ or $F^{**}$, it not sufficient to know that one has objectionable preferences,
conversely, it is necessary to know the degree to which each alternative satisfies this last person personal preferences.

Second, Kaplow and Shavell are not including fairness distribution in their definition of fairness. They claim that their formal proof of a conflict between the Pareto principle and fairness "encompasses distributive theories that are not based only on individuals' utilities". As the distributive fairness in $F^*$ and $F^{**}$ also comprises other informations rather than just individuals' utilities, they are among the fairness theories subject to their claim regarding a conflict with the Pareto principle.

Chang, instead, observes that if Kaplow and Shavell want to bring $F^*$ and $F^{**}$ within their definition of welfarism, they must modify that definition in order to allow fairness information that can affect the distribution of utility.

E.g. :

"If $F$ [...] is a theory that gives weight to notions like retribution and corrective justice, then so will $F^*$ and $F^{**}$, which make the fairness optimum under $F$ relevant for ranking alternatives. Thus, $F^*$ and $F^{**}$ would allow in considerations that Kaplow and Shavell specifically seek to exclude from our analysis of legal rules. If they seek to define welfarism this broadly, then they have departed radically from the standard definition and left themselves with a notion of welfarism with little content."  

Surprisingly however, Kaplow and Shavell agreed that it is consistent with the Pareto principle to give weight to these notions in functions $F^*$ and $F^{**}$. That is Chang's article "demonstrates that the Pareto principle cannot provide support for their general recommendation that legal policy should be evaluated using a framework "under which assessments of policies depend exclusively on their effects on individuals' well-being."

Farther, in order to derive this position from the Pareto principle, Kaplow and Shavell must make continuity and independence assumptions that still are controversial to Chang.

Kaplow and Shavell criticized the discontinuity implied by $F^*$ or $F^{**}$ stating that whatever the fairness involved, it can be outweighed by administrative cost savings, even if that amount is rather small. But under $F^*$ or $F^{**}$ the cost would exceed unfairness only in the context of a Pareto improvement, when everyone would agree to give up their right to the fairness optimum. Indeed, alienable rights to fairness imply that neither $F^*$ nor $F^{**}$ would give any weight to unfairness if everyone prefers not to take into account fairness concerns, and in that case, according to Chang's argument, the latter would exceed welfarist concerns.

Similarly, Kaplow and Shavell agreed that violations of independence are not consistent. In fact, theories like $F^*$ and $F^{**}$ violate independence because they take alienable rights to fairness seriously\(^{10}\).

Moreover they complain that a procedure like $F^{**}$ would require an infinite number of steps to generate the modified rankings, but this feature of $F^{**}$ is not necessary to prove the possibility of a fair Paretoian. However, Chang notices that one would have to perform an infinite number of steps under $F^{**}$ only in theory. In practice, under the hypothesis of the costliness of gathering and analyzing information, a belief in $F^{**}$ is nearly certain to imply the same choices one would make under fairness theory $F$.

Thus, the practical implications of $F^{**}$ suggest that the Pareto principle requires very little change from the social choices one would make under criterion $F$.

It is to be considered a further Chang's goal the fact that due to this implication of $F^{**}$ Kaplow and Shavell are now seeking to embrace this theory within their

\(^{10}\) Cfr. Sen's Paradox of Liberal Paretoian
definition of welfarism because $F^{**}$ undermines their claim that the Pareto principle implies that one should ignore the many fairness principles that may enter criterion $F$.

Finally, Kaplow and Shavell ask Chang:

1) which criteria should be used to evaluate preferences in a theory like liberal consequentialism. Chang's counterexample proves the possibility of a fair Paretian regardless of what theory of preference one may use to construct the fairness criterion $F$, indeed he stated that he has not managed yet to identify the ideal fairness theory.

2) who is in charge to choose which preferences a society takes into account. He responds that each member of society decide the answer, as individuals engaged in the process of moral reasoning.

To conclude, Chang states that among various liberal theories of social welfare, it is the individual that ultimately makes judgments for him/herself, appealing to his/her own moral intuitions.

5. **Conclusions and Final Considerations**

This paper faced the question of the social allocation of resources considering various standpoints. The very main finding is that this approach is less “scientific” than many authors - like Kaplow and Shavell - want us to believe, indeed an allocation can’t be defined or ruled out by few fragile theorems, but is a more complex feat.

Arrow defined some strong hypothesis under which there is not a Social Choice capable of representing everyone’s preferences; the Benthamianans recognized just the sum of all utilities as the only way to optimize social welfare function under Pareto Superiority; Amartya Sen demolishes the concept of the Liberal Paretian and paves the way to alternative non individualistic Social Welfare Functions which embody elements such as fairness. From this point – against Sen and Musgrave’s non-individualistic Social
Welfare Functions - the thesis of Kaplow and Shavell starts up and takes strength from the neoclassical “efficiency-obsessed” economic theory.

It is important to remember that Pareto Optimality is just an arbitrary way to define efficiency of a welfare state above others. One of Kaplow and Shavell strongest critics has been professor D’Amato.

Nevertheless, professor Chang tries to put in place an harmony between the two – apparently - antithetic issues: Pareto Optimality and Fairness.

The Political Scientist, however, should not, as a main research field, follow the argues among economists, concerning who provides the better arguments, but just state that for this feat there will not be a “hard” science which will give an “optimal” answer. A Political Scientist must try to keep the "science" away either from too disciplinary extreme positions, which aim to give us answers bases on too many and strong assumptions (e.i. Kaplow and Shavell’s note), or from theories, lost in their describing obsession, which lose the generality that is pivotal in this argument.
REFERENCES


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