Pareto Optimality as a Criterion for Morality and the Market Economy

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I. Introduction

The common vernacular defines “morality” in terms of being in accord with right or good conduct or a system of ideas regarding right and wrong. More rigorous definitions are offered by philosophers. The *Stanford Encyclopedia of Philosophy* defines morality either: (i) descriptively, referring to a code of conduct put forward by a group, or (ii) normatively, referring to a code of conduct put forth by all rational persons. Regarding the latter, all accounts apparently stress things such as “promoting people living together in peace and harmony” and “not causing harm to others.”¹

In this paper, I will stress the idea of morality flowing from “not causing harm to others.” As such, it fits squarely with the concept of Pareto optimality. Pareto optimal actions are those that raise at least one person’s welfare without making anyone else worse off (based on self-assessed welfare). Pareto optimality is reached once all such actions have occurred. The idea of not harming others is firmly imbedded in this concept and therefore can be clearly argued that Pareto optimality is a legitimate basis for morality.

This paper discusses the role of markets in promoting Pareto improving actions, the role of government in supporting markets in doing so, and provides a piece of the moral foundation of what we typically think of as market economies.

“Not harming others” is closely related to the ideas of non-coercion and of unanimity. Oftentimes, harming another individual is the result of coercion or force by another and is broadly seen as morally objectionable. Obtaining agreement by all

involved – unanimity – is viewed as morally appropriate. Individuals will not agree to harm to themselves, so these notions fit well with Pareto optimality.

The concept of Pareto optimality is widely used in the normative economics literature. The Pareto principle and unanimity are foundational in discussions of social welfare, social welfare functions, and social choice. Underlying this is the belief that these ideas have a fundamental morality.

Section II of the paper turns to one of the very basics of markets – mutually preferred trade – and reviews its Pareto optimality, thus establishing a moral foundation of markets. Section III of the paper discusses the long-recognized role of government in the protection of property and individuals from force. These function to support market exchange and, by extension, serve Pareto optimality. In the U.S., these largely take the form of the common law – property, contracts, and torts – and also aspects of the criminal law. I note that, in my view, contracts and the law that supports them are quite remarkable. They are not simply constructs of some social scientist’s model, but are real-world based and account for the imperfect information and imperfect people that life is made of.

Section IV turns to an ostensibly difficult case where changing circumstances induce a change in the market price and a movement to a new equilibrium where one party is worse off than at the initial equilibrium. While seeming to violate the Pareto principle, I argue that this is an inappropriate conclusion. As an example to illustrate this, I consider the case where increased competition lowers the price of a good, raises the welfare of the initial buyer, and lowers that of the initial seller. This makes some

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2 See, for the example, the summary and discussion in Mueller (1989), part V.
transactions with the initial seller no longer welfare improving for the buyer and 
mandating those trades violates the Pareto principle.

Section V of the paper discusses the type of laws that try to protect the initial 
equilibrium and, I argue, violate Pareto improving actions. These are laws that limit 
entry, impose trade barriers, and generally reduce competition. They are quite different 
from the common law and criminal law that protect rights, not the value of market prices. 
Lastly, section VI concludes.

II. Markets, Voluntary Exchange, and the Moral Foundation of Markets

Market transactions are based on the voluntary buying and selling of goods and 
services. The basic demonstration of the Pareto optimality of voluntary trade is quite 
straightforward. With voluntary exchange, each party will not engage in trade unless 
they regard it as improving their welfare or at least making them no worse off, i.e., 
causing themselves no harm. Also, because the exchange is voluntary, one party cannot 
force another to take a bargain that they do not wish. Thus, one cannot cause the other 
harm.

These fundamental aspects of markets can be shown with a bare-bones example 
of two parties who may engage in trade with one another. A standard Edgeworth Box 
annotation is used for illustration. See Figure 1. The diagram depicts two individuals, A 
and B consuming and possibly trading goods X and Y. The origin for A is the point $O_A$ 
and A’s utility (and consumption) rises in the north and east directions. The origin for B 
is the point $O_B$ and B’s utility (and consumption) rise in the south and west directions. 
The endowment of each is represented by point C. At their respective endowments and 
with no trade, A attains utility $U^A_1$ and B attains $U^B_1$. 

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Voluntary and mutually preferred trade moves the parties into the ellipse formed by CD. Naturally, this assumes that A will not take actions that reduce his/her own welfare and likewise for B. Thus, voluntary trade will not move person A to a point lower than indifference curve $U^A_1$ or person B to an indifference curve lower than $U^B_1$. Thus, neither will suffer harm.

They are likely to reach an outcome where both are better off. An example is a point like F, where person A gives up some X in exchange for Y and B does the converse. The slope of the line CE indicates price of X relative to Y that this trade occurs at. Both parties are better off. Voluntary trade prevents doing harm to each individual, thus has a very strong moral foundation.
The analysis applies to a situation where there are numerous parties. Each individual has an endowment point and comes to agreements with others on trades. This group of individuals comprises a market and a market equilibrium is established where all parties are better off or, at minimum, no worse off. A similar logic applies if parties produce goods and services prior to exchange, though the analysis is more involved.

III. Government Institutions That Support Market Exchange

While the above seems quite simple, there is a well-developed and subtle set of laws and legal institutions that support markets and mutually preferred exchange. This comprises much of the common law regarding property, contracts, and torts and also large parts of criminal law. These legal institutions fall within the long-recognized role of government regarding the protection of individuals and property and facilitate market exchange.\(^3\) They are quite subtle and recognize many real-world issues that arise, including uncertainty and imperfect information, various human frailties, and transactions costs.

Establishing property rights to the goods represented by the endowment point is important in enabling voluntary trade to take place. Essentially, this gives each individual that right to attain point C. Person A, therefore, cannot be made worse off than by consuming C and attaining utility \(U_A^1\). Similarly, B is assured of attaining utility \(U_B^1\). Thus, property rights and their enforcement prevent individuals from doing harm to one another.

Property rights operate in the real world and so naturally must deal with real-world situations and not simply be an abstract concept in an Edgeworth Box. Property law is extensive in establishing the recording and titling of many types of property and in

\(^3\) Recognized at least since Adam Smith (1776). See especially book V, chapter I, books I and II.
determining property rights via such doctrines as adverse possession and estray statutes. Protections against takings via eminent domain are also protected, at least to a certain degree. Trespass is well defined, as are exceptions to prohibitions against trespass, e.g., for private necessity. Intellectual property is protected through patent and copyright law. Nuisance laws prevent use of one’s property to impinge on another’s property. If harms are done, the legal system issues injunctions and awards damages to stop and compensate for the harm.

To some degree, rights to property may be self enforcing in the sense of reflecting the cooperative equilibrium of a repeated game where all parties find it in their interest not to expropriate others’ property. However, the sketch of property law outlined above can provide protection for property where this repeated game equilibrium does not occur. Of course, the law does not work perfectly, but the objective is to protect point C for the individuals and thereby enhance the ability of parties to take Pareto improving actions.

While well-functioning property law protects the rights of individuals to attain endowment point C, contract law is important in enabling individuals to undertake Pareto improving trades to move from point C. Basically, this has to do with agreements to trade X for Y. As above, a cooperative repeated game equilibrium may be sufficient to sustain agreements, but contract law may step in when this is not the case. There are many subtle features of contract law that recognize the uncertainties and transactions cost in the real world and serve to promote Pareto improving exchange.

One aspect of contract law is that it provides for the enforcement of agreements. A substantial part of contract law deals with remedies for breach, dealing with awards of damages and requiring performance, that provide incentives to honor agreements. In
many settings, contract law has evolved to provide default contract terms unless otherwise stated. This is highly relevant in a world with many uncertainties and with costs of contracting on various contingencies. It allows parties to rely on the default terms and saves transactions costs.

The economic model of trade relies on individuals being rational in the sense of only making trades when it is expected to improve their welfare. Contract law implicitly recognizes that this level of rationality is required for Pareto improving actions and does not recognize contracts with an incompetent party, e.g., with children or the insane. Contract law also recognizes that, in order for value-enhancing agreements to occur, parties must understand and agree to what is being traded. Thus, fraud is unlawful. Also, contracts may be non-binding when uncertainty and misunderstandings cloud the agreement as with the legal doctrines of mutual mistake and frustration of purpose.

Contract law does not recognize agreements made under coercion or duress, e.g., the protection racket. “Agreements” made under duress allow one party to reduce the other’s welfare below the endowment point by threatening that party. Clearly, this does not lead to Pareto improvements. Contract law also recognizes other uncertainties and establishes default provisions the event of necessity of one party or of the impossibility of performing a contract.

Tort law deals with unintentional harms. The assignment of liability and determination of penalties in tort law serve to protect individuals’ property and their rights to endowment point C. Similar comments apply to the criminal law dealing with the destruction or harm to persons or property.
Freedom of exchange and the above described governmental institutions that support it are what we think of as market economies. They promote Pareto optimality by allowing individuals to improve their own welfare without harming others. Of course, this does not work perfectly and there are even cases where defining and exchanging property rights are prohibitively costly, resulting in serious externalities. Nevertheless, the market and its supporting institutions are pointed toward encouraging mutually preferred exchange and Pareto optimality and therefore have a strong moral basis.

IV. Changes in the Terms of Trade and Pareto Optimality

The simple framework analyzed above and depicted in Figure 1 illustrates an essential feature of markets – trade improves the welfare of individuals. Many complicating factors, such as imperfect information, are dealt with in part by provisions in the common law with the intent to support mutually preferred trade.

A further complicating factor that will be analyzed here is the role of changes in the terms of trade. By this I mean a change in the relative price that good X and good Y trade at. This could be due to, for example, a change in resource endowments, technological change, or increased competition. An occurrence like this will cause a change in the new equilibrium point. The outcome will deviate from point F in Figure 1, implying that someone will be worse off compared to the initial equilibrium.

The types of changes described above are normal happenings in a market economy, that is, we regularly experience changes in technology and prices that shift the equilibrium point of exchange between parties and possibly reducing the welfare of one. Does this suggest that markets are causing harm? I believe that this is the wrong way to look at these changes and suggest an alternative.
To me more concrete, consider the case where another seller of good X enters the market and offers X at a lower price. Refer to Figure 2 for illustration of this. The lower price is represented by the line CH. Assuming B can buy all s/he desires at this price from the new seller, s/he can attain the utility associated with point G; U^{B3}. For person A to make any trades, s/he must offer the same price as the outside competitor. At this lower price, A will choose to trade to point I, and the remaining transactions done by person B are with the outside person. A is thus on an indifference curve U^{A'}, below U^{A2}.
that was previously reached. Moving from F to I for person A is not an improvement. Thus, one might conclude, the market is not promoting Pareto outcomes by causing A harm.

I do not think that this is the appropriate way to examine this situation and therefore reach a different conclusion. With the set of circumstances as in Figure 1, the trades that moved the parties to point F were Pareto improving. Neither party was harmed by the trades. Now with the new circumstances in Figure 2 (with the additional seller) we can ask what trades between A and B are Pareto optimal. Do the parties wish to continue with the same trades? Are they protected from being made worse off as a consequence of dealing with one another? As one can see from Figure 2, the parties do not agree on the same trades as previously, but allowing only mutually preferred trade does protect each from being harmed by dealing with the other.

For trades with A to be Pareto optimal, A must offer a deal that makes person B no worse off than at point G. Circumstances have changed so that person B can reach point G without trading with A. In a sense, the presence of a new supplier has moved B’s endowment point to G. To do B no harm, A cannot force B to an indifference curve below $U^B_3$. Market competition forces A to makes offers along the line CH. Thus, based on the new circumstances, market trade makes no one worse off relative to the situation of not trading with the other party. The market continues to follow the moral guidepost of “doing no harm.”

This, I believe, is the only sensible interpretation of this moral guidepost in a world with changing circumstances. Individuals’ situations change often for a variety of

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4 We are not considering the utility of the outside person. Alternatively, we may assume that the outside seller is providing the good at a price that makes him/her indifferent to the trades, so is equally well off with or without the exchange with B.
reasons, including addition of competition in the market, an evolution the demand for goods over the life cycle, unexpected inheritances, illness, family circumstances, and a host of other causes. Each can change the willingness to pay for a particular good or service.

Consider, for example, the decline of tuberculosis in the U.S. This decline reduced the demand for and the price charged for the services of sanatoriums. Does morality require those previously ill (or who would have become ill) to maintain transactions with sanatorium owners in order to sustain the previous equilibrium? Or consider another example. The opportunity to buy groceries from Wal-Mart changes the willingness of people to buy groceries from the local grocer. Does morality require continued patronage of the local grocer, even though buyers are worse off than what they would be otherwise? It seems the principal of “doing no harm” implies that mandating such transactions is immoral. With changing circumstances, I cannot see a moral (or practical) principle that guarantees transactions (or the equivalent utility) to a seller without a willing buyer.\(^5\)

A stronger moral case can be made that one ought to consider the Pareto principle as implying the following: one is not made worse off dealing with another compared to not dealing with that other person.

V. Protection from Competition Compared to Property Rights Protection

The types of laws that protect Pareto transactions in the face of changing competition, as I have defined it, are those that preserve the openness of markets. This falls outside of the common law areas of property, contracts, and torts. Oddly, a number

\(^5\) People may still, however, favor some form of a social safety net. Behind a veil of ignorance of from altruism, individuals may favor some type of social insurance.
of laws and regulations that we observe do the converse of preserving the openness and competitiveness of markets. These include international trade restrictions and barriers to entry to various markets and occupations. Even antitrust law, presumably in place to promote competition, often has been used to stifle it.

Consider the type of laws that promotes Pareto improving transactions (and morality) as described here. The nature of the common law is to protect a certain set of rights. Broadly speaking, these are:

(i) The rights of use of your property. This implies that others cannot utilize (or do harm) to your property without your permission or compensation.

(ii) The rights to residual income earned from your property. You have the right to establish contracts entailing use of your property and proceeds derived from such contracts.

(iii) The rights to contract away the above two rights (alienability).

Note that the above protect rights of use and of trading, but they do not protect the market value those rights, i.e., of the property or income derived from it. There is legal protection only if: (a) rights of use are harmed by removal of some rights or via destruction or theft the property, or (b) there is abrogation of freely agreed upon contracts.

This is consistent with the promotion of Pareto optimality as discussed above. Right to one’s endowment point are protected, as are the right to contract away from it. But any prices other that those agreed upon by buyers and sellers are not protected. Likewise, protecting a party from competition from another is not protected. The latter two are equivalent to limiting competition in the market.
VI. Conclusion

If one were to extract the implied policy recommendations from this paper, in many ways one would come up with a fairly standard set of conclusions. Property rights ought to be protected, contracts should be enforced, voluntary trade is to be favored, and competition promoted. For many economists, this is not a controversial set of recommendations. They essentially endorse a free market economy with its supporting governmental institutions. What I stress in this paper, however, is the moral side of this endorsement. There is a very strong moral component of market economies as described above. They make people better off, they foster agreement, and they protect individuals from force, coercion, and harm from others.
References


*Stanford Encyclopedia of Philosophy*, “The Definition of Morality,”