

ECONOMIC RESEARCH REPORTS

*THE MORALITY OF PROFITS,  
AND  
THE STRUGGLE FOR EXISTENCE*

BY

Mario J. Rizzo

RR # 92-17

April, 1992

**C. V. STARR CENTER  
FOR APPLIED ECONOMICS**



NEW YORK UNIVERSITY  
FACULTY OF ARTS AND SCIENCE  
DEPARTMENT OF ECONOMICS  
WASHINGTON SQUARE  
NEW YORK, N.Y. 10003

THE MORALITY OF PROFITS,  
AND  
THE STRUGGLE FOR EXISTENCE

by

Mario J. Rizzo\*  
New York University

January 1992  
Revised, April 1992

The technical assistance of the C.V. Starr Center for Applied Economics is gratefully acknowledged.

*Abstract*

**THE MORALITY OF PROFITS,  
AND  
THE STRUGGLE FOR EXISTENCE**

by

Mario J. Rizzo  
New York University

This paper is about the morality of the pursuit of profits as a means of enhancing adaptation to change. It follows the Austrian view of the function of profits elaborated by Israel Kirzner. Profits are made by correctly adapting to future changes. This adaptation has a moral value because it creates wealth, and thereby increases the probability of species-survival. The latter is the standard of morality in an evolutionary theory. The pursuit of profits also serves a long-run function in imposing costs on those who adhere to rules of conduct that have lost their ability to help agents adapt to change. This paper argues that profits have two moral functions. First, they create incentives to apply those existing rules that enhance adaptation to change. Second, they create incentives to change the moral rules themselves, insofar as they are deficient in their ability to promote adaptation.

*Key words:* Ethics and economics, morality of profits, evolutionary ethics.

*JEL classifications:* K10; P16; Ethics and Economics (no JEL number).

[A]ll evolution, cultural as well as biological, is a process of continuous adaptation to unforeseeable events...

Friedrich A. Hayek [1988: 25].

[E]volution does not mark out a solitary route...and it remains inventive even in its adaptation.

Henri Bergson [1911: 102].

### 1. *Preliminaries*

The simple existence of the human race, not to mention its happiness or flourishing, is no way guaranteed by nature. It depends, first and foremost, on decisionmaking that adequately copes with the conditions in which we find ourselves and that transforms these into life-affirming circumstances. Moral rules, affecting as they do so significant a portion of individual decisionmaking, cannot fail to be judged by their impact on human existence. The maxim urging morality "though the heavens fall" cannot be followed literally. A morality that does not have a favorable impact on human life will soon be driven out of existence by the same nature that has "ordained" the moral system.

Our use of the evolutionary theorists' catch-phrase "struggle for existence"<sup>1</sup> in the title of this Article is meant to evoke a long-run perspective in evaluating the moral status of profits. Just as evolutionary theory in its biological manifestations is not concerned with the effects of conduct on each and every member of the species, so we are not concerned with the impact of moral rules on each and every economic transaction or on every human sensation of well-being or even on every individual human life. It is not that these are unimportant from a certain perspective but that, quite simply, they are not our concern here.<sup>2</sup> Besides refocusing our attention on long-run considerations, the term "struggle for existence" is also meant to shift the ground from static to dynamic moral

evaluation. Life is a process of change and our moral theories and practices must come to terms with this fact. Morality, in our view, is dynamic in at least two senses. It consists of conduct that grows out of a struggle with the environment -- conduct, the primary function of which is adaptation of the agent to prospective change. Morality is also not a frozen complex of behavior; instead its specific manifestations evolve as knowledge grows or underlying conditions change. Thus, as long as there is life, moral evolution is an unending process.<sup>3</sup>

A theory of cultural evolution, such as the one presented here, can attempt to do a number of things, not all of which are necessary in every context. First, it can be purely descriptive and seek to explain existing moral conduct and rules as the outcome of selection pressures. Second, it can be concerned more with the pressures themselves, rather than with actual outcomes, by uncovering some of the important forces or tendencies that affect the development of moral conduct. Third, it can describe the evolutionary tendencies, for better or worse, of certain kinds of actual or hypothetical moral conduct. And, fourth, it can be normative and prescribe those rules that serve the long-run adaptation of the human species to the conditions of its existence. The first two deal with the scientific determinants or causes of morality, while the third with the effects of moral conduct. Explanation of existing moral rules and conduct in terms of selection pressures is a vast and daunting task beyond the scope of our inquiry here. The argument for the prescription of rules is subject to the "naturalistic fallacy" insofar as a normative theory cannot be constructed solely from descriptive arguments -- why *ought* we to favor long-run adaptation? We instead concentrate on the second and third tasks -- description of the tendencies (partial causes) affecting moral conduct, and analysis of certain moral rules and conduct in terms of their tendencies (partial effects) on the long-run adaptational prospects of the human race. This is much more modest than the comprehensive

descriptive, and normative, undertakings. In the first place, since we are concentrating on *tendencies*, we need not account for all of the possible conflicting forces that affect the morality of individuals or the consequences of their behavior and, secondly, the reader is free to say that he cares not a whit about adaptational prospects, and that will be that. We do believe, however, that because of the competitive advantage generated by a moral system that readily adapts to its environment many, possibly most, of the existing moral rules in modern Western societies are based on a foundation of long-run congruence with life conditions.<sup>4</sup> So while an individual may *claim* that he has no interest in adaptation, he will, as a matter of simple fact, often have such a moral interest or conscience.

Since the morality of profits cannot be discussed apart from a specific idea of the nature and function of profits and apart from a specific moral standard, most of what follows will be devoted to these foundational issues. Evolutionary morality is consequentialist and thus cannot skirt the economic function of profits without seriously undermining itself. Our own view of the function of profits is derived from the Austrian perspective elaborated by Israel Kirzner elsewhere in this volume. The moral standard adopted is not done casually. Simply to choose one or two commonly-held intuitions as a standard is wholly inadequate because particular intuitions can easily be self or species-destructive and inconsistent with the main thrust of our moral heritage. It is also inadequate simply to adopt economic standards like Pareto-optimality or Kaldor-Hicks efficiency (wealth maximization) because the former is extremely limited in its applicability and the latter, without further argument, is not obviously connected with moral concerns. We choose an evolutionary perspective because most people believe that the existence of human life is good and ought to be promoted. An evolutionary theory tells us what is necessary for the survival of the human species.

The logic of our central argument is quite simple. The morality of profits is derivative from the morality of market exchanges (because profits are necessary to the

effective functioning of markets). The morality of market exchange is in turn derived proximately from the role of markets in assisting individuals to adapt to economic change, and ultimately from the role of markets in promoting, through a trial-and-error process, beneficial change in the moral rules themselves. The particular economic and moral perspectives embodied in our analysis are essential to its success. We could not easily accommodate alternative economic and moral premises without eviscerating the entire argument.

Finally, we make an institutional assumption for purely analytical convenience. The context in which profits are acquired is assumed to be a classical liberal economy in which there is only a minimal "night-watchman" state, that is, genuine *laissez-faire* capitalism. In this case money profits can arise only from voluntary transactions, defined simply as transactions excluding fraud and duress, which do not therefore generate substantial negative externalities.<sup>5</sup> We do not claim that the real world approximates this state of affairs or that deviations from it can be ignored for policy purposes; we seek to analyze profits in a simpler context before adding moral complications. In so doing we uncover a previously-unrecognized dimension of the morality of profits.

## 2. *Moral Choice, Change, and Profits*

The link between morality-as-survival and change, emphasized above and throughout this Article, is not arbitrary. There is a profound connection. The existence of continued moral choice (indeed, the necessity of it) presupposes the existence of genuine change and hence of profit opportunities.

Any choice requires "change" in the sense of an outcome contrary to the chooser's expectations. This is because in a purely stationary world or steady state

individuals would not have needed intelligence and its associated capacity to choose; they would have simply evolved the appropriate instinctual mechanism to generate adapted behavior.<sup>6</sup> If, in period after period, the same problems were to face an agent his intelligence would either wither away or never have come into existence in the first place. Intelligence and choice are required only when there are nonrepetitive problems to solve. Otherwise, a simple or even complex instinctual mechanism would be sufficient to cope with the conditions of existence. Anything more would be redundant and, by the evolutionary principle of maximum economy, would not have come into existence.<sup>7</sup> Since moral choice is just a species of choice in general, it too requires change. And change in the sense we are using the word requires uncertainty.

Uncertainty implies the existence of profit opportunities in the widest sense. In both market and nonmarket situations uncertainty means, *inter alia*, that there is no guarantee that the value of inputs will equal the value of the associated output. Even Robinson Crusoe must be aware that the subjective value of the resources he applies to the construction of a net can fall short of, equal, or exceed the value of the fish he eventually catches with it. Similarly, on the market, the prices paid for resources may fall short of the prices eventually paid for the output. Surely, however, profits are not guaranteed by the existence of uncertainty; it is conceivable that losses will be incurred. But given the presence of even moderately clever or alert agents, among less clever or less alert ones, there will indeed be profits at least some of the time.

Therefore, a world in which there are on-going moral choices is one in which some agents will be making economic profits. Or, more exactly, uncertainty and profits are necessary<sup>8</sup> for moral choice. So, despite the relatively small amount of attention given it, the connection between a morality of change and the morality of profits is inescapable.



### 3. *How Are Adaptation, Happiness and Wealth Related?*

There is some debate among theorists of evolutionary morality over the connection, if any, between adaptation and human happiness. Hayek [1988: 69], for example, is quite clear that the evolutionary criterion is survival and not happiness. His view is misleading, however, because it ignores the latter's evolutionary role. If activities conducive to life are correlated, even if imperfectly, with happiness, then those beings that experience such an association will be at a competitive advantage relative to those that do not.<sup>9</sup> While survival is the ultimate criterion in an evolutionary morality, happiness has a function in promoting adapted behavior in the individual, short-run circumstances. The survival of the human species, and of certain groups of human beings, is rarely the goal of individual action. Therefore, in order to induce adapted behavior nature has associated agreeable feelings of one kind or another with behavior that is evolutionarily appropriate.<sup>10</sup>

Happiness also exerts an independent influence on the survival propensities of human beings. Love of life varies in proportion to the happiness derived from it. It is difficult to imagine individuals alertly and efficiently pursuing courses of action that increase the likelihood of survival if they do not love life. While it is perhaps possible mechanically to go through the motions of sustaining oneself, it is certainly not possible to exercise creative imagination or to be alert to hitherto unnoticed opportunities for enhancing the likelihood of survival without the enthusiasm for life that comes with happiness. This does not imply, however, that there is never a conflict between acting so as to increase individual happiness and acting so as to increase the probability of individual survival.<sup>11</sup> Human sentiments are insufficiently adjusted to the conditions of existence so that some activities which give pleasure also cause physical or mental harm. Our argument nevertheless implies that the relatively happier will often be the relatively more adapted.

In the very long run of cultural evolution the choice between extensions of survival and increased happiness is the outcome of endogenous forces. There is a long-run tendency, created by selection pressures, toward the emergence of actions that utilize happiness as a means to extended survival. Those individuals and cultures whose most basic "goal" (whether conscious or not) is to increase the probability of survival will, *ceteris paribus*, have a competitive advantage. They will be more likely to survive relative to those who in effect value happiness for its own sake. Since the survival-maximizing "amount" of happiness cannot be known with certainty outside of the evolutionary process, at any point in time there will be different individuals who will make different happiness-survival choices. This is due to a continually-operating trial-and-error process. Although the process will certainly eliminate those who choose with regard only to happiness, it is unlikely, however, that there will be a single optimum because of biological and psychological differences across individuals.

An individual's adaptation to his circumstances is fundamentally a self-generated adaptation. Indeed Herbert Spencer calls the mechanism involved the "principle of *self-adjustment*" [1978b: 26].<sup>12</sup> This is a consequence of the nature of human happiness which, as we have seen, is evolutionarily associated with adapted conduct. Happiness does not simply consist of the possession and use of products or services as the consumption theory of modern economics encourages us to believe. Happiness consists of a process of both discovery and choice leading to "experiments in living" [Gray, 1983: 78-86]. The cognitive aspect of these experiments requires a setting that allows the agent to discover his own genuine desires and most appropriate projects. It is important that the individual himself find these because this activity is an important part of his individuality or "authenticity." In its absence, the individual's purposes are superficial as he is not aware of his own nature and thus incapable of moving on to the second stage of fulfilling it.

The second, practical stage of these experiments involves implementation of the individual's projects through choice. This is a person's "autonomy." Choice is important because it allows the individual to "fulfill the peculiar demands of his own nature," a nature which is the unique outcome of a process of discovery or authentication [Gray, 1983: 81].<sup>13</sup> It is also important because genuine happiness is the result of a sense of accomplishment arising from the use of one's own faculties. Therefore both discovery (authenticity) and choice (autonomy) are necessary, although not sufficient, parts of an activity in which human happiness may be found.

Just as happiness and survival are positively associated, there is a positive, although imperfect, association between survival and wealth.<sup>14</sup> Wealth promotes adaptation and survival both directly and indirectly. There is direct promotion through the purchase of goods and services that can cure disease and provide food and shelter. The availability of, or capacity to produce, general means of survival is especially important insofar as individuals face uncertain futures. Efficient adaptation often requires rapid response to unforeseeable changes. On the other hand, there is indirect promotion through the furtherance of happiness by wealth in permitting indulgence in cultural activities, amusements, and everything else that makes life worthwhile and survival more attractive. This does not mean, however, that all wealth is conducive to adaptation and survival. Some wealth (e.g., large rich meals) can be enjoyed at the expense of increments in the probability of survival. Nevertheless, those individuals or groups which value such wealth will *tend* to disappear, or, more exactly, will be more likely to die out than those who use wealth to promote survival.<sup>15</sup>

Because of the importance of the market in producing wealth and the importance of wealth in permitting adaptation and extending survival the market has a preeminent moral dimension. It is the great means to moral improvement. While it is no doubt true that some individuals can adapt and survive better than others with less participation in

market activity and no one should, from the point of view of survival, devote all of his time to market exchanges, almost everyone in the modern world adapts largely through the market. Therefore, a code of behavior that either passively or actively supports the market is *a fortiori* moral.

The individual's adaptation to his circumstances is always incomplete in the sense that there is, in principle, further adaptation that would increase the probability of survival, and yet it is not undertaken. There are at least two reasons for this. In the first place, before there can be complete adaptation to a given set of circumstance it is likely that those circumstances will have changed. The individual's adjustment speed often lags behind changes in the data. Secondly, the growth of knowledge means that new and better ways of adjusting to existing circumstance are continually being discovered. There can be no complete adjustment as long as there is life and consequently changes in knowledge. If an adjustment is never total, how can we characterize the "goodness of the fit" between behavior and environment generated by those who follow ethical rules? The fit is to be characterized in relative terms. Is a particular type of behavior or moral code conducive to greater or lesser adjustment of the agent to change *than alternative behavior*? Different moral codes may encourage people to adapt to economic or other changes to different degrees. Differential adaptation is in turn responsible for differential rates (probabilities) of survival of individuals and cultures.

#### 4. *Morality in a Social State: From the Individual to the Market*

To illuminate our conception of the nature of morality it is important to affirm the existence of ethics for an isolated individual. This is because ethics in the social state is partially an extension of ethics in the individual state. An isolated individual has a

survival problem: how to adjust to the conditions of existence in a way that increases the probability of his survival? He can do this by utilizing resources and creative imagination, and by following rules of efficient conduct. These rules reduce informational and computational requirements by simply pointing him in the right direction on average. So, acting in accordance with them, he may forego immediate pleasures in order to provide for future needs, that is, he may act "prudently." Often this will turn out to have been perfectly appropriate, but sometimes it will be excessive and lead to overwork and overall inefficiency. Nevertheless, a given individual will be more adapted to his circumstances and hence more likely to survive following these rules than not.<sup>16</sup> For the isolated individual ethical rules are simply rules of prudent conduct.<sup>17</sup>

Similarly, large numbers of people -- perhaps the average or randomly-chosen individual -- will be more adapted in most or average circumstances when they are following ethical rules than when they are not. In a dynamic world, humanity is continually buffeted by shocks in environmental conditions such as wars, famines, weather disasters, earthquakes and epidemics that disturb the existing degree of adaptation. The likelihood of survival under these circumstances depends on the degree to which individuals can adjust their behavior in response to the shocks, that is, by their adaptiveness. In modern evolutionary theory "survival of the fittest is a statistical truth only, with many individual exceptions" [Hardin, 1980: 39] and so our concern is with the probabilistic consequences of these adjustments. Thus from the evolutionary standpoint, ethical or moral conduct is that which moves toward greater adaptation or adjustment to changing conditions of existence in such a manner that, if everyone acts ethically, raises the *probability* of species-survival relative to what it would have been in the absence of any adjustment.<sup>18</sup> The "most moral" conduct is that which raises the probability of survival relative to all competing types of adjustment behavior. None of this implies, however, that

moral conduct must raise the probability of survival above what it actually was in the immediately preceding period. Moral conduct and a continually falling likelihood of survival are compatible if the changes in environmental conditions are hostile enough.

If everyone does not act ethically, as required in the above definition, then ethical conduct will raise the probability of survival only within the group in which it is practiced. Furthermore, if one individual behaves ethically and another individual with whom the first interacts does not, it is by no means certain that the ethical person will enhance his survival probability on average. This is the realm of the second-best, about which we have nothing to say at present. Nevertheless, the more a society (in the limit, a world society) can impose moral behavior on all of its members in their dealings with each other, the greater will be the likelihood of survival of the group, or, equivalently, of the randomly-chosen individual.

The critical connection between the ethics of the isolated state and morality in a social state is cooperation. Cooperation is the best way to promote, or perhaps, more accurately, simply to permit, the adaptation of the randomly-chosen individual. While it is true that some individuals will gain relative to others in a given society through exploitation rather than cooperation, the society as a whole will be less wealthy because departures from cooperation result in deadweight losses. As a consequence, the average or randomly-chosen individual will tend to be less adapted in an uncooperative society than in a cooperative one since wealth and adaptation are positively correlated.<sup>19</sup> To the extent that most individuals find it difficult to prosper unconnected with their society, moralities that foster less average adaptation will be less likely to support, in the long run, even those exploiters, such as the party elite in the former communist countries, who are better off relative to average individuals.

From the perspective of modern economics, the superiority of cooperation is due to specialization and the division of labor. The best way for an individual to obtain most

of what he wants is to engage in trade rather than to produce it himself. As trade expands, people will more and more undertake specialized production and become more dependent on the market for their needs. This has resulted in an enormous world-wide increase in output and living standards. Philip Wicksteed [1967: 170-83] argued that the best way to get what one wants is to help others through the market get what they want. The market is thus the locus of "reciprocal altruism" [Trivers, 1971]. This not only has economic value but moral value as well.<sup>20</sup> The market, by extending the efficacy of choice (that is, by increasing the chances that the chooser can get what he wants), is an aid to the development of better or more adapted moral conduct. Individuals in a market society are more competent than those outside of one to improve both their own lives and those of others in their sphere of interest. There is no end to the possibilities for improvement because knowledge, and hence the efficacy of choice, can grow without limit. The spread of market relationships to more and more areas also overcomes the tension that sometimes exists between conduct that is ethical in the isolated state and conduct that is ethical in the social state. Through the market individuals help themselves by helping others. The "conflict between egoism and altruism,"<sup>21</sup> which now constitutes the crux of all ethical speculation, is transitional, and in the process of gradual disappearance" [Spencer, 1978a: 319] to the extent that market relationships are permitted to expand.<sup>22</sup>

##### 5. *Trial and Error in Moral Evolution*

Moral conduct depends on the individual successfully adapting to changing environmental conditions. The relevant knowledge needed to accomplish this is uncertain, and agents will, in the course of its acquisition, both make mistakes and then learn from those mistakes. While learning moral principles may be the result of studying philosophical

treatises, theological tracts, the Bible, or simply imitating the behavior one's elders, moral conduct has an irreducibly empirical element. To practice the virtue of prudence requires that the individual both know what the virtue means in abstract terms and have some reasonable guesses about the consequences of putatively prudent behavior under changed circumstances. Consider, as another example, two individuals, one of whom, in the face of growing trading opportunities, refuses to trade with members of an alien culture because it is "immoral" to have dealings with strangers, and the other who violates the moral code and has such dealings. The latter will tend to be relatively more prosperous because his opportunity set has expanded. Thus he will have adapted to the changed trading conditions more nearly completely, while his "moral" associate, by not changing his behavior, will experience an opportunity cost.<sup>23</sup> This cost will discourage adherence to the old morality. The marginal adherents will change their behavior to a greater or lesser degree. The inframarginal -- those for whom adherence to the maladapted morality has high nonpecuniary value -- may at first react with a certain curiosity, merely investigating the causes of the innovator's prosperity, without themselves changing behavior. Eventually, however, as these individuals incur costs period after period, they begin to wonder why they should behave in the traditional way. Their perception of the morality of avoiding strangers will come under greater and greater stress, especially as the distance from full adjustment to new circumstances grows. Thus as profit opportunities get larger, the temptation to violate the old morality will become greater, and more individuals will succumb. Since people will find that no one is really harmed by commercial intercourse with strangers and almost all are helped, the maladapted morality will tend to be expunged from their emotions and minds or, at least, from those of future generations.

The elimination, or at least the tendency toward the elimination, of maladapted behavior can occur only in the presence of a feedback mechanism. This mechanism must



ensure that the consequences of maladapted behavior are borne by the agent.<sup>24</sup> In more specific terms, it must ensure that the "normal connections between conduct and consequence" [Spencer, 1978b: 289] are maintained for both adapted and maladapted conduct. The feedback mechanism is

a fundamental law, by conformity to which life has evolved from its lowest up to its highest forms, that each adult individual shall take the consequences of its own nature and actions...

[Spencer, 1978b: 76].

The extent to which this "law" is satisfied in social arrangements will, *ceteris paribus*, determine the extent to which moral evolution can be successful (that is, the extent to which it can eliminate errors and replace them with more adapted conduct).<sup>25</sup> Without the law of normal connections between conduct and consequences there would be an incentive problem: Why *should* agents correct their errors and replace them with more adapted behavior? After all, the received morality tells them that there is nothing wrong with their behavior; in fact, it may even tell them that what they are doing is laudatory. Only the experience of consequences, whether favorable or unfavorable, can shift behavior in the proper direction. Therefore, allowing breach of contract without, for example, damage remedies will simply bring forth more breaches. Unless he bears the consequences, the breaching party will have no incentive to change his behavior. Spencer's law is also an information-generating mechanism. Consider that if an individual does not bear the consequences of his foolish behavior he will not have the incentive to find out exactly which behavior is responsible for the negative consequences and how to correct that behavior. A person may continually get fired from jobs and yet not know what he is doing wrong. If he bears the consequences of these failures he will try to discover the

culpable behavior. If not, he will probably sink into an ever-worsening state of affairs without knowing the reason.<sup>26</sup>

The law of normal connections between conduct and consequences is not a moral law in the sense that adherence to it *constitutes* adapted behavior. It is obviously a moral law in the sense that it encourages adjusted behavior at a given moment in time. More importantly, however, it is a law of supra-morality, a kind of justice, that makes possible the evolution of more adapted conduct. As such its moral character is formal and can only be grasped in abstract terms. Often people will be moved by strong feelings of generosity or beneficence to alleviate the concrete suffering of their fellows. In part this is because such suffering produces painful sympathetic feelings in themselves and in part because beneficence is thought always to be morally sanctioned. In fact in many such cases breaking the connection between conduct and consequence is a moral wrong. This is because without such a connection actual moral or adjusted behavior would be impossible. There would be neither sufficient incentives nor sufficient discovery for individuals to adapt their behavior to the changing conditions of life. Spencer's law is in part made necessary by our moral ignorance. It would be superfluous if we knew with *a priori* certitude what would be adapted under future conditions. Unfortunately we do not, and we thus need a moral-feedback mechanism.

There are both ethical and proethical consequences of a moral decision and action. The ethical are the objective consequences for species-adaptation and, to a lesser extent, for the long-run happiness of the randomly-chosen individual. These are the intrinsic results of an action. The proethical are the extrinsic results or the external pressure applied to the agent by those in society who dispense moral evaluations. This is the social praise or blame, or artificially constructed reward or punishment attached to an action [Spencer, 1978a: 369]. The adaptability of conduct is defined relative to the intrinsic or

ethical consequences. The proethical sanctions ideally serve to reinforce the ethical and thus to promote adaptation for those who either cannot envision long-run intrinsic consequences or do not care about them for themselves or others.

Proethical sentiments obviously inhibit the violation of existing moral codes and hence retard the moral trial-and-error process. These sanctions can obviously be too strong (or too weak for that matter). In highly traditional or intensely religious societies they will sometimes be too strong.<sup>27</sup> A religion does not present itself as "contingently true" or "a working hypothesis only" that "shall give way to something truer." It is "absolute and eternal truth" and will not admit of competitors [Sumner, 1969a: 56].<sup>28</sup> Nevertheless, for the optimal balance to prevail there must be sufficient competition from alternative moral perspectives. Thus it is plausible that this optimal balance with regard to the strength of proethical sanctions is achieved within a pluralistic, not homogeneous, society. Over the long run, individuals may better adapt to their circumstances when they live in a society of many separate groups in which there are different moral standards (enforced by proethical sentiments) and when they have the ability to leave one and enter another.

#### 6. *The General Role of Profits in the Market*

From the adaptational perspective, the desirable feature of profits is that they encourage both the utilization of existing knowledge and the discovery of new knowledge. In any society different individuals possess different pieces of knowledge [Hayek, 1948: 77-91]. Without the appropriate incentives, this separated knowledge will not gravitate toward those individuals who can use it most efficiently. Consider that suppliers may be selling a product at \$5.00 per unit, while many demanders in that same market are quite willing to

pay more. This excess demand (let us suppose) must mean that the sellers do not have adequate knowledge of the demanders' preferences. So existing knowledge (presumably the demanders know their own preferences) is not being efficiently utilized. If, on the other hand, a supplier were to learn that some consumers are willing to pay more than \$5.00, he would sell to them. In doing so he will begin to push the market toward an equilibrium. The supplier, however, will be alert to this learning possibility only if he can earn a profit. Thus the simple market equilibrium that economists take for granted is the result of a process of discovery generated by the pursuit of profits. Consider now another case of equilibration -- through arbitrage. Suppose the same product is being sold at \$1.00 in one market at \$2.00 in another market. Since the difference between the prices in these markets is, *ex hypothesi*, not due to a difference in costs, the only reason the price spread exists is because the suppliers in the first market are ignorant of the preferences of the consumers in the second market.<sup>29</sup> Here again is a case of existing knowledge not being fully utilized. The role of profits in eliminating gaps such as these through arbitrage should be obvious. The first seller to notice the higher price in the second market will make a \$1.00 profit on the first unit he sells there. It is the price discrepancy and the potential for profit that attract his attention and are thus responsible for the efficient spread of divided knowledge. The "law" of one price is not a constant but must be generated by the pursuit of profit opportunities. Finally, knowledge which is not currently possessed by anyone must also be generated by the pursuit of profits. A completely new technology will be discovered only where profits are available. Temporary "monopoly" profits are reaped by those who first introduce a new technology; this supra-normal return provides the incentive for significant transformations of production processes, as Joseph Schumpeter taught.

The general role of profits in the market is thus threefold. Pursuit of profits tends to avoid the incompatibility of plans (as in cases of excess demand), to exploit

available opportunities across markets (as in the process of arbitrage), and to create radically new opportunities (as in the discovery of new technologies). Each of these has a moral, and not just economic, dimension. The utilization or discovery of knowledge in these three cases extends the efficacy of choice. And choice, in turn, is vital to the successful long--run adaptation of individuals and ultimately of the species. The pursuit of profit also promotes the harmonization of conflicting claims so as to overcome partially the egoism--altruism dichotomy. This harmonization is the Humean idea of justice -- maximization of the compatibility of individual ends, rather than the achievement of a collective or tribal end.<sup>30</sup> Both the extension of the efficacy of choice and the harmonization of these choices can be seen from either a static or dynamic perspective. Statically, we can talk of the degree of adaptation made possible by extending the efficacy of choice or the degree of harmonization made possible by closeness to equilibrium. From the "dynamic" evolutionary perspective, however, what is more important is the moral trial--and--error process and the growth of social cooperation generated by the increase in knowledge.

### 7. *The Meanings and Specific Roles of Profit*

Until now we have been working with a largely intuitive sense of the term "profit." The time has come to say something more precise about it. In general, profits are being earned when the agent's returns exceed the full value of all his costs, both implicit and explicit. We shall consider three types of surplus that have been called profit: (1) windfalls; (2) economic rent; and (3) pure profit.

(1) *Windfalls*. This is a return over costs that is the result of pure luck and requires no individual effort or alertness. Let us first deal with apparent windfalls.

(i) *Apparent Windfalls.* These are not true windfalls and hence not genuine profits. Although the windfall element is present with respect to a single outcome, it is not present in the context of the agent's economically relevant decision or series of decisions. Consider an example that is much in the news lately. Some companies appear to have made huge profits on a single drug when the cost of production is measured by direct expenditures on that drug. As a result there have been cries of unfairness and expressions of moral indignation. This is all based, however, on a radically incorrect way of measuring costs. The cost is not simply investment in the successful drug but a share of the unsuccessful drug investments as well.<sup>31</sup> *Ex ante* the firm does not know which drug will be effective. In order to develop a successful drug it must make a group of investments, each with only a small probability of success. It is quite possible that there will be no real surplus here. All of the return may simply cover the full costs of production when they are appropriately measured. If that is the case, then the apparent windfall is actually a supply price needed to elicit the new drug's coming-into-existence.

(ii) *True Windfalls.* These can occur only when the possible outcomes -- or at least some of them -- are completely unexpected. In other words, in these cases no probabilities are known because the outcomes are unlistable beforehand. Therefore, there is no question here of an expected return balanced against an expected cost. Here there will be a true windfall from the *ex ante* perspective (unlike in the previous case). This is the result of "dumb luck." An example can be found in the invasion of Kuwait by Iraq in 1990. This resulted in a large temporary cutoff of oil supplies. Suppose that the cutoff was completely unexpected in the sense that the relevant agents did not conceive of it as a possibility. The immediate rise in the price of oil produced, under these circumstances, a true windfall profit. The price rose on the "old oil" far in excess of its historical costs of production. It is obvious that this was not necessary to bring forth the

existing supply. Nevertheless, this does not mean that the rise was without any adaptational function. Consider that conditions had changed. Although immediately after the invasion world supplies were only slightly changed, very soon, as existing supplies were used up, there would be a significant fall-off in supply. The immediate rise in prices thus reallocated the oil from a period in which it was relatively abundant to periods in which it was expected to be relatively scarce. In other words, the oil was reallocated in the direction of the unfavorable change in conditions. In general, even a true windfall emanating from dumb luck is allocatively or adaptationally significant in the producing an *ex post* adjustment to changed conditions. While, *ex hypothesi*, the change could not have been foreseen, once it occurred, adaptation to it would be impossible without windfall profits.<sup>32</sup>

(2) *Economic Rent*. In one variant of economic rent an agent has a unique talent that is the source of superior knowledge or superior ability to act upon commonly-available knowledge. If the talent present here is truly unique and hence fixed (that is, if its supply is unalterable), then the entire income earned by the agent is a type of profit derived from its monopoly status.<sup>33</sup> This profit is generally called economic rent. From a superficial perspective, there would seem to be no need to reward this given (fixed) resource, or to reward it in excess of its relatively low opportunity cost if it is not entirely fixed in supply. Nevertheless, economic rent is not superfluous in the sense that it has no adaptational functions. The payment of rent indeed has short-run allocational and longer-run supply consequences.

Suppose an individual has the potential to be an Alfred Hitchcock. He has a special talent in movie direction that, when developed or trained, can grow into exceptional performance. Having a special talent means that even if others study or are trained equally well they will not achieve this quality of output. Is it the case that Hitchcock's

rent income could be expropriated without affecting his ability or willingness to adapt to change? Clearly not. In the short run, Hitchcock's ability to maximize his rent will affect whether he allocates his talent to newly-emergent higher-valued uses. Why should he change his current behavior when any increase in rent will be forfeited to the tax collector? Furthermore, an agent will not be especially interested in discovering or creating still higher-valued uses when the lure of rent is absent. In the longest run, the very existence of Alfred Hitchcock, *qua* resource, is affected by rent. Consider what it means to *have* a special talent. "Having" something, in an economic sense, requires that it be recognized by the individual himself or by others in the market. This recognition is the result of a combination of entrepreneurial discovery and efficient learning. In order to elicit recognition of a specific talent entrepreneurial alertness must be switched on and opportunity costs overcome. Generation of the former is enhanced by rent.

When the foregoing short and long-run considerations are taken into account, it seems unlikely that there will be any significant income without an adaptational function. Appropriate adjustments to changing economic uses, the creation of new ones, and the long-run discovery of the very existence of the talent are all elicited by economic rent.

(3) *Pure Profit*. This is the result of a successful outcome in the intentional pursuit of unexpected opportunities. An individual may face a situation in which he doesn't have even a probabilistic conception of the future because he doesn't know all of the possible outcomes.<sup>34</sup> He is, however, genuinely prepared for or alert to opportunities of a certain kind -- that is, of a profitable nature -- so that the eventual discovery of such opportunities is not a matter of pure luck.<sup>35</sup> Since this alertness, or perhaps focus, is a generalized state and is "directed" toward nonmarket as well as market opportunities, it does not, strictly speaking, have an opportunity cost.<sup>36</sup> In practice, however, the pure form of preparation, alertness, will not be visible because it will be combined with actions that do have an opportunity cost (e.g., shopping around to find the lowest price).



An important example of what is at least plausibly pure profit can be found in the case of *Laidlaw v. Organ* (1817).<sup>37</sup> Hector Organ purchased tobacco from Peter Laidlaw & Company at a price that was depressed because of the British blockade of the Port of New Orleans during the War of 1812. Organ learned earlier than Laidlaw that the Treaty of Ghent had been signed and that the blockade was therefore lifted. In effect, Organ knew, but Laidlaw did not, that the market price of tobacco would soon rise significantly due to the resumption of export trade. When Laidlaw found out two days later what had happened he repossessed the tobacco he had sold.

The issue here is not whether anyone should make a profit, but who should make it? If Laidlaw were permitted to repossess the tobacco he would make a windfall profit due to the unexpected end of the blockade. If Organ could keep the tobacco then he would reap a pure profit. As between the two parties, whose conduct is *more* adaptive to change? Laidlaw who knew nothing of the treaty? Or Organ who learned of it? As Chief Justice John Marshall, writing for the U.S. Supreme Court, said: "There was, in the present case, no circumvention or maneuver by the vendee [Organ], unless rising early in the morning, and obtaining by superior diligence and alertness, that intelligence by which the price of commodities was regulated, be such" [*Id.* at 193]. The Court ruled that the contract should be enforced, although it equivocated on the issue of whether Organ's conduct was moral. While it is true that, beyond the early rising, Organ did not appear to incur any costs in uncovering this information,<sup>38</sup> nevertheless, the decision seems consistent with the morality of change. It promotes conduct that is relatively adapted through the stimulation of generalized alertness. By bringing about a more rapid adjustment of the (reservation demand) price of tobacco to its new higher level Organ's conduct promotes both the synchronic and intertemporal coordination of plans under changed conditions.

## 8. *Harder Cases*

(a.) Much of the moral case for markets and hence for profits rests on the importance of the increased efficacy of choice which, as we have seen, is critical in extending the prospects of human survival through adaptation. Other moral criteria we have employed are derivative of this criterion. The moral value of maximizing the compatibility of ends, partially overcoming of the egoism—altruism dichotomy,<sup>39</sup> and discovering of new knowledge all depend on the moral worth of individual choice. The value of the market as a great system of human cooperation may thus seem to have no moral value when the purposes for which there is cooperation are themselves immoral.<sup>40</sup> Consider an individual who drinks great quantities of alcohol each evening and is consequently unable to function at work the next day. The market and the profit system provide the individual with vast opportunities for efficacious choice. All sorts of alcoholic beverages are available to him which would not be in a world of crippled markets. From the perspective of purely static morality, this would seem to be an example of immorality of profits. This is because some profits earned as a result of arbitrage across, say, the markets for different types of alcohol derive their moral value from the presumably negative moral value of excessive drinking.<sup>41</sup> Moral mistakes do have positive value, however, in a trial—and—error process of self—adjustment. Expropriation of the profits derived from selling to the alcoholic, even if practical, would lessen or destroy the efficacy of the process of moral self—adjustment. Only if the individual endures the consequences of his conduct will its immorality be impressed upon his emotions and ultimately upon his mind. (It may, however, be the case that a given individual will fail to learn the lesson but even here his example cannot fail to teach others.) This is of substantial value

because the long-run chances for human happiness are greater when individuals learn for themselves through experience. But there is another, more subtle, point. Often individual circumstances vary greatly and what is dysfunctional alcoholism for one person is not for another. In addition, general circumstances may also change over time (e.g., increasing wealth may make fewer hours of work necessary) and so sleeping until 10 am to get rid of a hangover may become feasible. The key point here is that the moral quality of conduct depends on its consequences and these cannot be known *a priori*. Thus there must be an information-generating mechanism to facilitate the alteration of conduct in the direction of moral adaptation.

(b.) Next let us consider cases in which the state of knowledge of at least one party to an exchange is "determined" by sheer luck. We might, for purposes of illustration, utilize a series of fact-patterns similar to those in the previously-discussed *Laidlaw v. Organ*. Recall this is a case in which one party has superior knowledge and by trading on the basis of it makes a profit. Here, however, we shall ignore any *ex post* allocational issues. This might be realistic in circumstances where it is virtually inevitable that the ignorant party will learn of the new facts before there is an opportunity to misallocate the resources.<sup>42</sup> There are three relevant possibilities.

(i) In the first type of case we shall suppose that B's superior knowledge rests on good luck and A's inferior knowledge rests on bad luck. Under such conditions, it is a matter of moral indifference who gets the windfall profit. If A (*Laidlaw*) is allowed to repossess the tobacco he sold, he will then capture the new larger difference between the purchase price from the original farmer and the resale price. If B (*Organ*) is allowed to keep the tobacco then the windfall is his. Since no issues of adaptation to change are at stake here (they have been excluded by assumption), there is no reason in evolutionary morality to favor one or other of the parties.

(ii) Suppose now that while B's superior knowledge is based solely on good luck, A's inferior knowledge has its origins in either in alertness in the perception of opportunities or in lower expenditures on information-gathering. In either case, A's *conduct* is relatively less adapted to change and, from an evolutionary standpoint, is less moral. Furthermore, it does not matter in justice whether this inferior adaptation is due to temporary causes such as a momentary distraction or disability. Nature does not listen to our excuses. Thus, "penalization" of A is morally justified. In other words, B's relatively greater prosperity, as compared with A, is morally justified.

(iii) Suppose that B's greater knowledge is based on alertness or expenditure of resources. A's inferior knowledge, on the other hand, is a matter of bad luck. Again B's conduct is more adapted to change. A's conduct, in contrast, is maladapted and hence, from the standpoint of evolutionary ethics, ought to be penalized. This occurs if A is not permitted to repossess the tobacco and fails to reap the profits of the exchange.

In general, depending on the specific factual circumstances, we are either morally indifferent between A and B's legal right to the profits or we are confident that B's moral claim is better. Since the above cases are exhaustive of the possibilities, there is never a reason, in justice, to overturn market outcomes of the *Laidlaw* variety. The party exhibiting more adapted behavior should always reap the profits.

(iv) The reader may now wonder whether there is a moral case, based on beneficence, to favor the party with inferior information. This would mean that the individual possessing superior information is morally permitted to forbear acting upon his informational advantage. It is possible that the party whose knowledge is lacking has had a temporary and uncharacteristic distraction or disability (the second case above) or a simple unfortunate turn of luck (the third case) *that, if endured, would substantially and*

*altogether freakishly injure his capacity to survive.*<sup>43</sup> Under these circumstances, beneficence may be permitted. It is clear why shielding the individual from a case of bad luck does not affect his adaptational propensities. Even the most capable individual cannot avoid *pure* luck. On the other hand, a temporary and uncharacteristic failing could have been avoided by greater diligence. So why should we rescue such a person? In general, of course we should not. In the special case, however, where the consequences are likely to be grossly disproportionate<sup>44</sup> to the failing we can do so without injustice.<sup>45</sup> Nevertheless, there are information problems facing the potentially beneficent individual. It is not always easy to distinguish cases in which aid to the party subject to *ex post* losses will discourage adaptational behavior from those in which it will not. This is because consequences that are the result of inalertness are hard to distinguish from those that are due to simple misfortune. And ordinary human sympathies often tend to make us bad judges of when conduct produces normal results in contrast to when it produces grossly disproportionate results.<sup>46</sup>

## 9. *Conclusions*

The morality of profits is most usefully analyzed as a part of a broad mechanism or system of adaptation to change. There is nothing in the nature of profits, as distinct from any other form of income, that makes them moral or immoral. In a classical liberal perspective, any voluntary exchange, starting from an initial position of accepted property rights, embodies a very strong presumption of moral legitimacy. From this presumption we can argue for the morality of profits because they are simply derived from the prices freely agreed to by the transacting parties. The key to the special moral character of profits, however, must be found in the context of their function in the market order. The morality of profits lies in the consequences for human happiness, wealth, and survival.

In this Article we have emphasized the moral significance of adaptation to economic change. In an evolutionary framework failure to adapt to change lowers the probability of species-survival. A morality that ignores or downplays such survival also reduces the likelihood of its own survival. The ability of agents to capture profits fosters *creative* adaptation, that is, adaptation by means of alertness to previously-unknown possibilities. The inventive character of evolutionary adaptation is inextricably linked to the function of profits in rewarding creativity and alertness.

Adaptation generated by profits is of two kinds. The first consists of the application of existing rules to new situations. Both incentives to apply the rules and information about the factual content of a new situation are provided by the feedback of profit and loss. Thus an agent is encouraged to act in a way he thinks prudent by the expectation of profit. The system of rewarding correct forecasts of the future means that his *desire* to be prudent tends to be followed by his success. The second form of adaptation is dynamic insofar as it involves the development of new moral rules that are themselves more adapted than the previous ones had become. Thus the morality of commercial intercourse with strangers will tend to change as the economic consequences of dealing with them changes.

We live in a dynamic world where the "penalties" for resisting adaptation are growing increasingly more severe. Any moral theory, regardless of its pedigree, must deal with this fact of change. It is to the credit of evolutionary morality that change is given a central place in its analysis. From this perspective we can look beyond the myopic confines of static moral theories. We can then attend to the preservation of the feedback mechanism we have called Spencer's law, a mechanism that is necessary for both the application and development of moral rules.

## FOOTNOTES

\* I am indebted to Robin Cowan and Israel Kirzner for many helpful comments.

Responsibility for errors is mine alone.

<sup>1</sup> We eschew all connotations of a bitter struggle among individuals for the limited means of survival. Just the opposite is the case. The human struggle for existence usually involves a large measure of social cooperation. See text, *infra*, Section Four. The term "struggle for existence" was first used in Malthus [1926: 48].

<sup>2</sup> Furthermore, it would probably be impossible to say anything very general about the content of moral behavior if an exception had to be made every time a rule had consequences not conducive to a particular individual's happiness, wealth or survival.

<sup>3</sup> "The task of right living forever changes its form, but let us not imagine that the task will ever reach a final solution..." [Sumner, 1969b: 108].

<sup>4</sup> We make no claim that the adapted behavior studied here is the inevitable or even most likely outcome of a process of selection. We believe, however, that there are strong forces tending in the direction of adaptation that will have to be overcome for maladapted behavior to prevail. Explanation of any given behavior should therefore proceed in terms of the interplay of forces tending toward adaptation and those tending toward a form of maladaptation.

<sup>5</sup> Negative externalities violate the voluntariness of a transaction since they amount to a forcible taking, that is, an involuntary use of another's person or property.

<sup>6</sup> "Consciousness would never have developed if the environment of living organisms were perfectly uniform and monotonous, conformable to mechanical laws. In such a world organisms would be automata" [Knight, 1971: 294].

<sup>7</sup> "[E]volutionary change in general tends toward a maximum economy in the use of resources..." [Howard, 1982: 83].

<sup>8</sup> Strictly speaking, there could be a world in which all uncertainty was restricted to the nonmarket realm so that money profits would not arise. There would, of course, then be "psychic profits" (that is, a positive difference between the subjective value of an output and the subjective value of the inputs) in the nonmarket sector. Such a restricted world, however, is highly unlikely and we ignore it.

<sup>9</sup> "[T]hose races of beings only can have survived in which, *on the average*, agreeable or desired feelings went along with activities conducive to the maintenance of life, while disagreeable and habitually avoided feelings went along with activities directly or indirectly destructive of life..." [Spencer, 1978a: 115]. Emphasis added.

<sup>10</sup> Those agreeable feelings may be culturally determined as well as biological in origin.

<sup>11</sup> At this time we put the possibility of any conflict between individual and group



survival to one side. For a discussion of the relation between the two, see text, *infra*, Section Four.

<sup>12</sup> Emphasis added.

<sup>13</sup> The above is largely based on John Gray's [1983] interpretation of John Stuart Mill.

<sup>14</sup> Consider that there is a high positive correlation, across the nations of the world, between percapita real income and life expectancy. Furthermore, it is also the case that, even within a single country, at higher levels of income people spend more to reduce risk.

<sup>15</sup> Furthermore, in the context of voluntary exchange the relatively more adapted will also tend to drive the less adapted into marginal existence. The former will be able to manage resources more efficiently and so will tend to come into possession of them. Thus they will have more economic "power" in society. Through greater control of resources the more adapted will, by their example and use of the resources of communication, be able to spread their moral code more effectively. The individuals who embody the inferior morality may continue to exist but they will not be able to reproduce themselves "ideologically" even if they can physically.

<sup>16</sup> The more conditions are changing the more it is the case that conduct must be guided by rules that are independent of specific content [Hayek, 1976: 1-30]. In a changing world repetitive specific actions are not adaptive. While an action may have previously been suited to certain circumstances, as these circumstances change, so too must the action. Therefore, to the extent that adaptive behavior can be characterized across many instances, it must be in terms of abstract rules. For example, individuals who follow

a rule of considering long-term consequences in addition to immediate ones before acting do not thereby know exactly what decision to make. The ultimate decision will depend on the concrete facts of the particular case. Nevertheless, those who follow such abstract rules will exhibit greater survival properties than those who do not.

<sup>17</sup> There is an ambiguity in the above discussion between those rules that consist of adaptive behavior (e.g., the virtue of contemplating long-run consequences) and those that simply permit adaptive behavior (e.g., "Making a profit is good so do it, or so do not be inhibited about it"). In our use of the term, "moral rules" consist of both meanings.

<sup>18</sup> The reader should be careful not to identify adjusted behavior with any and all existing behavior. "In nature, A's 'superiority' over B will be *expressed* as differential survival, but it is not *defined* by it...[C]ertain morphological, physiological, and behavioral traits should be superior a priori as designs for living in new environments. These traits confer fitness by an engineer's criterion of good design, not by the empirical fact of their survival and spread. [For example,] it got colder before the woolly mammoth evolved its shaggy coat" [Gould, 1989: 95].

<sup>19</sup> It cannot be determined *a priori* just how much worse off the average individual will be or how many people will be better off in a noncooperative society either relative to the average or to people in other societies. This will depend on many empirical factors.

<sup>20</sup> The difference between the two kinds of value can be seen on two levels. From the perspective of the isolated individual, ethically indifferent choice (i.e., narrowly-construed economic choice) is that which does not appreciably affect the agent's adaptation.

Consider that the choice between vanilla and chocolate ice cream does not usually affect adaptation. But the choice of ice cream over a low-fat dessert has adaptational significance for those with heart problems or a propensity towards them. The key is the existence of *objective* adaptational consequences. A sharp dividing line does not exist; the purely "economic" shades into the ethical. It is usually where the ethical (adaptational) context is substantial that we are confident in declaring the choice to be of a moral nature. Overeating as a general practice constitutes the vice of gluttony, but a single instance of overeating is usually not considered unethical. From the perspective of the individual in the social state, however, the moral aspect of choice lies in its consequences for the adaptation or welfare of other individuals. Such consequences are necessary, though not sufficient, for transforming an "economic" choice into a moral choice.

<sup>21</sup> Both Spencer and Trivers (above) use the word "altruism" to mean merely the act of helping others. Neither of them includes the intention or desire of helping as a necessary ingredient in altruism. Therefore, assisting others *in order to* receive a benefit in return can be altruistic in this meaning. In a consequentialist approach, however, it is actions that ultimately matter rather than intentions.

<sup>22</sup> Axelrod [1984] has shown that cooperation is likely to emerge spontaneously even under many strategies designed to defeat it as long as agents repeatedly deal with one another and defectors can be punished by withdrawal of cooperation. This apparently strong tendency must be juxtaposed to those sentiments that keep people from cooperating.

<sup>23</sup> We are making the plausible assumption that all individuals value increases in wealth to a greater or lesser extent.

<sup>24</sup> It should be obvious that the existence of negative externalities is inconsistent with the operation of this mechanism. Those who produce external costs do not bear the consequences of their behavior. This is because externalities can exist only in the absence of a market for the good used in the externality-generating activity. Thus, profits earned in the production of negative externalities, like polluted air, do not generally enhance species-survival. Our claim, however, is that profits are moral *insofar* as they arise out of market transactions.

<sup>25</sup> Spencer's law is a necessary, but not sufficient, condition for the development of adaptive conduct.

<sup>26</sup> There is neurobiological evidence that learning and pain are evolutionarily related. The brain's ability to learn may have evolved from the sensation of pain. In the marine mollusk, *Aplysia*, nerve cells exhibit the same reaction to injury as they experience when there has been learning. This is suggestive of a similar biochemical mechanism at work in each case. See Walters, Alizadeh and Castro [1991].

<sup>27</sup> Northern Ireland may be a case where proethical sentiments are too strong. Catholics and Protestants have been bearing the costs of their exclusionary behavior toward each other for a long time. On the other hand, white South Africans apparently have decided that the costs of exclusionary behavior have risen to an excessively-high level and so they are changing the system.

<sup>28</sup> "But then again nothing is absolutely and eternally true. Everything must change, and religion is no exception. Therefore every religion is a resisting inertia which is being overcome by moving forces. Interests are the forces, because they respond, in men, to

hunger, love, vanity, and fear, and the actual mores of a time are the resultant of the force of interests and the inertia of religion. The leaders of a period enlist on the side either of the interests or the resistance, and the mass of men float on the resultant current of the mores" [Sumner, 1969a: 56-7].

<sup>29</sup> It is also the case that consumers in the second market are ignorant of the selling preferences of those in the first market.

<sup>30</sup> "For Hume the moral justification of justice, or the cause of our approval of it, is that it creates a 'system of conduct or behaviour' which allows the optimal pursuit of individual interests which is compatible with living together in society. ...[T]he interest that justice promotes and protects is not any concretely specifiable one. It is simply the sum total of individual interests that are compatible within a society... [O]ne of the central tests of justice is the maximization of compatibility of aims..." [Haakonssen, 1981: 41-2].

<sup>31</sup> There is no determinate way to allocate a share of the unsuccessful investments to the successful drug other than to return to the firm's initial research plan. To the extent that a single decision is responsible for the attempted development of a group of drugs, the cost of the failures will be allocated to that entire group and not to drugs outside of the decision-group. Within the group (say, of all anti-AIDS drugs) allocation of costs is arbitrary although it may be accomplished along the lines of a fixed formula.

<sup>32</sup> It may appear as if the price rise, rather than the windfall profits, is solely responsible for the allocative adjustment. This is incorrect. The lure of what were

windfalls from the pre-cutoff perspective provided the incentive (alertness) for decisionmakers to search for (discover) the new equilibrium price as soon as the oil supplies were cut off. Prices in the real world do not adjust without human agency.

<sup>33</sup> On the other hand, rent can exist in the absence of monopoly if the supply of a resource is simply fixed.

<sup>34</sup> This is the sense in which they are unexpected.

<sup>35</sup> There is a statement of Louis Pasteur, the source of which is unknown to the present author, that makes the point: "In the fields of observation, chance favors only the mind that is prepared."

<sup>36</sup> If an individual is alert to all opportunities, nothing is being given up by the state of generalized alertness. This assumes that being out of focus has no value.

<sup>37</sup> 15 U.S. (2 Wheat.) 178 (1817).

<sup>38</sup> The costliness of acquiring information is the key element in determining the result in cases such as these, according to Kronman [1978].

<sup>39</sup> The help one gives others on the market is in the achievement of their own ends. It is help by *their* standards of choice.

<sup>40</sup> Here "immoral" does not mean violation of the rights of others. This is excluded by

our imaginary construction of a liberal social order.

<sup>41</sup> For the contrary view see Kirzner [1980: 6].

<sup>42</sup> One could interpret *Laidlaw* in this way.

<sup>43</sup> "But clearly it is only where a disastrous contingency is of a kind greatly exceeding reasonable anticipation, that negative beneficence [i.e., not pressing one's advantage] may properly come into play" [Spencer, 1978b: 310].

<sup>44</sup> The disproportionality is the result of unfavorable low-probability events in the chain of consequences emanating from an action or omission.

<sup>45</sup> It would be unjust to sever the normal connections between conduct and consequence.

<sup>46</sup> Perhaps this is why the law does not always make this distinction. See Rizzo [1981: 1026].

REFERENCES

- Axelrod, Robert. 1984. *The Evolution of Cooperation*. New York: Basic Books.
- Bergson, Henri. 1911. *Creative Evolution* (trans. Arthur Mitchell). New York: Henry Holt & Company.
- Gould, Stephen Jay. 1989. "Darwin's Untimely Burial." In *Philosophy of Biology* (ed. Michael Ruse), pp. 93-98. New York: Macmillan.
- Gray, John. 1983. *Mill on Liberty: A Defence*. London: Routledge and Kegan Paul.
- Haakonssen, Knud. 1981. *The Science of a Legislator*. Cambridge: Cambridge University Press.
- Hardin, Garrett. 1980. *Promethean Ethics*. Seattle: University of Washington Press.
- Hayek, Friedrich A. 1948 (1945). "The Use of Knowledge in Society." *Individualism and Economic Order*. Chicago: University of Chicago Press.
- \_\_\_\_\_. 1976. *Law, Legislation and Liberty*, (vol. 2): *The Mirage of Social Justice*. Chicago: University of Chicago Press.
- \_\_\_\_\_. 1988. *The Fatal Conceit*. Chicago: University of Chicago Press.
- Howard, Jonathan. 1982. *Darwin*. New York: Hill and Wong.
- Kirzner, Israel M. 1980. "The Morality of Capitalist Success." *Discourse* (Culver-Stockton College), pp. 1-6.
- Knight, Frank H. 1971 (1921). *Risk, Uncertainty, and Profit*. Chicago: University of Chicago Press.
- Kronman, Anthony T. 1978. "Mistake, Disclosure, Information, and the Law of Torts." *Journal of Legal Studies*, vol. 7, pp. 1-34.
- Malthus, Thomas Robert. 1926 (1798). *First Essay on Population*. London: Macmillan.
- Rizzo, Mario J. 1981. "The Imputation Theory of Proximate Cause: An Economic Framework." *Georgia Law Review*. vol. 15, pp. 1007-1038.



- Spencer, Herbert. 1978a(1897). *Principles of Ethics*, vol. 1. Indianapolis, IN: Liberty Press.
- \_\_\_\_\_ 1978b(1897). *Principles of Ethics*, vol. 2. Indianapolis, IN: Liberty Press.
- Sumner, William Graham. 1969a(1911). "Religion and the Mores." In *Essays of William Graham Sumner*, vol. 1 (ed. Albert Galloway Keller and Maurice R. Davie), pp. 55-72. Hamden, CT: Archon Books.
- \_\_\_\_\_ 1969b(1911). "The Challenge of Facts." In *Essays of William Graham Sumner*, vol. 2 (ed. Albert Galloway Keller and Maurice R. Davie), pp. 87-122. Hamden, CT: Archon Books.
- Trivers, Robert. 1971. "The Evolution of Reciprocal Altruism." *Quarterly Review of Biology*. vol. 46, pp. 35-57.
- Walters, Edgar, Hassan Alizadeh, and Gilbert Castro. 1991. "Similar Neuronal Alterations Induced by Axonal Injury and Learning in Aplysia." *Science*. vol. 253, pp. 797-99.
- Wicksteed, Philip H. 1967(1910). *The Common Sense of Political Economy*, vol. 1. New York: Augustus M. Kelley.