



The Political Economy of Destructive Power

Mehrdad Vahabi



Series Editor: Geoffrey M. Hodgson

NEW HORIZONS IN INSTITUTIONAL AND EVOLUTIONARY ECONOMICS

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Series Editor: Geoffrey M. Hodgson

Research Professor, University of Hertfordshire Business School, UK

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Mehrdad Vahabi

*Laboratoire d'Economie Dionysien (LED),
Department of Economics and Management,
University of Paris VIII, France*

NEW HORIZONS IN INSTITUTIONAL AND EVOLUTIONARY
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For my grandmother, Rokhsareh Mokhtari, who took me to school
on the first day and who is always with me.

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Preface

In *The Kid* (1921), Charlie Chaplin's little tramp finds an ingenious way to earn his living as well as that of his little kid. The tramp and the kid go to a middle-class district. First, the kid throws a stone and breaks the window of an apparently well-to-do apartment and then makes his escape. Then the tramp appears as a glazier and is hired to repair the broken window. In this way, the deliberate destruction of a window by the kid creates an outlet for the tramp.

Deprived layers of population are not only ones that may use their destructive power to create an outlet for their living. Strong states sometimes pursue imperialist policies to dominate other countries. The destruction of colonized countries may create new markets for the 'civilized' states. However, there are crucial differences between Chaplin's story and the imperialist policy. In the former case, only windows are broken, whereas in the latter one, people are usually killed and the states are broken. Many companies could be hired to reconstruct the windows (economy), but who can repair broken states? This was and remains as yet an unresolved puzzle. However, destruction can create outlets both for creating income (or *property*) and *sovereignty*; a fact that is often ignored by economists. The reason should be sought in the fundamental orientation of our discipline.

From its inception, political economy has been interested in analysing the value that agents, individually or collectively, can produce or exchange at national or international level. What is examined in this book is the exact opposite: how much can an agent *destroy*? This question is no less important than the traditional central question of political economy, since it is easier to *destroy* than to *create*. In fact, we are able to destroy a hundred or even a thousand times more than we can create. Destructive power bears many forms, violent as well as non-violent. Warfare, revolution, crime, strikes and demonstrations are some examples of destructive power.

Destructive power has two different functions. It can be used as a *means* to take or appropriate the value created by others. In its *appropriative* function, destructive power redistributes the social amount of created wealth without the mutual consent of all participants. Rational conflict theory has focused on this aspect of destructive power. However, destructive power has a second function, namely *rule producing*. The social product of destructive power as an *end* in itself is sovereignty. This aspect of destructive power has been neglected in

classical and neoclassical approaches, since these schools of economic thought are based on a strict separation of property from sovereignty.

Rational conflict theory considers real destruction and violence as manifestations of irrationality generated by lack of information, randomness and unpredictability. Consequently, models of rational behaviour exclude real destruction and treat it as a deviation from equilibrium. However, real destruction is not just a symptom of temporary crisis or disequilibrium. It is an integrative part of collective action and social development.

The focus of this book is to integrate both functions of destructive power into political economy. My objective is to bring together the question of sovereignty with that of property. In doing so, I have to concede that my intentions are devoid of economic imperialism for at least two reasons. First, I do not find the application of the present standard assumptions of economic analysis such as rationality and optimization appropriate for my goal. Second, the integration of destructive power in economic analysis requires economics to come closer to other social sciences, such as philosophy, political science, psychology, sociology and military science. Nevertheless, I think that in analysing the *value of destructive power*, economists have something to say, since they have been addressing the issue of value over the last three centuries. As a student of social science, I have tried, although not always successfully, to profit from all social sciences that are relevant to my subject in order to contribute to the *political economy* of destructive power.

My insistence on social science in general will become more obvious as we scrutinize the meaning and the place of destructive power in collective action. In Chapter 1, I shall argue that collective action involves three forms of power, namely creative (economic), destructive (military) and moral-ideological (including religious) powers. Although, these three forms of power will be separately defined on a theoretical level, they are embedded in reality. And even their separation is a historical process that will be discussed in the first chapter.

Since my study concentrates on destructive power, I shall discuss the other forms of power only in relation to it. Destructive power is also part of moral and creative power. Thus its frontiers and meaning should be clarified. Chapter 2 is devoted to this task. In gleaning the meaning of destructive power, I shall review different economic, political and sociological theories on conflict. Thus, this chapter will also provide an exhaustive critical survey of the existing literature on this topic. But it is not in any way limited to a survey, since different theories are discussed in relation to what I regard as relevant in defining destructive power. I shall underline the limits of both a moralistic conception of destructive value and a rational conflict perspective. I shall then argue that destructive power should be analysed as a social, deliberate process involving real destruction and conflict.

The social character of destructive power will be examined in Chapter 3. In

doing so, the following questions will be addressed. What is the role of destructive power in creating a social order? How does it contribute to the enforcement of rules? To what extent is it involved in the change of rules? What is its relation with communication? Finally, is destructive power a public or private good? I shall also show the historical significance of destructive power in furthering extensive and intensive social integration. While destructive power in its *appropriative* function, depending on the striking force of military weapons, develops the *extensive* integration through domination (empires of domination), destructive power in its *rule-producing* function decides on the zone of *intensive* integration or nation-building (territorial empires). In investigating the relationships between destructive power and rule enforcement, I shall develop two different concepts, namely ‘legality preference’ and ‘violence preference’. In doing so, I compare destructive power with money, and suggest that the two different functions of destructive power resemble the two different functions of money as a means of circulation (fiat money) and as a store of value (liquidity preference). Accordingly, violence preference alludes to destructive power in its rule-producing function. Uncertainty and transaction costs will be invoked as two factors that determine the comparative advantage of legality preference over violence preference.

Furthermore, destructive power will also be viewed both as a driving force of communication means (for example, sea power) and as a form of expression (for example, a scream). In the former case, destructive power leads to more extensive integration, whereas in the latter case it enhances protest and opposition movements. Destructive power as the source of sovereignty defines the frontiers of private and public order, and thus it should be regarded both as a private or appropriative activity and as a public or rule-producing activity.

The value of destructive power will be the subject of my inquiry in Chapter 4. I shall first emphasize the non-equivalency principle and the higher productivity (or ‘destructivity’) of destructive power compared to creative power. Subsequently, I shall contend that the value of the two different functions of destructive power cannot be measured in the same way. While there is a unique value for destructive power in its appropriative function, the value of destructive power in its rule-producing function is the sum of many different valuations hinging upon the perception of the social subject. Furthermore, I shall highlight the limits of marginal utility theory and cost–benefit analysis in measuring the value of destructive power.

Finally, Chapter 5 will be devoted to the sources of destructive power. Elaborating on these sources, I shall show different tensions existing between the sources of destructive power in its appropriative function, and those of destructive power in its rule-producing function. In particular, I shall stress the growing autonomy of the military–industrial sector from both society and

democratic institutions of the modern state. I shall associate this process with the commercialization and privatization of the military sector and the weakening of public order.

This book substantiates the political economy of destructive power. It opens the door to future research exploring the relationships of destructive power with creative and moral powers.

Acknowledgements

The idea of this book emerged as a result of observing the long period of social destruction beginning with the Iranian Revolution, the massive emigration of Iranian intellectuals, and an eight-year war, through to the first and second Gulf wars. In a sense, this book is directly inspired by my personal experience regarding the importance of social destruction.

Thanks to the French Ministry of Higher Education and Research, I benefited from a sabbatical for one semester in 2001–2002 during which I intended to write a book on another topic on which I had already published a few articles. It was thanks to my first reader and wife, Sylvie Lupton, that I changed my plan one month before the beginning of my sabbatical leave, and devoted my energy to the preparation of the present book. I would therefore like to thank her for having encouraged me to write this book, and her suggested corrections both on the form and content.

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Needless to say, the author bears the responsibility for all the remaining errors.

1. Three types of power

The ordinary healthy high-schooled graduate, of slightly below average intelligence, has to work fairly hard to produce more than 3000 \$ or 4000 \$ of value per year; but he could destroy a hundred times that much if he set his mind to it according to the writer's hasty calculations. Given an institutional arrangement in which he could generously abstain from destruction in return for a mere fraction of the value that he might have destroyed, the boy clearly has a calling as an extortionist rather than as a mechanic or clerk. (Schelling 1963, p. 141)

INTRODUCTION

There is an important economic fact that tends to be ignored in the conventional economics of production and exchange, namely, the enormous potential for destruction that is available in the face of extortionate threats. Schelling's example alludes to this great potential. Economic science has extensively studied the *creative power* of individuals or social groups, but it has largely ignored the *destructive power* of economic agents. Borrowing Schelling's example, the creative power of an ordinary healthy high-school graduate does not amount to more than \$4000. This creative or economic power measures his capacity to produce or to exchange. However, as an extortionist, he can destroy a hundred times more. The extortionate threat can be used by a criminal, a brigand or a revolutionary. Whatever the extortionist's personality, he uses a destructive power, namely, the power to destroy use values or exchange values. If our high-school graduate is unemployed, then his *creative value* or the value of what he produces and exchanges is null! However, his *destructive value* may cost several thousand dollars to society if he chooses, for example, to get involved in criminal activities. In fact, it is not by chance that there is a direct relation between the high rate of poverty and the high rate of crime¹ or as Aristotle said: 'poverty produces discontent and crime' (*Politics*, p. 70). In Schelling's example, the high-school graduate's power is either creative or destructive. However, there is a third possibility: he can be a beggar and try to earn his living by arousing the pity that his difficult condition may stir up among people. In this case, he uses *moral power*. Thus, our high-schooled graduate can adopt three different social positions and use three different types of power: (i) as an employee, he uses his creative power; (ii) as an extortionist, he resorts to his destructive power; and (iii) as a beggar, he exerts moral power.

DEFINITIONS OF CREATIVE, DESTRUCTIVE AND MORAL POWER

Before defining the different types of power, we have to scrutinize the meaning of power itself. Max Weber defines power as ‘the possibility of imposing one’s will upon the behaviour of other persons’ (Weber 1954, p. 323). This definition considers solely the power over human beings. However, power may be exercised over inanimate objects or non-human forms of life (for example, animals, plants). Hence, power can be defined more broadly as ‘the production of intended effects’ (Russell [1938] 1971, p. 25). When comparing the power of two individuals, it can be said that A has more power than B, if A achieves many intended effects and B only a few. The exercise of power over other individuals implies the ability to *influence* (and not necessarily to *impose* as Weber suggests) the decisions of others to produce one’s intended effects. This power offers a range of possibilities, since it is an ability to influence. Thus, there is a parallel between the concept of power and the economists’ concept of a possibility boundary (Simon 1951) which divides the total set of future possibilities into those that a person can or cannot do. In other words, power is the *potential* to do something, but it does not imply the *actual* realization of that thing. For example, threat power does not mean the actual use of power. However threat can be considered as credible, if two conditions are satisfied. First, threat should be an action inside the possibility boundary. Second, the person who has the power should be committed to use it if necessary. Although a credible threat of aggression is not the actual aggression, it has a real power to influence the decisions of the party who is threatened. The possibility boundary determines the limits of one’s free choice, but this does not imply that the utmost power is to extend one’s ability beyond that boundary. It may be that the renunciation to use one’s power could be the freest exercise of the will. For instance, you may have the power to crush your enemy, but you do not use this power and prefer to make a friend out of your enemy. By referring to the power to crush one’s enemy, I am not suggesting that power implies domination. Contrary to Weber’s definition of power, my definition of power does not necessarily imply the possibility of imposing one’s will; it suffices that one could have the possibility of influencing others’ decisions. Force, as a much narrower concept, is linked to the concept of domination (Boulding 1989, p. 16). Hannah Arendt also makes a distinction between the concepts of ‘power’ and ‘force’. She further tries to distinguish several concepts such as ‘power’, ‘violence’, ‘strength’ and ‘authority’ (Arendt 1969, pp. 44–6). However, I do not share her definition of ‘power’: ‘*Power* corresponds to the human ability to act but to act in concert. Power is never the property of an individual; it belongs to a group

and remains in existence only so long as the group keeps together' (ibid., p. 44). In my opinion, power can be the property of an individual and it should not be limited to the ability to 'act in concert'.

Without granting any a priori primacy to any type of power, I distinguish three types of power, which I name 'creative', 'destructive', and 'moral and ideological' power. Creative power is a type of economic power, which is based on the institution of property. It refers to the ability to create (produce, exchange) value (use and exchange value) in all its material and immaterial forms which embrace both organizational and technical capabilities.² It also includes the right to exclude and to control economic activities, and it uses economic punishments and rewards. Destructive power is the power to destroy use or exchange values. It can also be used to protect property rights and thus, it is the basis of law and sovereignty. It includes not only coercive and threat power but also non-violent forms of pressure such as strikes and boycotts. In a sense, destructive power is the opposite or negative counterpart of creative power. However, destruction and creation are not two totally separate, purely contradictory processes. Between them, there are much more complicated relationships: they are simultaneously identical, different and opposite. I shall discuss these relationships in more detail in the next section and all through this chapter. The third type of power, moral and ideological power, can be defined as the power to form and influence opinions, beliefs and the meaning of sacredness. It is the legitimacy power.

Several authors have also defined these three types of power. Although I cannot examine all these definitions, I shall try to provide an extensive review of all classifications of power inspired by Russell for two reasons. First, my definition of different types of power is also influenced by his contribution. Second, Russell's book has been the source of inspiration for American institutionalism. In this way, I shall examine my own definitions of creative, destructive and moral power through a critical examination of some major institutionalist contributions.

Russell defines three types of power: (i) military or coercive power exercised over the body by the army and the police; (ii) economic power using rewards and punishments as incentives and deterrents and exercised by economic organizations; and (iii) power of opinion used by schools, churches and political parties aiming at influencing opinion (Russell [1938] 1971, p. 26). These three types of power correspond respectively to what I earlier referred to as destructive, creative and moral power. For Russell, there is a fundamental difference between economic and military power. While military power is the foundation of rules and law, and in this sense it is a primary power, economic power is based on rules and law and thence it is a derivative power (ibid., p. 82). Morality, particularly positive morality, is considered to be older than law and government. It consists originally of tribal customs, out

of which law gradually develops (*ibid.*, p. 156). In Russell's view, military power is the basis of sovereignty. His argument is that even if the resolution of conflicts depends on law within one state, international dealings can only depend on law on minor issues due to the absence of an international state. On the contrary, when complex issues are involved, their resolution depends upon war or the threat of war. Russell's theory of power can be regarded as political as it gives central importance to sovereignty and not to property.

Russell's concept of power has inspired both Commons's (1970) and Galbraith's (1983) concepts of power and through Galbraith, it has influenced Boulding's recent concept of power (1989). While Russell's theory of power is *political*, it has been developed in two different directions by these authors. On the one hand, Commons developed a *juridical* theory of power, whereas, on the other hand, Galbraith and primarily Boulding elaborated a *moral* theory of power. I shall successively review the works of these three authors.

Inspired by Russell's contribution, Commons, one of the founders of American institutionalism, developed a transactional or juridical version of power relationships. He distinguished three different kinds of power which correspond to Russell's classification: (i) physical power exercised through administration of violence; (ii) economic power, or bargaining power exerted through proprietary control of supply or demand; and (iii) moral power or propaganda (Commons 1970, p. 170). Similar to Russell, Commons considered physical power as the foundation of sovereignty. He contended that special privileges granted by a sovereign to his subjects are based on and protected by physical power or the power of violence which he considered to be the main type of power recognized during the period of feudalism (Commons [1924] 1995, p. 63). Again, like Russell, Commons treated economic power as a derived power and not a primary one, in the sense that:

[Economic power] could not emerge until physical power had been regulated by 'due process or law,' and thus the rights of property had been established by the business revolution that ended with the Act of Settlement, in 1700; and even then not until modern economic conditions had revealed the power which property has by mere withholding from others what they need but which does not belong to them. (*ibid.*, pp. 63–4)

Nevertheless, there is one major difference between Commons's and Russell's definitions of economic power. Commons defines this kind of power more specifically as 'bargaining power', since he considers 'transactions' rather than 'commodity exchange' as the unit basis of economic analysis. In this sense, economic power does not allude solely to incentive structure (rewards and punishment), but extends to the property and control structure. Finally, for Commons, moral power is the power of personal influence unaided by

violence or economic power, 'a kind of power which emerges only when unequal physical and economic power are eliminated' (*ibid.*, p. 64). These three types of power generate three great types of going concerns, namely, the state, based on the fear of physical power; business, based on the fear of economic power or poverty; and the great variety of modern cultural, religious or moral concerns, based on the fear of opinion unsupported by fear of violence or poverty. In this sense, for Commons, different types of power are the foundations of different forms of collective action.

My main objection to Commons's treatment of different forms of power resides in the fact that in analysing collective action, he accords a primary role to law and not to destructive power. He acknowledges that economic power or property rights could not emerge until physical power had been regulated by law. But law, in the last analysis, depends on physical power. Thus, although law is supposed to resolve conflictual situations, in the case of intense conflicts, the recourse to law may be replaced by the direct use of force. In this latter case, transaction cannot be used as the unit of analysis. In fact, the transactional approach makes sense in the context of negotiation and the possibility of reaching an agreement through a 'two-sided collective action' (Commons 1970, pp. 29–31). This kind of collective action implies not only the collective action of businessmen and labourers separately, but also their common effort to settle things between themselves through negotiations, compromises, agreements or disagreements. A two-sided collective action can be called 'collective bargaining' (*ibid.*, p. 29). Thus Commons theorizes about a particular interpretation of the class struggle: it is not a struggle waged by the ascending class to destroy the old dominant class, or to abolish the social relationships which the latter controlled. Instead it is a struggle whose objective is to complement the old social structure by new and vigorous layers of population and by incorporating the customs of the rising class. Commons's theory of power is centred on collective action of 'bargaining classes' and the vicissitudes of their respective 'bargaining power'. This explains why in Commons's theoretical framework, every type of collective action is defined according to a particular type of 'transaction'; and 'negotiating' on the basis of legal rules is regarded as the way collective action can be formed. In my opinion, social conflicts cannot solely be characterized as a 'negotiating' process. Although there are situations of 'limited wars' which may be depicted as a process of bargaining, 'total wars' have already played (and probably will continue to play) a major role in human history. The role of law, transaction and negotiation in collective action notwithstanding, it is determined by politics, struggle and the use of destructive power. In my theory, collective action is not essentially generated by 'bargaining classes' but by struggling classes who try to use efficiently their destructive power alongside their creative and moral powers.

Galbraith (1983) develops Russell's theory of power in another direction. He substantiates the moral aspect of power. In defining the concept of power, he adopts Weber's definition of power as the 'possibility of imposing one's will', and disregards the differences between Russell's and Weber's conceptions of power. He subsequently deals with different types of power as a relationship based upon domination. Nevertheless, he too classifies power into three categories, which he calls 'condign', 'compensatory' and 'conditioned'. Although his terminology seems to me a little uncouth, his classification is directly inspired by Russell and his definitions are very close to those of Commons. Condign power refers to the threat, coercive or physical power and underlines the ability to win 'submission by inflicting or threatening appropriately adverse consequences' (ibid., 1983, p. 5). 'Compensatory' power is based on property or wealth and uses pecuniary reward to achieve the submission of others (ibid., pp. 38–9). Finally, conditioned power is exercised by changing people's belief. In recent times, this power is not limited to churches, schools and political parties and applies also to the media and advertising (ibid., pp. 29–31). Hence, Galbraith expands the meaning of moral or conditioned power and contends that the 'modern President increasingly and inevitably relies most upon conditioned power' (ibid., p. 156). In defining this last category of power, Galbraith is not consistent with his definition of power, since 'conditioned' power can be exercised without any intention of winning submission. He notes: 'While condign and compensatory power are visible and objective, conditioned power, in contrast, is subjective; *neither those exercising it nor those subject to it need always be aware that it is being exerted*' (ibid., p. 24, added emphasis). The user of conditioned power tries to influence the opinion of others, but s/he does not necessarily intend to win the submission of others. In other words, this type of power endeavours to persuade its subject to integrate an opinion as a legitimate or a sacred belief. Considering the particular or subjective nature of conditioned power, it cannot be defined in terms of domination, though it can lead to a very strong submission. It is hard to explain Jesus' or Mahomet's efforts to propagate their ideas as one of winning the submission of believers, although a dedicated Christian or Muslim wholeheartedly submits to the will of God and the rules of her/his religion. Russell's definition of power is more appropriate to capture moral or conditioned power, since it underlines the importance of 'influencing' and not 'dominating' others' opinions.

Boulding (1989) further develops the moral theory of power. He acknowledges that, 'the work that perhaps comes closest to the argument of this volume is that of another economist, John Kenneth Galbraith, *The Anatomy of Power*' (ibid., p. 11). It is through Galbraith that Boulding is influenced by Russell's book on power. However, he is more loyal to Russell's definition of power than Galbraith: 'For individual human beings,

power is the ability to get what one wants. The term *power* is also used, however, to describe the ability to achieve common ends for families, groups, organizations of all kinds' (ibid., p. 15). This definition of power is entirely in tune with that of Russell as 'the ability to produce intended effects'. Boulding too distinguishes three major categories of power, which he has called 'threat power', 'economic power' and 'integrative power' – the stick, the carrot and the hug. According to him, these are closely related 'to another tripartite division: the power to destroy, the power to produce and exchange, and the power to integrate, that is the power to create such relations as love, respect, friendship, legitimacy, and so on' (ibid., p. 10). Boulding broadens the concept of moral or conditioned power even more than Galbraith by introducing integrative power. This kind of power is not limited to efforts aimed at forming or changing opinion and it includes the power to create relations at different social levels. In this sense, integrative power covers not only moral or sacred power but also what sociologists (Bourdieu 1986), and economists call 'social capital'. For an economist, 'Social capital describes circumstances in which individuals can use membership in groups and networks to secure benefits' (Sobel 2002, p. 139). While some economists like Arrow (1999) and Solow (1999) convincingly point out the weaknesses of the analogy between physical capital and social capital, many others try to highlight the strength of the analogy (Stiglitz 1999). Boulding's concept of integrative power reintroduces the notion of 'social capital' from the moral or ethical point of view. His major thesis is that

[It] is integrative power that is the most dominant and significant form of power, in the sense that neither threat power nor economic power can achieve very much in the absence of legitimacy, which is one of the most important aspects of integrative power. Without legitimacy, both threat and riches are 'naked'. (Boulding 1989, p. 10)

According to Boulding, the great fallacy of political thinking is that it elevates threat power to the position of dominance. It should be noted that for Boulding, civil war and revolutions are examples of pathological behaviour by definition. For him,

Cromwell's victory ... led to a brutal dictatorship ... the bloody French Revolution, with its terror, produced Napoleon and even the restoration of the monarchy for a time, and led to a technological backwardness in France, from which it did not really recover until the second World War ... Even the American Revolution, much idealised in the United States, led eventually to the devastating Civil War. (ibid., pp. 72–3)

By the same token, the violent means used to 'destroy Hitler ... led to the

child-roasting in Hiroshima, Nagasaki, and Dresden, not too far morally removed from the evils of Auschwitz, and led, furthermore, to a divided world in grave danger of destroying itself' (ibid., p. 64). It is not clear whether the 'child-roasting in Hiroshima and Nagasaki' can be justified by the needs of the Second World War against the Japanese. As Kevin Black (2002, p. A21) rightly argues, Harry S Truman's physical target for the A-bombs was the Japanese, but the political target was his ally, and ideological opposite, Joseph Stalin. Hence, ideological or religious conflicts can be as (if not more) dangerous as political and economic conflicts. At any rate, it is difficult to imagine how the world could have been saved from Hitler's dominance without military resistance against his invasions.

Although Boulding's book is full of insightful remarks and rich analyses, it cannot show the primacy of integrative power. This is due to the fact that on a doctrinal base he refutes the use of violence in general,³ and hence cannot examine more objectively the role of threat power in relation to integrative power. Furthermore, although in defining economic power, Boulding rightly refers to the institution of property, his definition of property is inaccurate. He contends that 'Property could almost be defined as the power to keep other people out of what is defined as our property, except by our permission . . . Property is a universal concept in all societies. Even animals and birds have territories and nests' (Boulding 1989, pp. 48, 49). In my viewpoint, the concept of 'possession' should not be confused with the concept of 'property'. The former does not imply the economic and juridical property rights of *usus*, *fructus* and *abusus*, and it alludes to the right to dispose of something. Among animals and birds, property as an institution cannot be found, even if they can possess their nests and territories, since the idea of 'buying' and 'selling' among them would be preposterous. In the same way, in primitive communal societies, each hunter possessed special hunting instruments according to his physical characteristics, but the right to dispose of these instruments did not imply property rights for the users. It meant that they did not have the right to buy and sell these instruments either. In other words, property rights as an institution do not exist in all societies and these rights are not natural but historical, and depend upon specific social conditions. If economic power is based on property as an institution, then it means that such a power only exists in a society where the division between the haves and the have-nots, proprietors and non-proprietors has already appeared.

Boulding invokes the importance of legitimacy regarding the primacy of integrative power compared to other types of power. Since integrative power constitutes the source of legitimacy and without legitimacy threat and riches are feeble, it follows that integrative power is the most dominant form of power. The problem with this type of argument is that it disregards the fact that threat and riches are themselves sources of formal and informal rules, and

coercive power is the foundation of laws. Thus, although integrative power determines other types of power through legitimacy, threat and riches also determine integrative power by influencing and even deciding rules and laws.

Of all the issues raised by sociological theory over the last two centuries, the most basic yet elusive is that of ultimate primacy or determinacy. Are there any decisive, ultimately determining core elements/keystones of society? To this question the Liberal Manchester school, through its eminent representatives, Smith ([1776] (1961) and Ricardo ([1817, 1821] 1951–73), has given a response which is consistent with that of Marx ([1857–61] 1973) and Engels ([1878] 1966). They consider economic power as the basis of society, and this power determines other forms of power, particularly political and ideological ones. In criticizing the Marxist school of thought, Russell attributes the primary role to military power, whereas Boulding considers integrative power as the dominant one. In my opinion, there is no dominant power. Similar to Mann (1986, 1993), my contention is that each type of power may play a principal reorganizing role during specific historical epochs. For example, economic power played such a role during the Iron Age and in early classical Greece (Mann 1986, chs 5 and 6). In other periods, particularly during the first empires of domination in Assyria and Persia, and the Roman territorial empire, military or coercive power had a predominant role through ‘compulsory cooperation’ (*ibid.*, chs 5, 8 and 9). Ideological power played a dominant role during the rise of the world religions particularly in the cases of Confucianism, Islam, the Hindu caste and Christianity in European history between AD800 and AD1155 (*ibid.*, chs 11 and 12). Mann adds a fourth type of power, namely political power which he differentiates from military power (*ibid.*, ch. 16). According to him, this kind of power includes ‘territorial centralization’ and ‘geographical diplomacy’. He argues that geographical diplomacy was the main organizing factor in early modern Europe (*ibid.*, chs 13 and 14). From Mann’s historical research, one can easily deduce that there is no unique primary organizing power in human society. The intricate relationships between different types of power and the transitory domination of one type over the others shape the particular social formation of different societies throughout history.

Galbraith (1983) rightly notes that while the distinctive feature of both destructive and creative powers (or ‘condign’ and ‘compensatory’ powers in his terminology) is their objectivity or visibility, moral and ideological power (or ‘conditioned’ power in his terminology) is subjective, since it is based on persuasion, education or cultural habits. The importance of this difference notwithstanding, I prefer to put the emphasis on another distinctive feature of both destructive and creative powers in contrast to moral and ideological power. The first two types of power are directly related to the process of creating or destroying values, whereas the third one is not directly related to this

process even though it gives a meaning to the value. In other words, the third type of power defines the ‘value judgements’, or how we evaluate things. It has a direct qualitative dimension and an indirect quantitative dimension. Its direct qualitative dimension is related to the fact that it establishes moral and ideological criteria for evaluating the value of things, while destructive and creative powers directly affect the quantity of value created or destroyed. The indirect quantitative dimension of moral and ideological power is what certain economists examine under the title of ‘social capital’ and what others study in the framework of ‘efficiency wage’. For example, in defining a particular version of efficiency wage theory, productivity is related to morale effects, and perceptions about how fairly employees are being treated (Akerlof and Yellen 1990; Akerlof 2002, pp. 414–15; Stiglitz 2002, pp. 464–5). In this perspective, moral power may be thought of as an aspect of creative power, which is used in determining the wage level. Trust as an element of moral power is also relevant in market relationships (Sobel 2002). The absence of trust can lead to the destruction of value. Hence, moral power may have a negative sense such as mistrust, and in this respect it may be regarded as an aspect of destructive power.

In this chapter, although the relationships between all different types of power will be discussed, the major focus will be on destructive power and its connections with creative value.

THE SEPARATION OF THE THREE TYPES OF POWER AS A HISTORICAL PROCESS

In the preceding section, I distinguished three types of power. However, this distinction does not mean that these three types of power have always been separate and independent. In fact, their separation is the outcome of a long historical process. It is noteworthy that the great French mythologist, Georges Dumézil, in his studies of the Indo-European myths ([1968] 1995) discovered a direct causal relationship between these myths and the tripartite functional division among administration of sacredness (*administration du sacré*), defence and nutrition. For Dumézil, the tripartite ideology originally reflects the Indian *varna* division between three social groups:⁴ (i) Brahmins (religious or ideological⁵ power); (ii) warriors (military power); and (iii) cattle breeders–farmers (economic power) (ibid., pp. 48–9). According to Dumézil and Emile Benveniste ([1935] 1984), this tripartite division of social classes can also be found in Indo-Iranian and European mythology. Jupiter (celestial god, and hence moral and ideological power), and under him Mars (military god or destructive power), and finally at the bottom of the hierarchy, Quirinus (agricultural god or creative power) mirror this division. However, Dumézil underlines that:

[In] contrast to the Indian model, the 'tripartite ideology' does not necessarily go together with a real tripartite division of life in a society. In fact, this division perhaps does not or has never existed and it may be that it is nothing but an ideal, and simultaneously an analytical instrument for interpreting the forces which guarantee the course of the world and the life of human beings. (ibid., p. 15)

Consequently, he suggests the replacement of the three social classes by the 'structure of three hierarchical functions', namely magical and juridical sovereignty, physical force – principally that of warriors – and abundance and fertility (ibid., p. 16). The 'tri-functional interpretation' instead of the three *varna* social classes becomes the cornerstone of Dumézil's comparative studies of Indo-European mythology.⁶ In this perspective, the three ancient curses among Iranians, namely military invasion, bad harvest (drought) and lying may be explicated in terms of disturbance in the three social functions (ibid., p. 645).⁷ Dumézil's theory reinforces the conception of a tripartite division of power through history, since this division can also be verified in ancient myths. However, we should recall Dumézil's caveat that this tripartite division of power corresponds to three different social functions rather than to three different social classes.

Destructive power is historically possible when surplus product exists. Without surplus product, threat power has no object to be used against, since if everything is used for survival, there will be nothing left to be plundered.⁸ Moreover, without surplus product, the development of any social division of labour in which the use of threat power could be relegated to a special body of warriors would be impossible. Creating an army or military power requires a certain level of surplus product and the possibility of storing this surplus in order to feed people who could refrain from producing and specialize in destroying. Historically, the surplus product has become possible with agriculture or the creation of what is called 'civilization'. Therefore, one can deduce that destructive power was born with civilization. It is not surprising that in tripartite ideology, destructive power used by warriors is acknowledged along with abundance and fertility produced by cattle breeders and farmers. The close relationship between 'property' and destructive power is to the extent that the right of destruction (*abusus*) is considered to be a part of the rights of property. Only the one who has the rights of property over something is allowed to destroy it. In this sense, the legitimate or legal borders of destructive power are defined, and other kinds of destruction that question or violate the established rules are considered as illegal or illegitimate. Theft, for example, is the violation of rule, but in the case of war, plundering of a defeated country is regarded as legitimate. The reason is that the sovereign power of the defeated country, which could legitimize the legal boundaries of property rights, including the right to destroy (*abusus*), has now been destroyed and

thus previous property relationships have lost their legitimacy. Power (especially destructive power) partakes in the construction of legitimacy. Determining the borders of creative and destructive power requires the intervention of a third power, the power of legitimacy or moral power. Civilization is hence accompanied by destructive and moral power. William McNeill (1982) corroborates this relationship between destructive power and civilization. He asserts:

In a limited sense, the industrialisation of war is almost as old as civilisation, for the introduction of bronze metallurgy made specially skilled artisans indispensable for the manufacture of weapons and armour . . . But the phrase, 'industrialisation of war' does not really fit the ancient river valley civilisations, whether of Mesopotamia, Egypt, India, or China. In the first place, priests and temples competed with warriors and army commanders as consumers of bronze and other artisan products; and the earliest rulers probably based their power more on their religious than on their military roles. In the second place, in society at large, the great majority of the population remained in the fields, toiling to produce food for their own support. Surpluses were small; and the number of rulers – whether priestly or military or both – and of artisans remained proportionately modest. (ibid., p. 1)

In fact, historical studies show a long process of fusion and then growing autonomy and separation between creative, destructive and moral powers. Before the separation of church and state, an ecclesiastical organization had both physical power over the bodies of individuals, and economic power over their opportunities of earning a living or getting rich. Although in certain countries like the United States, churches have had only the moral power of persuasion for more than two centuries, in other countries such as Spain, a civil war broke out largely on the issue of trying to deprive the church and the nobility of their economic power as owners of large estates and possessors of the sovereign physical power of taxation. In this sense, property (creative power), sovereignty (destructive power) and religious power (as part of moral and ideological power) were fused together before the separation of church and state. The separation of religious power from other types of power does not connote that moral and ideological power has definitely been separated from destructive power. In fact as Galbraith justly remarks, the power of the media has become influential in modern politics and the separation of church and state has only provided the foundation for a secular sovereignty. This power of the media is so important that even 'the religious figures of greatest influence in our time are those who have most successfully exploited the resources of radio and television' (Galbraith 1983, p. 174).

Creative and destructive power were also historically united and fused together. Their separation as two distinct and independent functions is closely related to the development of capitalism. It is only in capitalism that the 'free

choice' of agents to enter into contractual relationships and especially employment contracts becomes a necessary condition. The study of pre-capitalist societies reveals the importance of what Spencer (1969) calls 'compulsory cooperation'. This type of cooperation was essential in holding the 'first empires of domination' together. What Mann (1986) dubs 'the first empires of domination' covers the Mesopotamian sphere of influence towards the end of the third millennium and the beginning of the second millennium BC. He argues that the organizational capacity and the politically despotic form of the first empires in the Middle East emerged primarily from the reorganization of the relations in developing military power. These empires were erected by the marcher lords who were able to combine military techniques of agriculturists and pastoralists with larger, more varied and more centralized military striking forces. They began with Sargon of Akkad and developed into militaristic, monarchical states, and their emergence depended overwhelmingly on the militaristic organization of both state and economy embodying compulsory cooperation. During this long historical period, '*concentrated coercion* became unusually effective as a means of social organization' (ibid., p. 174, added emphasis). This was done through two channels: conquest and compulsory cooperation. The conquest by the marcher lords raised the possibility that larger and more sophisticated societies could be built. These new societies integrated irrigation agriculture, rain-watered agriculture and pastoralism, and combined town and countryside. Furthermore, this possibility became a stabilized and institutionalized reality over a long period because military organization penetrated ideological, political and especially economic relationships through the mechanisms of compulsory cooperation. The military reorganization of social life through conquest and compulsory cooperation is the foundation of ancient Near Eastern imperial civilization. This type of cooperation is the outcome of past economic conquests.

Under these relationships, the surplus extracted from nature could be increased, the empire could be given a somewhat fragile economic unity, and the state could extract its share of the surplus and maintain its unity. However, 'these benefits flowed *only* as a result of increasing coercion in the economy at large. The peculiarity of this is the *inseparability of naked repression and exploitation* from more or less common benefit' (ibid., p. 146, second emphasis added). According to Spencer, this type of cooperation can be found in ancient history as a whole. Mann does not approve of this overgeneralization and applies the notion to a more limited range of empires (ibid., ch. 3), notably the Roman Empire and more tentatively the Assyrian and Persian empires. The application of this notion to civilizations like those of Greece or Phoenicia is questioned. Compulsory cooperation can be characterized by five economic processes, all of which were imposed by repression. Let us develop these five as such: (i) military pacification; (ii) the military multiplier; (iii) the authoritative imposition of

value upon economic goods; (iv) the intensification of labour through coercion; and (v) the diffusion and exchange of techniques through conquest (ibid., ch. 5). In this period, empires built roads with *corvée* labour supervised by army personnel, and they used forced labour to build fortresses and communications infrastructures. Not only did military techniques resemble civil engineering, but also the role of coercion in other spheres such as agriculture, mining and crafts production was undeniable. As Mann highlights, during this historical period of early empires ‘Economic development and repression could go together’ (ibid., p. 153). Under compulsory cooperation, the militaristic elite provided the integration of the economy as a whole. It denotes that militarism has not been merely parasitic but also productive. Although I do not suggest that all militaristic empires were productive, I insist on a causal connection between some aspects of a certain type of military empire and economic and social development. It is true that most militarism across history has been mostly destructive, since it led to the annihilation of lives, material resources and culture. However, militarism could probably lead to greater security and welfare for the masses, further development of communication systems, and an extension of the division of labour. The contribution of military empires to the extension of the division of labour can be verified by the fact that trade and especially long-distance trade could not have been carried out without military protection. In addition, trade is one of the principal prerequisites of specialization and the extension of the division of labour.

The subordination of labour and its total separation from the means of production usually start by involving mainly dependent rather than free labour. Large-scale military conquest contributed to dependency and slavery: ‘Slavery might be extended to members of the same people through debt bondage or through the selling by a chief of his own surplus labour to a more civilised society, but the model for both was *conquest slavery*’ (ibid., p. 151, added emphasis). Forced labour or large-scale military-style organization of labour should not be confused with slavery. As a matter of fact, ‘As compulsion became institutionalised, it needed slavery less. Nonfree, servile, but nonslave groups became more visible’ (ibid., p. 151). The Akkadian and Ur Third Dynasty empires provide several examples of a *corvée* organization without slavery. Mann even reports a ‘further stage of institutionalised labour compulsion’, namely ‘free’ or ‘hired labour’. Hired labour exists where stratification and private property are most secure and where some group de facto ‘owns’ the means of production and others must work for it in order to subsist. In this case, workers ‘voluntarily’ enter into employment relationships with owners. This type of labour, based on economic compulsion, was not dominant in the ancient world, since it would be difficult, in an agrarian economy, to exclude the peasant altogether from direct access to his principal means of production, namely the land: ‘Once in possession, he or she was more often coerced

directly through slavery or serfdom' (ibid., p. 152). While the separation of creative and destructive power becomes an established fact in a capitalist system, it does not exist under other systems like compulsory cooperation, slavery or serfdom. In the pre-capitalist systems, the productive systems were founded on *personal subordination*, whereas in the capitalist system the productive system depends upon economic or *impersonal subordination* of labour to capital (Marx, *Grundrisse*, [1857] 1973; Simmel 1987). The slave worked out of fear of the lash, and that was part of productive power. The slavery system of production was based on the direct use of force, which guaranteed the personal subordination of slaves to their masters. The same can be said about the feudal system where peasants were attached to the land. However, the free labourer who works for a salary has only an economic bond to his or her employer. The fear of the lash in the slavery system is replaced by the economic fear of hunger in the capitalist system (Galbraith 1983, pp. 17–18). Although the separation of destructive and creative power is accomplished by the capitalist system, it should be noted that for a long time, in this system, owners of factories and mines had the right to resort to physical violence, or its threat, to break strikes, or else submit recalcitrant workers to their will. This right has largely been revoked in advanced democratic countries and its use in dictatorial regimes is regarded as regressive.

It is noteworthy that the initial phase of capitalist development, or the so-called 'primitive accumulation of capital' (Adam Smith [1776] 1961) was also marked by the direct use of coercive, extra-economic means such as military conquests, imperialism, plunder, pirating, colonialism, triangular slave trade and enclosure laws in Great Britain (Marx [1867] 1978a, vol. 1, ch. 24). In this period of mercantilist, infant capitalism, destructive power was directly employed in the production and 'exchange' process, and it went along with creative power. Two different types of labour submission to capital, namely formal and real submission can be distinguished (ibid., vol. 1). Formal submission is based on the use of supra-economic or coercive means, whereas real submission is grounded on the economic process of capitalist production. Capitalist production is not only the extension and development of simple commodity production, but also its negation, since it involves the appropriation of unpaid labour by capital (a non-equivalent exchange), whereas simple commodity production is the exchange of equivalent values. However, the juridical expression of both simple commodity production and capitalist production is private property. This juridical expression masks the change in economic content of two different relationships, namely the commodity contract and the labour (employment) contract:

The laws of appropriation or of private property, laws that are based on the production and circulation of commodities, become, by their own inner and inexorable

dialectic, changed into their very opposite. The exchange of equivalents, the original operation with which we started, has now become turned round in such a way that there is only an apparent exchange. This is owing to the fact, first, that the capital which is exchanged for labour power is itself but a portion of the production of others' labour appropriated without an equivalent; and secondly, that this capital must not only be replaced by its producer, but replaced together with an added surplus . . . At first the rights of property seemed to us to be based on a man's own labour . . . Now, however [at the end of the Marxian development – Engels], property turns out to be the right, on the part of the capitalist, to appropriate the unpaid labourer of others or its product, and, on the part of the labourer, the impossibility of the appropriating his own product. The separation of property from labour has become the necessary consequence of a law that apparently originated in their identity. (Marx, *Capital*, vol. 1, quoted by Engels [1878] 1966, pp. 180–81)

This appropriation of unpaid labour by the capitalist is the outcome of a pure economic relationship and in this sense the labour submission to capital is real. This is also one of the possible explanations of the separation of destructive and creative power in the capitalist production relationships.

The fusion of destructive and creative power is not limited to pre-capitalist societies and to the 'primitive accumulation of capital'. The Soviet economy is another salient example of such a fusion. Oscar Lange (1970) is the first author to dub the Soviet economy a 'war economy during the peacetime'.⁹ This analogy with war economy is clearly advocated by some of the most famous Soviet leaders such as Trotsky and Preobrazhensky. In his response to Karl Kautsky's criticism of Bolshevik methods (1920), Leon Trotsky ([1920] 1980) defended the idea of 'militarisation of labour' and praised the army as a model for the way the new Soviet economy had to be organized:

Without the forms of state coercion that constitute the foundation of labour militarisation, the replacement of the capitalist economy by the socialist economy would be an empty word. Why are we talking about *militarisation*? It is obvious that it is only an analogy, but an analogy very rich in content. No other social organisation, except the army, has ever believed in having the same rights as the dictatorship of proletariat by subordinating the citizens so completely and subjugating them so entirely in every respect to its will. Only the army achieved the right to ask everyone to submit to its tasks, to its goals, to its regulations and orders, precisely because it decided in its own way about the questions regarding the life and death of nations, state, and ruling classes. And it achieved this goal all the more so completely since the tasks of military organisation coincided with the needs of social development. (ibid., 1980, pp. 149–50)

He also vindicated the close collaboration of workers' trade unions with the Soviet state and objected in advance to any attempt by these trade unions to struggle against the Soviet state (ibid., p. 177). Although he was uttering these phrases during the period of war communism, he was not suggesting that his proposals were extraordinary measures taken temporarily due to the critical

situation in Russia. In fact, his theoretical formulations were generalizing this particular Soviet experience as a universal model for the instauration of socialism.

Although Lenin fiercely attacked the ‘anarchist’ and ‘syndicalist’ deviations inside the Party, he did not share Trotsky’s proposition for the ‘militarisation of labour’, and the fusion of trade unions with the Soviet state (Lenin [1921] 1971). However, the discussion over the ‘militarisation of labour’ was not the only occasion where the resemblance between Soviet experience and military organization had been stressed by Party leaders. In 1926, in the conditions of New Economic Policy (NEP), Preobrazhensky tried to answer the question of how rapid industrialization could be financed and what kind of relationship socialized industry should maintain with the private sector. The author of *The New Economics* argued that the relatively small and weak socialist sector could not possibly bear the whole burden of investment. Resources must be obtained from private enterprises, primarily from the peasants, since these constituted about four-fifths of the population. To achieve this, prices charged by the state for the products of its industry should be such as would compel peasant purchasers to contribute to investment in the socialized sector. This form of non-equivalent exchange would be a necessary substitute, in Soviet conditions, for what Marx, following Adam Smith, described as ‘primitive capitalist accumulation’. Preobrazhensky ([1926] 1965, pp. 79–146) called this phase of socialist construction ‘primitive socialist accumulation’, and argued that the Soviet state could not indulge in capitalist forms of exploitation, colonialism, robbery and so on. The author and his arguments were soon at the centre of furious controversy. Nikolai Bukharin and Josef Stalin attacked Preobrazhensky as a member of the Left opposition led by Trotsky. Although Preobrazhensky was shot in Stalin’s great purge in 1937, his theory of primitive socialist accumulation was realized by Stalin himself, with such coercive and barbarous methods as Preobrazhensky could not have imagined! In fact, Soviet economy was principally a ‘war economy during peacetime’.

John Commons also observes the particular place of coercive methods in organizing the whole economic system of the Soviet Union. In his general theory of three different types of transactions, namely ‘rationing’, ‘bargaining’ and ‘managerial’ transactions (Commons [1931] 1965, pp. 520–21), he defines rationing transactions as transactions based on the assumption of a subordination relationship between a collective superior and individual inferiors. For instance, the logrolling activities of a legislature in matters of taxation and tariff, the budget making of a corporate board of directors, or even the decisions of a court or arbitrator, are regarded as rationing transactions. This is due to the fact that all of them consist of rationing either wealth or purchasing power to subordinates without bargaining and managing which are left to executives: ‘They involve negotiation, indeed, but in the form of argument,

pleading, or eloquence, because they come under the role of command and obedience instead of the rule of equality and liberty' (ibid., p. 521). For Commons, one of the prominent examples of rationing transactions is the Soviet regime: 'A fascist or communist dictatorship extends this economics of domestic law to all the transactions of economics. Modern totalitarianism is rationing transactions imposed by those in power, the "superiors," upon those deprived of power, the "inferiors"' (Commons 1970, p. 55). The analysis of the Soviet regime comes under 'rationing transactions', and the word 'rationing' is sufficiently clear to remind us of the logic of war and a militarized economy where the superior represents collective sovereignty and all others are atomized individuals who have to execute the terms of commandment without 'negotiating' them.

The Soviet economy is also characterized as 'bureaucratic co-ordination' (Kornai 1984). This type of coordination is a vertical relationship, sub- and super-ordination between the coordinating individual or organization, and the coordinated individuals or organizations. Bureaucratic coordination resembles in almost every respect another type of coordination, namely 'aggressive co-ordination'¹⁰ except for the fact that in this latter type of coordination 'coercion is not institutionalised' (ibid., 1984, p. 308), whereas in bureaucratic coordination, coercion 'is supported by legal sanctions' (ibid., p. 307). For example in the case of land use, the state authority allocates the land for the users in bureaucratic coordination, whereas in aggressive coordination, the land is robbed from the earlier possessor. However, in both types of coordination, destructive and creative powers are not separated.

It is true that since the collapse of the Berlin wall, the Soviet system has foundered; a new period of post-socialist transition has begun in the ex-Soviet bloc, and by the beginning of the twenty-first century capitalism is allegedly the only dominant social system. However, one can ask oneself whether the Soviet experience will ever be renewed. It seems to me that this experience will probably not be renewed in the form developed in the USSR, or in any other form, except in the case of a new war, or some other analogous emergency. This is because, as Hobsbawm rightly notes, 'The Soviet experiment was designed not as a global alternative to capitalism, but as a specific set of responses to the particular situation of a vast and spectacularly backward country at a particular and unrepeatable historical conjuncture' (Hobsbawm 1994, p. 497). With the end of the Soviet economy and the beginning of post-socialist transition, the historical study of this type of economy can be followed as one of the subdivisions of a new branch of economics, namely the political economy of destruction. There are at least two reasons for this. First, the Soviet type of economy is the result of revolutions stemming from war conditions. Second, this type of economy is a type of war economy even during peacetime. War and revo-

lution are prominent forms of destructive power. Consequently, the study of the Soviet regime takes place in the general framework of destructive power.¹¹

As my study shows, the separation of destructive and creative power primarily occurred during capitalism, while in pre-capitalist societies as well as in the Soviet bloc, such separation did not exist. Although in capitalism, the productive process is not based on the use of destructive power, the distributive process is affected by this type of power. Moreover, this kind of power is a necessary institutional condition for the existence of capitalism. Hence, the appraisal of destructive power is relevant to all social formations despite the kind of relationship (fusion or separation) that may exist in relation with creative power.

THE EMBEDDEDNESS OF THE THREE TYPES OF POWER

Although we have analysed the growing separation and autonomy of the three types of power, matters are more complex, as each type of power, when closely investigated, encompasses the others. Destructive power contains creative and moral powers as its integral parts. In the same manner, creative power embraces destructive and moral powers; and moral power comprises creative and destructive powers. In other words, these three types of power are embedded in one another. This is illustrated in Figure 1.1.

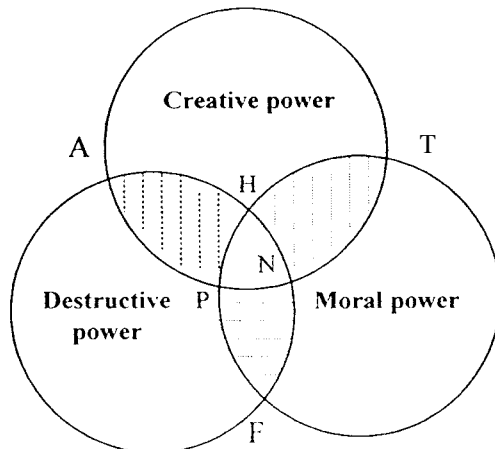


Figure 1.1 *The embeddedness of the three types of power*

As Figure 1.1 shows, each type of power can be considered as a three-dimensional vector space. Let \mathbf{C} , \mathbf{D} and \mathbf{M} (vector spaces) denote respectively creative, destructive and moral powers, each containing $\{c, d, m\}$. Then,

$$\begin{aligned}\mathbf{C} &= r_1c + r_2d + r_3m; \mathbf{C} = \{c, d, m\} \text{ where } r_1, r_2, r_3 \text{ are parametric coefficients;} \\ \mathbf{D} &= s_1c + s_2d + s_3m; \mathbf{D} = \{c, d, m\} \text{ where } s_1, s_2, s_3 \text{ are parametric coefficients;} \\ \mathbf{M} &= t_1c + t_2d + t_3m; \mathbf{M} = \{c, d, m\} \text{ where } t_1, t_2, t_3 \text{ are parametric coefficients.}\end{aligned}$$

In that case $\mathbf{C} \cap \mathbf{D} = \text{AHP} \cup \text{HPN}$, $\mathbf{D} \cap \mathbf{M} = \text{PNF} \cup \text{HPN}$, $\mathbf{C} \cap \mathbf{M} = \text{THN} \cup \text{HPN}$, and finally $\mathbf{C} \cap \mathbf{D} \cap \mathbf{M} = \text{HPN}$.

In this section, I shall try to highlight the issue of embeddedness for each type of power.

Creative and Moral Power as Integral Parts of Destructive Power

In a sense, destruction can be considered as the very act of *creation*, since all production involves what might be called ‘destructive transformation’, like wheat being ground into flour, or flour baked into bread (Boulding 1989, p. 239). For producing a chair, we need to use, consume and thus *destroy* wood, and the destruction of wood in a particular way leads to the construction of the chair. Destruction can be a prelude to production in different ways. For instance, forests are used for agriculture, buildings are demolished to construct new ones, and oil and coal are extracted to be burned as raw materials to produce energy. Hence this particular manner of destruction is nothing but creation.

In a similar way, innovative activity can be considered as creative destruction, as Schumpeter referred to the process of capitalist development (Schumpeter 1951, ch. vii; Elliott 1980). This kind of destruction is just the direct outcome of innovation, namely the destruction of old products, past processes of manufacturing and archaic forms of organization through the introduction of new products, ways of producing and organizational methods. In the same manner, the process of learning is a kind of self-destruction, namely the reshaping of our knowledge framework, the rearrangement or reconstruction of our data and mental representations through which ex-biases could be removed or replaced by new ones. Science can be defined as a form of destruction, or a process of permanent destruction of certain ideas, concepts or paradigms. The particular form of negation of past knowledge is mental destruction, which, like the particular form of material destruction may give birth to construction of new knowledge.

Hegel defines destruction as ‘negation’ and distinguishes two different types of negation: abstract negation and specific or definite negation (*Phenomenology of Spirit*, [1807] 1977, pp. 359–60, 567–68). For instance,

abstract negation or destruction of a seed leads to total eradication of the seed; whereas specific or definite (Hegel also uses the terms ‘mediated’ or ‘limited’) negation or destruction of the seed results in conception of a tree. Obviously, a seed can be destroyed in many other specific, definite or limited ways. For example, a seed can be transformed into powder, food or into a decorative object. In all these cases, the positive moment (for example, a seed being transformed into a decorative object) results from a definite specific negation. The definiteness of destruction is both qualitative and quantitative. It is qualitative, since the particular form of the seed’s destruction depends on the goal that we want to achieve. In producing a decorative object, the destruction of the seed is a transitory moment, and the quality of this destruction (or productive transformation) should be subject to that precise goal.

Furthermore, it is quantitative because the amount of seed to be destroyed as a means to produce decorative objects depends on the required number of these decorative items. A specific, definite destruction is a mediated and limited destruction. It is mediated, since it constitutes a transitory moment of a creative process and hence its role is one of a mediator for producing. A specific or definite destruction is a limited one, in the sense that the object is not entirely but only partially destroyed. A limited, definite or mediated destruction is nothing but creation. According to Hegel, working is also a destructive activity, but a definite or specific destruction, since working implies the negation or the transformation of things as they are in order to create new, specific things.¹²

To differentiate destruction from creation, we have to focus on abstract destruction for which destruction is not just a moment of the creative process, but constitutes a moment in itself: it means destruction for the sake of destruction. This is what Boulding refers to as ‘the dark side of destructive power’ which goes back a long way, as shown in the story of Cain and Abel (1989, p. 22). This brings us once again to threat power, which is different from creative power. It is on this particular sense of destruction and destructive power that the rest of my study will be focused and not on destruction as an integral part of creation.

Even ‘the dark side of destructive power’ or abstract destruction cannot be entirely dissociated from creative power. Destruction in its strict sense also involves creation in several ways. First, destructive activity requires certain types of skills or abilities that may engender some positive externalities for peaceful creative activity. For example, many of the great empires were established by nomadic people who had a ‘comparative advantage in violence’ (North 1981), since they were specialized in riding and hunting. Their ‘military effectiveness’ had, thus, positive externalities for their peaceful productive activity, since hunting, riding and other such practices were a natural part of normal life. A more recent example is the Second World War. Some technological advances

such as aeronautics and computers originally made for purposes of war have proved considerably more readily applicable in peace. This does not alter the fact that war or the preparation for war has been a major device for accelerating technical progress by supporting the development costs of technological innovations which would almost certainly not have been undertaken by anyone making peacetime cost-benefit analysis, or which would have been made more slowly and hesitantly (see Hobsbawm 1994, ch. 9). Nathan Rosenberg (1969) has also stressed the inducing and focusing virtues of strikes and war in so far as innovation is concerned. In the same vein, the advocates of social revolution have argued that only revolutionary changes can liberate the abundant but dormant, alienated and repressed energies of popular masses (Baran 1957).

Second, destructive activity demands great discipline, obedience, order, hierarchical structure among warriors, and hence special forms of organization. The strength of an army depends on the 'tame' character of its warriors and their internal coherence and solidarity, or what the great Arab historian of the fourteenth century, Ibn Khaldun called the bonds of *assabiya*¹³ (see Issawi 1950, for a translation of some selections of this Tunisian historian). Walter Bagehot (1956, pp. 38–9, added emphasis) writes:

But what makes one tribe – one incipient tribe, one bit of a tribe – to differ from another is their relative faculty of coherence. The slightest symptom of legal development, the least indication of a military bond, is then enough to turn the scale. The compact tribes win, and the compact tribes are the tamest. *Civilisation begins, because the beginning of civilisation is a military advantage.*

Moreover, the fate of great wars has been partly decided over the course of history by innovations in organizational forms of belligerent armies. Such kinds of organizational innovations have been a great source of inspiration in reorganizing industrial activities. In fact, certain forms of industrial organization are directly borrowed from military organization. For example, the Second World War had a major impact on industrial organization and methods of mass production. Since 1914, wars were unmistakably mass wars. They required massive participation of the population in the war, and the massive production of materials for the needs of war. The Second World War was particularly a mass war in the sense that it used and destroyed hitherto inconceivable quantities of products in the course of fighting (Hobsbawm 1994, pp. 44–5). Mass war required mass production, and thus mass war changed the scale and forms of industrial organization.

Third, destructive activity may also contribute to the creation of jobs. Undoubtedly, military expenditures and innovations have great impoverishing effects. For instance, most historians (see Kennedy 1989, ch. 2) explain the multiplication and aggravation of military confrontations and wars in Europe

during the sixteenth and seventeenth centuries by the improvement in warfare technology. However, this improvement in military technology encouraged many leading European countries like Spain, France, and German principalities to spend heavily on warfare and caused their repeated bankruptcies. In the case of Spain, these expenditures led to its economic decline. The impoverishing effects of war notwithstanding, it might be a source of job creation as James Baker, the US Secretary of State, once tried to justify the war against Iraq in 1991. He invoked three reasons for the importance of this war to US citizens: ‘Jobs, Jobs, Jobs’ (quoted in Skaperdas and Syropoulos 1996, p. 74, footnote 3). None the less, it should be pointed out that this war ‘largely contributed to the 1991 recession, which was a key factor in the non re-election of President Bush Senior in 1992’ (Stiglitz 2003, p. 63).

Fourth, the organization, rationalization, and the management of destructive activity on a large scale, such as mass wars, require the mobilization of the whole national economy. Before the twentieth-century mass wars, the main question in waging a war was fiscal: how to pay for wars. Should it be through loans or through direct taxation (Ricardo [1817, 1821] 1951–73), and in either case, on what precise terms? Consequently, it was treasuries or ministries of finance that were seen as the commanders of the war economy. However,

The First World War, which lasted so much longer than governments had anticipated, and used up so many more men and armaments, made ‘business as usual’ and, with it, the domination of Ministries of Finance, impossible, even though Treasury officials (like the young Maynard Keynes in Britain) still shook their heads over the politicians’ readiness to pursue victory without counting the financial costs. They were, of course, right. Britain waged both World Wars far beyond its means, with lasting and negative consequences for its economy. *Yet if war was to be waged at all on the modern scale, not only its costs had to be counted but its production – and in the end the entire economy – had to be managed and planned.* (Hobsbawm 1994, p. 46, added emphasis)

Mass wars imply the mobilization of the whole national economy and not just the finance ministry. In this sense, organized massive use of destructive power is inseparable from the utilization of the whole productive or creative power.

Fifth, the use of destructive power induces the creation of protective or defensive instruments. Although there is no absolute distinction between offensive and defensive weapons, there are some examples of exclusively defensive uses of resources, such as locks, city walls (defensive fortifications) and surface-to-air missiles. Conversely, a siege weapon is an example of an exclusively offensive use of resources (Grossman and Kim 1995, p. 1276). Moreover, insurance companies offer different types of insurance coverage against robbery, expropriation, confiscation or other kinds of damage due to

‘political instability’ in general (see Habib-Deloncle 1998). By the same token, robbery, theft or other types of destructive activity create the need for state or private security services in their various forms.

Finally, many people enjoy ‘imagining’ being a murderer or committing destructive actions, without ever acting violently. Books, movies and video games are made to satisfy such a desire. In this sense, destructive power is part of creative power. Satisfaction in destroying is characteristically human, as is the capacity for sexual excitement while inflicting pain¹⁴ (Moreno 1977, ch. 4). ‘Men kill out of joy, in the experience of expansive transcendence over evil’ and death (Becker 1975, p. 155). When man is at his destructive work, he is on a different plane from animals (Gray 1970, p. 55). Gray also sees the important similarities between creative and destructive acts. The psychology of evil or the ‘delight in destruction’ is not a group psychology; it is rooted in the individual’s psychology of desire (Becker 1975). Whatever the psychological roots of this delight in destruction might be, it is true that for some people, especially the fans of detective novels, violent thrillers or violent video games, the imagination of resorting to destructive activity or violent actions such as murdering, and provoking bloody car accidents produces great joy and satisfaction. Some authors argue that this delight in destruction is rooted in group psychology. In his analysis of detective novels, Ernest Mandel alludes to the ‘monotony, uniformity, and standardisation of jobs and the mode of life’ in a capitalist society, and claims that middle classes try to escape from this monotony and ‘security of everyday life’ by the power of their imagination to experiment ‘fake insecurity’ through reading detective novels or violent thrillers: ‘The readers realise through their imagination what they dream to do, but they never do in reality, namely to turn everything upside down’ (1987, p. 94). Since the beginning of the 1990s, it has been hard to speak about the ‘security’ of everyday life, even among middle classes, since insecurity is so prevalent that middle classes are not spared in any way.

Although ‘monotony’ remains a stubborn fact of life, it may not be the best explanation for inclination towards violent and destructive actions among social groups. This may be due to the ‘individualization’, ‘indifference’, and especially the ‘existentialist fear’ in our modern society. Of course, Mandel is right that many fans of detective stories or violent video games never do in reality what they dream of doing in their imagination. But this does not mean that there are not some age groups (particularly youngsters) or some layers of the population who are more vulnerable and may be persuaded to commit violence because of violent movies or video games. Moreover, if some people never do what they may imagine, it is also true that some serial killers or murderers try to publish their ‘memories’ about the way they murdered their victims. One recent example in France is Patrick Henry who murdered a small child, Philippe Bertrand, and whose ‘memories’ have been published by a

respectable French publishing house, Calmann-Lévy, although it provoked much criticism and moral indignation (see *Marianne* 2002, p. 55). In this sense, destructive activity can be a source of revenue not only because a professional killer is paid to kill, but because the act of ‘murdering’ can be a source of *imagination* for others who are not murderers in reality, but enjoy imagining being a murderer or a witness to a crime.

Through all these six channels, destruction in its strict sense or abstract destruction is intermingled with creative power.

Moral power is also an integral part of destructive power. One of the first thinkers who noted this phenomenon was Aristotle. He wrote in *Politics*: ‘war forces men to be obedient and honest’ ([1962] 1979, p. 290). Honesty, discipline, honour and many other values are parts of destructive power. Walter Bagehot, one of the very few political economists who noticed the importance of destructive power (although in a Darwinian spirit), also pinpoints this relationship between war and certain moral values: ‘War both needs and generates certain virtues – not the highest, but what may be called the preliminary virtues, as valour, veracity, the spirit of obedience, the habit of discipline’ (1956, p. 55). Another prominent aspect of war is ‘comradeship’ or ‘brotherhood’ in battle. Fanon writes about this aspect in the following terms: ‘the practice of violence binds men together as a whole, since each individual forms a violent link in the great chain, a part of the great organism of violence which has surged upward’ (1968, p. 47). Comradeship in battle derives from a consciousness of power that is supra-individual, since the fate of every individual is linked to the destiny of the whole combative group. It is the feeling of liberation from individual impotence, of being ‘drunk with the power that union with our fellows brings’ (Gray 1970, p. 45). Gray compares this sense of comradeship to a feeling of ecstasy. War is alluring to men, because through war, men discover the mysteries of ‘communal joy in its forbidden depths’ (*ibid.*, p. 46).

It is through war that death becomes something unbelievable, since everyone is sharing her/his life with others and becomes a ‘dynasty’¹⁵ rather than an isolated individual. It seems paradoxical, but war as a way of collective destruction is also the source of immortality, or as McCarthy notes: ‘the striving for union with our fellow-men and the striving for immortality have been consummated again and again throughout human history while men are in the service of destruction’ (1981, p. 51). In revolutions, we see the same, if not stronger, ‘comradeship in battle’ and everyone sees him- or herself as a link in the general chain of brother- or sisterhood. Not only does the possibility of being killed in battle not frighten the revolutionary masses, but it is astonishing how these people who, in the recent past, could be afraid of their daily problems and not always confident in their power become suddenly so brave that they can dare to shake mountains and despise death. If I were to define the

necessary (and not the sufficient) condition for the existence of a ‘revolutionary situation’, I would state that such a situation exists when people despise death while waging a struggle against the ruling class. Hence, both war and revolution, as two salient forms of destructive power, arouse a sense of community and comradeship among people.

Moreover, war shakes and shatters the very foundations of a society, and this encourages everyone to think about the basic values of life and its meaning, its joys and sorrows, and its purpose. People usually turn towards basic moral, philosophical, religious and existentialist questions when they become subject to trauma, big shocks or changes such as divorce (another form of destruction, namely family destruction), or death (of close relationships, or massive annihilation of life through natural or social catastrophes). In all these cases, moral power is an integral part of destructive power.

To sum up, Figure 1.2 shows creative and moral powers as integral parts of destructive power. In algebraic form, we have:

$$\mathbf{D} = s_1c + s_2d + s_3m \text{ or } \mathbf{D} = \{c, d, m\}$$

where s_1, s_2, s_3 are parametric coefficients. In this equation, s_2d indicates the true share of destructive power, that is, the share of destructive power as different from creative and moral powers.

Destructive and Moral Powers as Integral Parts of Creative Power

Analysing the problem of embeddedness concerning creative power is more

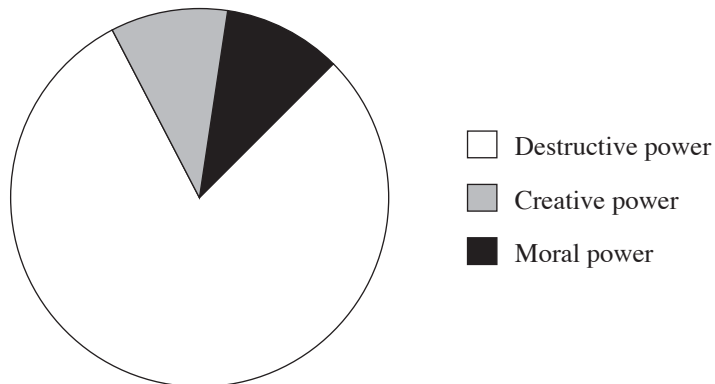


Figure 1.2 Creative and moral powers as integral parts of destructive power

complicated, since this type of power has been separated from destructive power in capitalism, whereas in other social formations, it is fused with destructive power. Economic performance in capitalism is subject to the needs of capital accumulation. Capitalist accumulation is not grounded on personal subordination, it is based on impersonal subordination of economic agents to capital. This means that not only the fate of workers, but also the destiny of individual capitalists depend upon the needs of capital accumulation. Capitalists are only agents of capital, and the result of economic performance of any individual or isolated capitalist depends not only on her/his actions but also on the general state of capitalist accumulation and competition. Consequently, there are two types of economic or creative power: (i) personal economic power of individual capitalists (or group of capitalists); and (ii) impersonal power of capital. One can ask oneself whether 'impersonal power' is not an oxymoron, since 'power' implies an intentional behaviour, and that cannot be 'impersonal'. My answer to such a question is that there is no contradiction between our concept of power (production of intended effects) and the impersonal power of capital, since capital produces its intended effects through confrontation of millions and millions of daily separate decisions, each of them being intentional, whereas the general result of their conflicts is unintentional and unpredictable. In capitalism, like other social formations, embeddedness of different forms of power persists, however, creative power has both personal and impersonal character.

Destruction in capitalism is also an integral part of creation in two different ways. Either it can originate from the very process of capital accumulation and its specific institutional sanctions (an impersonal process), or it can result from conflictual economic interests between different social classes, layers or interest groups (a personal process¹⁶).

Different examples can be given to illustrate the first way. The accumulation of capital involves concentration and centralization of different forms of capital (such as industrial, financial or commercial capital) which bring forth the elimination of small property owners. Property rights do not limit themselves to holding things for oneself, since through capitalist development, they transform into withholding from others (Commons [1924] 1995, pp. 53–4). Thus this process of capital accumulation generates bankruptcy, that is, the destruction of certain firms, and creation of new firms, job destruction and job creation (Davis and Haltiwanger 1990), as well as mergers and acquisitions in financial markets with their direct consequences in terms of value creation and value destruction (Jemison 1986). Competition as a natural selection mechanism of capitalism brings into action all forces necessary to weed out elements that can hinder capitalist development. Budget, monetary and financial constraints provide economic sanctions through which competition exerts its full power as a selection mechanism. In all these cases, destruction is an integral part of the

creative process. However, this type of destruction is not necessarily the result of intentional actions taken by individual capitalists separately. It is the ‘spontaneous’ or unintended result of all individual actions. Here by ‘spontaneous’, I mean ‘unintended’ by individual economic actors, although each economic actor acts consciously, s/he cannot know what would be the outcome of *all* individual decisions. By describing ‘market economy’ as a *Catallactic* society, Hayek also underlines the ‘spontaneous’ or ‘organic’ nature of a complex economy in terms of ‘unintended results’ (Hayek 1976, vol. 2, chs 9 and 10). Despite their opposing positions regarding capitalism, the author of *Capital*, like Hayek, considers this type of capitalist destruction as a natural outcome of the ‘capitalist mode of production’ and not the ‘fault’ of individual capitalists (Marx [1867] 1978a, vols 1 and 3). Marx stresses the ‘impersonal character’ of both capital accumulation and its value destruction. In this perspective, one can ask oneself whether the capitalist system with its logic of profit making is the source of creation or destruction of value: ‘The negative judgement on the creation of wealth can occur in the case of over consumption and overproduction’ (Mullin 1980, p. 33). Overconsumption and overproduction are part and parcel of economic crisis. In fact, Karl Marx clearly speaks of the ‘destruction of capital’ through crises (Marx [1861–3] 1978b, Part II, pp. 495–6). He distinguishes two different meanings of capital destruction during crises, namely destruction of real capital (use-value and exchange value) and destruction of capital defined as depreciation of exchange values.

The first aspect of capital destruction alludes to the fact that during crises, factors of production are not used. Unused machinery is not capital and labour that is not exploited is equivalent to lost production. Raw material that lies idle is not capital. All this means that ‘In so far as the reproduction process is checked and the labour-process is restricted or in some instances is completely stopped, *real* capital is destroyed’ (ibid. p. 495). The second aspect of capital destruction amounts to the depreciation of values, which impedes their reproduction on the same scale as before. This is due to the destructive effect of deflation. In this case, use-values are not destroyed, but exchange values are transferred from one group of capitalists to another: what one loses, the other gains: ‘Values used as capital are prevented from acting again as *Capital* in the hands of the same person. The old capitalists go bankrupt’ (ibid. p. 496). This redistribution of exchange values through crises and deflation involves the complete destruction of the nominal capital of certain firms. Accordingly this is also a period during which ‘moneyed interest enriches itself at the cost of industrial interest’ (ibid. p. 496). Destruction of capital through crises constitutes a necessary moment of the capitalist reproduction process.¹⁷ In this respect, destruction of values is an integral part of value-creation. None the less, the destructive power of crises is a ‘spontaneous’ or an ‘unintended’ destruction which does not result from strategic decisions of individuals or social groups.

Contrary to this spontaneous or impersonal destructive power, there exists an intentional or personal destructive power as an integral part of creation. The intentional destructive power stems from conflictual economic interests between different social classes, layers or interest groups. There are many examples of such destructive power. One striking example is the use of destructive power by capitalists and labourers in their conflicts over wages, job conditions, employment, work discipline, 'hiring and firing' conditions, the internal hierarchy of the firm's organization, tenure, vacancies, promotions and seniority, which Commons refers to as 'working rules' (Commons 1970, p. 29). The position of capitalists and workers in the labour market is not symmetrical. This is a fact that is noted by many economists. Marx ([1857–61] 1973) noticed that unlike other commodities, the price of labour force, or wage, is not determined automatically. It is through strikes, or collective bargaining that wage level is decided. Even in bargaining, as Alfred Marshall justly notes, the asymmetrical positions of workers and capitalists should not be ignored:

[While] the advantage in bargaining is likely to be pretty well distributed between the two sides of a market for commodities, it is more often on the side of the buyers than on that of the sellers in a market for labour. Another difference between a labour market and a market for commodities arises from the fact that each seller of labour has only one unit of labour to dispose of. These are two among many facts, in which we shall find, as we go on, the explanation of much of that instinctive objection which the working classes have felt to the habit of some economists, particularly those of the employer class, of treating labour simply as a commodity and regarding the labour market as like every other market. (Marshall [1920] 1961, pp. 335–6)

While workers possess their labour force in the labour market, capitalists have money, that is, a stock of general purchasing power. The asymmetrical position of these two social classes can be hence defined as one between those who have 'money' (a general form of value) and those who have 'labour force' (a particular form of value). While the former can buy everything, the latter needs to be hired in order to change this particular form of value against the general form of value. Furthermore, capitalists are owners of the means of production, and property rights entitle them to exclude whoever they wish from disposing of these means of production. The right of property owners to 'fire' is the basis of their authority in the hierarchical relationships within the firm. Although workers can also quit a job, their 'exit' does not have the same impact as 'firing' due to the asymmetrical position between employers and workers in the labour market. During the nineteenth and the first half of the twentieth centuries, capitalist firms were managed in a despotic way. However, with workers' growing organized power through unions or other

forms of organization in advanced capitalist countries, and the instauration of collective bargaining, the despotic regime within firms gradually changed to a semi-democratic regime. Industrial democracy (workers' participation in management) was thus an outcome of workers' destructive power.

Workers' destructive power has many violent and non-violent forms such as Luddism, sabotage, legal or wild-cat strikes, slowing the pace of work, picketing, demonstrations, revolts, terrorist activities against individual capitalists, hold-ups and insurrections. Capitalists' destructive power also has many violent and non-violent forms like firing or non-hiring of worker activists, hiring competing workers, economic sanctions, delay in promotion, lynching militant workers or staining their reputation through rumours, and police and military intervention to break up strikes. Certain conflicts between workers and capitalists can be depicted as 'partial war' or 'strategic bargaining', whereas others look like 'total war'. For example, organizing strikes, whether informally or through labour unions means using destructive power. The use of this power has both costs and benefits. Since both workers and employers lose income as a result of a strike, there are some costs associated with the resort to such means. But there are also benefits in the case of partial or total retreat of employers. This analysis in terms of costs and benefits can lead to a strategic bargaining between the two sides of the conflict aiming at establishing the terms of a new contract. However, it may be that the use of destructive power bypasses the borders of strategic bargaining and turns into total war. This was, for example, the case in the miners' strike against the Thatcher government, which ended with the victory of the latter; the miserable conditions of thousands of English workers had prompted them to engage in a struggle to safeguard their livelihood. In countries where workers do not have the legal right to go on strike, every strike can turn into a violent confrontation with the police and army, and hence lead to total war.

Conflictual interests are not limited to a class struggle between capitalists and workers. Different types of conflict within capitalists and among workers themselves (especially between employed and unemployed) are recognizable. Conflicts between mercantilists and industrial capitalists during the eighteenth and nineteenth centuries, and conflicts between financial capital and industrial capital during the twentieth century are salient examples. Moreover, there is a separation between property and corporate control, which results in conflictual interests between managers and shareholders (Berle and Means 1932). Corporate governance, the architecture of decision making inside the modern corporation, and the danger of 'take-over' raiders are other examples of strategic behaviour and destructive power. Corporate take-overs show the emergence of a new form of intentional (personal) destructive power. An individual or a small group of people secretly buys enough stock in a corporation in order to take control. The raiders can then outvote the other stockholders and take

over the corporation. They usually change the high-ranking executives and fire the old directors in order to implement a new policy and appoint their own protégés to high managerial positions. Some authors have proposed a stock take-over analogy to explain the destruction and creation of new nations. In this perspective, Wittman (1991) cites the historical case of the secession of Charles II of Spain in 1700. England, France and the United Provinces were scheming to divide Spain. Rather than accept such a division, the king offered his entire realm as an indivisible bequest to the strongest of the claimants, France, on condition that the integrity of the country and monarchy remained. According to Wittman, two nations would join together (separate) if the economies of scale and scope and the synergy produced by their union created greater (smaller) benefits than costs, since '[t]he merger of states reduces interstate transaction costs but increases intrastate transaction costs' (ibid., p. 129).

Competition is the fundamental selection mechanism of capitalism. However competitive power in some cases can be very destructive. Three kinds of capitalist competition and three corresponding kinds of value can be differentiated. The first two distinctions, namely 'monopolistic competition' and 'destructive competition' are two extreme cases of competition. The third is an intermediary form of competition which Commons refers to as 'fair competition', which is equivalent to 'reasonable value'. According to Commons, to prevent the former two extremes, the intervention of a third party, namely the courts of law, is necessary. The standard of reasonable value allows courts to follow a policy of outlawing both extremes of monopoly and cutthroat competition, including such practices as fraud, oppression and pauperization: 'But without the long history of judicial efforts toward reasonable value, the Anglo-American civilisation might well have become, as in the history of many republics a history of swings between the *anarchic gangsterism of destructive values* and the dictatorship of monopolistic values' (Commons 1970, p. 164, added emphasis).¹⁸ Cutthroat competition is a form of personal destructive power, which can lead to destructive values.¹⁹

Regarding monopoly power, one must clearly disentangle two different types of monopoly, a political or feudal type and an economic form. In the first case, competition is prevented physically due to the authority of the sovereign and in the second case, competition is prevented economically: 'In the one case the monopolist is favoured by the sovereign as against the equal competitive liberty of others; in the other case the owner is favoured by his economic situation while the sovereign treats his property and liberty equally with all others' (Commons [1924] 1995, p. 52). The political monopoly is a powerful source of destructive power used also by dominant countries such as Great Britain, for example, in its colonialist policy against the Indian textile industry in the nineteenth century. Another example of monopolistic destructive

power is the economic embargo of American and British petrol companies against the nationalist government of Dr Mohammad Hedayat Mossadegh, who was struggling to nationalize Iranian petrol at the beginning of 1950.

I noted above the impersonal destructive power of capitalist crises. However, there is another type of crisis, which is intentional. This type of crisis is related to the outburst of a revolution or is the direct outcome of a radical change in a social system. All revolutionary upheavals can be characterized by a period of chaos and drastic decline in production as well as an institutional and sometimes political vacuum. The recession following the revolution is sometimes interpreted as the 'price of revolution' (Brogan 1951), a price which impedes the economic development for some time. For example, 'In 1815, French industry was much what it had been in 1789. England was nearly a new country' (ibid., p. 25). The 1789 revolution in France, the 1861 civil war in the United States, and the 1917 revolutions in Russia, all incurred very high costs. The economies of these countries needed at least one or two decades in order to catch up with their pre-revolution levels of production. The economic importance of this phenomenon is so striking that Russian Marxist economist and politician, Nikolai Bukharin, characterizes it as 'expanded negative reproduction' (Bukharin [1920] 1976, ch. 3).

The period of revolution is also a period of institutional change, old institutions are weakened but not completely destroyed, whereas new institutions are not yet ripe enough to replace the old ones. Thence, revolutionary periods usher in an epoch of 'no man's land'. This institutional vacuum can be the main source of 'transformational recession' (Kornai 1995) during radical change of a social system, for example, as recently happened in the ex-socialist countries. All the post-socialist countries without exception suffered a grave economic recession at the inception of their transformation. The reduction in production, which followed a long period of stagnation in these countries, was greater than the one that took place during the Great Depression in the early 1930s. Despite their considerable differences, all the post-socialist countries had one major factor in common: they all experienced an institutional crisis. There was a curious no man's land, in which bureaucratic coordination no longer dominated and market coordination was not yet strong enough to dominate, and economic activity was hindered by disintegration, lack of coordination, and anarchy. Kornai elucidates the nature of transformational recession as follows:

The old property forms have been shaken, but mature new property forms have not arisen in their place. Everything is in a fluid state. The old institutions and organisations of co-ordination cease to function under these conditions. But the requisite new systems of coordinative institutions . . . have still not developed. All these factors gravely impede production. (ibid., pp. 179–89)

The destruction of value in this type of crisis is not only spontaneous, it is also intentional, since it is related to an intentional change of social institutions with its direct upshot in terms of destruction of old institutions and creating new ones. Transformational recession, unlike ordinary economic crises, is generated not only by spontaneous economic destructive power, but also by intentional destructive power.

Moral power is also an integral part of creative power. In his famous book on the ethics of Protestantism and the spirit of capitalism, Max Weber ([1904] 2000), advocated that Protestant Puritanism, by commending a mode of life based on hard work in order to prepare oneself for the Last Judgement, contributed to the development of capitalism in Western Europe. In this sense, moral power (Protestantism) is part of creative power (the development of Western capitalism).

Furthermore, I noted earlier the importance of moral effects in a particular version of the efficiency wage theory (Akerlof and Yellen 1990). Solow (1990) also underlines the particular nature of the labour market where both employers and workers have precise notions about what is fair and what is unfair, and their conception regarding just behaviour directly influences their economic performance. More generally, the question of the relationship between efficiency (economic performance) and social justice has been widely discussed in economic literature since Adam Smith (1776), through Hayek (1976), up to contemporary economic theory regarding social choice (Arrow 1951; Kolm 1969; Sen 1995). An exhaustive review of literature on the role of moral power (social justice) as an integral part of creative power (efficiency) is beyond the scope of this chapter and requires several articles and books.²⁰ While many authors, following the intellectual traditions of the seventeenth and eighteenth centuries, argue that market economy and commerce have a powerful moralizing effect, others insist on the degrading moral effects of capitalism on society. Hirschman reviews rival interpretations of market society as civilizing, destructive, or feeble and suggests a synthesis of all of them in order to capture the ‘complexity’ of social reality (1982a, p. 1483). The civilizing aspect of market society is the source of some fundamental positive moral values.²¹

To sum up, Figure 1.3 shows destructive and moral powers as integral parts of creative power. Put in algebraic form, we have:

$$\mathbf{C} = r_1c + r_2d + r_3m; \mathbf{C} = \{c, d, m\}$$

where r_1, r_2, r_3 are parametric coefficients. In this equation, r_2d indicates the share of destructive power. However, this term includes two different types of destructive power, namely impersonal and personal destructive power. If we decompose these two types of power, we have:

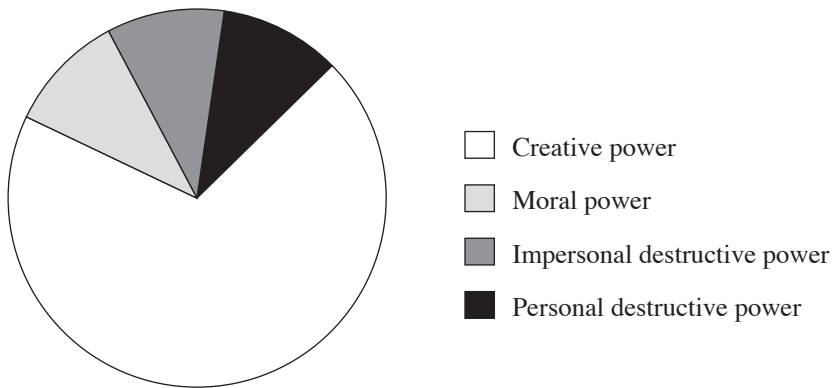


Figure 1.3 Destructive and moral powers as integral parts of creative power

$$r_2d = r_4d + r_5d, r_2 = r_4 + r_5,$$

where r_4 , r_5 denote, respectively, personal and impersonal destructive powers. This is the intentional segment of destructive power (r_4d) which constitutes the share of destructive power, since it is only this part which represents strategic or threat power.

Creative and Destructive Powers as Integral Parts of Moral Power

Destructive power is an integral part of moral power. The earliest civilizations were allegedly founded on priesthood. This form of ‘sacred’ power has flourished by persuading people that the religious authority had some kind of supernatural power. Priests pretended that because of their transcendental power, they could cure ills, overcome famine, make crops grow and provide social cohesion through religious rituals. They established social rules and threatened disobedient people with social exclusion or divine punishments. Non-believers were told that they would be punished by preternatural powers and should expect to endure excruciating torments after their death by going to an awful place like hell, while believers were promised a blissful life in a beautiful place like paradise. Priests’ power can be called ‘spiritual destructive power’: ‘Nearly all early civilisations seem to have been ruled by priesthood resting on *spiritual threat*, which made people give the priests part of their produce, with which the priests were able to employ people to build temples, conduct rituals, and so on’ (Boulding 1989, p. 90, added emphasis). History has been the witness of long periods of bloody

wars between different religions, especially between monistic religions, such as the crusades, the war between Judaism and Christianity, the war between Catholicism and Protestantism, and the war between Shiites and Sunnites.²² David Hume ([1757] 1997) argues that monistic religions are more prone to such wars than ‘natural religion’ or animistic religions, since monistic religions are based on a unique God and vindicate the monopoly of truth, whereas natural or animistic religions accept the coexistence of multiple gods and do not claim the monopoly of divinity.

The power of rabbis, priests and mullahs in monist religions is also based on spiritual threat. Spiritual destructive power is a part of moral destructive power in general. Although with the secularization of power, spiritual destructive power has been separated from physical destructive power, the importance of moral destructive power has been augmented with the increasing role of the media in forming and influencing public opinion. In our epoch, the media can judge, condemn and inflict sentence by destroying the reputation of some people including high-ranking officials. Even wars between nations are prepared and orchestrated through the media. To arouse people’s hatred against an enemy, the enemy must be presented as the incarnation of all vices (Satan in person), and this can be done through the media. The role of propaganda has been essential in recent wars:

The part played by propaganda in national power has increased with the spread of education. A nation cannot succeed in modern war unless most people are willing to suffer hardship and many people are willing to die. In order to produce this willingness, the rulers have to persuade their subjects that the war is about something important – so important, in fact, as to be worthy of martyrdom. Propaganda was in a large part the cause of the Allied victory in the War, and almost the sole cause of the Soviet victory in the years 1918 to 1920. (Russell [1938] 1971, p. 89)

In recent times, both Iranian fundamentalists led by Vali-faghieh (supreme religious authority) and American fundamentalists led by George W. Bush use the media to present their conflict as one between good and evil. Both sides share not only a traditional Manichaean vision of the world, but also a modernist assessment of the influential role played by the media in deciding political issues.

Moral destructive power can be carried out through moral threat. However, there exist other forms of this power that cannot be reduced to moral threat. For instance, gossip is not a moral threat. But it can spread scandals about certain targeted people, put them down, exclude them from collective action or groups, and even ruin them morally. If in gossip, destroying one’s reputation is not necessarily based on the truth, in blackmailing, the non-revelation of the truth can be a source of power. More generally, moral destructive power aims at destroying someone’s reputation and for this, requires communication

lines. The destructive use of media, gossip, blackmailing or other forms of moral destructive power is impossible without communication. Throughout time, destructive power in both its dimensions, namely, physical (military) and moral, contributed to the development of communication systems, and in turn, has been enhanced by the development in communication systems. Great technological innovations in telecommunication are stimulated by war requirements. However, the roaring of canons does not leave much room for communication, whereas the use of moral destructive power starts with communication. In this sense, moral destructive power needs communication systems more than physical destructive power, since the existence of the former depends on such systems.

Creative (economic) power is also an integral part of moral power. Many social values and ethical codes are directly influenced by economic interests of dominant social classes. A well-known phrase of Thorstein Veblen suggests 'the good fame of the rich' attracts many followers of what rich people believe in. Bernard Mandeville (1670–1733) even declared morality to be a means of ruling. Marxian interpretation of history, as developed in *German Ideology* (Marx 1847), claims that the ruling ideology of a society is the ideology of the dominant class. Although, in my opinion, moral and ideological power is independent from economic or creative power, there are many ethical values, which idealize the interests of the dominant class and directly derive from economic situations. In this sense, creative power constitutes an integral part of moral power. From a historical point of view, even the emergence of ethics as part of philosophy is related to the particular political and economic position of ancient Greece.

In fact, in the history of philosophy the question of ethics comes to the forefront soon after the Persian wars. The repulse of the gigantic Persian despotism had a similar effect on the tiny Hellenic state to that of the defeat of the Russian despotism on the Japanese in 1905. All of a sudden they became a world power, ruling the sea which surrounded them and through which they commanded distant trade. After the Persian wars, Greece, and Athens in particular, became the headquarters of the world commerce of its epoch, commercial capitalism embraced the entire population and dissolved all the traditional relations and conceptions which had hitherto ruled the individual and regulated his/her dealings. Individuals found themselves suddenly transplanted into a new society, where they could no longer find their traditional values. This identity crisis created a need for different rules of conduct, which would be compatible with this new economic and political position: 'Since the Persian wars Ethics or the investigation of this mysterious regulator of human action – the moral law – comes to the front in Greek philosophy. Up to this time Greek Philosophy had been, in the main, natural philosophy' (Kautsky 1907, p. 12). The relationship between this new economic and political situa-

tion of Greece, on the one hand, with both the materialist ethical school of Epicurus (341–270BC) and the non-materialist ethical school of Plato (427–347BC), on the other, has been extensively documented (*ibid.*, pp. 16–21).

The emergence of capitalism also gave rise to certain values, such as individualism, self-reliance, selfishness, free individual choice, competitive spirit, entrepreneurship, alertness, frugality and probity (Rosenberg 1964). In fact, it was with capitalism that egoism and sympathy for others have been considered to be complementary. In his two principal works, Adam Smith enquires into the two chief drivers of human action. In *The Theory of Moral Sentiments* ([1759] 2000), he introduces sympathy (moral sentiment) as the most important bond of human society; while in *Wealth of Nations* (1776), he proposes that egoism or the material interest of the individual is the mainspring of human action. It is noteworthy that although *Wealth of Nations* appeared in 1776, the ideas advocated in it had been taught by Smith in Glasgow as early as 1752–53. In fact, Smith defended both egoism and sympathy as two complementary ethical principles. For Smith, individual happiness and materialist motivation were not mutually exclusive with altruism and social sympathy (Dupuy 1992, ch. III). Simmel (1955) draws our attention to another aspect of the ‘socialising’ effects of capitalism. Paradoxically, he argues that competition fosters empathy and enhances strong social bonds not among the competitors themselves, but between them and a third party, namely the consumers:

The aim for which competition occurs within a society is presumably always the favour of one or more third persons. Each of the competing parties therefore tries to come as close to that third one as possible. Usually, the poisonous, divisive, destructive effects of competition are stressed and, in exchange, it is merely pointed out that it improves economic welfare. But in addition, it has, after all, this immense socialising effect. (Simmel 1955, quoted in Hirschman 1982a, p. 1472)

Individualism is also a direct product of capitalist relations of production and exchange. The replacement of personal subordination by impersonal subordination to capital and the free choice of labourers and employers in contracting provided the material condition for individualism. Capitalism tore apart family, clan, tribes and community ties, and established the free contract between employers and employees. The individual rights became the basis of a new social contract. Robinson Crusoe on his isolated island (before and after the arrival of Friday) epitomizes these new ethical values of individualism. Hence, the creative power of capitalism, by stirring egoism, individualism and so on constitutes an integral part of moral power.

To sum up, Figure 1.4 shows creative and destructive powers as integral parts of moral power. Put in algebraic form, we have:

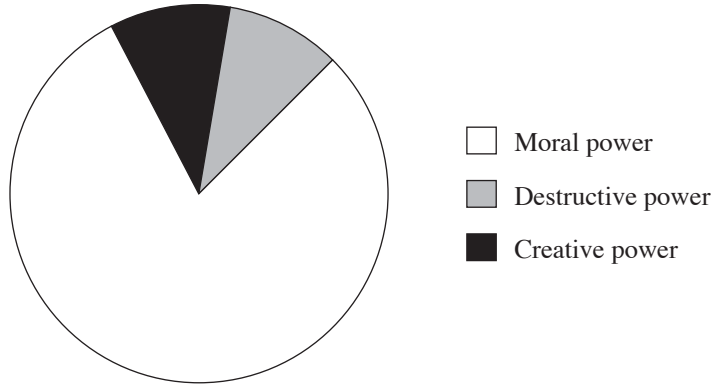


Figure 1.4 Destructive and creative powers as integral parts of moral power

$$\mathbf{M} = t_1c + t_2d + t_3m; \mathbf{M} = \{c, d, m\}$$

where t_1, t_2, t_3 are parametric coefficients. In this equation, t_2d indicates the share of destructive power properly speaking, that is, the share of destructive power as different from creative and moral power.

CONCLUSION

In this chapter, I first defined three forms of power, then analysed the historical process of fusion and separation of these powers through capitalism, and finally investigated the problem of embeddedness. By the end of the chapter, I had provided a new way of understanding the boundaries of each type of power.

Although at the beginning, I separately defined three forms of power, the issue of embeddedness led me to acknowledge that each form of power contains the other two. Thence the boundaries of each form of power cannot be established without adding the components included in other forms of power. Put in algebraic form, I first defined creative, destructive and moral powers, respectively, by vector spaces \mathbf{C} , \mathbf{D} and \mathbf{M} , each containing $\{c, d, m\}$. Then,

$$\begin{aligned} \mathbf{C} &= r_1c + r_2d + r_3m; \mathbf{C} = \{c, d, m\}, \text{ where } r_1, r_2, r_3 \text{ are parametric coefficients;} \\ \mathbf{D} &= s_1c + s_2d + s_3m; \mathbf{D} = \{c, d, m\}, \text{ where } s_1, s_2, s_3 \text{ are parametric coefficients;} \\ \mathbf{M} &= t_1c + t_2d + t_3m; \mathbf{M} = \{c, d, m\}, \text{ where } t_1, t_2, t_3 \text{ are parametric coefficients.} \end{aligned}$$

Scrutinizing the elements of destructive power as integral parts of creative power, I distinguished impersonal and personal destructive powers. Hence, I established that:

$$\mathbf{C} = r_1c + r_4d + r_5d + r_3m; \mathbf{C} = \{c, d, m\}; r_2d = r_4d + r_5d, r_2 = r_4 + r_5$$

where r_4, r_5 denote, respectively, personal and impersonal destructive powers.

We noted that only the intentional part of destructive power (r_4d) constitutes the share of destructive power properly speaking, whereas spontaneous or impersonal destructive power of capital is a necessary moment of capitalist reproduction. Hence, impersonal destructive power should be regarded as an integral part of creative power.

Now, given the aforementioned modifications, each form of power can be redefined as follows:

$$\begin{aligned} \mathbf{C} &= r_1c + s_1c + t_1c + r_5d; \\ \mathbf{D} &= r_4d + s_2d + t_2d; \\ \mathbf{M} &= r_3m + s_3m + t_3m. \end{aligned}$$

In this new presentation, destructive power embraces not only physical (political) but also economic and moral destructive powers. Returning back to our illustrative example in the introductory section, destructive power of the ordinary healthy high-school graduate is not just his power as an extortionist, but also as a striker at work, and as a blackmailer or agitator in street demonstrations. I am not suggesting that all the different forms of destruction are equivalent and bear the same social value. It would be nonsense if we treated a striker as if s/he was an extortionist. However, despite their great differences with regard to their social value, all these various types of activity share in common the use of destructive power. Moreover an agent can mix all the different forms of destructive power to achieve his/her objectives. This is not only true for an individual agent, but also for social groups, classes and nations. For example, in waging the war against Iraq, the United States used the media, embargo and military intervention. My study will focus on this particular sense of destructive power as a strategic behaviour.

2. The meaning of destructive power

INTRODUCTION

In the preceding chapter, we discussed the economic, political and moral dimensions of destructive power. Despite the moral dimension of destructive power, in our analysis, the distinction between destruction and creation is not grounded on a moral theory. In Robert Nozick's theory of value (Nozick 1981, chs 4, 5, 6), 'value and disvalue' are distinguished on the basis of a moral theory of choice. In this chapter, I discuss why contrary to a moralistic conception of value, we adopt an *instrumental* meaning of value. It does not mean that I exclude the ethical or moral theory in defining the boundaries of instrumental value, it only connotes that I do not distinguish creation and destruction, as well as creative and destructive powers on an ethical basis.

Whatever our moral principles may be, it is undeniable that destruction is a fact of everyday life. It is also a necessary moment of every natural process. The mental or bodily death of human beings due to ageing and diseases are forms of natural destruction. Natural catastrophes such as earthquakes, hurricanes and floods cause great destruction. In this sense, nature possesses a great destructive power. But this type of destruction should be distinguished from other types that are the outcome of conscious, deliberate decisions of human beings. For example, suicide or other forms of self-destructive activities such as drug use, alcoholism and excessive sunbathing result from particular pathological behaviours. Killing other people for various reasons, and destroying nature for particular interests, are other examples of deliberate destructive activities. This deliberate type of destructive power comes within the scope of conflictual behaviour. Conflictual behaviour includes both partial and total war, and non-violent and violent forms of struggle. Strikes are one form of 'partial war', whereas military insurrection and revolution are examples of 'total war'. Destructive power can be used deliberately as a means of protest ('voice' in Hirschman's terminology) or to secede from a national territory and achieve one's own national independence ('exit' in Hirschman's terminology). This chapter examines these different aspects of destructive power in order to clarify the meaning of destructive power as a strategic behaviour.

DESTRUCTIVE POWER AND MORALIST THEORY

Destruction is sometimes opposed to creation in an ethical sense. In Hegel's *Phenomenology*, Mephistopheles is the incarnation of abstract or unlimited destruction, whereas Providence creates through a process of negating negation or definite destruction. Of course, Hegel does not suggest any dualist or Manichaean opposition between good and evil, since evil can be a vehicle through which good can achieve its goals. Hegel's philosophical distinction between 'abstract destruction' and 'definite destruction' has inspired my classification of creative destruction and destruction *stricto sensu*. But, I do not necessarily consider a destructive action to be a 'bad' or Mephistophelian one. By the same token, a creative action is not willy-nilly a 'good' action. In other words, my distinction between destruction and creation, as well as between destructive and creative values is not based on an ethical criterion. It does not mean that I deny the ethical or legitimizing aspects of any recourse to destructive or creative powers, it simply implies that in my definition, the value has a purely instrumental character, and does not contain a judgemental value.

Although in moralistic theories of value, the distinction between creative and destructive values boils down to an opposition between good and evil, Robert Nozick's moral theory of value is an exception to this rule. In his approach, the demarcation line between destructive and creative values is traced on the basis of free choice. None the less, a closer investigation of his theory reveals that this exception also confirms the rule. In fact, I shall show in this section that his theory is contradictory and, if one tries to resolve its contradiction, as Graham Oddie has already attempted, it would bring us once more to a moral distinction of value and disvalue in terms of good and evil. Thus, I shall begin by presenting Nozick's moral theory of value.

For Nozick, in evaluating any action, thing, event, or state of affairs, four types of value should be distinguished: (i) intrinsic value; (ii) instrumental value; (iii) originative value; and (iv) contributory value.²³ First, the intrinsic value of an action, a thing, or an event refers to 'the value it has in itself apart from or independently of whatever it leads to or its further consequences' (1981, p. 311). For example, if we try to evaluate Mother Teresa's actions,²⁴ we can say that the 'intrinsic' value of her actions is her gracious and unpretentious self-giving for the sake of others (especially, of course, Christians). This value captures the intention of the person and not the kinds of effect that can result from her actions. Second, its 'instrumental' value, which is a function and measure of the intrinsic value it will lead to: 'either the sum of the intrinsic values of the different things it actually will lead to (if these intrinsic values are independent) or some measure of the different intrinsic values it might lead to as weighted by the probabilities that it will, such as the expected intrinsic value' (*ibid.*, p. 311). In the case of Mother Teresa's actions, their

instrumental value is the diminution of pain and promotion of dignity and happiness which her acts generate. In a utilitarian, or consequentialist theory of value, the instrumental value of an action measures the economical price of that action without considering the intention behind it. Any action, free or unfree, embraces these two sorts of value. For clarifying the sense of free choice, we can compare Mother Teresa with a prophet. In the case of Mother Teresa, she was not chosen by God to be His Messenger. She herself chose to devote her life to her poor fellow-sufferers. But, a prophet who is the vehicle through whom God dictates His commands, brings goodness to mankind without freely choosing it himself. In other words, the actions of a prophet are determined in advance by God's will, whereas the actions of Mother Teresa are not. In both cases, the actions comprise both intrinsic and instrumental values despite the fact that Mother Teresa has a free choice, and a prophet does not. The collection of those dimensions of value which do not depend on whether the action is free or not, namely the sum of intrinsic and instrumental values is called by Oddie, the action's 'base' value: 'the value it would have even if it were the act of a totally determined agent' (1990, p. 299).

The third type of value is what Nozick calls 'originative' value:

The *originative value* of an action is 'a function of the value it newly introduces into the world, the new instrumental or intrinsic value it introduces that was not presaged by or already fully counted in previous instrumental value. An intermediate stage of a causal process has instrumental value in that it leads to some later intrinsic value, but it lacks originative value; the probability distribution over future intrinsic value was exactly the same beforehand and it is unchanged by the occurrence of this causally intermediate event. (Nozick 1981, pp. 311–12)

In this definition, originative value is related to two different things. First, an originative value is the value that was not anticipated by an agent. In this respect, the originative value is justified on the basis of uncertainty involved in every free action. In economic theory, it can be translated as a difference in the expected value of different options. In this sense, originative value has no moral aspect, since it can be defined in terms of instrumental value. However, there is a second element in Nozick's definition of originative value which bears a particular moral aspect. An originative value is a value which derives from the free choice of an agent. Consequently, every action resulting from a deliberate choice among a range of possible alternative actions is considered to contain an originative value. A good action which does not stem from free will has no originative (creative) value, although it contains some intrinsic and instrumental values. In other words, a free decision has positive originative value simply by virtue of its being free: 'The free decision, bestowing weights on reasons of previously indeterminate weight, has originative value' (*ibid.*, 1981, p. 314). In the case of Mother Teresa, the originative value of her actions

derives from the fact that she is not simply endowed by God or nature but chooses among rival alternatives. She could be a bank clerk, or have a job in an arms factory, or have a quiet life as a housewife, or have a life of service to the poor and destitute. According to this second ingredient of Nozick's definition of originative value, the fact that Mother Teresa's actions are not predetermined, gives them an originative value. But this means that her every possible action, by virtue of being 'free', contains originative value. In this respect even if she had chosen to be a bank clerk or a manager in an arms factory, due to her free choice, her action would have contained an originative value. However, this moral ingredient of Nozick's definition contradicts the first economic or instrumental ingredient of his definition, since every free action does not necessarily introduce new value. If originative value is a newly created value which makes a difference to the amount of value already existing, then no free action, regardless of its power to make such a difference, can be considered originative (or creative). A free act may not introduce any new value but it may well destroy value, which is why Nozick's moralist definition of originative value seems to be contradictory. In my opinion, a free act is not necessarily a creator of value. It can create or destroy value. Creation and destruction of value could be measured in terms of instrumental value (or the difference in expected value of different options).

Oddie notes this logical inconsistency of Nozick's definition of originative value. He tries to overcome Nozick's contradiction by introducing a new definition of 'creative value and disvalue' on the basis of a strict *moral* criterion. He writes:

Freely choosing the *worst* of the available life projects exhibits creative disvalue, a disvalue which is missing from the lives of totally determined agents. Thus in addition to creative value there is creative disvalue. Creative value/disvalue depends not only on the range of value options open to the agent, it also depends on which option from that range the agent chooses. (1990, p. 301)

Applying this definition to Mother Teresa's case, we can claim that the creative value of Mother Teresa's actions depends not only on her free choice among different rival alternatives (to be a clerk, a manager in an arms factory, a housewife, or a servant of the poor), but also on her particular free choice of being a servant of the poor. In other words, free choice requires a necessary, but not sufficient condition of creative value or disvalue. The sufficient condition is the degree of difficulty to choose a morally good or evil action. To put it in algebraic form, we can say that each option has a base value (the sum of intrinsic and instrumental values), for example:

$$\text{Option } A_1: BV(A_1) = E(A_1) + I(A_1),$$

where BV , E and I denote, respectively, the base value, intrinsic value and instrumental value.

$$\text{Option } A_2: BV(A_2) = E(A_2) + I(A_2) .$$

If Mother Teresa must choose between these two options, and the difficulty of choosing a relatively good act (respectively, evil act) is given by $1 - P(A_1)$, then her creative value (CV) can be defined as follows:

$$CV(A_1) \propto [BV(A_1) - BV(A_2)] [1 - P(A_1)] .$$

In this equation, the creative value of the act depends on two factors. First, it depends on the difference between value bases of option (A_1) and option (A_2). Second, it depends on the degree of difficulty in choosing each option. As $P(A_1)$ approaches 1, the creative value of (A_1) approaches 0, and the creative disvalue of (A_2) correspondingly increases. If we suppose that there is a constant proportionality (say, ϕ) between the difficulty of choosing (A_1) and (A_2), then the preceding equation can be rewritten as follows:

$$CV(A_1) = \phi[BV(A_1) - BV(A_2)] P(A_2).^{25}$$

In this formulation of creative value and disvalue, Oddie introduces two things: (i) a moral distinction between value and disvalue; and (ii) a difficulty factor that directly influences the amount of value or disvalue created. Although he resolves Nozick's contradiction, he provides a more consistent moral theory of value and disvalue which takes us once again back to the distinction between good and evil. As I stressed earlier, my distinction between creative and destructive values (or 'value and disvalue' in Oddie's terminology), is not grounded on any moral judgement regarding their content as good or evil.

EXOGENOUS AND ENDOGENOUS DESTRUCTIVE POWERS

Jean-Paul Sartre, in his *L'être et le Néant* (Being and Nothingness), claims that there cannot be any change or destruction in nature without mankind's involvement (see the chapter on 'L'origine de la Négation' (The Origin of the Negation) 1943, see also pp. 507–16). For Sartre, man's power to destroy is the only source of change, and by its nature it plays a revolutionary role.²⁶ In criticizing Dühring, Engels also stresses the revolutionary role of force:

That force, however, plays another role in history, a revolutionary role; that in the words of Marx, it is the midwife of every old society which is pregnant with the new, that it is the instrument by the aid of which social development forces its way through and shatters the dead, fossilised political forms – of this there is not a word in Herr Dühring. ([1878] 1966, p. 203)

For Jacques D'Hondt, the use of violence is related to the resistance of those social forces that do not accept necessary change or ruptures in human society:

But relative ruptures are necessary, and it is often the refusal to recognize them as such, with the vain temptation to prevent them at any cost, which produces violence. To eliminate such violence, we must – upon reflection and decision, in a methodical and timely fashion – execute the beneficial destruction ourselves, replacing time-worn structures with new construction before they accidentally crumble. (1986, p. 354)

D'Hondt's theory of destruction is inspired by Hegel's philosophy of 'definite negation', which is why he considers the moment of rupture and destruction to be, in history, a factor of progress (D'Hondt 1982).

If in the Marxian approach, class struggle and revolutionary destruction are the locomotive of history, in Freud's theory of societal evolution (1930), the conflict between love and death, or Eros and Thanatos, is the driving force of change in culture and society. Hence, in contrast to Marxian theory, Freud underlines the importance of individual psychological tensions between sexual and death pulsions in explaining social change. However, despite all their differences, Marx, Freud and Sartre refer to destruction as a source of change. In this sense, destruction is treated in an *endogenous* way, since it is subject to man's (individually in Freudian theory, or as part of a social class in Marxian approach) decision. For Sartre, there exists only this endogenous type of destructive power, since change and destruction only belong to mankind, whereas nature is deprived of them.

In my opinion, change and destruction also exist in nature. However, in this case, destruction is not the source but the result of change. All natural and organic processes involve change and destruction. Death is part and parcel of the life cycle of every living creature be they humans, plants or animals. Destruction as an inevitable outcome of organic or natural change is an *exogenous* type of destruction. It can philosophically be argued that nature knows only the law of inertia and self-preservation, and thus death is always caused by external causes. However, this argument, regardless of its validity or invalidity, does not exclude death as an outcome of natural change. Natural catastrophes such as earthquakes, hurricanes and floods usually lead to great destruction. But this type of destruction must be distinguished from the environmental destruction provoked

by the implementation of particular policies in the use of natural resources. For example, the history of the exploitation of the Amazon forest by colonial powers and Brazilian generals post-Second World War shows the destructive consequences of their policies in deforestation, in the extinction of some species, and the loss of biological diversity (Hecht and Cockburn 1989). It can also be demonstrated how the widespread environmental destruction occurring in Central America is linked to the pattern of agricultural development that has taken place in the region (Stonich 1989). In these examples, destruction is endogenous, whereas in case of natural catastrophes, it is exogenous.

Ageing and diseases can lead to death. Death is the destruction of the body. Likewise the death of the mind, in so far as it can die, is its destruction, or as Spinoza writes '[its] ceasing to affirm the present existence of the body' which 'accompanies the destruction of the body although not caused thereby' (quoted in Matson 1977, p. 404). As Matson notes, this conception of death is in opposition to the Platonic and Cartesian notion of separation or release of the animating principle, with consequent bodily destruction. Spinoza claims that the pre-amnesic Spanish poet 'cannot very well be said to be the same man' as the Spanish poet after the attack of amnesia (*ibid.*, p. 405). In other words, for Spinoza, personal identity depends on the continuity of memory, and its loss amounts to mental death. Bodily and mental deaths are exogenous forms of destruction, while suicide and murder are endogenous forms of destruction. Historical forgery is an interesting example of endogenous mental destruction. When Rameses II tried to appropriate monuments erected by other pharaohs simply by erasing their names and engraving his own, he was deliberately changing the historical memory of Egyptian dynasties. In this case, destruction of historical memory, and hence the forging of a new identity for Egypt by Rameses II is an endogenous type of destruction. Of course, Rameses II is only one of the early pioneers of historical falsifications.²⁷ Official or 'state truth' is usually an apology for historical falsifications, and it is used throughout history to destroy historical memory and to forge apologetic 'evidences'. All this falsification power can be considered as an endogenous type of mental or moral destruction.

Destruction can be a 'spontaneous' outcome of social and economic processes. In the preceding chapter, we cited several examples of such destruction due to the impersonal or spontaneous nature of capitalist accumulation. Competition as a selective mechanism of capitalism results in bankruptcy. This type of destruction is exogenous, whereas the destruction stemming from cutthroat competition is endogenous.

To sum up, we can say that destruction as the outcome of natural, organic, or spontaneous social and economic processes is exogenous, whereas deliberate or strategic destruction is endogenous. The exogenous type of destruction is a moment in the process of creation and belongs in the general category of

Hegelian definite negation. Hence, it is not destruction properly speaking. Only endogenous destruction constitutes destruction *stricto sensu* or what Hegel calls abstract negation. My study focuses on endogenous destruction.

INDIVIDUAL AND SOCIAL SELF-DESTRUCTIVE BEHAVIOUR

Self-destructive behaviour is a form of endogenous destruction and it includes a whole range of pathological and non-pathological behaviours, such as masochism, drug abuse, alcoholism, self-starvation, excessive sunbathing, pathological gambling, unprotected sex and suicide: 'Self-destruction is ordinarily defined as the act or process of physically or psychologically destroying oneself. In the case of anorexia nervosa the destruction is both physical and psychological' (Walters 1999, p. 58). This type of behaviour in humans motivated by self-preservation is paradoxical. Many theorists have tried to explain this paradox. Among them, the behaviourists attribute self-destructive behaviour to environmental factors and frustration (Berkowitz 1989). One particular type of frustration is 'existential fear', which stems from difficulties in three general categories of experience, namely attachment, control and identity. Walters suggests that attachment to a social group, the ability to control the environment, and forming a personal identity are instrumental in shaping this fear. In his opinion, self-destructive behaviour reflects an organism's life instinct. However, this life instinct is related to one's insertion in a social environment. In other words, although self-destruction is a form of personal destructive power (Boulding 1989, p. 83²⁸), its relation with social environment and frustration cannot be disregarded. If the role of 'social' factors in explaining the aforementioned forms of self-destruction is controversial, there is also another type of self-destruction that is closely related to social identity.

The persistence of high levels of poverty, and criminal activities among the African-American community is another example of self-destructive behaviour. Akerlof and Kranton (2000) have developed models, based upon sociological and psychological observation, to understand this type of self-destruction. Their theory underlines the role of identity and the decisions that individuals make about who they want to be. In their model of minority poverty, dispossessed races and classes face a Hobbesian choice. They adopt either an identity that adapts to the dominant culture, or an 'oppositional' identity. In the former case, they have to bear a psychological cost, since it involves being someone 'different'. They will possibly be excluded from their community, who consider them as mavericks. In the latter case, they adopt an oppositional identity and reject what seems to be part of the dominant culture.

Each identity is associated with prescriptions for ideal behaviour. Since the prescriptions of the dominant culture endorse self-fulfilment, those of the oppositional culture are self-destructive. This identity-based theory of disadvantage describes the situation of the African-American community as if they have a *symmetrical* position in choosing between the two alternatives, namely the acceptance or rejection of the 'dominant culture'. In my viewpoint, institutional constraints impose an *asymmetrical* position in choosing between these alternatives. In fact, it is more difficult to adopt the dominant culture or to share in the advantages of the dominant group, than to adopt the oppositional culture, not because of pressure exerted by the minority group against the African-American maverick, but because of the institutional barriers imposed by the dominant white community against the 'potential mavericks'. In other words, the problem is not so much the wrong choices of African-Americans, but the bad institutions of American society. In the presence of such institutional constraints, the trade-off between the lack of creative power (the high level of poverty) and the use of destructive power (criminal activities, riots and radical militant activities) explains the persistence of the African-American disadvantage. Despite the differences in explaining the self-destructive behaviour of the African-Americans, this type of self-destruction is very different from masochism, or other forms of individual self-destruction. Because it is by its very nature a social phenomenon, its impact on every individual member of this minority group is undeniable. In individual self-destruction, the social factor is indirectly present, whereas in social self-destruction, the social factor (or social 'minority identity' in Akerlof and Kranton's theory) is directly present. While the first type of self-destruction is at the centre of attention of medical and psychological studies, the second type should be the focus of social sciences and hence the political economy of (self)-destructive power.

One of the extreme forms of self-destruction is suicide. Spinoza defines suicide as a state of mind such that 'those who kill themselves are weak-minded and completely conquered by external causes contrary to their nature' (quoted by Gabhart 1999, p. 622). Thus, it seems that in Spinoza's philosophy, there is no legitimate distinction between suicide and any form of death. This is a very serious weakness of Spinoza's characterization of suicide. Victor Cosculluela provides a more accurate definition of suicide and proposes five criteria in order to establish whether an act could be considered as suicide. His definition is articulated as follows:

Person S commits suicide at time T if and only if: (1) S intends at T to kill himself, (2) S acts at T in such a way as to kill himself, (3) the intention specified in (1) causes (via a number generated actions) the action described in (2), (4) the causal route from the intention specified in (1) to the action described in (2) is more or less in accordance with S's action-plan, and (5) S acts voluntarily in killing himself. (1995, p. 141)

This definition takes on board two key elements of suicide as an act of self-inflicted death: (i) it is intended by someone who brings about his/her own death accordingly and (ii) it is a voluntary act. However, the definition is ambiguous with regard to the first criterion, that is, the intention of a person to bring about his/her own death. For example, a martyr's intention to commit suicide cannot be defined as a desire for death. S/he commits suicide to bring about some greater happiness for a community. Nevertheless, her/his action is still an intention to die in the act of martyrdom (see Gabhart 1999, p. 623). In my opinion, although martyrdom is a type of suicide, it has a particular characteristic which should not be overruled. Its purpose is not to kill oneself, but to achieve a goal that concerns a community, a sect or a social group. It can be likened to the sacrifice of human life in a religious ritual for the sake of the gods. This type of suicide is very frequent in revolutionary, guerrilla or terrorist activities, as well as in hunger strikes in protest movements, and in sects (collective suicide as in the case of The Temple of the Sun). Like other forms of self-destruction, two different types of suicide must be distinguished, namely individual and social.

As I mentioned earlier, self-destructive behaviour is an integrative part of endogenous destruction. None the less, it is only social self-destructive behaviour that constitutes the focus of our study.

DESTRUCTIVE POWER AND CONFLICT THEORY

Social conflicts, both against the existing social and political order and within the social order, are part of social endogenous destructive power. In the writings of political thinkers, historians and economists of the eighteenth and nineteenth centuries, social conflict played a crucial role. Not only political thinkers such as Thomas Hobbes, John Locke and Jean Jacques Rousseau and the social Darwinians like Herbert Spencer, but also the French historians such as François Guizot, Augustin Thierry, Auguste Mignet and Alexis de Tocqueville as well as classical economists, like Adam Smith, David Ricardo, Thomas Malthus and Karl Marx accorded a central place to social and class conflicts in societal development.

Classical Political Economy and Class Struggle

The labour theory of value was a cornerstone of analysis in terms of class conflict. In fact, in this theory the question of economic growth was directly linked to the question of economic distribution of social wealth among three major social classes, namely the bourgeoisie, the wage earners (the proletariat) and the landowners. Inspired by the French historians (notably Guizot, Thierry

and Mignet) and the English political economists (particularly Ricardo and Smith), Marx further developed the labour theory of value as well as the theory of class struggle into its final form. In classical political economy, the concept of social conflict embraced two different types of class conflict. First, it alluded to the struggle of people (comprising the bourgeoisie, the working classes and the peasants) against the feudal or aristocratic order. This type of struggle aimed at changing the whole political and social order. Most political economists approved this kind of class struggle, and French historians evidenced the process of such conflicts in England and France. Second, social conflicts also referred to conflicts inside the bourgeois society regarding the distribution of wealth. Some of the prominent political economists such as Smith and Ricardo were not enthusiastic about this type of conflict. For them, even workers' and employers' syndicates defended a retrograde tendency to restore feudal corporations and monopolies. Although the majority of political economists were advocates of the new capitalist system, they did not deny conflictual economic interests and class conflicts within (and not against) the existing system. In other words, they always acknowledged the close relationship between economic activity and social conflicts, and thus considered the economic discipline to be a theory of political economy. Moreover, classical economists discussed some important aspects of the relationships between commerce and war. Smith and Ricardo studied the different ways of financing a war. They investigated public financing of war through taxes or debts (Ricardo [1817] 1951, pp. 186–7),²⁹ but they never tackled systematically this question of how a war economy could be organized. It was only after the First and Second World Wars that economists such as Pigou (1940) and Keynes (1920, see Skidelsky 2000) thoroughly examined the question. While in his book, *The Economic Consequences of the Peace* (1920), Keynes showed the seeds of a new war in the Versailles Peace Treaty after the First World War, and tried to persuade public opinion that a weakened and destroyed Germany would be harmful for all European countries, in his *How to Pay for the War* (1940), he introduced a new way to finance the Second World War. The main point of the second book was to reject inflation and rationing as ways of assembling the resources to fight the war. Compulsory saving was to take its place, reducing aggregate demand in the present while preserving for the wartime generation a claim on the future production of the economy (for all the references to Keynes in this period, see Skidelsky 2000, 2003). Keynes's contributions to the economics of peace and war further developed the classical economists' reflections of public financing of war. In my opinion, these contributions should be regarded as a prolongation of the classical political economy tradition.

Neoclassical Economics and the Absence of Social Conflict

With the emergence of the neoclassical school of economics, and logical empiricism, conflict disappeared from mainstream economics. The neo-classical school was founded on the rejection of social disequilibrium and conflict, and assumed a sustainable harmony among individual agents through the market economy. In fact, social conflict, particularly against the social system, has been depicted as a deviation from rational behaviour and natural harmony existing in the framework of a competitive market economy. In this new doctrine, the market economy is assumed to be the 'end of history', since it constitutes an economic order compatible with the laws of nature and rationality. Consequently, revolutions or radical conflicts undermining the social system (anti-conformist movements) are considered to be 'unnatural' or irrational, and thus treated as actions resulting from passions and emotions and not from reason. Since by definition neoclassical economics should study 'rational behaviour', as Pareto suggested, the study of this type of irrational behaviour should be delegated to sociology, politics, psychology and history.

Of course, elementary textbooks frequently introduce the production possibilities frontier between 'guns' and 'butter' (as Samuelson's favourite example describes the optimal allocation of resources in his *Economics*, 1948) to illustrate the nature of the economic problem and the concept of opportunity cost. It is noteworthy, however, that they never consider the question of how guns might be used in a destructive manner to appropriate resources from neighbouring peoples or states, and thus push out the production possibilities frontiers of the society.

The neoclassical school rejected Marxian theory along with Marx's insightful remarks with regard to social conflicts. Despite the exclusion of radical social conflicts from the field of economics, the mainstream neoclassical school accepted a particular type of conflict. Since any competitive activity implies a certain type of conflict of interest among agents, the neoclassical school has largely developed theories of conflict which may be called 'system neutral' or 'pro-systemic' (Gupta 1990) according to which, conflicts remain within the rules of the market economy. The competitive, oligopolistic and monopolistic strategies have been analysed by Antoine Cournot, Francis Edgeworth, George B. Richardson, John Von Neumann, Oskar Morgenstern and others on the basis of some fundamental behavioural assumptions such as rationality and maximization. During the 1960s and 1970s, Thomas Schelling (1963, 1966) and Kenneth Boulding (1962, 1970) used these microeconomic tools (especially game theory) in analysing some aggregate conflict situations. Their theoretical developments are known as 'strategic conflict theory'. A particular version of strategic conflict theory was developed in the 1990s. This recent literature is known as 'strategic

bargaining models with destructive power'. The interesting and insightful remarks of these authors notwithstanding, the field and the method of a political economy of destructive power cannot be defined either by strategic conflict theory or by its recent development, namely, strategic bargaining models with destructive power.

Strategic Conflict Theory

From a methodological point of view, strategic conflict theory is based upon rationality assumption and maximizing behaviour of agents:

It is faithful to our definition of 'strategy': it takes conflict for granted, but also assumes common interest between the adversaries; it assumes a 'rational' value-maximizing mode of behaviour; and it focuses on the fact that each participant's 'best' choice of action depends on what he expects the other to do, and that 'strategic behaviour' is concerned with influencing another's choice by working on his expectation of how one's own behaviour is related to his. (Schelling 1963, p. 15)

The theory tries to capture the 'threat' or 'potential' versus actual destruction in case of a limited (but not total) war. This amounts to saying that the principal subject of the theory is 'deterrence' and not real war or social conflicts questioning the whole social system. Deterrence was of course a favourite topic of the cold war during the 1960s, but it was far from total war, civil war, or other destructive phenomena on a large scale.

[T]hough 'strategy of conflict' sounds cold-blooded, the theory is not concerned with the efficient *application* of violence or anything of the sort; it is not essentially a theory of aggression or of resistance or of war. *Threats* of war, yes, or threats of anything else; but it is the employment of threats, or of threats and promises, or more generally of the conditioning of one's own behaviour on the behaviour of others, that the theory is about. (ibid., p. 15)

Moreover, the deterrence is regarded as if it consists of bargaining between rational, maximizing commercial partners. In fact, in this approach the conflict coexists with mutual dependence, and the adversaries are also partners. Schelling calls it 'the theory of precarious partnership or the theory of incomplete antagonism'. Conflict theory uses game theory to explicate the strategy of adversaries as players in a game which is not the zero-sum game, since there is no unique winner or loser. It also explores other types of games: variable-sum games instead of constant-sum games.

On the strategy of pure conflict – the zero-sum-games – *game theory* has yielded important insight and advice. But on the strategy of action where conflict is mixed with mutual dependence – the nonzero-sum games involved in wars and threats of

war, strikes, negotiations, criminal deterrence, class war, race war, price war, and blackmail . . . traditional game theory has not yielded comparable insight or advice. (ibid., p. 83)

The problem with this type of game theory is that it is based on the same fundamental assumptions that the zero-sum game is grounded on, namely rationality and maximizing behaviour. In my opinion, there are three major shortcomings with regard to the methodology of conflict theory.

First, it supposes that the agents are rational in the sense that ‘the participants coolly and “rationally” calculate their advantages according to a consistent value system’ (ibid., p. 16). In social conflicts such as wars, revolutions, or even serious and protracted strikes (such as that of English miners against the Thatcher government), it is almost impossible to make a distinction between costs and benefits, since every individual participant behaves as if s/he represents all the others: ‘one for all, all for one’. In such circumstances, the social identity of every individual, or her/his behaviour as a *dynasty* overshadows his/her *individual* interests. Dying for the ‘cause’ is not only a ‘cost’, but is considered to be a ‘benefit’. In other words, as Hirschman justly remarks: ‘it is in the nature of *the* ‘public good’ or the ‘public happiness’ that striving for it cannot be neatly separated from possessing it. This is so because striving for the public happiness will often be felt not so much as a cost, but as the closest available substitute for it’ (Hirschman 1970, p. 9).

Second, individuals participating in a social movement do not have constant choices. They learn about social realities through their participation and understand about their own social choice. For example, at the beginning of the social unrest in 1978 in Iran, many people did not know about the role of the Shah in supporting the corruption of and oppression by high officials and the royal family. They believed that the king was good, but his associates were corrupt. This is also how the majority of Iranian citizens thought about Ayatollah Khomeini and the Islamic Republic after the Iranian February revolution in 1979. Lenin used to say that during revolutionary periods, people learn more each day than they have learned in ten years. This amounts to saying that during revolutionary periods, as well as during any important collective action, an individual’s social preferences change very rapidly. The rationality hypothesis cannot capture this rapid change of preferences, since it assumes the invariability of individual preferences.

Third, in game theory, the costs/benefits and strategies of agents are supposed to be known to the agents. This does not mean that game theory ignores uncertainty. It incorporates the *parametrical* type of uncertainty, where the probability of occurrence of any event and the corresponding strategy, costs and benefits associated with such an event are known beforehand. In other words, game theory only excludes radical uncertainty and assumes the

predictability of events. While such an assumption may hold true in generic or routine situations, in the case of social conflicts, the 'rationality' assumption lacks any serious meaning of rationality. In fact, how can the occurrence of an event be predicted during social turmoil where everything is in the process of change? As Pierre Proudhon rightly observed, the predictability of an event is an oxymoron: 'The fecundity of the unexpected far exceeds the statesman's prudence' (cited in Arendt [1969] 1970, p. 7). The *singleness* of every major social conflict excludes any predictability or rationality assumption, which explains why Richard Goodwin (1968) in his review of Thomas Schelling's *Arms and Influence* (1966) severely criticized this book for giving credence to the dangerous idea that we can 'predict events' and have 'control over their flow'. This critique is even more powerful if we remember that in the case of variable-sum games, in contrast to constant-sum games, each actor's decision influences the other actor's decision, and thus the unpredictability concerns not only the occurrence of events but also the way each player *interprets* unprecedented events and *anticipates* the possible interpretation of the other player! Schelling, himself, notes the difficulty:

There is no way to build a model for the interaction of two or more decision units, with the behaviour and expectations of those decision units being derived by purely formal deduction. An analyst can deduce the decisions of a single rational mind if he knows the criteria that govern the decisions; but he cannot infer by purely formal analysis what can pass between two centres of consciousness. It takes at least two people to test it. (1963, p. 163)

Now, if the analyst does not know the criteria that govern the decisions of an agent, since the agent's own choice is changing and if the analyst cannot clearly determine the boundaries of costs and benefits in the agent's calculation, and if the analyst cannot know the objective utility function of the agent since s/he behaves as if s/he is a collective agent, and if the analyst cannot attach any probability to the occurrence of events, then how many people would it take to test our game theoretical model?

My objection to strategy conflict theory does not limit itself to these methodological considerations. Another essential shortcoming of this conflict theory is that it does not consider genuine social conflicts. As Schelling highlights, the theory is not concerned with the efficient application of violence, aggression or war. The conflict is viewed as a process of strategic bargaining. This particular conception of 'conflict' is directly inspired by the way commercial negotiations and competitive market strategies are carried out. Furthermore, strategy conflict theory excludes total war, revolutions, civil wars or other types of social conflict which involve the violation of market rules and question the social and political order. To sum up, strategy conflict theory cannot overcome the pitfall of the neoclassical school with regard to

social conflicts, since it shares the fundamental assumptions of this school concerning rationality and maximizing behaviour.

Strategic Bargaining Models with Destructive Power

A recent economic study on strategic bargaining with destructive power corroborates strategy conflict theory. This literature shares the fundamental assumptions regarding rationality and maximizing behaviour with conflict theory. It builds upon the non-zero-sum game theoretical models. However, the objective of this literature is not to study the deterrence or other strategic considerations of the cold war period. It tries to capture the role of workers' destructive power as part of strategic bargaining models. Its particular fields of application are strikes and suspension of talks during labour contract negotiations (for example, between the Canadian auto workers and General Motors in 1998), commercial negotiations during the different rounds of the General Agreement on Tariffs and Trade (GATT) or the World Trade Organization (WTO), and negotiations between trade unions and firms. This literature is concerned not only with efficient strikes, but also with the 'threat' of strike action. Accordingly, one of the main problems examined in this literature is the credibility of threats or the commitment to put a threat into effect.

In these game theoretical models, destructive power refers either to the power of bargainers to destroy part of the surplus or to their ability to inflict a cost on their opponent, without actually damaging the object bargained over. The first form of destructive power is analysed in Dasgupta and Maskin (1989), Manzini (1997, 1999) and Busch et al. (1998). The second form is dealt with in Avery and Zemsky (1994) where the authors call such kind of activity 'money burning'. This literature has tackled both destructive power and commitment to use it. In Dasgupta and Maskin (1989), destructive power is modelled in a way that *both* bargainers (employers and employees) have destructive power and can actually destroy part of the surplus to be shared. Nevertheless, in their model, commitment by bargainers to use such a power plays no role. Busch et al. (1998) discuss a bargaining model in which *one* of the players has the power to destroy any proportion of the surplus during disagreement periods. Like Dasgupta and Maskin, the authors show that destructive power increases the player's bargaining power even in the absence of commitment to use it. Manzini (1999) studies a simple two-player alternating offers bargaining model in which one of the players is allowed to destroy part of the surplus bargained over. Commitment plays no role in this model either. Obviously, commitment can arise in a number of real-life circumstances, for example, a union can commit itself to a predetermined period of strike action in order to increase its bargaining power. Such a situation is modelled by Holden (1994). Muthoo (1992) examines a situation where one

of the bargainers representing a group of people is committed to a proposal previously adopted by his representees and in the case where he wants to break his commitment, he should bear the cost. Manzini (1997) models the joint effect of destructive power and commitment to use it in an alternating offers bargaining model in which one of the players can commit to damaging the surplus that they are bargaining over.

As our short review indicates, in all these models, destructive power is studied in the framework of a negotiating procedure with hyper-rational and maximizing agents. All other uses of destructive process involving a 'total war' are excluded. In fact, for this literature a total war is just a zero-sum game with rational and maximizing agents, whereas a 'partial war' should be examined through more interesting and complicated non-zero-sum games. In my opinion, the fundamental problem with this kind of modelling is that the behaviour of opposing groups in a really conflictual situation, non-reducible to a 'bargaining process', cannot be explained by rationality and maximizing assumptions. Moreover, in these models, social conflicts are limited to bargaining procedures that remain within the market rules. All movements which debilitate the social and economic order are excluded.

Commons's Theory of Social Conflict

In contrast to the neoclassical school, the old American institutionalism does not deny the importance of social conflicts. Among American institutionalists, John L. Commons's standpoint is particularly interesting. He suggests that economic analysis should begin with transaction as a social institutional relationship between two groups of individuals. Contrary to the exchange of commodities, transactions require the definition of some working rules. These working rules should be constructed to regulate all individual bargaining. They establish a juridical framework to achieve equality in negotiating power between two organized parties. This collective negotiation between two organized parties is a 'two-sided collective action'. Commons's institutional economics shares with the neoclassical school the idea that the free choice of individuals and transactions between them should occupy the centre stage in economic analysis. None the less, he opposes the neoclassical emphasis on individual action. For Commons, the institution as 'collective action in control, liberation, and repression of individual action' should be considered to be the decisive element in defining the orientation of individual action. The economy, then, is not only a mechanism for overcoming natural scarcity, but also a system of working rules. Commons does not ignore social conflicts, but in contrast to Marxian theory, he develops a theory of class struggle within the existing social order. As a social reformer, he endeavours to find those working rules that allow the smooth functioning of the social system on the basis

of collective negotiations and reasonable compromises. In this sense, Commons's two-sided collective action resembles Schelling's conflict theory, since in both cases, social conflict is depicted as a process of strategic bargaining that leads to a reasonable solution within the market rules. However, while Schelling's theory of deterrence does not explicitly address the possibility that a third party, such as an international court, can act as the proximate enforcer of 'implicit' or written contracts decided by two 'rival' and 'partner' states (for example the United States, and the former Soviet Union), Commons's theory of two-sided collective action stresses the role of a third party (state or court) in enforcing agreements decided by workers' and employers' unions. In my opinion, the problem with Commons and Schelling is that they exclude all social conflicts which undermine the social, political and economic rules. However, it is noteworthy that contrary to Schelling, Commons's starting point is not only individual choice, but also working rules, and he does not postulate the rationality assumption and maximizing behaviour for individual agents.

To sum up, endogenous social destructive power cannot be reduced to strategic conflict in Schelling's sense, or to destructive power in strategic bargaining models, or even to Commons's two-sided collective actions. My conception of destructive power is closer to the classical economists' notion of social conflicts, since it includes both revolutionary and reformist movements. In this perspective, genuine conflicts such as wars, revolutions, wild-cat strikes, guerrilla warfare and terrorist activities are as important, if not more, than the limited conflicts such as economic strikes in developed countries, embargoes, boycotts, picketing and non-violent manifestations.

DESTRUCTIVE POWER AND POLITICAL VIOLENCE

In this section, I shall first introduce 'socio-political instability' models and highlight their differences with conflict theory. Then, I shall discuss a general classification of 'political instability' models based on the two aspects of political violence, namely *motivational* and *instrumental*. Finally, I shall examine successively each type of model and endeavour to show the insufficiency of this literature to understand destructive power.

Socio-political Instability Models and Conflict Theory

During the 1980s and 1990s, a neoclassical theory of political violence was developed that can be regarded as a strand of public choice theory with particular application for political violence. In economics, this theory is known as the new political economy of 'socio-political instability' (Drazen 2000,

pp. 500–513; Persson and Tabellini 2000, pp. 351–61, 377–9), and in insurance theory, it is known as ‘political risks’ (Habib-Deloncle 1998). There is no unique definition of ‘political instability’. According to Alesina and Perotti (1994, p. 355), there are two ways to define this concept. The first is to construct an index of socio-political instability (SPI) that summarizes several indicators of more or less violent forms of political protest and social violence. The SPI approach begins with a list of variables that identify events such as riots, political demonstrations against the government, and assassinations. For instance, Perotti (1996) uses the following index of socio-political instability:

$$\text{SPI} = 1.60 \text{ ASSASS} + 2.33 \text{ DEATH} + 7.29 \text{ SCOUP} \\ + 6.86 \text{ UCOUP} - 5.23 \text{ DEM},$$

where *ASSASS* = number of political assassinations per million population per year; *DEATH* = violent deaths per million population per year; *SCOUP* = number of successful coups per year; *UCOUP* = number of unsuccessful coups per year; and *DEM* = a dummy variable which is 1 for countries with an average value of Jodice and Taylor’s (1988) democracy index of greater than 0.5, and 0 (zero) otherwise. The weights are chosen by the method of principal components.

The second method (Alesina and Perotti 1994) focuses on executive turnovers, namely on the frequency of government collapses. These two methods are used by economists to test empirically the impact of political violence on economic growth.

In the insurance literature, a third measure is defined which is directly linked to the security of property. This measure is a subjective indicator of ‘country risk’ produced by specialized firms, particularly by British, American and French private insurance companies. The country risk includes several indicators such as sovereign default risk, risk of nationalization or expropriation, inconvertibility or non-transferability of currencies, protection of expatriate staff, measures related to the ‘rule of law’ and the enforceability of contracts, and the level of bureaucracy and corruption. Since the end of the 1970s, private insurance companies such as Lloyds have insured foreign branches of multinational corporations against ‘political risks’ in countries where such risks are considered to be high. The insurance contract is confidential and it covers risks due to unpredictable events such as revolutions, political or governmental changes, wars and civil wars. Since 1996, the global market of political risk has increased radically. In 1998, the total capacity of this market in case of non-enforceability of contracts amounted to \$100 million and the insurance sum in the case of expropriation of capital goods exceeded \$700 million (Habib-Deloncle 1998, p. 1216). This third measure of country risk has been used by Knack and Keefer (1995), Mauro (1995) and Svensson (1998) among others.

The burgeoning literature on political instability is related to practical needs regarding the costs and benefits of political violence and the security of property rights. In contrast to conflict theory, this literature deals with real, or genuine political violence. It cannot be criticized for ignoring real social conflicts and it gives the impression that neoclassical theory has finally resumed the classical tradition of political economy. Nevertheless, a closer comparison of conflict theory with political instability literature displays the theoretical consistency of the former and the lack of solid theoretical assumptions of the latter. In fact, conflict theory had no claim to represent realistic conflicts; it was mainly concerned with rational conflict or threat as part of a bargaining procedure between parties who were supposed to be both partners and adversaries. The adoption of rationality and maximizing assumptions by conflict theorists was incompatible with realistic conflicts, but these assumptions were entirely consistent with a normative theory of rational conflict. In political instability literature, the object of modelling is not a rational but a realistic conflict; however the fundamental assumptions of rationality and maximization are maintained. In this case, the theoretical inconsistency between real conflict and expected rationality assumptions is dismissed by postulating an individual maximizing behaviour for a rioter or a revolutionary militant. In other words, the theorists of political instability usually rule out particular political, psychological or social motivations for political violence and assume pure individual economic motivation for participants in political violence in order to investigate the utilitarian dimension of political violence. Their method in social science can be called 'economic imperialism'.³⁰ And it is not so hard to show the incongruity of their assumptions with the motivations involved in real social conflicts. In fact, Mancur Olson's theory of collective action proclaimed the impossibility of collective action for large groups due to free-rider problems just before the explosion of important social movements at the end of the 1960s in Western countries. If any individual can benefit from collective action without sharing the costs of actively participating in it, then there can be no revolution by the masses. There can only be revolutions fomented by 'small conspiratorial groups': 'It is natural then that the "Marxian" revolutions that have taken place have been brought about by small conspiratorial elites that took advantage of weak governments during periods of social disorganization' (Olson [1965] 1980, p. 106). Despite the inconsistency between Olson's theory and the reality of massive social movements, his theory was widely praised, and it is now considered to be one of the pioneer contributions of public choice theory. Hirschman's explanation of this paradoxical phenomenon is thought provoking:

It seems to me paradoxically conceivable that the success of Olson's book *owes* something to its having been contradicted by the subsequently evolving events.

Once the latter had safely run their course, the many people who found them deeply upsetting could go back to the *Logic of Collective Action* and find in it good and reassuring reasons why those collective actions of the sixties should never have happened in the first place, were perhaps less real than they seemed, and would be most unlikely ever to recur. Thus the book did not suffer from being contradicted by subsequent events; rather, it gained by actively contradicting them and became a great success among those who found these events intolerable and totally aberrant. In this manner, false prophecy can be the foundation stone of fame and reputation in the social sciences. (Hirschman 1982b, pp. 78–9)

Hirschman is, of course, not a partisan of ‘economic imperialism’. He stresses in *Exit, Voice, and Loyalty* (1970) that he has been guilty, not of imperialist ambition or designs, but rather the opposite, namely ‘the desire to convince economists of the importance and usefulness, for the analysis of economic phenomena, of an essentially political concept such as voice’ (1974 pp. 7–8; see also Hirschman 1981, pp. 267–8).

Motivational and Instrumental Aspects of Political Violence

The concept of political violence should be clearly distinguished from the notion of conflict in conflict theory. Sociologists and economists have both stressed this distinction. Schelling differentiates between ‘rational’ and ‘non-rational’ conflict, Coser (1956, p. 59) demarcates ‘realistic’ from ‘non-realistic’ conflict, and Galtung (1965, p. 349) pinpoints the difference between ‘destructive’ and ‘conflict’ behaviour. The distinction is not linguistic or descriptive, but analytical. The essence of the distinction is ‘between actions *instrumental* in securing the values sought and actions *destructive for their own sake*. The analytic usefulness of the distinction is not in question; what is questionable is attempting to account for political violence using theoretical approaches that assume that only the instrumental manifestations of violence are relevant or subject to analysis’ (Gurr 1970, p. 45; the first two emphases are added). Conflict theorists, such as Coser and Galtung, acknowledge this double aspect of conflictual behaviour. However, economists are mainly concerned with the instrumentalist aspect, since it can easily be fitted into a utilitarian approach consistent with rationality and maximizing assumptions. Political scientists (Huntington 1968; Gurr 1970) have taken issue with the question of the ubiquity of costs/benefits motivation in analysing political violence. They stress the interest of analysing political violence for its own sake (that is, *motivational* aspect of political violence) as well as for its tactical or instrumental value (that is, *instrumental* aspect of political violence).

Incorporating both aspects of political violence in a general theory of violence, Gurr (1970) gives equal weight to ‘non-rational origins and manifestations’ of conflictual behaviour. He particularly invokes frustration and

fear as psychological drives of violence, and develops a theory of 'relative deprivation' to explain the potential for collective and political violence. By relative deprivation, he means the discrepancy that people *perceive* between their value expectations and their value capabilities (ibid., p. 37). For example, a discrepancy between what people actually possess in terms of political and economic goods and what they think is justly theirs, can be defined as their relative deprivation (RD). Inspired by the Freudian theory of sexual urge and death wish, Gurr considers men to have a capacity but not a need for aggression. The need for aggression is related to RD. Hence the basic frustration-aggression proposition is that the greater the frustration, the greater the quantity of aggression against the source of frustration. This postulate provides the motivational base for an initial proposition about political violence: the greater the intensity of deprivation, the greater the magnitude of violence. Gurr focuses on three forms of political violence, namely turmoil, conspiracy and internal war. The theory of RD tries to explicate all 'relatively spontaneous, unorganized political violence with substantial popular participation' (riots), as well as 'highly organized political violence with limited participation' (conspiracy), and 'highly organized political violence with widespread popular participation' (internal war) (ibid., p. 11). Thus, political violence includes all subversive activities and is not limited to conflicts within a political or social order. In this sense, it is part and parcel of destructive power, although destructive power also embraces non-violent forms of social conflict.

RD theory pertains to individual psychological motivations of participants in political violence and it usually overrides the peculiarities of social conflict itself. For instance, Gurr's main conclusion is that 'there *are* violent societies, that we know something about how they originate and perpetuate themselves, and that the discontents that precede violence in them are probably more amenable to change than the attitudes that justify it' (ibid., p. 192). But are there really 'violent societies'? Taking Vietnam as an example, can we say that the protracted national liberation war of the Vietnamese people was due to their 'frustration-anger' or RD motives? It seems to me that the Vietnamese resort to violence can be better understood if we take on board three social facts: (i) the use of violence by the United States against the Vietnamese people; (ii) the intensity of the struggle and its protracted character; and (iii) the international situation that could not prevent the United States launching the war against Vietnam. Nor can Vietnamese society be considered as a violent society, or their resort to violence be explained by their frustration-anger. Frustration-anger or RD do not necessarily lead to political violence. Many other factors, notably social and institutional ones, are crucial for the emergence of political violence. Despite these critical remarks, Gurr's contribution has the particular merit of inquiring into the nature and the genesis of political violence. His theory of political violence influenced certain

economists who analyse political instability on the basis of psychological assumptions about human behaviour.

Gupta (1990) clearly follows Gurr's theory of RD. Although Gupta's main concern is the instrumental aspect of political violence, he does not ignore the motivational aspect. Consequently, he develops a rational expectations model of political violence without assuming a maximizing behaviour. None the less, the majority of economic models on political instability completely ignore the motivational or causal aspects of political violence, and focus on its economic effects or on its instrumental aspect. According to Hirshleifer (1991a, p. 130), modelling of conflict began with Fredrick Lanchester (1916). The importance of Lanchester's simple model in analysing 'fighting efficiency' parameters of two conflicting forces and their relative attrition rates notwithstanding, political stability models are inspired by Haavelmo's long-neglected contribution on economic evolution. In this book, the author provided a canonical general equilibrium model of the allocation of resources among appropriative (or 'grabbing' according to Haavelmo's terminology) and productive activities in order to develop a theory of international or interregional trade (Haavelmo 1954, pp. 91–8). Although Haavelmo's original contribution is not based upon the maximizing assumption,³¹ a number of theorists have reinvented his formalization of this problem and added the maximizing hypothesis in order to develop a general equilibrium model of appropriative or predatory activity. These models are constructed on rationality and maximizing assumptions and they can be grouped in three strands of formal modelling.

The first strand develops a rational expectations model of conflictual behaviour which takes into consideration insurrections, riots and other forms of political violence. However, in dealing with political collective violence, two different approaches can be distinguished. The first assumes that successful insurrections mainly produce social benefits from which active insurgents cannot exclude non-partisans. These social-benefit theories stress the importance of such factors as 'ideology', class identification and anomie in overcoming the free-rider problem associated with non-excludability (Roemer 1985, 1988; Gupta 1990). The second approach emphasizes private returns of insurrection and considers social consequences as complementary (Tullock 1974; Usher and Engineer 1987; Popkin 1988; Taylor 1988b; Tong 1988; Grossman 1991, 1995).³² The second strand follows Grossman and Kim's (1995, 1996a) model of predation which describes the allocation of resources to productive, predatory or defensive activities. Grossman and Kim (1996b) apply the predation model to growth. The third strand, known as 'common property models', pertains to situations where property rights are threatened by expropriation and redistribution, and examines the implications of such insecurity. In common property models, society is described as a sum of powerful groups which are either in a cooperative or in a conflictual relation-

ship. Social conflict is modelled as the appropriative activity of a group for its own self-interest instead of cooperating with other groups. This 'rent-seeking' activity can follow two different types of strategies. The first type can be dubbed 'simple strategy' and it consists of appropriating an optimal constant rate of the common property for one's own interest. The second type is more complicated, since it alludes to a variable rate of appropriation of the common property by rent seekers. This rate depends on the amount of wealth and is called a 'wealth-dependent strategy'. Thus the third strand of socio-political instability models or common property models can be divided into two subgroups: (i) the 'common property models with constant appropriation' (Drazen 2000, pp. 502–7); Tornell and Velasco (1992), Lane and Tornell (1996) and Tornell (1997) have developed such models; and (ii) the 'common property models with wealth-dependent appropriation' (Drazen 2000, pp. 507–13); Benhabib and Rustichini (1996) have modelled this version. Table 2.1 summarizes theories of political violence.

Apart from these theoretical models, there is a vast literature on econometric tests which are used to examine empirical evidences with regard to the relationship between political instability and growth.³³ Although the pioneer studies of Hibbs (1973) show that political instability has no effect on growth, several papers find a significant negative relation between socio-political instability and economic growth (Drazen 2000, p. 523). Due to political instability and insecurity regarding property rights, the level of investment decreases and subsequently, economic growth declines. Hence two questions should be answered. First, what is the cause of political instability that leads to sharp reductions in economic growth? Second, in what kind of political regime can political risks lead to expropriation? Rodrik (1997, pp 1–27) tackles these two questions and provides some very general answers. He considers the 'depth of pre-existing social cleavages in a society, along the lines of wealth, ethnic identity, geographical region' as the basis of 'latent' social conflicts that can bring about political instability. In such a society, if the domestic institutions of conflict management have weak conflict resolution, then a serious political crisis can turn into a situation of expropriation.

Political Instability Models

In this section, I discuss three types of modelling of socio-political instability, namely the rational expectations model of political violence, predation models and common property models.

Rational expectations models of political violence

Rational expectations models of political violence can be grouped in two different types. The first comprises social-benefit theories which underline the

Table 2.1 A taxonomy of real and rational conflict theories

Assumptions	Type of conflict	Potential conflict or threat power	Real conflict for its own sake (motivational aspect)	Real conflict as a means (instrumental aspect)
Rationality assumption		Haavelmo (1954)		<i>Frustration-anger, political instability theory</i> , and ideology's effect, or general equilibrium models of insurrection with social benefits for insurgents (Gupta 1990; Roemer 1985, 1988)
Rationality, maximizing assumptions		<i>Conflict theory</i> Schelling (1963, 1966)		<ol style="list-style-type: none"> 1. <i>General equilibrium models</i> of insurrection with private benefits for insurgents (Olson 1965; Tullock 1974; Popkin 1988; Taylor 1988b; Tong 1988; Grossman 1991) 2. <i>Predation model</i> (Grossman and Kim 1995, 1996a, b) 3. <i>Common property models</i>: <ol style="list-style-type: none"> (i) common property models with constant appropriation (Lane and Tornell 1996; Tornell 1997); (ii) Common property models with wealth-dependent appropriation (Benhabib and Rustichini 1996)
Non-rational, psychological individual motivations			<i>Relative deprivation theory</i> Gurr (1970)	<i>Relative deprivation theory</i> Gurr (1970)

importance of such factors as ideology. John Roemer's (1985) contribution to the analysis of revolution as a two-person game is a good example. He believes that free riding in revolutionary coalitions is indeed overcome by a change in agents' preferences from those of the prisoner's dilemma to those of the assurance game. By 'assurance game', I mean a game in which each agent derives more utility from cooperating than from defecting, given the other one cooperates. According to Roemer, 'Revolutionary participation simply cannot be explained by side payments or coercion, factors appealed to in the pure self-interest model [Olson]' (*ibid.*, p. 90). He also assumes that Lenin and the Tsar are both non-ideological in the sense that each behaves in a disinterested manner to achieve his goal. Lenin maximizes the probability of revolution, and the Tsar minimizes it. Nevertheless, each of them finds it optimal to behave in what might be interpreted by an outside observer as ideological.³⁴ Roemer (*ibid.*, p. 90; 1988, p. 234) 'endows Lenin with a charisma which enables him to convince people to behave cooperatively' and to participate massively in the revolution against the Tsar, although the layers of the population who do not have sufficient political courage to rise against the Tsar will also benefit from Lenin's progressive programme if the revolution achieves victory. It is noteworthy that contrary to Roemer, Mancur Olson ([1965] 1980, p. 106) and Gordon Tullock (1974, p. 45) claim that Lenin never tried to overcome the free-rider problem in the Russian revolution, since his organizational project to build the Russian social-democratic party, as defined in 'What is to be done?' (1902), was based on the idea of 'professional revolutionaries'. In other words, Lenin was relying on 'a committed, self-sacrificing, and disciplined minority, rather than on the common interests of the mass of the proletariat' (Olson ([1965] 1980, p. 106). Needless to say, this caricatural vision of the Russian revolution as a Bolshevik (or Lenin's) *coup d'état* is not approved by many prominent historians of the Russian revolution such as Edward Hallett Carr ([1950, 1952, 1953] 1983). In fact, if Olson's and Tullock's interpretations had been right, it would be very difficult to explain how a small minority of 'professional revolutionaries'³⁵ could succeed in a bloody and protracted civil war against Kolchak, Denikin, Yudenich and Wrangel, and attacks by the allied forces of 14 other European countries. I do not deny that there is a kernel of truth in Olson's and Tullock's claims. It is true that rational, value-maximizing thinking about the uses of violence is more characteristic of leaders than followers. But revolutions are not made by leaders; they are made by large masses. As Frederick Engels rightly notes: 'all conspiracies are not only useless but harmful. They [knew] only too well that revolutions are not made intentionally and arbitrarily, but that they were always and everywhere the necessary result of circumstances entirely independent of the will and guidance of particular parties and whole classes' (quoted in Arendt [1969], 1970, pp. 11–12). There are many examples to illustrate the uselessness of

conspiracies to provoke revolutions. Janos (1964, p. 81) notes that Louis Auguste Blanqui called out the people of Paris 13 times in the mid- and late-nineteenth century, but never successfully. In 1870, 'the workers of Paris stood by apathetically while Blanqui and his storming party were arrested after an unsuccessful appeal to the masses, yet only three weeks later the same masses spontaneously rose to overthrow the government of Louis Napoleon' (ibid., p. 84). Leaders are more prone to 'rational, value-maximizing' calculation about the use of violence, but they are also less immune to errors and 'irrationality' as Blanqui's example illustrates!

Gupta (1990) provides another example of the social-benefits theory of collective rebellion. In this type of modelling, the maximizing assumption is denied. Other theorists emphasize the fact that social consequences of insurrection do not preclude having private returns (Usher and Engineer 1987; Popkin 1988; Taylor 1988b; Tong 1988). A salient example of this type of approach is Grossman's general equilibrium model of insurrection. In this model, the peasant families, as the ruled class, respond to the ruler's policies by allocating their labour time to production, soldiering or participation in an insurrection 'with the objective of *maximizing their expected income*. In a successful insurrection, the insurgents take as booty all of the revenue of the ruler and his clientele' (Grossman 1991, p. 912; added emphasis). In other words, insurgents behave like looters, since their main objective is to enrich themselves. Grossman even defines insurrection in such a way that the distinction between 'revolutionaries' and 'bandits' becomes blurred:

The analysis that follows defines insurrection generally to include any forceful action against the established system of property rights and taxation. This definition does not distinguish between rebels or revolutionaries . . . and bandits or pirates . . . In actual cases, this distinction can be blurred (see, for example, the discussion of pre-modern China in James Tong [1988]). (1991, p. 913)

Perhaps the distinction between revolutionaries and bandits is blurred in 'pre-modern China',³⁶ but it is hard to blur this distinction in the American War of Independence (1776), the French Revolution (1789), the Russian Revolution (1917), the recent Iranian Revolution (1979), or in all other major revolutions. This private-benefits type of modelling builds upon rationality and maximizing assumptions and it has been further developed by predation models. In this section, we examine social-benefits theory, particularly the work of Gupta (1990), since he explicitly advocates a rational expectation model of collective rebellion without postulating a maximizing behaviour.

Borrowing from Gurr's (1970) work, Gupta (1990) develops a rational expectations model of political violence. He acknowledges the importance of individual psychological impulses, particularly that of frustration or relative deprivation, in explaining aggressive behaviour. However, he argues that

relative deprivation cannot be the sole explanation of aggression and notes that the broad definition of 'frustration' fails to specify the kind of aggressive act in which an individual is likely to engage (*ibid.*, p. 84). He distinguishes five acts of collective rebellion: political demonstrations, riots, political strikes, armed or guerrilla attacks, and assassinations (*ibid.*, p. 104). According to Gupta, all these forms of violence are 'anti-systemic' in the sense that they are not 'system neutral' conflicts or conflicts within the rules of the market (*ibid.*, pp. 15, 19). He pinpoints the role of such conflicts in institutional change. Frustration does not always lead to aggressive behaviour. The step between frustration and aggression is not direct and is complicated by choice of action (with varying degrees of satisfaction or benefit), fear of retaliation, and ideology. In fact, 'a rational actor will weigh his choice of action against its possible consequences in light of all these factors' (*ibid.*, p. 85). So a model explaining participatory behaviour in political actions must be based on a cost-benefit analysis. Moreover, the frustration that one feels as an individual may not always be translated into political action. Instead 'it may lead to criminal activities, or an individual may engage in psychotic behaviour ranging from homicidal to suicidal. But when will frustration lead to political violence?' Gupta argues that 'for the feeling of frustration to translate into a collective action, it must relate to the collective identity' (*ibid.*, p. 85). This collective identity implies an ideological orientation. Hence, Gupta suggests that Gurr's frustration theory be amended by a cost-benefit analysis and that ideology or 'collective interests' be included in the utility function of agents.

Before going further in detailing Gupta's arguments, two critical points should be raised with regard to Gurr's analysis of the genesis of political violence. First, in my opinion, 'collective identity' is not a good factor to demarcate 'political violence' from 'criminal activities', since even in the latter, a collective identity can be formed. Not only in organized crime, but even in small groups of youngster racketeers, we find the phenomenon of each individual member's identification with the group. To be a member of a criminal group means to have a social identity, a social attachment and recognition, as well as a social (group) power. In broad terms, the identification with one's job, or organization was mentioned earlier by Herbert Simon (1947). For Simon, this identification motivation in organization is more important than profit-maximization, and it can be considered as the essential factor for the survival of an organization. Hence, he suggests replacing the maximizing assumption with 'satisficing'³⁷ behaviour. Identification theory shows that collective identity is not a particular feature of political action in comparison with criminal activity. Both kinds of collective action, political and non-political (criminal), share this feature.

Although Simon's identification and bounded-rationality theories are extremely fertile and rich, they are mainly concerned with individual behaviour.

Individual behaviour is also the starting point of neoclassical analysis (Hahn 1984, pp. 1–2), and Gurr’s psychological political theory. It is not surprising that Gupta also tries to distinguish political violence from criminal activities on the basis of individual behaviour of participants in both types of violence. Thus he claims that while in political violence, the individual is also a carrier of a collective identity and integrates in his/her utility function the interests of this collective body, in criminal activities, s/he only follows his/her own self-interests. In my opinion, the difference between these two types of violence is social rather than individual, which leads to my second critical remark. A historical study of banditry and the Mafia shows that the difference between different kinds of violence is closely related to the type and nature of coexistence between different social rules. For example, Eric Hobsbawm highlights that:

A man becomes a bandit because he does something which is not regarded as criminal by his local conventions, but is so regarded by the State or the local rulers . . . It is important that the incipient social bandit should be regarded as ‘honourable’ or non-criminal by the population, for if he was regarded as a criminal against local convention, he could not enjoy the local protection on which he must rely completely. (1959, pp. 15–16)

Regarding the Mafia, he writes: ‘*Mafia* (in all the three senses of the word) provided a parallel machine of law and organized power; indeed, so far as the citizen in the areas under its influence was concerned, the only effective law and power’ (ibid., p. 35). In fact, if in the case of revolutionary or anti-systemic movements, the social and state rules are under question, in social banditry and organized crime (Mafia) two different contradictory types of rule (informal local, and formal national) coexist. However, in the case of pure criminal activity, an exception from existing rules (without trying to change them, or being supported by other (in)formal local rules) is sought. The difference between these types of violence is thus social and cannot be defined on the basis of individual choice, or a cost–benefit analysis at an individual level.³⁸

Finally, it is noteworthy that contrary to Gupta’s claim, Gurr does not ignore the difference between collective and political violence and invokes the role of ideologies in revolutionary and other forms of violence (Gurr 1970, ch. 7). The only point which distinguishes Gupta’s analysis from Gurr’s theory of violence is Gupta’s standpoint on cost–benefit analysis. Gupta is mainly concerned with the instrumental or utilitarian aspect of political violence, although he does not neglect the value of political violence for its own sake, especially in defining the individual’s participatory motivation. This explains why he proposes a rational expectations model of political violence without the maximizing assumption. He writes: ‘If we cannot question the consistency

aspect of the question of rationality in the study of social sciences in general and economics in particular, we may take issue with the question of the ubiquity of the assumption of maximization of self-interest' (1990, p. 113). He then quotes at length Sen's works to support his idea and concludes:

The obvious pitfall of the assumption of a perfect correspondence between selfishness and rationality is the basic inability to explain a large chunk of human interaction. As we have noted, by following the Olsonian (1971) logic of the free-rider, no public work in democracy will ever be followed by action, no battle will ever be won. Therefore, in our analysis of participation in the acts of political violence, we have explicitly introduced ideology or group welfare as another aspect of the maximand. Unfortunately, in economic literature any kind of altruistic or ideological behaviour has been traditionally termed as 'non-economic' . . . or even simply 'irrational' . . . However, a recent trend in economics is slowly recognizing the need to accept ideological factors within the framework of economic rationality. (ibid., p. 314)

I entirely agree with Gupta that there is no justification for assuming the economic agent to be a maximizer. However, I think that there are good reasons as to why mainstream economics postulate maximizing behaviour (see Friedman 1953), and avoid the complication regarding the definition of an additive utility function. In contrast, it is a little hard to reconcile a rational expectations model with the idea of an economic agent who does not maximize. We ask why Gupta is so seriously concerned about developing a 'rational expectation model of political violence' (ibid., pp. 6, 106)? The answer can be found in his insistence on the instrumental or utilitarian aspect of political violence. He endeavours to grasp the costs and benefits of resorting to political violence and in doing so, he needs the rationality assumption:

We should recognize that often an individual takes part in an act of political defiance with an eye on the expected material benefit, which can vary from a position of power in the next administration to the spoils of 'anomie' such as the loot from a riot (L). However, along with the reward, taking part in a rebellion against an established political order also promises some kind of cost to the individual if he is apprehended. This cost factor may include the loss of freedom (prison terms) or income, bodily injury, or even death. These costs' factors are included in the term C. Finally, we come to the intangible benefit of taking part in a political action, what Banfield (1968) and Tullock (1971) called the 'fun factor'. (ibid., p. 88)

Undoubtedly, there is a tactical use of violence, since it can be used for value enhancement or for 'looting'. The most direct utilitarian use of violence is to seize a desired good, as rioters do when they pillage warehouses and as conspirators do in a *coup d'état*. Other tactical uses of violence are anti-government riots and strikes which are sometimes designed to induce rulers to change undesirable policies. A common indirect use of violence is to

demonstrate symbolically the demands of those resorting to violence and the intensity with which they vindicate these demands. In other words, it displays the capacity of protestors to disrupt the socio-political order if their demands are not met. Nevertheless, there is a great difference between looters and social protestors in resorting to violence. In the former case, the rational calculation of looting is based on a net separation of costs and benefits, whereas in the case of political protests, there is usually no such net separation between costs and benefits. As Hirschman (1982b, pp. 85–6) notes, the neat distinction between costs and benefits of action in the public interest vanishes, since striving, which should be entered on the cost side, turns out to be the art of the benefit. In fact, the ‘fun factor’ also alludes to such inseparability, since the effort (cost side) itself brings out pleasure. However, the fun factor is an incongruous phrase for describing gigantic sacrifices involved in a political or social movement which sometimes include sacrificing one’s own life for the ‘cause’. In analysing ‘revolutionary motivation’, Buchanan also invokes the ‘in-process benefits’:

According to the in-process benefits solution, certain goods intrinsic to the process of contribution offset the costs of contribution. Plausible examples of this phenomenon may not be hard to find. Not only revolutionary terrorists but also Red Cross volunteers and peace demonstrators may set great store by the community, fraternity, and solidarity which they experience as participants in a common struggle. (1979, p. 71)

Furthermore, in every revolutionary movement, ‘revolutionary idealism’ (Plekhanov [1894] 1974) or ‘revolutionary utopianism’ (Gurr 1970, p. 216) has played a great role. What is revolutionary idealism? It is the illusion of having the ability to end all the inequality, oppression and misery in one stroke and to create a harmonious fraternal society immediately after a revolution. This wave of optimism during the revolutionary period reflects the relative ignorance of revolutionaries about the real potential of revolution and it is usually followed by a wave of pessimism after the end of the revolutionary period. If one adopts a consistent utilitarian outlook, one may ask whether this revolutionary idealism enhances the interests of revolution. My answer to this question is affirmative. I argue that a utilitarian approach is not necessarily a good bedfellow of rationality.

One good example is the illusion of French Enlighteners about whom Plekhanov writes very lucidly:

Turn the pages of Mably’s *Doutes, proposés aux philosophes économistes* or Morelli’s *Code de la nature* and you will see that inasmuch as these writers’ views differed from those held by the vast majority of the Enlighteners in respect of the conditions for human welfare, and inasmuch as they dreamt of the abolition of private property, they, in the first place, came into glaring contradictions with the

most essential and vital needs of the nation in their times, and, in the second place, vaguely aware of that, they themselves considered their aspirations *absolutely impracticable*. Consequently, I ask you again: wherein lay the ignorance of the Enlighteners? Did it consist in the fact that, while being aware of the social needs of their times and correctly indicating how they could be met (through the abolition of the old privileges, and the like), they attributed an extremely exaggerated significance to the methods needed, i.e., the significance of a road towards universal happiness? This was not yet *crass ignorance*; *from the practical point of view, it should even be recognized as quite useful, since the more the Enlighteners believed in the universal significance of the reforms they demanded, the more energetically they had to work for their achievement.* ([1897–98] 1976, p. 240, added emphasis in last sentence)

Revolutionary idealism or utopianism is the source of extraordinary efforts which make possible the overthrow of entrenched regimes. Another salient example of the efficiency of this type of utopianism is the creation of one of the most powerful, courageous, efficient and yet cheapest army of Europe under Napoleon Bonaparte. This revolutionary army was the most formidable child of the Jacobinic Republic. From a *levée en masse* of revolutionary citizens it soon turned into a force of professional fighters, for there were no call-ups between 1793 and 1798, and those who had no taste or talent for soldiering deserted en masse. It therefore retained the characteristics of the Revolution and acquired those of vested interest – the typical Bonapartist mixture. Regarding the origin of this army during the Terror period, Hobsbawm writes: ‘[B]y March 1794 an army three times as large as before was run at half the cost of March 1793, and the value of the French currency . . . was kept approximately stable, in marked contrast to both past and future . . . The Republic of the Year II had coped with worse crises and with fewer resources’ (1962, p. 68). How could they reduce the costs of the army so drastically and so rapidly? The answer can be found in the reports of Savant, one of the soldiers of this army, who is quoted by Hobsbawm:

Do you know what kind of government [was victorious]? . . . A government of the Convention. A government of passionate Jacobins in red bonnets, wearing rough woollen cloth, wooden shoes, who lived on simple bread and bad beer and went to sleep on mattresses laid on the floor of their meeting-halls, when they were too tired to wake and deliberate further. That is the kind of men who saved France. (ibid., p. 68)

Personal sacrifices are the source of this high and rapid reduction of costs. Such economies of resources are made in all revolutions without any exception and it naturally remains a puzzle for the Olson theory of free-rider behaviour! Moreover, the interesting point is that the revolutionary masses usually make such great sacrifices because of their ‘revolutionary utopianism’, namely their relative ignorance, and not because of their ‘rationality’. But does

it mean that revolutionary utopianism is devoid of all historical rationality? To answer this question, I distinguish two types of rationality, namely *ex ante* and *ex post*.

Ex ante rationality is a behavioural postulate for individual actors and the neoclassical school is based on such an assumption. Nevertheless, this assumption is questioned by some economists who believe in weaker forms of rationality, like Simon (1982, 1997c). *Ex post* rationality is historical rationality, and it implies what Hegel once formulated about the presence of reason in history: ‘All that is real is rational; and all that is rational is real’³⁹ (quoted in Engels [1888] 1970, p. 10; for a Marxian interpretation of this quotation see *ibid.*, pp. 10–19).⁴⁰ It should be noted that for Hegel, everything that exists is certainly not also real, without further qualification. According to Hegel, the attribute of reality belongs only to that which is necessary: ‘The reality proves to be the necessary in the course of its development’. Hegel cites the example of ‘a certain tax regulation’ which may be unnecessary and in this case should not be considered real, even though it may exist. The reality of a thing depends on whether it is necessary or not. And the necessity of a thing can be verified by its continuity, persistence or becoming. If something continues to exist, then there must be some kind of regularity or a necessity. In that case, that thing is real and hence, it is rational. There exists a reason in historical processes and every revolution is rational *ex post*, though it may seem a temporary madness.

Revolutionary utopianism has no *ex ante* rationality, but it has an *ex post* rationality, since no revolution can achieve its goals without great sacrifices by masses who are not concerned about the costs and benefits of their actions. If revolution is a particular form of collective action to change the existing socio-political rules, then revolutionary utopianism is a necessary condition for changing existing rules with the least cost. In this sense, revolutionary utopianism is *ex post* rational. The result of a historical process is always rational *ex post*, even if its initiators do not behave rationally *ex ante*. *Ex post* rationality does not connote that the historical outcome is the most efficient or *optimal* (North 1990), it only implies that there is a certain regularity or a certain ‘order’ in society. The *ex post* rationality can be traced in the works of classical economists, notably in the *Wealth of Nations*. Adam Smith’s theory of the invisible hand or the ‘finger of Providence’ posits the existence of certain regularity or a certain spontaneous order in the market economy. However, it is hard to show that Smith believed that *ex ante* rationality could explain the behavioural regularity of individual actors. Herbert Simon also underlines that ‘Within his framework, Smith has no occasion to treat human choice or decision making in any formal way’ (1997c, p. 6). However, Simon adds: ‘But in his [Smith’s] treatment, being rational means having reasons for what you do. It does not imply maximizing anything, or having a single consistent criterion

of choice, a utility, that provides the criterion for all decisions' (ibid., p. 6). It seems to me that, for Smith, political economy was not knowledge about the way a rational individual chooses to act but rather the way different economic actors coordinate among themselves and construct a certain spontaneous (or impersonal) order without engaging in any social engineering activity. In this perspective, *ex post* rationality and not *ex ante* rationality (or even a weaker form of *ex ante* rationality, namely 'bounded' rationality) is crucial. A utilitarian approach to political violence is in tune with an *ex post* rationality hypothesis, but there is no need to adopt an *ex ante* rationality assumption to develop such an approach.

Gurr also assumes the autonomy of a utilitarian approach and the rationality postulate:

Conflict theorists frequently assume that men are rational or at least rationalistic in conflict situations: they tend to choose the courses of action that they think maximize their chances of getting what they want. Evidence examined here suggests that many participants in strife perceive violence in a utilitarian way, but that their perceptions of utility are not often 'rational' in the sense of being based on accurate calculations about the effects of alternative courses of action. Instead they tend to be derived from ideological assumptions of perceptions that violence has been successful in other situations. Utilitarian motives often are contingent upon and secondary to the 'non-rational' motivation to act violently out of anger. Labelling utilitarian motives for violence as 'rational' and emotional motives as 'non-rational' or 'irrational' is of course a value judgment imposed by the observer . . . Consequently this analysis of utilitarian perspectives on violence makes no assumptions about rationality or irrationality of violence *per se*. (1970, p. 210)

The reference to people's perception of the utility of violence in achieving victory gives credence to the idea that people learn from other examples and from their past experiences. Although this is not easily compatible with the rational expectations hypothesis, it is not contradictory with the rationality postulate. It means that even if people, in contrast with the rational expectations hypothesis, do not have the 'memory of an elephant', they do have a selective memory which is shaped by striking historical events and traumas. If we translate this phenomenon in terms of hysteresis, we can say that the learning function of people displays a 'strong form of hysteresis',⁴¹ since it depends greatly on the previous maximum value of their past experiences. Although Gurr's definition of rationality is not clear, he is right when he stresses the fact that a utilitarian approach can be developed without postulating the rationality assumption. That is why I consider Gupta's utilitarian approach inappropriate. While I share with Gupta the rejection of the maximizing hypothesis, I emphasize the tension between the *ex ante* rationality assumption and the logic of collective political violence. A rational expectations theory of political violence suffers from such a tension. To remove this tension, I propose to

reject both maximizing and *ex ante* rationality assumptions, and I espouse a utilitarian approach based on an *ex post* rationality hypothesis.

Predation models

A second strand of socio-political instability modelling is derived from the predation model (Grossman and Kim 1996a). This model is developed in the general theoretical framework of conflictual behaviour as a rent-seeking activity. The fundamental postulates of the economic theory of conflict can be summarized in two points: '1. *Optimization*: Each competitor chooses a preferred balance of productive effort and conflictual effort. 2. *Equilibrium*: On the social level, the separate optimizing decisions interact to determine levels of production and the extent of fighting activity, together with the distribution of production among the claimants' (Hirshleifer 1995a, p. 17). As a general principle, resources can be used not only for production but also for appropriative purposes such as theft and warfare: 'Individuals and groups can either produce and thus create wealth or seize the wealth created by others' (Garfinkel and Skaperdas 1996b, p. 1). Predation models are parts of an emerging literature on conflict and appropriation (Skogh and Stewart 1982; Hirshleifer 1987, 1991a, b, 1995a; Findlay 1996; Skaperdas 1992; Garfinkel and Skaperdas 1996a; Skaperdas and Syropoulos 1996). In this literature, the use of force, or the threat of using force, is a primary determinant of aggregate outcomes; appropriative activities include the use of swords, bombs or guns. Individuals and pressure groups are supposed to be involved in appropriating goods from others. The wealth of a richer agent gives a poor agent an incentive to prey on the richer agent and, perhaps, even to be a pure predator. Jack Hirshleifer (1991b) provides an interesting example alluding to what he calls 'the paradox of power'. This paradox can be defined in the following terms: if the relative endowment of an agent is sufficiently small, then that agent allocates all its resources to predatory activities. Grossman and Kim (1995) have developed a predation model with two agents in which purely aggressive equilibrium is excluded and no agent is entirely specialized in predatory activities. Grossman and Kim (1996a) relax this assumption to allow for the possibility that a poor agent might choose to specialize in predatory activity.⁴²

In this model, there are two types of agents: (i) a predetermined potential predator, who allocates his/her resources to producing consumption goods and 'offensive weapons' in order to appropriate the prey's property; and (ii) a predetermined potential prey, who allocates his/her resources to produce consumption goods and 'defensive fortifications'. The model abstracts from all specific institutional setups and concentrates on a general equilibrium with predatory activities. The authors investigate three types of equilibria: (i) a non-aggressive equilibrium, where a predator devotes no efforts to predation; (ii) a pure predation equilibrium, where a predator devotes no efforts to production;

and (iii) a part-time predation equilibrium, where a predator divides his/her efforts between productive and predatory activities. The modelling is based on a game theoretical framework. The prey has to move first and s/he disposes of an initial endowment (e^d). This initial endowment is the constraint under which the prey has to divide its capital between defensive fortifications (x^d) and production of consumption goods (k^d):

$$e^d = x^d + k^d. \quad (2.1)$$

The predator moves next and s/he divides his/her initial endowment (e^o) between offensive weapons (x^o) and the production of consumption goods (k^o):

$$e^o = x^o + k^o. \quad (2.2)$$

The production is a linear function with a coefficient (α). In the case of predation ($x^o > 0$), the prey preserves a fraction (θ) of her/his endowment. This fraction depends on the relative amount of resources devoted to offensive weapons and defensive fortifications: $\theta = \Omega (x^o / x^d)$, with $\Omega' < 0$. Final wealth is w^j ($j = d, o$), and since predation destroys resources,⁴³ the final wealth may be less than the initial endowments:

$$w^d + w^o < e^d + e^o. \quad (2.3)$$

An agent's objective is to maximize the sum of consumption goods and final wealth, denoted $\delta^j = \alpha k^j + w^j$. The model's equilibria are Nash equilibria and they are based on optimal choices of x^o and x^d . The various equilibria depend on relative initial endowments ($\lambda = e^d/e^o$), and the effectiveness of predation compared to defensive activities (μ). Three possibilities can be distinguished. If λ and μ are both small (that is, if both agents are poor and the predatory activity is not so effective) then there will be a non-aggressive equilibrium. If λ is large, whereas μ is neither too large nor too small (that is, if the predator is poorer than the prey), then it will be profitable for the predator to allocate its resources entirely to the predatory activity. In this case, we will have pure predation equilibrium. If μ is too small, then we will be once again in a non-aggressive equilibrium even if λ is large, since the ineffectiveness of offensive weapons will not allow the potential predator to allocate its resources to predatory activity. If μ is too large (that is, if the offensive weapons are extremely effective), then the potential predator does not need to devote all its effort to predatory activity and can carry out both productive and destructive activities. In this last case, we will have part-time predation equilibrium (Grossman and Kim 1996a, pp. 65–70).

Grossman and Kim (1996b) have extended this model to a growing dynamic economy. Inherited wealth can be devoted to one of three activities: (i) consumption of production goods; (ii) accumulation of productive capital; and (iii) production of offensive weapons or defensive fortifications. Growth depends on the amount of accumulation of productive capital, whereas the redistribution of wealth from prey to predator depends on the effectiveness of predatory activities. The destruction of the wealth would be an outcome of devoting all resources to defensive and offensive actions. Hence, the growth of an economy can be directly affected by predatory or protective activities. Grossman and Kim (*ibid.*) describe protective activities as those that guarantee the security of property rights, and thence develop a theory of property rights in a growth model. They conclude that the property rights would be secure if the potential prey devotes sufficient resources to protective activities so that the predator would be dissuaded from engaging in offensive activities. Moreover, they argue that since the security of property rights is not costless, it may sometimes be more profitable not to guarantee it fully and tolerate a certain level of predation. In fact, the authors show that certain societies which tolerate predation sometimes grow more quickly than those that always give priority to the full security of property rights.

There is another interesting case relevant to predatory activity which Aristotle notes in *Politics*. None the less, the aforementioned models do not discuss it. A country may choose a slow rate of growth in order to dissuade other countries from invading it. Aristotle writes:

A nation's wealth is part of its strength; for it is essential that there should be resources sufficient not merely for its internal needs but also to meet external dangers. For this purpose the total amount of property ought not to be so large that more powerful neighbours will covet it, and the owners be unable to repel the invasion; on the other hand, it must not be so small that they cannot finance a war against an equal or similar foe. Phaleas of course fixed no limit and there is no denying that surplus wealth is very useful. But a limit there should be, and perhaps the best way of stating it would be to say that the total wealth should not be so great as to make it profitable for a stronger power to go to war attracted by its great size, but only such as might be wanted in a war not motivated by the attraction of huge wealth. (*Politics*, p. 76)⁴⁴

In this case, the slow rate of growth is not caused by the use of resources in protective activity (as argued in Grossman and Kim's model), but is a deliberate choice of a country. In Grossman and Kim's model, this case cannot be discussed independently of the rate of the effectiveness of offensive weapons, since there are two *independent* variables, namely $\lambda = e^d/e^o$ (the relative initial endowments) and μ (the effectiveness of offensive weapons). In other words, even if λ is small, the type of equilibrium depends on the value of μ . This result is based upon the assumption that λ and μ are independent. Now, if we

assume that μ is a function of λ , $\mu = F(\lambda)$, and that they are positively related to each other, then:

$$\mu = a\lambda + b, \text{ where } a, b \text{ are the parameters and } a > 0.$$

This assumption amounts to claiming that greater (lesser) differences in initial endowments (or economic inequalities) provoke greater (lesser) specialization in destructive activities. This assumption is compatible with many real situations. In fact, the rent-seeking predation models can be used to justify an optimal allocation of resources to police departments in order to reduce criminal activity. However, there is a certain level of poverty (and hence a certain critical level of λ) for which any protective measure cannot dissuade predatory activities of poor people against property rights. In other words, I suggest that there is a critical value for λ (a poverty trap) for which the predatory activity becomes inelastic with regard to the variation of μ . This critical level is not discussed in predatory models.

My principal objection to predatory models is that they do not provide any analysis about the origin and nature of predatory actions. In fact, predatory actions can include criminal, revolutionary and warlike activities. But these models entirely ignore the distinctions between these various types of predatory actions and assume that such an action is equivalent to plundering (rent-seeking) and necessarily derives from pure economic calculation with regard to maximizing the utility function of individual agents (or dynasties). Moreover, these models do not inquire into the specific properties of destructive activity and do not provide an internal explanation for violence and destruction. As noted earlier, predatory activity is different from destructive activity, even though predation involves destruction, and the destructiveness of predation is taken into account in Grossman and Kim (1995, 1996a, b) by a parameter (β). However, given complete information and the absence of stochastic factors, these models do not involve violence and destruction. We should not forget that in these general equilibrium models, agents are assumed to be hyper-rational. If they are aware of all states of nature (there is no radical uncertainty) and can rationally calculate their costs and benefits in different types of aggressive and non-aggressive equilibria, then they can anticipate the necessary conditions to avoid real destruction and violence. Grossman and Kim acknowledge that 'Another possibility would be that predation involves violence and destruction. But given complete information and the absence of stochastic factors, this model does not provide an internal explanation for violence and destruction' (Grossman and Kim 1995, p. 1279; 1996a, p. 60; 1996b, p. 347). In other words, predation models as well as general equilibrium models of collective rebellions do not treat real destruction or violence, since they are based on rational expectation, complete information, and the

predictability of all relevant states of nature! Hence, these models maintain the basic assumption of the public choice approach: rational people will usually not rebel!

Brito and Intriligator (1985) address the question of whether appropriative conflict is resolved with or without violence and destruction, and they stress the importance of incomplete information as a cause of violence. They distinguish between the threatened use of force in attempting to reallocate resources, which they call 'conflict', and the actual use of weapons, which they name 'war'. Drawing upon models of bargaining with asymmetric information, they introduce two equilibrium concepts, namely 'separating' and 'pooling' equilibria. In the first type, the uninformed agent attempts to induce the other party (informed one) to reveal the pertinent characteristic. In pooling equilibrium, the uninformed agent does not attempt to induce the other party (the informed one) to reveal the pertinent characteristic. The authors show that if two conflicting countries are both fully informed about the parameters of the problem, there will be no redistribution by actual war. Rather, there will be a voluntary redistribution of resources, with neither side having an incentive to fight. War can occur, however, in a situation of asymmetric information, where one country is informed of all the parameters of the problem, and the other is not informed about the parameter characterizing the first country's aversion to war. In such a situation, war can occur if 'the uninformed country adopts a separating equilibrium strategy, in which it precommits itself to a positive probability of war in order to prevent bluffing by the informed country. However, there would be no conflict if the uninformed country finds it optimal to adopt a pooling equilibrium strategy, in which it does not attempt to prevent such bluffing' (*ibid.*, p. 944). It should be noted that this conclusion is not based on a historical or concrete analysis of destruction or violence. Neither the First World War nor the Second World War can be explained on the basis of asymmetrical information between belligerent countries. In fact, Brito and Intriligator try to show that incomplete information is a sufficient logical condition to justify the rational possibility of resorting to destruction or violence. This, however, does not imply that real wars are caused by a situation of asymmetric information.

Randomness of political events is another factor which has been raised to explain the genesis of collective violence. Given that rational people usually do not rebel, stochastic models show that instances of rebellion are largely random events (Lichbach 1992). By the same token, the modellers could argue that rational people usually do not innovate (since they should know everything in advance, ignorance as well as novelty have no place in their universe), as instances of innovation are largely random events. But, the fact that revolution (a social innovation), like any other type of innovation, is a 'random' event, does not tell anything about its nature, its origin and its internal logic or

'rationality'. Timur Kuran (1989) models the role of random events and social psychology in helping to determine the success of insurrections. He tries to support his theory using three historical examples, namely the French Revolution of 1789, the Russian Revolution of February 1917 and the Iranian Revolution of February 1979.⁴⁵ Undoubtedly, socio-political instability is marked by unpredictability of random events. And incomplete information or even sheer ignorance regarding the outburst of revolution is something well known. But these rudimentary truths are not sufficient to provide an internal explanation for violence and destruction.

Common property models

There are two different types of common property models. In the first type, agents adopt simple strategies. By simple strategies, I mean an optimal constant rate of appropriation of the common property (Tornell and Velasco 1992; Lane and Tornell 1995, 1996). In the second type, agents' decisions about whether to cooperate or appropriate depend on the level of wealth (Benhabib and Rustichini 1996). These models are called 'common property models with wealth-dependent appropriation' (Drazen 2000, p. 507).

Growth in common property models with constant rate of appropriation

Lane and Tornell (1996) provide a growth model of common property with a constant rate of appropriation. The starting point of this model is that, on average, resource-rich countries do not grow quickly and do not have the highest income per capita. Two salient examples are Venezuela and Nigeria. In Venezuela, the terms of trade grew at an average annual rate of 13.7 per cent over 1970 to 1990 due to a sudden increase in oil revenues. However, Venezuela's output per capita declined by 28 per cent during the same period. Nigeria enjoyed the oil windfall of the 1970s and early 1980s, whereas its GDP per capita over 1970 to 1990 showed a mediocre annual performance of 0.03 per cent. The authors also cite the example of Trinidad and Tobago, an oil producer, which grew at only 1.2 per cent annually over 1970 to 1990, and GDP per capita contracted at a rate of -2.75 per cent per year over 1980 to 1990. To explain this paradox, Lane and Tornell extend the neoclassical growth model by replacing the representative agent with multiple powerful groups. They define these groups as: 'coalitions with power to extract transfers from the rest of society. Examples are provincial governments that extract transfers from the centre, strong unions and industrial conglomerates that seek protection, and patronage networks that obtain kickbacks from public works' (ibid., p. 214). Thus, the appropriative activity of powerful groups is described as their power to extract common resources for their private consumption. The 'voracity effect' measures the amount of resources that is appropriated by these groups following an increase in the rate of return of common resources

such as oil. In other words, any increase in the oil revenue in Venezuela, Nigeria, or Trinidad and Tobago where such powerful groups are dominant, provokes a voracity effect: the private consumption of these groups surpasses the amount of increase. The appropriative activity of powerful groups reduces growth rate due to the voracity effect. The model ignores the specific institutional matrix of society. Instead, it assumes that society is made up of powerful groups that can either cooperate or be in conflict. The conflict is related to rent-seeking or appropriative activity.

Lane and Tornell (1996) assume a one-sector growth model. In their earlier model (Lane and Tornell 1995), they assumed a second sector that was secure from appropriation by others but offered a lower rate of return. Tornell and Velasco (1992) have also studied the effect of a second sector with a lower rate of return (an inferior technology, namely saving money in foreign bank deposits with lower rates of interest) in order to analyse the capital flow from poor to rich countries. They have showed that due to insecurity, economic agents in poor countries prefer to deposit their savings in rich countries where the rate of return is inferior compared to their own countries but is immune from appropriative activity. Lane and Tornell (1996) assume that powerful groups do not have access to additional private accumulation. The production technology is linear with the marginal product of capital being equal to $F'(K) = \alpha$. The aggregate output is linear in the aggregate capital stock $K(t)$, and the change in the aggregate capital stock is simply the output minus the total sum of the private consumption of powerful groups at each point in time. Assuming $J (> 1)$ groups, we have:

$$K^0(t) = \alpha K(t) - \sum_{j=1}^n C_j(t), \quad (2.4)$$

where $C_j(t)$ is the private consumption or appropriation of group j at time t .

Agents' preferences are represented by constant elasticity of substitution (CES) functions. The objective function of each group is defined over an infinite horizon:

$$U^j = \int_{t=s}^{\infty} \sigma/\sigma - 1 C_j(s)^{\sigma-1/\sigma} e^{-\rho(s-t)} ds \quad (2.5)$$

where the elasticity of intertemporal substitution is $\sigma > 0$ and where $\rho < \alpha$. There is an upper bound ($\hat{\Gamma}$) on the rate of appropriation by each group. Hence:

$$0 \leq C^j(t) \leq \hat{\Gamma}K(t), \text{ where } 0 \leq [\alpha(1 - \sigma) + \rho\sigma]/[J - \sigma(J - 1)] < \hat{\Gamma} < \infty. \quad (2.6)$$

The output cannot be appropriated all at once. The value $[\alpha(1 - \sigma) + \rho\sigma]/[J - \sigma(J - 1)]$ is the appropriation rate in an interior equilibrium. Each group's strategy is to choose an optimal consumption stream $C^j(t)$ to maximize (2.5)

subject to (2.6) and the strategies of the other players. Lane and Tornell consider Markov strategies, namely strategies that are restricted to be functions only of the payoff-relevant state variables and are not allowed to be history dependent. Subsequently, they define the interior equilibrium as well as extreme equilibria of their model. In the interior equilibrium, the appropriation rates of all groups lie in the interior of the appropriation set. In addition to this type of equilibrium, for some parameter values, there are two extreme Markov perfect equilibria. Having examined the conditions of the stability of the interior equilibrium in the presence of multiple equilibria, Lane and Tornell study the ‘voracity effect’. They define the voracity effect as follows: ‘a more than proportional increase in aggregate redistribution in response to an increase in the raw rate of return (α)’ (1996, p. 226). The question is then to identify conditions under which the existence of powerful groups leads to a perverse response to positive productivity or terms of trade shocks, in which redistribution increases and the growth rate falls. Their results can be summarized in the following proposition:

Proposition 2: (The Voracity Effect). A positive shock to productivity or to the terms of trade: i) Leads to a reduction in the growth rate if only if there exist multiple powerful groups that act non-cooperatively and $\sigma > n/n - 1$;^[46] (ii) Leads to an increase in the growth rate if groups have no power to extract transfers from the rest of society, or their behaviour is coordinated by a central planner. (ibid., p. 227)

In other words, if the intertemporal elasticity of substitution is sufficiently low, powerful groups will not appropriate excessively, and the voracity effect does not operate. Moreover, Lane and Tornell’s model confirms Olson’s result (1982, 1993) that if there is only one long-lived powerful group or a few powerful groups that can coordinate and act cooperatively, then first-best policies will be implemented, and the outcomes will be those of the representative agent model. The voracity effect holds when there are a few powerful groups that cannot act cooperatively and the intertemporal elasticity of substitution is high enough, namely: $\sigma > J/J-1$. The authors also construct a dummy variable dubbed as ‘Power’. Applying this Power dummy variable, they dichotomize countries into a group that has slow growth and responds negatively to terms-of-trade shocks and a group with relatively higher growth which responds positively to terms-of-trade shocks. Venezuela, Nigeria and Trinidad and Tobago are part of the first group with a high rate of the voracity effect.

The voracity effect measures the extent of rent-seeking or appropriative activity of organized powerful groups. These groups are not limited to ruling classes, military elites or other dominant groups. They include workers’ unions or other types of employee pressure groups. If in a country there are strong workers’ and employers’ unions that cannot act cooperatively, the voracity effect will operate, whereas in the presence of a powerful dictatorial regime (a

unique long-lived powerful group banning trade unions) the voracity effect will not operate. But it is a well-known fact that social conflicts usually precede social compromises, and hence workers' and employers' unions cannot achieve an acceptable compromise without testing their relative strength. This means that a period of social conflict is a necessary historical requisite to achieve cooperative behaviour from both sides of the employment relationship. Lane and Tornell's model does not capture the social and historical advantages of a democratic regime with 'two-sided collective action' (according to Commons's terminology) compared to a centralized dictatorial regime. The reason is that the voracity effect can operate in such a democratic regime with non-cooperative powerful groups, whereas in a centralized dictatorial regime, where trades unions have no rights, the voracity effect cannot operate. This result is due to three underlying assumptions in Lane and Tornell's model.

First, they ignore the specific institutional matrix of the society, and focus only on the role of powerful groups. Thus the role of rules in society, the type of state and the level of development of the civil society are ignored. Second, in defining the strategies of agents, they consider Markov strategies which are not history dependent. Hence, they cannot distinguish between different conflictual processes according to their historical role in developing or hindering a democratic social compromise. This lack of distinction between the different types of conflictual process undermines the clarity of the voracity effect. The voracity effect includes both the appropriative power of pressure groups and the necessary social conflict between organized workers' and employers' unions in order to achieve a two-sided collective action. Third, the competitive market economy with atomized agents (or with a centralized planner or a Walrasian *crieur de prix*) is supposed to be the ideal economy where the voracity effect is null. Hence, any social conflicts as well as any workers' or employers' unions are regarded as a deviation from Pareto optimality. This doctrinal vision of the market economy disregards the close relationship between social conflicts, growth and wealth distribution.

Growth in common property models with wealth-dependent appropriation
Benhabib and Rustichini (1996), like Lane and Tornell (1996), develop a common property model. However in their model, the decision of whether to cooperate or appropriate may depend on the level of wealth. The starting point of this model is the observation that contrary to the prediction of neoclassical growth theory, poor countries do not grow at faster rates than rich countries. In fact, poor countries have usually invested at lower rates, experienced more intense social conflict and political instability, and consequently have not grown faster than rich countries. In other words, there is a robust negative correlation between investment and various measures of

political instability, and investment-reducing political instability appears to depend on the level of income. The representative agent is replaced by 'organized social groups' that can capture, or attempt to capture, 'a larger share of the output either by means of direct appropriation or by manipulating the political system to implement favourable transfers, regulations, and other redistributive policies' (Benhabib and Rustichini 1996, p. 126). Such appropriative activity can provoke significant disincentives to accumulate, and can be stronger at lower than higher levels of wealth, so that poorer countries may grow more slowly or even stagnate at lower levels of growth (which Benhabib and Rustichini 1996, p. 126 call the 'growth trap').

To capture this relationship between growth and wealth, the authors use a simple dynamic game theoretical model. Organized social groups can follow an appropriative strategy, but this type of strategy eventually generates retaliation in the future. In other words, defection by one player from cooperative behaviour provokes other players to adopt non-cooperative behaviour in the future, resulting in a complete exhaustion of the capital stock. Whether high or low levels of wealth depress investment and growth rates critically depends on the curvatures of technology and preferences. Both cases are possible. Lower wealth may lead to lower growth and, sometimes, to a growth trap. This case is more likely when there are sufficiently high diminishing returns in utility, since when wealth and consumption are high, the utility value of appropriating more consumption in the present is less attractive than the cost of retaliation in the future. Similarly, the opposite may also be true at lower levels of wealth, when consumption is low and marginal utility is high. The utility value of appropriating more consumption in the present outweighs the cost of future retaliation. Conversely, if the marginal utility of consumption does not diminish significantly as consumption rises, compared to the decreasing marginal productivity of capital, the opposite will be true. At low levels, capital is too valuable to risk the retaliation. As capital becomes more abundant, fully cooperative behaviour cannot be guaranteed, and inefficiency will reappear. Thus Benhabib and Rustichini (1996) share with Olson (1982) the idea that in a mature rich economy (like Britain), there may exist inefficiencies due to organized groups exerting redistributive pressures.

Unlike the Lane and Tornell (1996) model, in which there is an exogenous upper bound on the rate of appropriation,⁴⁷ the only limit on appropriation is the total level of resources. Since there is no exogenous upper bound on appropriation, total consumption of the two players may exceed available output, so an allocation rule must be specified. This rule has to relate the consumption of the two players to the amount of output allocated to them. For instance, for the first player, the authors specify the following rule:

$$A_1(c_1, c_2, k) = \begin{cases} c_1 & \text{if } c_1 + c_2 \leq f(k) \text{ or } c_1 \leq f(k)/2 \\ f(k) - c_2 & \text{if } c_1 + c_2 \geq f(k) \text{ and } c_1 \geq f(k)/2 \geq c_2 \\ f(k)/2 & \text{if } c_1, c_2 \geq f(k)/2 \end{cases} \quad (2.7)$$

and a similar allocation rule for $A_2(\cdot)$ for the second player. Then, one possibility is that each player tries to appropriate as much as s/he can. In this case, all output is consumed in one period. More formally, Benhabib and Rustichini consider the pair of ‘fast consumption strategies’ (1996, p. 128) $\hat{c}_1(k) = \hat{c}_2(k) = f(k)$. This will be a subgame-perfect equilibrium, and the value to player j of this equilibrium is:

$$V_j^D(k_0) = \sum_{t=0}^{\infty} \beta^t u \{A_j[\hat{c}_1(k_t), \hat{c}_2(k_t), k_t]\} = u[f(k_0)/2], \quad (2.8)$$

where β is the discount factor and $u(\cdot)$ is the instantaneous utility function for both players.

Fast consumption strategies are important, since they are the punishment after a defection from a cooperative equilibrium. In other words, if one group adopts a non-cooperative strategy, others will also stop playing cooperatively and try to appropriate as much as they can. Hence they will be induced to adopt a fast consumption strategy. Equation (2.8) defines the threat level in this trigger equilibrium. Thus, any equilibrium must respect an individual rationality constraint of the following form:

$$\sum_{t=0}^{\infty} \beta^t u [c_j(t)] \geq V_j^D(k_0), \quad (2.9)$$

where $c_j(t)$ is the level of consumption in the equilibrium. Benhabib and Rustichini consider two other equilibrium concepts, namely a first-best and a second-best equilibrium in order to derive possible growth paths and from that, the possibilities for welfare-maximizing growth (ibid., pp. 129–33). They subsequently discuss wealth-dependent strategies, and show that the possibility of enforcing a first-best equilibrium may depend on the level of wealth. One possibility, consistent with poverty traps, is that first-best behaviour, and hence first-best growth rates are sustainable from high levels of wealth, but not from low levels, because of the incentive compatibility constraints. Their intuition is that when stocks of capital are low, it is not possible to increase the consumption enough to avoid defection. The alternative wealth-dependent case is where cooperative behaviour is sustainable from low levels of (k) , but not from high levels. Benhabib and Rustichini call this possibility ‘an ‘Olson’ case’ (ibid., pp. 137–9). This case alludes to ‘mature’ societies (societies with high levels of income, like Britain in Olson’s 1982 example) which suffer from a low level of growth rate due to the appropriative activity of powerful interest groups.

By focusing on second-best subgame perfect equilibria, the authors' contribution is in illustrating that growth rates can indeed be wealth dependent. Poor countries may indeed accumulate at lower rates because even for the best sustainable equilibria, the incentives for appropriation can be much stronger at low levels of wealth than at high levels, and thus the momentary advantages of defection can be overcome only with high consumption and low-level investment rates. The model elegantly explains the relationship between appropriative strategies and different levels of wealth. However, the authors, like Lane and Tornell, ignore the specific institutional matrix of society, and focus only on the role of 'organized social groups'. Thus the role of 'rules' in society, the type of state and the level of development of the civil society are ignored. In Benhabib and Rustichini (1996), organized social groups are defined in the same way as powerful groups in Lane and Tornell (1996). Labour unions as well as employers' unions are considered to be part of organized social groups. The model assumes that 'suppression of interest groups under authoritarian regimes may have increased the cost of defection and appropriation, making way for first-best growth' (Benhabib and Rustichini 1996, p. 141). Two examples are given: Korea and Chile. Undoubtedly, Augusto Pinochet's *coup d'état* and the overthrow of Salvador Allende's government led to the suppression of all kinds of non-governmental associations as well as independent labour unions. In this sense, Pinochet's authoritarian regime suppressed some 'interest groups' and according to the authors, in doing so, he contributed to Chilean economic growth. In fact, the authors' fundamental assumption is that poorer countries are more prone to political instability. Therefore, an authoritarian regime that provides political stability may be beneficial to economic growth in poorer countries. But once the country becomes richer and the increased rate of growth becomes sustainable, then the authoritarian government will no longer be necessary. Applying this recipe to Korea and Chile, the authors contend: 'Later, once the original *switching threshold* was crossed, first-best growth may have become self-sustaining and the authoritarian regimes toppled, as they no longer were necessary to sustain growth. A more recent example, following the path of Chile, may be Peru' (ibid., p. 141, added emphasis). Benhabib and Rustichini show this switching threshold in their Figure 2 (p. 136), and argue that only after the threshold wealth level of k_1 has been reached does growth resume its higher first-best level. There is an implicit political pattern in their model for poorer countries: first, economic growth under an authoritarian regime; then political democracy. Hence, we first need a Pinochet to establish a free market economy, then we can have our free parliamentary democracy!⁴⁸

But, what guarantees that once the threshold wealth level of k_1 has been reached, political instability will not be unleashed? In fact, there are many examples that show political instability following a certain level of growth in

developing countries. The Iranian Revolution in February 1979 followed a long period of growth rate since the agrarian reform in 1963 and six years after the first petrol shock in 1973. In other words, there is no linear relationship between political instability and growth. As Huntington (1968) highlights, when poor or developing countries experience a 'period of takeoff' and rapid growth, social and political unrest may actually increase. Not only are new demands generated, and the process of urbanization accelerates, but also the need to change archaic institutions and to build new ones to cope with social and economic transformation becomes pressing. Developed countries, unlike developing ones, already have some basic institutions to deal with social and economic transformations, although even in these countries, socio-political instability is not excluded in certain situations such as May 1968 in France⁴⁹ or the United States during the Vietnam War. In developing countries, this institutional change is frequently accompanied by social turmoil and political revolutions. Huntington defines 'revolution' in such countries as part of the 'modernization' process: 'Revolution is . . . an aspect of modernization . . . [I]t is most likely to occur in societies which have experienced some social and economic development and where the process of political modernization and political development have lagged behind the process of social and economic change' (*ibid.*, p. 265).

While I agree with Huntington's analysis regarding revolution as an aspect of modernization in developing countries, it seems to me that he does not sufficiently take into account the importance of the international system. As Theda Skocpol (1979) rightly pinpoints, not only class competition and conflict, but also nation-state rivalry, competition and war play a crucial role in the genesis of revolutions. The machinations of foreign states have played a decisive part in the history of the world's poor countries, most of which are small and weak. Moreover, it was colonialism that set the stage for many contemporary revolutions. Given the course of the Second World War, it is not surprising that in its aftermath there was social upheaval in Korea, China, Vietnam and Burma. And if Winston Churchill had remained in power, India, too, would likely have been torn by even more political turmoil, with democracy being an unlikely outcome. In Africa, the reluctance of the French to leave Algeria contributed to that country's radicalization, a lesson ignored by the Portuguese in Guinea-Bissau, Mozambique and Angola. In these cases and others, Skocpol perspicaciously intimates that the roots of revolutions should be sought in the 'specific inter-relations of class and state structures and the complex interplay over time of domestic and international developments' (*ibid.*, p. xiii).

Contrary to more abstract and axiomatic approaches to revolution and political instability, the case-study method of Skocpol has the particular merit of insisting on specific historical circumstances. In this perspective, the long-term

outcome of revolution is not just a progression to a more efficient economy and the political ascension of a formerly subordinate class. As Colburn asserts, as a result of revolution, ‘the state itself comes to have growing power and autonomy’ (1994, p. 12). The recognition of the autonomy of politics with regard to economics implies that there is no linear relationship between economic growth and political instability. Regrettably, the model of Benhabib and Rustichini (1996), like all other models inspired by the public choice approach, is based on economic determinism. This means that all institutional and political change is directly associated with economic change and the autonomy of political and institutional evolution is denied. In fact, ‘economic imperialism’ involves a linear relationship between political instability and economic growth: poor countries with low rates of growth are prone to instability, whereas rich countries with high rates of growth are marked by political stability.⁵⁰ My main criticism is that such a linear relationship cannot capture the independent role of destructive power with regard to economic or creative power.

In summary, from my general overview of the three strands of socio-political instability literature, namely the rational expectations models of political violence, predation models and common property models results we can draw the following conclusions:

1. These models do not provide an internal explanation for destruction and violence.
2. These models do not distinguish between different types of collective rebellion, criminal activity and warlike activities. They are all regarded as predatory, appropriative, or rent-seeking activities. This is due to the fact that all these models ignore the institutional setup of the societies. However, they assume that every society may be composed of powerful organized groups or pressure groups that can choose between cooperative productive strategies and non-cooperative appropriative strategies.
3. In these models, the strategies of the agents are rational but not history dependent.
4. In these models, the competitive market economy with atomized agents (or with a centralized planner or a Walrasian *crieur de prix*) is supposed to be the ideal economy where the voracity effect, or appropriative, rent-seeking activity is null. Hence, any social conflicts as well as any workers’ or employers’ unions are regarded as a deviation from Pareto optimality.
5. These models are based upon economic determinism, namely the denial of autonomy for the political sphere with regard to economic activity. It is usually assumed that there is a linear relationship between economic growth and political instability.

DESTRUCTIVE POWER AND VOICE VERSUS EXIT PARADIGM

Hirschman's theory of 'Exit, Voice, Loyalty' (EVL) has the great merit of not being founded on rationality and maximizing assumptions. It may be argued that destructive power can be reinterpreted as part of the voice mechanism. Some prominent forms of destructive power are strikes, violent demonstrations, riots and social revolution. In this section, I shall show the ambiguous character of *voice* in Hirschman's theoretical framework and argue that the dichotomized options of *exit* versus *voice* cannot capture social revolution. In my opinion, Hirschman's theory of EVL is not an appropriate framework to tackle the relationship between destructive and creative powers.

Rejection of Rationality and Maximizing Assumptions

Hirschman focuses on the insufficiency of market coordination and especially on the limits of the exit mechanism and introduces a complementary mechanism, 'voice' to overcome this insufficiency. While exit belongs to economics, voice is political action *par excellence*. In justifying the role of voice, Hirschman draws our attention to 'repairable lapses' of economic actors which have been neglected by economists. He invokes two reasons for this neglect:

First, in economics one assumes either fully and undeviatingly rational behaviour or, at the very best, an *unchanging level* of rationality on the part of the economic actors . . . The second cause of the economists' unconcern about lapses is related to the first. In the traditional model of the competitive economy, recovery from any lapse is not really essential. (1970, pp. 1–2)

The rationality assumption does not leave much room for studying the dysfunction of market coordination, and other mechanisms such as voice. Moreover, voice cannot be subject to maximizing incentive constraint:⁵¹ 'Voice, to the extent that it is political action or action in the public interest, is liable to escape from the fetters of the benefit–cost calculus and can therefore suddenly gain an unexpected edge over silent, self-regarding exit' (1981, p. 239). In fact, voice can become an end in itself, and its exercise can become confused with the attainment of its objective. As soon as that happens, its cost (for example, in terms of time spent) can measure the satisfaction or benefit received from its exercise or 'consumption' instead. For this mutation of cost into benefit to occur, the exercise of voice has to be felt as something beyond the many activities that are primarily self-regarding. Hirschman cites the example of local and national elections. In local elections, the public-interest dimension is less obvious and the cost of voting tends to be computed and

related to its conceivable benefits; [n]ational elections, on the other hand, partake of the character of public celebrations and even of the traditional “feast of fools”: the lonely citizen is transformed into the sovereign – though only for one day as Rousseau lamented – and he enjoys himself thoroughly in the process’ (ibid., p. 240).

For Hirschman, market failure is not limited to the presence of externalities. Following Dennis Young, he redefines this concept broadly in terms of situations ‘where exit does not do a good job of stirring up management and of restoring efficiency’ (ibid., p. 237). In this perspective the availability of another mechanism, namely voice, is regarded as a complementary channel. Four characteristics of voice that differentiate it from exit may be defined as follows (see ibid., p. 244):

1. Voice is rich in information. It conveys more information than exit.
2. Voice is more apt than exit to become an activity that is enjoyed for its own sake, that has its own reward, especially when it is felt as action in the public interest. In this sense, voice escapes from cost–benefit analysis.
3. Voice is subject to special hazards, since the organization authorities try to silence it either by retaliation against those who voice or by extending special favours to them, whereas exit is not subject to such types of hazards.
4. Voice is treacherous: since voice is generally a process in which a few voice on behalf of a much larger dissatisfied or claimant group, it is possible that the changes achieved through voice are primarily in the interest of the articulate few.

These distinctive features of voice compared to exit make it inappropriate to adopt rationality and maximizing assumptions in order to understand its role as a correcting mechanism for market failure. But what is voice? Is there any clear-cut definition for this concept in Hirschman’s works? While I share with Hirschman the rejection of *ex ante* rationality of agents and the maximizing behaviour assumption, I shall show that his definition of voice is ambiguous and he does not provide a general theory of voice.

Hirschman’s Ambiguous Concept of Voice

Hirschman’s concept of voice is ambiguous, since he confuses two different things: voice within the existing rules, and voice against the existing rules. While voice within the existing rules can be opposed to exit as abandoning the existing rules or organization, voice against the existing rules cannot clearly be opposed to exit, since in this case the frontiers between voice and exit become confused. In other words, voice within the existing rules comes within

the scope of Hirschman's dichotomy of voice versus exit, whereas voice against the existing rules escapes this dichotomy and cannot be opposed to exit. To voice against the existing rules, one should also do a particular kind of exit, for example not to be among 'loyalists' and join 'others' or opponents. This explains why Hirschman has never distinguished between these two different senses of voice. Such a clarification would have undermined his theoretical framework in terms of the dichotomy between voice and exit.

Hirschman has developed his theory of EVL over a period of more than 20 years since the publication of his book, *Exit, Voice, and Loyalty*, in 1970. Thus, in reviewing Hirschman's concept of voice, I shall take into account all his different contributions. I shall contend that both senses of voice are present in Hirschman's works, but that he never distinguishes between them.

In Hirschman (1970), we can find both senses of voice. He first defines exit and voice in the following terms:

- (1) Some customers stop buying the firm's products or some members leave the organization: this is the *exit option* . . . (2) The firm's customers or the organization's members express their dissatisfaction directly to management or to some other authority to which management is subordinate or through general protest addressed to anyone who cares to listen: this is the *voice option*. (ibid., p. 4)

Voice includes different types of protest, from expressing dissatisfaction to management or other authorities, to general protest. Voice 'is a far more "messy" concept because it can be graduated, all the way from faint grumbling to violent protest' (ibid., p. 16). But what is the objective of 'general or violent protest'? Do we want to mobilize public opinion in order to oblige management to adopt some particular measures or do we want to remove authorities from their positions and to nominate others? In other words, do we voice *within* or *against* the existing rules? Hirschman does not answer such questions. It may be argued that Hirschman's reference to 'violent protest' implies *voice* against the existing rules. However, according to Hirschman, 'On reflection it will be realized that even if violence is a necessary condition for revolution it is not a sufficient one, and that is also a common element of reform' (1963, p. 257). Hence, violent protest does not clarify whether voice is within or against the existing rules.

Hirschman further defines 'voice' as:

any attempt at all to change, rather than to escape from, an objectionable state of affairs, whether through individual or collective petition to the management directly in charge, through appeal to a higher authority with the intention of forcing a change in management, or through various types of actions and protests, including those that are meant to mobilize public opinion. (1970, p. 30)

In this sentence, voice is defined as any attempt to change and it is opposed to exit which implies abandoning or escaping from an objectionable state of affairs. But change can be effected within or against the existing rules. Hirschman's definition of voice includes both types of change. However in analysing 'Exit and voice in American Ideology and practice', Hirschman interprets 'voice' as 'social revolution' and considers 'exit' to be a synonym of 'emigration'. He writes: 'The U.S. owes its very existence and growth to millions of decisions favouring exit over voice. This "ultimate nature of the American experience" has been eloquently described by Louis Hartz', and further he quotes Hartz: "'In a real sense physical flight is the American substitute for the European experience of social revolution'" (ibid., p. 106). Thus, we can interpret voice versus exit as fight against flight. The problem with this type of interpretation is that voice defined as 'social revolution' cannot be reconciled with another concept of Hirschman, namely 'loyalty'. In elaborating his theory of loyalty, Hirschman contends that 'the likelihood of voice increases with the degree of loyalty' (ibid., p. 77) and 'As a result of loyalty, these potentially most influential customers and members will stay on longer than they would ordinarily, in the hope or, rather, reasoned expectation that improvement or reform can be achieved "from within"' (ibid., 79). In other words, voice is related to the possibility of 'reform' or change 'from within', whereas in the case of social revolution, citizens are no longer loyal to their government and do not try to bring about change from within. They are determined to bring about change 'from without' or against the existing rules. Emigration or exit is, of course, a way to escape from the existing rules without trying to change them. Emigration and social revolution have something in common: they both represent exit, but if in the case of emigration, exit is definitive, in the case of social revolution, exit is temporary, in the sense that revolutionaries try to build another political regime where they can once again be heard and find their voice. Social revolution or voice against the existing rules is a particular type of exit, a temporary exit with a special goal: to re-establish voice.

It is noteworthy that we can find several paragraphs in Hirschman's works where he defines voice as a 'change from within'. For example, he writes: 'Thus the voice option includes vastly different degrees of activity and leadership in the attempt to achieve change "from within"' (ibid., p. 38). Or, 'hence he will be more inclined to use voice, to "work from within"' (ibid., p. 117). He adds that 'It may be asked why this should be so, why exit, an act of withdrawal, should suddenly prove to be influential when the returns from "working from within" via voice have been declining' (ibid., pp. 125–6). In his clarifying remarks regarding 'some uses of the exit-voice approach', Hirschman once again defines voice as a repairing mechanism within the organization: 'He who voices remains within the organization, maintains a relationship with it' (1976,

p. 387). In his later contributions, Hirschman acknowledges O'Donnell's critique (1986), and attempts to examine the difficulties of voice formation. In doing so, he distinguishes between 'horizontal' and 'vertical' voice. The latter 'is the actual communication, complaint, petition, or protest addressed to the authorities by a citizen and, more frequently, by an organization representing a group of citizens'. Horizontal voice 'is the utterance and exchange of opinions, concern and criticism *among* citizens . . . Horizontal voice is a necessary precondition for the mobilization of vertical voice' (1988, p. 220). Hirschman acknowledges that in his original book on EVL (1970), he neglected horizontal voice and mistakenly equated vertical voice with voice in general. This self-criticism clarifies that voice was originally conceived as voice from within, that is different forms of protest addressed to the authorities. However, horizontal voice or the exchange of opinions among citizens implies nothing about the content of people's criticism. These criticisms can be against or within the existing rules. None the less, if horizontal voice is carried out with the objective of enhancing vertical voice, then it can be inferred that the content of people's criticism should not have been revolutionary. It is more plausible to imagine that these criticisms are formulated within the existing rules.

In my opinion, Hirschman is aware that the dichotomy between voice and exit has a theoretical justification if and only if voice is reduced to voice from within. For example, in the case of public goods, he puts his dichotomy aside, and argues in terms of voice from within and voice from without:

In the case of public goods, on the other hand, one continues to 'care' as it is impossible to get away from them entirely . . . To exit will now mean to resign under protest and, in general, to denounce and fight the organization from without instead of working for change from within. In other words, *the alternative is now not so much between voice and exit as between voice from within and voice from without (after exit)*. The exit decision then hinges on a totally new question: At what point is one more effective (besides being more at peace with oneself) fighting mistaken policies from without than continuing the attempt to change these policies from within? (1970, pp. 104–5)

Social revolution is also a public good and in this case, it is voice from without. In contrast, if there is a possibility of expressing the social dissatisfaction in parliament, then this type of social protest is voice from within. In fact, Hirschman interprets 'universal suffrage' in Britain as a method of avoiding social revolution: 'The vote *delegitimizes* more direct, intense, and "expressive" forms of political action that are both more effective and more satisfying' (ibid. p. 117). A parliamentary discussion is voice from within, whereas revolution is voice from without. In all these cases, the option is not between voice and exit but between voice from within and voice from without. But voice from without presupposes exit. Revolution is thus an exit, but a

particular kind of exit (not like emigration) since voice continues from without. Therefore voice from without is simultaneously exit and voice and cannot be explained in terms of a dichotomized option between voice and exit. The frontiers between exit and voice become blurred whenever a revolutionary situation occurs, or a protest against the existing rules or organization explodes.

One of my criticisms against Hirschman's 'model of loyalist behaviour' (ibid., pp. 86–92) is that this model assumes no transition period between the moment when a dissatisfied group inside an organization reaches a breaking point and the moment when it exits: 'Finally, loyalty reaches its breaking point and exit ensues (at point of . . . exit with loyalty)' (ibid., p. 88). In a real split, there is a period during which the splitting faction is convinced that it cannot live within the existing rules, but it continues to stay within the organization in order to persuade and attract other members to the idea that a radical change in the organization is necessary. Although during this period, the splitting faction is physically within the organization, it wages a struggle against the existing rules, and it endeavours to destroy the existing organization. This destructive or revolutionary period is not captured in Hirschman's model. There is no clear-cut frontier between voice (when a dissatisfied group expresses itself within the organization) and exit (when this group withdraws from the organization), since there is a revolutionary period during which the splitting group tries to destroy the organization while still being in the organization. In this particular phase, voice and exit coexist. More generally, any form of voice that undermines the existing rules has characteristics of both voice and exit.

Another example which casts some light on the specific place of voice in the existing rules is martyrdom. Hirschman argues that a martyr's death is a good example of exit: 'The remarkable influence wielded by martyrs throughout history can be understood in those terms, for the martyr's death is exit at its most irreversible and argument at its most irrefutable' (ibid., p. 126). The difference between emigration and a martyr's death is, of course, striking. In the former case, we have a classic example of exit, whereas in the latter, exit and voice are completely mixed, since a martyr's death is not only an exit, but also a cry (or scream) against an objectionable state of affairs.

According to Finer, voice is a change 'from within', while exit is a change 'from without' and in this sense, social revolution, rebellion and secession constitute various forms of exit:⁵²

Voice, therefore, requires structures such as these: the course of 'voice' is from complaint, to the demand for redress and modification, and, failing that, exit begins to take over as specified above, i.e. the course running from 'opting out', to resisting, to rebellion – and possibly to secession . . . The population demanded *voice*: in Estates and Assemblies, in Cortes or Corts, and in Parliament. If they were denied

this they sought for *exit* – hence tax revolts or even downright secessions like that of Portugal or Catalonia from the King of Spain. (1974, pp. 83, 98)

Finer describes the Hundred Years War, when the French state was threatened by secessions, the absence of loyalty and the upsurge of its peripheral sub-systems, as an ‘exit crisis’. The Wars of Religion is another example. During this period, there was also no loyalty to the centre or to the notion of ‘France’. Loyalty was, rather, to the external systems – the Catholic or the Protestant churches; so that Gaspard de Coligny could give up Le Havre to the English for military assistance and the people of Paris and the Guises supported a Spanish garrison to hold off the besieging troops of a heretic king (*ibid.*, p. 112). Rokkan’s definition of voice and exit is similar to that of Finer, since he claims that exit refers to ‘a transfer from one structure to another’, whereas, voice alludes to ‘a way of operating within a structure once the decision to remain had been made’ (1974, p. 35). What is particularly interesting in Rokkan’s argument is that he underlines the importance of the institutionalization of rules in the channelling of voice from its violent forms to parliamentary forms. He calls this process the ‘domestication of violence’ (*ibid.*, p. 33).

Schaffer and Lamb have a more complicated understanding of exit and voice. In their viewpoint, there is a great difference between ‘individual’ and ‘group’ exit. If exit is by individuals, ‘it is a sort of avoidance’, but if it is by groups, ‘it approaches a sort of voice, like a strike or a riot’ (1974, p. 78). They also pinpoint the importance of rules and stress the relationship between ‘group voice’ and the ‘change in rules’: ‘Group voice, is one way or another, an attempt to do something about the rules: to change them and the service critically, or to set up crucial challenges to the whole decision-making system, the totality of rules, the institution; or some way to reject it’. Hence group voice is about rules, while ‘Exit, unlike, voice, is not about rules, but about items’ (*ibid.*, p. 88). Schaffer and Lamb, like Rokkan, recognize the prominent place of rules in discussing the frontiers between exit and voice. Nevertheless, they do not distinguish voice from within and voice against the rules, and consequently they continue to argue in terms of Hirschmanian dichotomized option between exit and voice. Of course, Hirschman himself has never acknowledged such a relationship between the rules and the voice versus exit option.

As mentioned earlier, the ambiguity of Hirschman’s concept of voice resides in the fact that he does not recognize the importance of rules in distinguishing two different types of voice. Such a distinction shows the insufficiency of exit versus voice dichotomy to analyse voice against the existing rules. A general theory of voice has to differentiate not only different types of voice, but also different levels of voice. Voice as an option is not an alternative to exit, it is

rather an alternative to silence. As Brian Barry insightfully remarks, ‘One choice is between exit (leaving) and non-exit (staying), the other is between voice (activity, participation) and silence (inactivity, non-participation)’ (1974, p. 91). If we consider silence as level 0 (zero) in the formation of voice or as the borderline between inactivity and activity, then level 1 (one) would be voice as a routine activity of members of an organization. At this level, voice is not a protest activity, but a routine activity of members to resolve their daily problems and coordinate their actions. In Williamson’s theory of ‘market versus hierarchy’, ‘voice takes place among the members of an internal organization and occurs in a continuing rather than in a sporadic way’, whereas voice, as it is used in EVL, ‘is mainly a protest activity in which consumers are appealing to suppliers for better quality products’ (Williamson 1976, p. 373). Voice as a protest activity in Hirschman’s theory of EVL constitutes the second level of voice (level 2). This level of voice is opposed to exit and can be regarded as voice from within, or voice within the existing rules. There is a third level of voice (level 3) that can be described as voice against the existing rules, or ‘scream’ (Gupta 1990, p. 19). This last level of voice is not treated systematically in Hirschman’s work, since it overrules Hirschman’s dichotomy of voice versus exit. In fact, Hirschman’s theory does not cover either silence or scream. These four levels of voice can be listed as follows:

- Level 0 Silence
- Level 1 Non-protest voice
- Level 2 Protest voice
- Level 3 Scream

Social revolution is a form of scream and it cannot be opposed to emigration as exit, since social revolution may also be regarded as a particular form of exit. Louis Hartz, whose book on *The Liberal Tradition in America* (1955)⁵³ is the principal reference of Hirschman (1970) with regard to the American experience, does not explain this experience in terms of voice versus exit. He uses another dichotomy, namely ‘destructive versus creative power’:

‘It is one thing to try to establish liberalism in the Old World, and it is another to establish it in the New. Revolution, to borrow the words of T.S. Eliot, means to murder and create, but the American experience has been projected strangely in the realm of creation alone. The destruction of forests and Indian tribes – heroic, bloody, legendary as it was – cannot be compared with the destruction of a social order to which one belongs oneself. The first experience is wholly external and, being external can actually be completed; the second experience is an inner struggle as well as an outer struggle, like the slaying of a Freudian father, and goes on in a sense forever’. (quoted in Hirschman 1970, p. 106)

In my opinion, even emigration can be defined as a withdrawal from social conflict in search of employment and a new social and economic status. In this sense, emigration is the use of creative power, and can be contrasted to social revolution which uses destructive power.

To conclude, my contention is that the analysis of destructive power cannot be carried out within the scope of Hirschman's dichotomy of voice versus exit. Gupta is right when he notes that 'Hirschman, needless to say, did not ponder the possibilities of "scream" as opposed to "voice" when dissatisfaction is rampant and cannot be mitigated under the present socioeconomic and political system through legal channels open to the economic actors' (1990, p. 19). Voice in Hirschman's theory of EVL is an ambiguous concept, because it is not differentiated according to its relation with existing rules. However, it should not be forgotten that voice is part of destructive power, since social conflicts have an integrative function and allow interaction among groups and nations who otherwise would never communicate (see Coser 1956, 1967; Mazrui 1969). Different types and degrees of voice can be studied in the context of destructive power. But, in contrast with Hirschman's approach, my analysis of destructive power will be based on its relationship with the existing rules.

CONCLUSION

In this chapter, I examined my conception of destructive power. I started by clarifying that destruction is not understood on a moral basis. Moreover, contrary to Nozick's moral theory of choice, destructive value (disvalue) is not distinguished from creative value with regard to ethical considerations. Creative and destructive values (disvalues) are both understood as instrumental value. I then distinguished between endogenous and exogenous destructive powers and underlined that only endogenous destructive power, and particularly social (self-)destructive power, would be my main target of investigation. Social (self-)destructive power includes both violent and non-violent forms of activity. Reviewing 'rational' conflict theory and political instability models, I concluded that these theories, based upon the rationality and maximizing assumptions, generally provide no internal explanation for real destruction and violence. In rare cases where an explanation of violence and real destruction is suggested, it is reduced to asymmetric information or random events. The unpredictable character of social destructive behaviour is a rudimentary truth, and a reference to randomness of political events is very far from any serious analysis of the phenomenon. Asymmetric information is perhaps a logical explanation for the emergence of violence and real destruction, but it cannot be a great help in understanding the nature of major wars such as the two world wars. In fact, conflict theory and political instability models have not

overcome the neoclassical inability to reconcile social conflicts with rational maximizing behaviour of individual agents.

Commons's institutional approach and Hirschman's theory of EVL share in common the rejection of the neoclassical assumptions of rationality and maximizing behaviour. Nevertheless, neither the 'two-sided collective action' of Commons, nor Hirschman's theory of voice capture 'scream' or voice against the existing rules. I also reject the maximizing assumption and *ex ante* rationality of individual agents, while I consider that *ex post* rationality is reconcilable with a historical approach. Contrary to Commons and Hirschman, in my opinion, a general theory of destructive power should include not only social conflicts within the existing social rules (or market rules) but also those that undermine these rules.

3. The social nature of destructive power

INTRODUCTION

Destructive power has been studied from different angles. In the preceding chapter, we noted that in rational conflict theory, general equilibrium models of political instability, rational expectations models of domestic violence and other strands of the neoclassical approach, rational behaviour is incompatible with real destruction and violence. Even in an equilibrium competitive market economy with rational agents choosing between appropriative and destructive activities, there would not be real destruction or violence. Hence, real destruction can originate from random events, asymmetrical information, or disequilibrium. Following Pareto (1935), many economists believe that real destruction as a manifestation of irrational behaviour should be the object of sociological studies. For example, in his theory of revolution and war, Pareto distinguishes between two different types of qualities or 'residues', namely 'combination-instincts' and 'group-persistence'. According to him, the governing elite of the democracy is rich in the so-called 'combination-instincts'. This term means that they are materialistic and individualistic, innovating and risk-taking, pacific and reliant on persuasion and guile (*combinazioni* in the Italian sense) rather than on force. They are the 'Athenians' or 'foxes', while those governing Byzantium are the 'Spartans' or 'lions'.⁵⁴ However, for ruling, it is also necessary to possess group-persistence instincts implying the use of force and violence to defend one's own interests. Revolution and defeat in war can be explained by a disequilibrium in the necessary proportions between these two different qualities: '[I]n the long-run the differences in temperament between the governing class and the subject class become gradually accentuated, the combination-instincts tending to predominate in the ruling class, and instincts of group-persistence in the subject class. When that difference becomes sufficiently great, revolution occurs'. By the same token, 'If the combination-instincts are reinforced in a given country beyond a certain limit, as compared with the instincts of group-persistence, that country may be easily vanquished in war by another country in which that change in relative proportions has not occurred' (Pareto [1935] 1963, vol. IV, section 2179, p. 1517). The group-persistence instincts, in contrast with combination instincts, are not consistent with economical calculation,

but they are essential in ruling. The study of these instincts belongs to the realm of non-rational behaviour or sociology.

Crane Brinton is particularly inspired by the Paretian equilibrium approach in defining revolution as 'a kind of fever' ([1938] 1952, p. 16). He depicts a 'society in perfect equilibrium' as a society in which every citizen has, at a given moment, all that s/he could possibly desire and lives in a state of absolute contentment. As new desires arise, or as old desires grow stronger in various groups, or:

[as] environmental conditions change, and as institutions fail to change, a relative disequilibrium may arise, and what we call a revolution break out. We know that in the human body, for instance, the disequilibrium we call disease is accompanied by certain definite reactions which tend to restore the body to something like what it was before the onset of the disease. It seems quite likely that in a social system in disequilibrium there is something of the same kind of reaction toward the old conditions, and that this helps explain why revolutions do not turn out entirely as revolutionists want them to. Old adjectives tend to re-establish, and produce what in history is known as the reaction or restoration. In social systems, as in the human organism, a kind of natural healing force, a *vis medicatrix naturae*, tends almost automatically to balance one kind of change with another and restorative change. (ibid., pp. 15–16)

In this approach, destructive power is not only a symptom of crisis and disequilibrium, but also a transitory state to a new equilibrium or a self-curing mechanism which inevitably restores the old equilibrium.

Social Darwinism and structural/functional approaches stress the importance of violent or destructive behaviour in selection, adaptation or survival mechanisms. Merton's (1957) theory regarding the sociology of 'deviance', and further developments of this theory by Cloward and Ohlin (1964) as well as the Chicago sociologists (Burgess and Park 1921; Sellin 1938; Vold 1958 and so on),⁵⁵ depict violence or interpersonal aggression either as a survival instinct or an expression of frustration or as a cultural conflict. Merton's theory of deviance is based on the idea that low economic integration causes stress and that people respond by violating cultural goals or structurally acceptable means. Societies with a high level of structural dysfunction should show a high rate of norm violations. Merton enumerates five modes of stress resolution: conformity, innovation, retreatism, ritualism and rebellion. Rebellion refers to a stress adaptation whereby cultural goals and acceptable means are rejected, but new goals and means are advocated. Merton implicitly assumes that people who do not have access to legitimate means may resort to illegitimate ones. Contrary to Merton, Cloward and Ohlin (1964) argue that access to illegitimate means also requires some skill and knowledge. A juvenile must learn how to be a successful thief. Not all people who lack legitimate opportunities possess illegitimate ones. Some people lack

both and are referred to as 'double failures' by Cloward and Ohlin. Based on Merton's critique, they formulated a theory of adaptation. They argue that most juveniles who are subject to double failures express their frustration in interpersonal aggression. Burgess and Park (1921) also underline the role of violence in social adaptation and survival. However, their analysis is more in tune with social Darwinism. According to them, social groups strengthen their internal coherence in time and become increasingly stable. But this increased stability weakens their ability to change and adapt to a changing environment. In such circumstances, wars and conflicts, like natural death, function as mechanisms to destroy old and unadaptable organisms. This destruction enhances a process of differentiation allowing new developments in new and unknown directions. In other words, real destruction and violence are necessary to overcome rigidities and abnormalities. Finally, the cultural conflict thesis, which was developed by the early Chicago school, conceptualized cultural diversity as a cause of deviance and crime. As the norms of ethnic groups frequently conflict with the law, those who adhere to traditional ethnic norms frequently violate contemporary laws (Sellin 1938). Inspired by this idea, Vold (1958) argues that criminal behaviour is frequently an expression of values which clash with the law. When one group has the power to transform its values into laws, it has the power to make criminals out of those who behaviourally express conflicting values. Although Vold does not focus on the stable conflicts in modern capitalist societies such as those between employers and workers or racial conflicts, in his approach, violence is indirectly related to power relationships.

Social conflicts as part of power relationships is another approach formulated by Ralf Dahrendorf (1958, 1959) and further developed by Turk (1969). While Marx emphasized ownership of the means of production, Dahrendorf underlined power as the major social division. Furthermore, although Marx claimed that power stems from ownership of the means of production, Dahrendorf contends that in contemporary industrial society, power is usually divorced from ownership of the means of production and is based on institutional authority. Dahrendorf focuses on the division between those who have and those who do not have authority to control behaviour in institutional structures. Moreover, he argues that authority relationships in one institution, for example in economy or property relationships, do not necessarily coincide with authority relationships in other institutions, such as education, religion or government. Following Dahrendorf, Turk (1969) does not associate power either with ownership of the means of production or with economic status. He particularly investigates legal conflict and criminalization. His conclusions may be summarized in six propositions: (i) conflict between authorities and subjects occurs when behavioural differences between authorities and subjects are compounded by cultural differences; (ii) the more probable the

conflict, the more organized are those who have an illegal attribute or engage in an illegal act; (iii) the more probable the conflict, the less sophisticated the subjects; (iv) the probability of enforcement of legal norms increases as the congruence between the cultural and behavioural norms of authorities increases; (v) the lower the power of the resisters (subjects), the higher the probability of enforcement; and (vi) the lower the realism of the norm violators (resisters), the higher the probability of enforcement. Turk's pluralistic conflict theory is a combination of cultural conflict theory (Vold 1958) and Dahrendorf's power theory. In this approach, conflict is considered to be part of power relationship.

Equilibrium theory, social Darwinism and sociological approaches of deviance treat destructive power and violence as a crisis, a disequilibrium, a deviant behaviour of individuals or groups in order to survive and to adapt to a changing environment, frustration, cultural diversity or power relationships. Although all these approaches highlight some particular aspects of destructive power, the peculiar significance of destructive power resides in the fact that it is an essential dimension of collective action. In other words, I do not treat destructive power as a symptom of crisis, disequilibrium, irrationality or deviance, but as a major force of social integration. Consequently, in this chapter, I shall show the social nature of destructive power by analysing its role in constructing social order, in enforcing rules, in changing rules and in developing communication. Finally, I shall investigate the nature of destructive power as a 'public' or 'private' good; and I shall demonstrate that the frontier between public and private cannot be drawn on the basis of *intrinsic* qualities of destructive power, since it is the ultimate force which decides the establishment and enforcement of rules.

DESTRUCTIVE POWER AND SOCIAL ORDER

Praxeology as the method of political economy begins with the *Wealth of Nations*, and its imaginary construction builds upon Robinson Crusoe living on an isolated island before the arrival of Friday. For von Mises (1949), and Hayek (1976), the self-sufficiency of Crusoe and his isolated island resemble a communist oasis and its autarchic system which von Mises refers to as the 'praxeological character of socialism' (1949, Part V, ch. xxv). In his viewpoint, the liberal Manchester school advocates international division of labour and free exchange. This cannot be done within an autarchic economy. While a socialist economy requires the intervention of a powerful and omnipresent state, an open or liberal economy enhances international exchange and minimizes the role of state intervention to that of protection of people's security against bandits and thieves. In a chapter on 'War economy', von Mises argues

that the instauration of division of labour on an international scale should cause the ‘total elimination of wars’ and concludes the ‘uselessness of war in a liberal economy’ (1949, ch. xxxiv). In his viewpoint, state interventionism engenders economic nationalism which in turn leads to warmongering. Although praxeology may be used to justify a ‘communist oasis’, it has always been an apology for an individualistic conception of the rational, egoistic and calculating economic agent. *Homo oeconomicus* behaves as a self-interested atom of a market economy.⁵⁶ But against whom, except himself, can such an atomized individual resort to violence or destructive power? Crusoe in his isolation has no destructive power; he has only creative power. However, with the arrival of Friday, the destructive power of both Crusoe and Friday comes into being. The praxeology of destructive power cannot be individualistic; it is from the onset a social praxeology. As a self-interested atomized member of a market economy, one may disregard the interests of others or be completely indifferent to their destiny as long as one’s interests are not at stake. But one cannot ignore the social consequences of any individual or social group because of her/his/their power to destroy.⁵⁷ The distinguishing feature of destructive power as a social action may be put in these terms: it does not let others forget that what happens to you should concern others as well. Beneath Hobbes’s *Leviathan*, there exists such a social praxeology, which he calls the first and the second fundamental laws of nature:

And because the condition of Man, (as hath been declared in the preceding Chapter) is a condition of Warre of every one against every one; in which case every one is governed by his own Reason; and there is nothing he can make use of, that may not be a help unto him, in preserving his life against his enemyes; It followeth, that in such a condition, every man has a Right to every thing; even to one anothers body. And therefore, as long as this naturall Right of every man to everything endureth, there can be no security to any man, (how strong or wise soever he be,) of living out the time, which Nature ordinarily alloweth men to live. And consequently it is a precept, or generall rule of Reason, *That every man, ought to endeavour Peace, as farre as he has hope of obtaining it; and when he cannot obtain it, that he may seek, and use, all helps, and advantages of Warre.* The first branch of which Rule, containeth the first, and Fundamental Law of Nature; which is, *to seek Peace, and follow it.* The Second, the summe of the Right of Nature; which is, *By all means we can, to defend our selves.* (Hobbes [1651] 1985, ch. 14, pp. 189–190)

Law and all legal rules of conduct are, in the last analysis, derived from the power relationship or the use of physical force. Destructive power is the foundation of rules, and its various types can be classified according to their specific position with regard to rules. In a broad sense, destructive power can be grouped in three general categories:

1. Dominant, legal, state or international power which contributes to the

construction of domestic or international social order. It establishes the rules, and partakes in enforcing them.

2. Revolutionary or anti-systemic power which tries to change the existing rules and replace them with others.
3. Criminal power, which tries to deviate from dominant or official rules and not to be subject to their implementation.

While the first type of destructive power is defined and often legitimized by the existing dominant rules, the revolutionary destructive power is characterized by the fact that it undermines the existing rules and treats them as illegitimate. Criminal power can also be defined as a lack of respect for the rules. However, there is a great difference between revolutionary and criminal destructive powers: 'I may wish to change the rules of the game, as the revolutionary does, or to *make an exception for myself*, as the criminal does; but to deny them on principle means no mere "disobedience", but the refusal to enter the human community' (Arendt [1969] 1970, p. 97, added emphasis). Historical and sociological studies show that even in the case of criminal activities, the question is not 'to make an exception to rules' for oneself, but rather to follow an alternative local or unofficial rule instead of a central, official rule. One good example is the Mafia. According to Hobsbawm,

[A mafioso] recognized no obligation except those of the code of honour or *omertà* (manliness), whose chief article forbade giving information to the public authorities. In other words *mafia* . . . was the sort of code of behaviour which always tends to develop in societies without public order, or in societies in which citizens regard the authorities as wholly or partly hostile (for instance in jails or in the underworld outside them), or as unappreciative of the things which really matter (for instance in schools), or as a combination of both. (1959, p. 32)

In this case, the situation is close to 'lawlessness', or rather to a Hobbesian state in which the relations between individuals or small groups are like those between sovereign powers. The historical development of the Mafia under a central state also testifies that the existence of this organization is related to what is called a 'parallel system'. Undoubtedly, the Mafia's period of greatest glory comes after 1890. Sicilian peasants have throughout history lived under the double yoke of a remote and generally foreign central government and a local regime of slave or feudal lords; since theirs was *par excellence* the country of the *latifundium*. They were never, and could never be, in the habit of regarding the central government as a real state, but merely as a special type of brigand, whose soldiers, tax-gatherers, policemen and courts fell upon them from time to time. Their life was lived 'between the lord with his strong-arm men and parasites and their own defensive customs and traditions. In a sense, therefore, something like the "parallel system" must always have existed, as it

exists in all backward peasant societies' (ibid., p. 36). Although, this parallel system was not yet the Mafia, it was the foundation on which this organization grew. In other words, even in the case of organized crimes, the question is not one of the absence of rules or code of honour but rather of a private code of honour and rival rules of conduct.

The distinctive feature of destructive power is that while it does not depend on law (or in Russell's terminology, it is a 'primary' force), and conditions the exercise of law, its effective use requires discipline, order, hierarchy and obedience. In a Hobbesian state, there is obviously no central state. But each rival group should maintain a hierarchical structure within itself and the victory of one contending group over the others depends on the degree of discipline and obedience of its members to authority. The necessary condition of survival and victory is to strictly follow the code of honour and rules of conduct within the organization. Hence, although destructive power is the foundation of rules, naked power (or pure military power) is not sufficient to institutionalize power. Production of rules is part of the process of institutionalization of destructive power and requires the cultural, and legitimizing intervention of moral power. Russell attaches special concern to this difference when he tackles the relation between 'power and moral codes' ([1938] 1971, ch. xv). Naked power lacks moral, ideological or legal legitimacy. A legitimate power is an institutionalized one, and it can be derived either from social imitation or social innovation. Traditional power is rooted in *imitation* and social routines and can be best defined as the power of traditions, customs or established social norms or conventions. Tradition has great power to shape our preferences and to direct our desires. When a certain type of power or rule becomes traditional, then its exercise becomes automatic and does not encounter strong resistance. Traditional power is, moreover, a type of power which does not need to be secured and knows no traitor due to its strength and stable position. A second major source of power, in contrast with traditional power, is *innovation*.⁵⁸ It creates an unknown or revolutionary power which can both change our preferences and bring together separate and sometimes contradictory forces belonging to the old and new social orders. Naked power is the ultimate force of both traditional and revolutionary powers, but it is not sufficient for the creation of rules. Hence, destructive power is relevant in social integration, the enforcement of and change in rules, but not in the production of rules.

Of course, destructive power is only one of the three forms of power, and an exhaustive study of the production, enforcement and change of rules requires an analysis of creative power and moral power as well. However, the purpose of this book is not to examine collective action in all its three dimensions. Thence in this section, I shall limit myself to the role of destructive power in creating social order.

There are three major channels through which destructive power contributes to social integration: (i) extensive social integration and empire-building; (ii) territorial separation, nation-building and public order; and (iii) coordination and redistributive mechanism.

Extensive Social Integration and Empire-building

Throughout history, military power has had a more extensive range of influence than the range of either state control or economic production. This point has been thoroughly substantiated by Lattimore (1962) in his outstanding historical study regarding the relations between China and Mongolian tribes. He distinguished three radii of extensive social integration, which remained relatively invariant in world history until the fifteenth century.

The most geographically extensive is *military action*. The striking range of military action can be divided into inner and outer actions. Inner action is limited to territories which can be added to the state after conquest, whereas outer action is extended beyond such frontiers in punitive or tribute raids.⁵⁹

Thus the second radius, *civil administration*, namely the state, is less extensive, since its superior limit could be the inner radius of military action, while it is often far less extensive than this.

Nevertheless, the radius of civil administration is longer than that of *economic integration* which is the third radius. The reason is that this form of integration reaches at maximum to the region and at minimum to the cell of the local village market due to the feeble development of interaction between economic units of production. Although Chinese merchants could trade beyond the effective range of the empire's armies, the extent of communication and transport development could not allow them to trade other goods than those with a high value-to-weight ratio (that is, true luxury items) and 'self-propelled' animals and human slaves. Thus long-distance trade was largely limited to luxury goods or slave trade. The integrating effects of this type of trade were negligible.

Thus, for a long historical period, extensive integration was dependent on military and not economic factors (ibid., pp. 480–91, 542–51). Figure 3.1 shows the difference between the three radii of extensive integration.

Put algebraically, we can denote different radii of military, administrative (state) and economic integration as follows:

- R_1 = radius of outer zone of military integration;
- R_2 = radius of inner zone of military integration;
- R_3 = radius of civil administration; and
- R_4 = radius of economic integration.

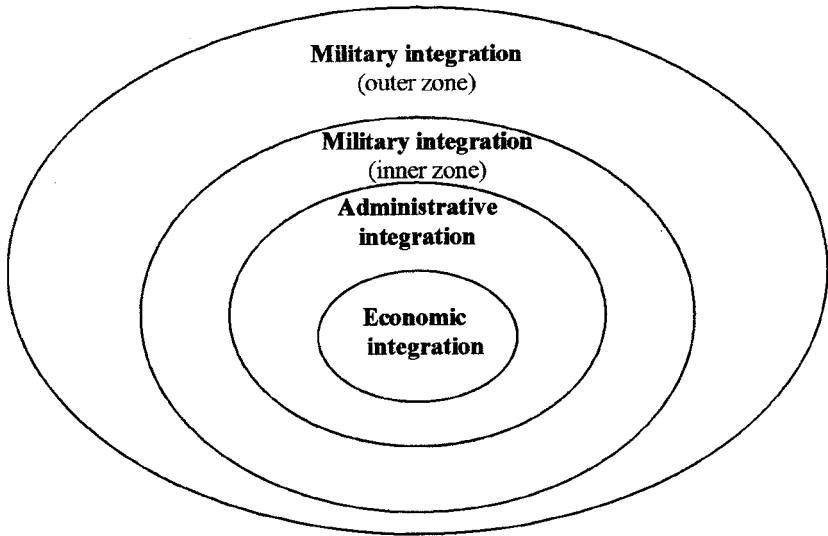


Figure 3.1 Economic, administrative and military ranges of extensive integration

We have: $R_1 > R_2 \geq R_3 > R_4$.

Now, if we define the effectiveness of military action (or destructive power) by $F(R_1)$, and the effectiveness of economic action (or creative power) by $F(R_4)$, then we can say that:

$$T_M = F(R_1) = a \Pi R_1^2,$$

where a is a constant coefficient, T_M defines the territory that the tribe or nation can conquer, and R_1 is the radius of a circle centred on the original point, the home base or the tribe, and its length measures the outer zone of military action. In this way, the integrative power of military action is measured in terms of territorial expansion. The integrative power of economic (productive) action can also be measured in terms of the territory occupied or integrated by economic activity:

$$T_E = F(R_4) = b \Pi R_4^2,$$

where b is a constant coefficient, T_E defines the territory that the tribe or nation can use or integrate economically, and R_4 is the radius of a circle centred on the original point, the home base or the tribe, and its length measures the zone

of economic integration. Given that: $R_1 > R_4$, we have $a \Pi R_1^2 > b \Pi R_4^2$, and thus $T_M > T_E$.

Lattimore does not suggest any modelling, but Michael Mann tries to measure the extension of military power by borrowing from logistics, the military science of moving personnel and supplies while campaigning. An army or a navy is akin to a mobile city that has to be fed, clothed and armed from reasonably stationary sources. This indicates that the means of destruction have a cost of transport, which increases with the distance from the sources of supply. Evaluating the cost of transport, Mann (1986, ch. 5) estimates that throughout ancient history the maximum unsupported march practicable for an army was about 90 kilometres. For instance, if a powerful military power is located 300 kilometres from its base country, the natives of the country situated under the influence zone of such an army may comply externally with the dictates of the army (supply annual tribute, send young men and women as 'hostages' to be 'educated' at its courts and so on). However, their daily life cannot be constrained by the army. In other words, an army can dominate an area, but it cannot necessarily institutionalize its domination. That is why Mann distinguishes between the early empires of domination and the territorial empires. The institutionalization or stabilization of military conquest requires other factors, such as ruling-class culture and internal cohesion, class ideology, literacy, language, script, religious, cultural or ideological and moral legitimacy, and a certain level of economic integration. The political radius of practicable rule by a state is smaller than the radius of a military conquest: 'An army achieved success by *concentrating* its forces . . . But ruling over those who had submitted involved *dispersing* force, which was throwing away the military advantage. No conqueror could eliminate this contradiction. An empire cannot be ruled on horseback – as Genghis Khan is reported to have said' (ibid., p. 142). The cost of transport of the means of destruction per mile is a very important factor in explaining the size of both states and empires. Boulding calls this difficulty the 'loss of power gradient' (Boulding 1989, ch. 2).

The main historical orientation of military innovations can be summarized in the production of more mobile destructive means. This orientation can be seen throughout history from ancient marcher lords, cavalry, chariots, to medieval infantry, up to the invention of powder, rifles, cannon in modern times, and finally the development of new aviation, submarines, ballistic and continental nuclear missiles, rockets and other sophisticated non-conventional destructive means (including, for example, the US Star Wars project). Historically, the range of extensive integration of destructive power has been larger than that of creative power. It is true that economic integration is more profound and intensive than military integration, since it penetrates every aspect of people's daily life, however military integration is more extensive

and does not necessarily change the mode of production and distribution. Given the limits of economic integration before the development of capitalism, extensive integration was more practicable than intensive integration. This explains why military power was the basis of early empires. Empire-building was related to the outer zone of military striking power, whereas the economic factor was less extensive in social integration. The essential ingredients of social integration can be found in the cohesion or solidarity of the conquering tribe or nation or bonds of *assabiya* (according to Ibn Khaldun's terminology⁶⁰) based on social docility and loyalty on the one hand, and 'compulsory cooperation' (Mann 1986),⁶¹ on the other. Following Alesina et al. (1997) and Wittman (1991), we can add two other factors in empire-building: the socio-economic as well as military advantages of the large size (economies of scale) of the empire⁶² and the high density of its population (especially the number of inhabitants). It is perhaps more accurate to consider the 'military participation rate' (MPR) than population density. This indicator, invented by the sociologist Stanislaw Andreski (1968), is used by the military historian John Keegan (1993) in order to measure the fraction of a population engaged in military activities.

However, the MPR indicator is not sufficient to capture the relative military effectiveness of different tribes or nations. This military effectiveness depends on the type of military skills necessary to use military means as well as the level of military technique. For example, in past times, nomadic tribes were more apt for military activities, since hunting, riding and other similar skills were part of their normal life or creative activity. Borrowing North's terminology, they had a 'comparative advantage in violence' (North 1981) and their destructive activity could engender positive externalities to their creative activity.

Modelling the territorial expansion and the limits of an empire, Findlay (1996) defines an influence function $r(A)$ which depends on the relative military efficiency of the tribe. He argues that 'it is clearly not just the relative military efficiency but *the entire structure of the two economic systems and ways of life*' that 'determines the fraction of the radius and hence the relative size of the territory that each side controls in this balance of power' (ibid., p. 44, added emphasis). In other words, $r(A)$ does not determine the extent of an empire. What Findlay fails to consider, is that before the development of capitalism, economic integration was far less limited than military integration. Hence the extension of the empire was principally dependent on military efficiency, and not on economic structure.

The importance of military power in social integration is such that the etymology of 'society' gives credence to the idea that society was historically perceived as a military alliance:

Let us examine the etymology of ‘society’. It derives from the Latin word *societas*. This elaborated *socius*, meaning a non-Roman ally, a group willing to follow Rome in War. Such a term is common in Indo-European languages, deriving from the root *sekw*, meaning ‘fellow’. It denotes an asymmetrical alliance, society as a loose confederation of stratified allies. (Mann 1986, p. 14)

While a number of neo-Schumpeterian studies have justifiably emphasized the role of trust in networking relationships (Freeman 1994, p. 471), the role of destructive power and fear is often neglected. In fact, military supremacy is a strong foundation for networking. Like the ancient Roman Empire, the new American empire also attracts many countries all over the world who prefer to be among American ‘allies’ than American ‘opponents’.

However, Findlay’s remark is completely justified if we study the stabilization or institutionalization of domination. In this case, the extent of integration, or the size of an empire does not solely depend on military efficiency, but on the economic and political structure as well as the ideological and moral cohesion of the ruling class. The distinction between ‘empires of domination’ and ‘territorial empires’ (Mann 1986) alludes to this difference between two different levels of integration. It is easier to dominate a region because it depends solely on a country’s military striking force. But it is very difficult to stabilize the power, since it depends on the whole economic and moral structure of that country. To show this relation, I develop a simple model, which integrates Lattimore’s intuition and Mann’s distinction between empires of domination and territorial empires.

Suppose that:

$$T_M = F(R_1) = a \Pi R_1^2, \quad (3.1)$$

$F(R_1)$ represents the military effectiveness and it does not necessarily depend on the size of the army (the number of warriors), and can be augmented by military innovations.

Moreover, we define:

$$T_E = F(R_2) = b \Pi R_2^2. \quad (3.2)$$

$F(R_2)$ represents the economic effectiveness and it does not necessarily depend on the size of the producers, and can be augmented by economic innovations.

Given that: $R_1 > R_2$, we have:

$$a \Pi R_1^2 > b \Pi R_2^2, \text{ and thus } T_M > T_E \quad (3.3)$$

The cost of transport (per mile) of the means of destruction is a very

important factor in explaining the limits of the military zone of influence or what Boulding calls the ‘loss of power gradient’. This cost is measured by $w_c (R_1)$, where w_c denotes the amount of wages of carriers (per mile) of the military devices, and its total amount depends on the distance over which the means of destruction are carried. We suppose that the total amount of wages of producers per mile (w_p) is equal to the total amount of wages of carriers per mile, namely $w_c = w_p = w$. The cost of producing over a certain distance, of R_2 , for example, would be $w_p (R_2)$. If the price of every square mile of produced territory is $P = 1$, then the budget constraint of the emperor to pay both the carriers of means of destruction and the producers can be defined as follows:

$$b \Pi R_2^2 = w/p R_1 + w/p R_2. \quad (3.4)$$

The emperor tries to maximize the territory of his empire and hence he maximizes (3.1) under the constraint of (3.4).

We write the Lagrangian:

$$\mathcal{L}(R_1, R_2, \lambda) = a \Pi R_1^2 + \lambda (b \Pi R_2^2 - w/p R_1 - w/p R_2). \quad (3.5)$$

Then, we have:

$$d\mathcal{L}/dR_1 = 0, R_1 = [w/p (\lambda)]/ 2a \Pi \quad (3.6)$$

$$d\mathcal{L}/dR_2 = 0, R_2 = (w/p)/ 2b \Pi. \quad (3.7)$$

Replacing (3.6) and (3.7) in (3.4), we have:

$$\begin{aligned} b \Pi R_2^2 &= w/p \{ [w/p (\lambda)]/ 2a \Pi \} + w/p [(w/p)/ 2b \Pi] \\ \lambda &= a/b [(2b^2 \Pi^2 R_2^2)/(w^2/p^2) - 1]. \end{aligned} \quad (3.8)$$

Replacing (3.8) and (3.2) in (3.6), we have:

$$R_1 = [(b \Pi T_E)/(w/p) - w/p]/ 2b \Pi. \quad (3.9)$$

From equation (3.9), it can be deduced that the size of the empire (R_1) is directly related to the size of surface economically integrated (T_E), and inversely related to the transportation cost of the means of destruction (w/p). In other words, the limit of a territorial empire, that is, an institutionalized empire, is decided by creative power and the loss of power gradient due to the cost of transport. Adopting Mann’s terminology, we can interpret the maximum boundary of an empire as the optimal point at which any further extension of military

power will cause a fragmentation of concentrated power. Owen Lattimore also notes that the optimum limit of an empire is the point at which ‘centripetal gain, accordingly, was converted into centrifugal loss’ ([1940] 1960, p. 242).

The important conclusion that follows is that while extensive integration depends on destructive power, intensive integration (or institutionalization) of power depends on creative (and moral) power. That is why it is easier to dominate than to rule (that is, to stabilize the power). As the Italian politician Camillo Benso Cavour once said: ‘One can lean on a bayonet, but one cannot sit on it’. For example, the occupation of Afghanistan by the Russians in 1979 and by the Americans in 2002 was much easier than the instauration of a stable regime in that country. The second Gulf war ended in effect after just three-and-a-half-weeks. However, the reconstruction of Iraq, a task that experts have said could cost \$25 billion to \$100 billion (Becker and Opiel, 2003, p. 4), will likely take many years. In fact, for years, conservative politicians in the United States have looked at peacekeeping as a diversion from the main task at hand: fighting and winning the nation’s wars. But that was before the Bush administration made the pre-emptive use of military force and ‘regime change’ the heart of its foreign policy. As Michael Gordon (2003, p. 4) rightly remarks, ‘Officials who dismissed the value of peace keeping are now committing American forces here to “peace enforcement” operations to stabilize the country and lay the foundation for a new Iraqi government.’ But creating a new order requires new alliances, and cannot be carried out only through the use of destructive power. While the Bush administration could easily manage a war against Iraq without United Nations approval, the creation of a new order both in Afghanistan and Iraq is impossible without the participation of at least the European countries. In an article, entitled ‘Rejecting the world’, Paul Krugman (2003, p. 6) pinpoints the danger of Bush’s policy of ignoring ‘global effects’:

The green house effect is a quintessentially global issue – fine, we’ll deny that global warming exists. Fighting stateless terrorists demands global cooperation – fine, we’ll fight terrorists by mounting a conventional war against a regime that, nasty as it was, had nothing to do with the terrorist attacks . . . Even, in Iraq, we’re starting to see that winning the war was the easy part, and U.S. officials – previously dismissive of ‘old Europe’ – are suddenly talking about an international peace keeping force. But to be effective, such a force, like the one in Afghanistan, would surely have to include French and German soldiers.

By the same token, one can say that it is usually easier to be in opposition than to be in power, since the former requires the use of ‘critique power’ (resembling military or destructive power), whereas governing requires the use of ‘stabilizing power’ (resembling creative or constructive power). This explains why ruling or established parties in Europe tried hard to bring Green

parties into parliaments or governments at the end of the twentieth century; the same thing happened in the case of socialist parties at the beginning of the twentieth century. Sometimes when opposition parties are determined to overthrow ruling parties, and their victory seems to be close, ruling parties adopt a ‘scorched earth policy’, which aims at undermining the creative power necessary for stabilizing destructive power of the future opposition government.

The French historian Fernand Braudel also noted the importance of economic integration in empire-building and formulated a new concept, namely ‘*économie monde*’ (world-economy) comprising different social, cultural and economic orders. In his opinion, ‘*économie mondiale*’ (world economy) and *économie monde* (world-economy) should not be confused. While world economy is an expression applied to the whole world, ‘[a] world-economy . . . only concerns a fragment of the world, an *economically autonomous* section, which is capable of being self-sufficient in itself for essentials, and whose links and internal exchanges endow it with a certain organic unity’ (1979, vol. 3, p. 12; see also, 1985, pp. 84–5). A similar difference is emphasized by Wallerstein (1991), who tells us that he ‘arrived at the theory of the world-economy while looking for the largest units of measurement which could still be coherent’ (*ibid.*, p. 70). Braudel and Wallerstein emphatically deny that there was any such ‘coherent’ world economy before very recent times. Accordingly, Braudel claims: ‘However, with modernity, the economic primacy becomes more and more weighty: it directs, it disrupts, and it influences other orders’ (1979, vol. 3, p. 36). In fact, with modernity the radius of economic integration has become longer than that of civil administration, and in this sense the world market (or world economy without a hyphen) has surpassed ‘national’ (the basis of modern civil administration) boundaries. Given the importance of globalization, military action in its inner stretch is not more extensive than economic integration. None the less, the outer range of military action is more extensive than economic integration due to great progress and precision in military techniques that have brought the remotest countries and even isolated caves within the reach of destructive power.

Territorial Separation, Nation-building and Public Order

Historically, war has had two major functions: one is to create empires or to pursue an imperialist policy, namely to subordinate (or to annex) other states or regions to a central authority. The other is to change or protect the boundaries of states. As Walter Bagehot notes: ‘It is war that makes nations . . . the idea of an indestructible nation is a modern idea; in early ages all nations were destructible, and the further we go back, the more incessant was the work of destruction’ (1956, p. 57). The role of military power in territorial separation

and nation-building is largely documented by historians. The borders of most of the states of modern Europe were decided by battles in a context of three variables, that is, 'territorial acquisition', 'border control' and 'penetration' (Finer 1974, pp. 93–6). The first one refers to the balance of military power between a centre and peripheral territories which it was seeking to control and incorporate into its own system. The second one alludes to the resources that are external to its own boundary which the existing territory could call upon, notably from another master system. The third one involves the balance of military power between one centre and another as a consequence of which a territory which was peripheral to both could secede from both and become a master system of its own. A historical study of the surviving fiscal records of the British state during the seventeenth and eighteenth centuries indicates that:

[T]he functions of the state appear overwhelmingly *military* and overwhelmingly *geopolitical* rather than *economic* and *domestic*. For more than seven centuries, somewhere between 70 and 90 percent of its financial resources were almost continuously deployed in the acquisition and use of military force. And although this force might also be used for domestic repression, the chronology of its development has been almost entirely determined by the incidence and character of international war . . . The 'modern state' had arrived, the product of the developments often called the Military Revolution – professional and permanent armies and navies. Even as late as 1815 its public civil functions were negligible in financial terms.' (Mann 1986, p. 511; for a detailed analysis see Mann 1993, chs 3 and 11)

The primacy of geo-political over economic and domestic factors in state-building undermines Marxist or functionalist theories that assign the state's main function to the regulation of its internal 'civil society'. Skocpol's insistence on the international system (Skocpol 1979) seems to be more appealing in explaining the creation of nation-states. The merit of her thesis is that it does not explicate political history by economic determinism.

It is a historical fact that the number of nations has increased since 1871, while their size has decreased drastically. In 1871, after the first German unification, there were 64 independent countries in the world (outside Sub-Saharan Africa). By the beginning of the First World War, the number of independent countries was reduced to 59, but at the end of the war and by the time of the Versailles Peace Treaty, it had expanded to 69 (including Sub-Saharan Africa). After the Second World War, in 1946, this number reached 74, and by 1950, it increased to 89. After the collapse of the Soviet Empire and with the separation of ex-Czechoslovakia and the disintegration of ex-Yugoslavia, the number of independent countries in the world reached 192 in 1995.

According to Alesina et al. (1997), in 1995, 87 countries had less than 5 million inhabitants, 58 less than 2.5 million and 35 less than 500 000. These authors explain the increase in the number of states and the decrease in the size

of countries by 'economic integration' due to free trade. Their main thesis is that trade openness and political separatism go hand in hand, and that economic integration leads to political disintegration. Alesina and Spolaore (1997) also argue that there is a tendency towards political separatism with economic integration. They explicate this tendency by a certain trade-off between the benefits of large jurisdictions and the costs of heterogeneity of large and diverse populations. This thesis should not be confused with another thesis advocated by many historians (see, for example, Braudel 1979; Chaunu 1969a,b) which suggested that European political fragmentation and the development of free and trading cities paved the way for the emergence of capitalism and economic integration.

Although in both theses, the political fragmentation is related to economic integration, the causality direction is different. In the recent literature of new political economists, economic determinism is a leading principle, and thus it is economic integration that causes political disintegration, whereas historians suggest an inverse relationship, namely the possibility of economic integration due to political fragmentation.

The analysis of the increasing number of nations also indicates that the disintegration of empires was not engendered by free trade, but by war and political upheavals and revolutions.⁶³ The wars of the French Revolution marked the transition to the nation-state defined by common language and culture. The wars of the twentieth century were caused by the disintegration of the Habsburg and Ottoman empires, the challenge to the dominance of Europe, and the end of colonialism. The increase in the number of nations in 1920 is linked to the fall of the Habsburg Empire and may be considered as a consequence of the First World War and not due to free trade. Since the end of the Second World War, nearly 100 new nations have come into being, many of them quite different from the historic European nation-state. The explosion in the number of nations in this period is connected to the Second World War and its impact on the fall of the British Empire. Furthermore, the creation of some nations such as Kuwait and other Emirates in the Persian Gulf was directly related to the British colonialist policy. As noted earlier in Chapter 2, the self-destructiveness of the Second World War undermined, and in some cases terminated European domination. The revolutions in China, Vietnam, Korea and Burma can be better understood in the light of the Second World War and its consequences (Skocpol 1979). Once again, the end of the British Empire or European domination was not caused by free trade, but by the world war, and by the new American supremacy. Finally, the collapse of 'really existing socialism' in the Soviet Union and the break-up of Yugoslavia have spawned another 20 nations, many of which have concentrated on re-enacting century-old bloodlusts. It is true that in this last case, the increase in the number of nations can be related to the victory of 'free-trade' capitalism over the Soviet

autarchic system. However, even in this case the creation of new nation-states has been caused by the disintegration of the Soviet Empire. The Soviet system lost in its competition with the capitalist system, partly due to the fact that its military power was not backed by a strong economy. In fact, the Soviet Empire was built on military integration and not on economic integration. The survival of this empire for several decades is a salient illustration of the power of military force in extensive integration, while its collapse gives credence to the idea that without moral and economic integration, the destructive power cannot be stabilized.

Analysing the process of the increasing number of nations shows that free trade cannot be invoked as a major driving force. The recent European Union is a counterexample where free trade and economic integration have led to a process of political integration. Not only are wars and revolutions strong explanatory factors of the rising number of nations, but also the persistence or the extinction of this large number of nations depends on the 'international political system'. As Henry Kissinger rightly remarks:

Whenever the entities constituting the international system change their character, a period of turmoil inevitably follows . . . Part of the turmoil associated with the emergence of a new world order results from the fact that at least three types of states calling themselves 'nations' are interacting while sharing few of the nation-state's historic attributes'. (Kissinger 1994, pp. 806–7)

What are these three types of nation?

First, there are states that are the ethnic splinters from disintegrating empires, such as the successor states of Yugoslavia and the former Soviet Union. Some of them are so obsessed by ancient ethnic rivalries that they totally disregard any universal concern for an international political order. Second, there are some post-colonial nations whose current borders represent the administrative convenience of the imperial powers. French Africa, possessing a large coastline, was segmented into 17 administrative units, each of which has since then become a state. Belgian Africa – formerly called the Congo, then Zaire, and now Democratic Republic of Congo – had only a very narrow outlet to the sea, and hence was governed as a single unit even though it constitutes an area as large as Western Europe. In such circumstances, the state too often came to mean the army, which was usually the only 'national' institution: 'If nineteenth-century standards of nationhood or Wilsonian principles of self-determination were applied to such nations, a radical and unpredictable realignment of frontiers would be inevitable. For them, the alternative to the territorial *status quo* lies in endless and brutal civil conflict' (ibid., p. 807). Finally, there are those nation-states that can be called continental-type states. The Indian nation, China, the United States of America and perhaps the European Union are examples of this third type of nation. The Russian

Federation is another example that includes several nations, torn between disintegration and reimperialization. These states usually unite a multiplicity of tongues, religions and nationalities. Among these three types of state, which one(s) is (are) more compatible with a free-trade regime? If we adopt the above-mentioned thesis of new political economists regarding economic integration and political disintegration, then we may predict the gradual decline of the third or continental-type of state as well as certain states of the second type and the increase in the number of the first type. In fact, these authors share the liberal doctrine that:

[N]ation-states are not necessary in a totally free market economy. Ideally, the world could be organized as a single free market area, a world market of free trading individuals. Nation-states were viewed as the second best, given the heterogeneity of individuals with different races, cultures and ideologies. According to liberal philosophy, a nation state had to be of sufficient size to form a viable unit of development but not more. (Alesina et al. 1997, p. 19)

However, it seems that continental-type states are probably the basic units of the new world order (see Kissinger 1994, ch. 31).

Although battles determined the frontiers of modern European states, the creation of nation-states in Europe as 'political associations' was based on the replacement of the Hobbesian state of lawlessness by a constitutional state. This asymmetrical situation may be explained by the fact that while in the international arena, the balance of power instead of legal order is the rule, national or domestic cohesion requires the establishment of rules and laws. The size of a nation-state, like an empire, is decided not only by the zone of its military striking power, but also by its creative and moral power to institutionalize its destructive power. That is why the victory in battles has to be conserved through legal rules and be translated into laws. Aristotle once noted the basic difference between an anarchic state and a constitutional state while discussing the peculiar situation in Crete:

[I]n Crete, while there is a certain amount of constitutional arrangement, there is really no constitution properly so called, but only a *dynasteia*, a system based on violence. The powerful men have a habit of taking bands of their friends and of the people, using these in quarrels and fights with each other, and so causing suspension of all government. And that surely is nothing less than the cessation of the state and the break-up of what we have called the 'political association'. (*Politics*, p. 93)

The creation of a constitutional state is definitely an initial phase in the long evolution of citizenship. Three different phases in evolution of citizenship should be distinguished⁶⁴ (Marshall 1963).

The first phase involves civil and *legal citizenship* or what Aristotle calls the instauration of 'constitution'. This means that the state takes over a

monopoly of the law and transforms it into state law. The monopolization of judicial powers by the modern state begins with adjudicating disputes regarding customs and privileges, and later extending to active legislation. This is not too costly because in this role the state is largely coordinating the activities of powerful groups in 'civil society'.

The second phase is *political citizenship*, during which politics becomes national politics and all other forms of politics become subordinated to it or dependent on it.

Finally, the third phase is *social citizenship*. The state extends its field of activity, starting with control over its own army, at least since the seventeenth century, and ending with state intervention in economics, as well as state planning and the creation of a welfare state (see also Mann 1993, ch. 14). This phase builds a type of state which Gabriel Tarde ([1904] 1999, p. 473) depicts as a grand general insurance company. One of the key features of this 'general insurance company' is its general monopoly over the exercise of coercion power:

The precision and effectiveness of the regulation of the use of condign power are, perhaps, the clearest index of the level of civilisation in a community . . . Anarchy, such as that in modern Uganda or in Lebanon in the early 1980s, is principally marked by the unrestrained exercise of condign power both inside and outside the formal structure of government. (Galbraith 1983, p. 83)

Uganda and Lebanon are modern equivalents of Crete in Aristotle's epoch. The end of the twentieth century and the beginning of this new century have witnessed a proliferation of Crete-type situations or Hobbesian states of lawlessness. Instead of the state's monopoly of military power, 'warlords' and private magnates of military power have emerged in Sudan, ex-Yugoslavia, Albania, Colombia, Afghanistan, North Caucasus, Chechnya, Somalia, and briefly, in large areas of Africa, the Balkans, and considerable parts of Western and Central Asia. In such circumstances, those countries have become ungovernable. Take for example, the case of Bosnia. A simple comparison of the cost of governing tiny Bosnia after the war with the cost of governing a huge colony clarifies how high such cost may be. After the war in Bosnia, 64 000 soldiers were sent to establish 'order'. A similar number of soldiers was used by the United Kingdom to maintain its colonial domination over the whole Indian subcontinent (Hobsbawm 2000, pp. 39–40). This also holds true for Afghanistan after the American military intervention in 2001. These examples clearly demonstrate that the cost of restoring order in an anarchic region is so high that it may be considered as ungovernable.

There are many reasons for the emergence of this Hobbesian state of anarchy. One reason is the growth of illegal businesses such as weapons, drug trafficking and smuggling which contributes to the creation of 'private armies' in

different regions of the world. However, these private groups could not exist without the silent involvement of large industrial military complexes and dominant states that sell arms all over the world. A second reason can be found in the particular context of the present international political situation. After the cold war, the United States is 'the only country in history that has been in a position to claim world hegemony . . . I believe, as a historian, that the idea of a single power, however great and powerful, being able to control world politics is a mistake' (ibid., pp. 48–9). In fact, the initial phase of a 'new world order' after the cold war is marked by a tendency among certain circles of power in America, close to the military–industrial complex and petrol companies, to try to impose American dictates all over the world. This tendency tries to overrule all reference to international law and hinges on the use of force in removing political tensions. International violence invigorates anarchy all over the world, especially in weaker states.

Another important reason for the weakening of the state is the growing disobedience of civil society towards the state since 1968. After the Second World War, 'social citizenship' was a result of the welfare state and the involvement of ordinary people in the political process. The 'voluntary loyalty and subordination of citizens to their governments' (ibid., p. 33) was the foundation of public order. Compliance to the rules, 'social docility' or receptivity to social influence largely contributed to the institutionalization of a constitutional state.⁶⁵ However, the important change is that since 1968, citizens are less willing to obey the laws of the state. Naked military force cannot bring either social docility or 'political association', even though it determines the frontiers of the nation-state.

Coordination and the Redistributive Mechanism

Historically, military power has been the source of three different types of social coordination, namely 'compulsory cooperation' (Mann 1986), 'aggressive co-ordination' (Kornai 1984) and 'bureaucratic co-ordination' (Polanyi 1944, 1957; von Mises 1946; Knight 1947; Arrow 1951; Lindblom 1977; Kornai 1984, 1992⁶⁶). While the early empires of domination and the Roman Empire⁶⁷ can be cited as examples of compulsory cooperation, predatory regimes in the past like the Spartans, the Vikings and the Mongols, and in recent times, pirates and organized criminal groups, may be invoked to illustrate aggressive coordination. The Soviet system is a good example of bureaucratic coordination.

There are some commonalities among these various forms of coordination. First, they are all based on a vertical relationship, and a hierarchical structure between sub- and superordinates. A kind of military discipline, and obedience towards the leader is the rule. Second, productive or appropriative activities

are usually planned or coordinated *ex ante*. Hence, the social order, unlike a market economy, is not the result of *ex post* coordination. Borrowing Hayek's distinction between 'abstract rules' (spontaneous or market rules of *Catallaxy*⁶⁸) and 'concrete, finalized, or organizational rules' (*taxis*), these forms of coordination are founded on concrete or finalized ones. Third, although transactions may be either monetary or not, monetary exchanges are not dominant, as direct allocation of resources is predominant compared to indirect or market transactions. Fourth, the motivation is established by force or through promotion on the part of the superordinates towards subordinates in order to realize the plans of actions as well as the allocation and distribution of resources. It is true that violence or destructive power as the foundation of coordinating mechanisms can be opposed to money as the basis of market coordination.⁶⁹ None the less, as Parsons (1967) rightly underlines, there is a certain resemblance between money and violence. Violence, like money as the general equivalent form of all values, is the ultimate force of validation or enforcement of all rules, while playing at the same time a secondary role in social mediation or social institutionalization, like fiat money which facilitates the exchange of commodities without being requested as such.

Commonalities notwithstanding, there is a difference between aggressive coordination on the one hand, and compulsory cooperation and bureaucratic coordination, on the other, with regard to motivation structure. While in compulsory cooperation and bureaucratic coordination, administrative or military coercion is supported by legal sanctions, in aggressive coordination, coercion is not acknowledged by law and morality. Thus in this latter case, coercion is not institutionalized. A major difference between compulsory cooperation and ancient forms of aggressive coordination, on the one hand, and bureaucratic coordination, on the other, is that in the former the separation between 'society' and 'state' is not complete, whereas in the latter, state becomes autonomous from society and the separation between 'above' and 'below' becomes institutionalized. The lack of institutionalization is related to the non-separation of state and society and there is no written law code, but only the emperor's, king's or pharaoh's will. In the case of Egypt, Mann writes: 'Indeed, no words indicate consciousness of separation between state and society, only distinction between geographical terms like "the land" and terms applying to the pharaoh like "kingship" and "rule". All politics, all power, even all morality apparently resided with him' (1986, pp. 109–10).

Despite distinctions between these forms of coordination, it should be emphasized that there are no absolute frontiers between them. One can transform itself into the other. For instance, aggressive coordination can change into bureaucratic coordination, when naked military power becomes institutionalized. By the same token, bureaucratic coordination can turn into aggressive coordination when the legally regulated coercion force degenerates into

open and arbitrary use of brutal force, as for example the period of Stalin's forced collectivization. Generally speaking, aggressive coordination is not stable due to lack of institutionalization of wilful force. Compulsory cooperation as the basis of early empires of domination can continue in the era of territorial empire. Borrowing Hayek's distinction between *taxis* (a made order) and *kosmos* (a grown order),⁷⁰ I suggest that coordination mechanisms which stem principally from the use of destructive power be regrouped in the general category of organizational or made order. Hayek, himself, cites 'an order of battle' as a salient illustration of *taxis* (1973, vol. 1, p. 37), since it is a typical directed social order, or a hierarchical constructed arrangement. Destructive power can construct *taxis* but its institutionalization or its transformation into *kosmos* requires the intervention of creative and moral powers. These three social powers have also been the sources of three social orders during feudalism in medieval Europe. Clergy, chivalry and workers representing respectively moral, destructive and creative powers were the basis of feudalism (Duby 1973, pp. 187–204). Among them, military order was the prominent source of social integration.

Destructive power also has a strong redistributive effect. It is a major source of primitive egalitarianism. Economic growth, particularly within the framework of market economy or commercial, usury and industrial capital can lead to inequality in wealth. Even in an agricultural economy, the difference in land ownership enhances social and economic inequalities. Peasant movements and social banditry are not necessarily able to remove the sources of inequality, but they may establish a primitive egalitarianism by simply destroying wealth. What cannot be shared, can be destroyed. Equality in poverty is not obviously equality in richness, but at least it is indiscriminate. In the face of death, all human beings are equal, and all distinctions will be cleared away. Then particular privileges will be dissolved, heterogeneity will turn into homogeneity, and standardization of everyone will pave the way for universal equality. Spoils of war motivate warriors, pirates or bandits to fight wholeheartedly, especially if they can be shared equally by all. When the Arabs invaded the Persian Empire during the Sassanid dynasty, they cut the precious carpets of the court in pieces and shared them; and what could not be divided was burnt. The same thing happened with the Mongols' invasion of Persia. In the same way, intellectual capital or cultural goods which are usually difficult to share, since their use requires an idiosyncratic taste, are the main victims of primitive social movements or barbarous invasions.⁷¹ It is not surprising that the Khmer Rouge under the leadership of Pol Pot butchered intellectuals, since their primitive communism could never share knowledge. Equality in poverty goes hand in hand with ignorance. Moreover, destructive power can be used to protect the stability of a traditional social order against any change stemming from new

economic and social development. Describing the relation between social banditry and destruction, Hobsbawm notes bandits' aspiration to achieve justice through destruction:

Thus the bandit is helpless before the forces of the new society which he cannot understand. At most he can fight it and seek to destroy it . . . And destruction, as Olbracht has correctly seen, is not simply a nihilistic release, but a futile attempt to eliminate all that would prevent the construction of a simple, stable, peasant community: the products of luxury, the great enemy of justice and fair dealing. For destruction is never indiscriminate. What is useful for poor men is spared. And thus the Southern brigands who conquered Lucanian towns in the 1860s, swept through them, opening jails, burning archives, sacking the houses of the rich and distributing what they did not want to the people: harsh, savage, heroic and helpless. (1959, pp. 25–6)

Destructive power is, thus, unable to root out economic and social causes of change and inequality, but it can momentarily level wealth and delay change or completely ruin society.

In summary, analysing the three channels through which destructive power contributes to social integration, I concluded that this kind of power plays a similar role to that assumed by money. As I noted above, Parsons (1967) stressed the resemblance between money as general equivalent or fiat money and violence. However, I think Parsons's insightful remark can be supported more strongly if we take on board the resemblance between money and violence in curbing radical uncertainty.⁷² This aspect of money cannot be grasped if one focuses on fiat money or as a money of account. In this case, our attention should be drawn to money as a store of wealth. Criticizing the classical theory of the rate of interest, Keynes (1937) underlined this function of money and showed that liquidity preference is determined, in the last analysis, by the degree of uncertainty about the future. He wrote:

For it is a recognized characteristic of money as a store of wealth that it is barren; whereas practically every other form of storing wealth yields some interest or profit. Why should anyone outside a lunatic asylum wish to use money as a store of wealth? Because, partly on reasonable and partly on instinctive grounds, our desire to hold Money as a store of wealth is a *barometer of the degree of our distrust of our own calculations and conventions concerning the future*. Even though this feeling about Money is itself conventional or instinctive, it operates, so to speak, at a deeper level of our motivation. It takes charge at the moments when the higher, more precarious conventions have weakened. The possession of actual money lulls our disquietude; and the premium which we require to make us part with money is the measure of the degree of our disquietude. (1937, pp. 215–16, added emphasis)

Given radical uncertainty regarding the stability of all conventions, holding money, whose nominal value does not change through time because of its special status as the general equivalent of value, can be a way to master or partially control unpredictable fluctuations.⁷³ Destructive power, like money, has the power to insure us against radical uncertainty involved in social change, since it is the ultimate source of enforcement of all laws and rules. Compared to money, destructive power is an even more solid insurance against radical uncertainty. While money can assume its role as a general equivalent within a community of commodity producers, destructive power maintains a central role even beyond any political association, or even in a Hobbesian state of lawlessness. In other words, violence preference, like liquidity preference, augments with the increase in the degree of social uncertainty or distrust in the stability of conventions.

Although destructive power does not directly produce rules, it indirectly determines the content of rules by partaking in the definition of social norms. Social norms establish the frontiers between order and anarchy. They can, thus, be understood as perceived thresholds or intervals in which there is a certain social regularity, not because the regularity is objective or observed, but because the regularity is the outcome of common beliefs and expectations (Vahabi 1998). Social norms reflect the dominant opinion formed by ruling social groups. What these power circles perceive as necessary for the existence and perpetuation of a community are called 'social norms', and through these norms, particular interests of powerful groups are represented as general interests of the whole community.⁷⁴ Social norms are marked by *ex post* rationality which alludes to a certain regularity stemming from the leading role of powerful social groups. It does not imply in any way an objective fully informed decision making by individual agents. While equilibrium analysis based on *ex ante* rationality is irreconcilable with a hierarchical vision of social order, an approach in terms of a normal state can come to grips with both social conflicts and *ex post* rationality. I earlier noted that destructive power can be legitimized by moral and ideological powers. Now, I contend that destructive power, in its turn, contributes to the legitimization of moral or ideological power through the construction of norms. Social norms precede legal rules concerning rights and duties of members of a community. Law is an apology of what political association takes for granted as the normal way of life in a community.

The state monopoly of coercion and the subordination of violence to law give credence to the idea that violence has a secondary role compared to the legal system. However, this is nothing but a judicial illusion: even though naked power does not produce rules, it constitutes the ultra-legal foundation of a political association which defines social norms.

DESTRUCTIVE POWER AND THE ENFORCEMENT OF RULES

Destructive power is the basis of sovereignty. This point is clearly stated by Commons: 'Sovereignty is the collective action which has monopolized powers extending to violence, and there cannot be found any individual taxpayer or parent who by bargaining has consented to be compelled by threat of violence to pay the specified taxes or give up the specified control of his children' (1970, pp. 88–56). Destructive power is a primary force, since it is the ultimate basis of law as a derivative force. This type of power contributes to rule enforcement through two channels: (i) sanctions, punishments and compliance; and (ii) protection and definition of property rights. In this section, we shall study these two channels.

Sanctions, Punishments and Compliance

The different kinds of collective action may be grouped according to the kinds of pressure, influence or sanctions one may use, that is moral power, creative or economic power, and destructive or physical power. Each kind of collective action constrains, liberates and directs individual action through sanctions, punishments, protection, persuasion, social education and compliance. In this sense, each kind of collective action is a government, differing in the kind of sanctions employed to bring the individual into conformity with the rules, as moral sanctions of opinion, economic sanctions of deprivation of property or income, and bodily sanctions of physical force. According to Commons, 'physical power' (destructive power in my terminology) is regarded as sovereignty, since it has the ability to exert bodily sanctions:

Since the bodily sanctions are, for most people, the extreme of all, the collective activity that attempts to monopolize physical power is known as Sovereignty, and the officials who direct its use are Sovereigns. In the American system they are collectively the politicians, including the legislature, the executive, and the judiciary. (1970, p. 41)⁷⁵

Although bodily sanctions are essential in rule enforcement, the role of coercion in social education should not be neglected. Sanctions are organized forms of deprivation which are commonly used to protect the order and to provide compliance. They are used not only in family, but also in schools and in society in general at different levels. To the extent that sanctions enforce rules, they are a method of assuring compliance and the necessary education or learning for all those who have a tendency to violate rules. They thus contribute to routinization of those types of social behaviour which are

compatible with existing order, and invigorate social docility.⁷⁶ Conformism is the outcome of a rooted social habit of being docile towards the established order.

However, sanctions and punishments are not only inflicted by rulers upon the ruled. Revolution is also a way for people to sanction the ruling body. It is a severe sanction, sometimes including the execution of rulers and the decapitation of kings. Moreover, for the masses, revolution is a method of learning about their social choices and preferences. Through revolution they also learn about their rights, which have been so conveniently ignored by rulers. By imposing such a sanction against tyrants, people become confident in their own power as the real masters of society. Sometimes the mere threat of revolution brings perspicacious rulers to modify their policies and introduce serious political and social reforms. Hence, not only can people learn from revolution, but rulers can also learn from the threat of revolution.

At this point, we should emphasize that the enforcement of law does not necessarily require the actual use of bodily sanctions; but rather suffices to use the possibility or threat of exercising bodily sanctions. The fact that such a threat is promulgated by law makes it credible. Destruction is the power that guarantees the enforcement of law. Protection, sanctions and the threat of punishment are functions ensuring the respect or observance of law. Among different types of transaction costs (Williamson 1985), there are *ex post* transaction costs which involve enforcement costs, and these are part of the costs related to sanction, punishment, protection or the use of destructive power.⁷⁷

In my opinion, institutions should be particularly defined by their sanctioning, protecting, punishing power, and must not be reduced to a set of rules and the interpretative power for elaborating these rules. For one thing, the enforcement of rules is more important than the rules themselves, which can be interpreted in a number of ways. However, the different interpretations will fade when it comes to the practical question of the implementation of law. The enforcement of law favours a particular, and a very special interpretation of law which is nothing but the practical or practised one. Institutional change is first and foremost the change in the enforcing mechanism, since the rules are determined, in the final analysis, by destructive power, their change also occurs by a transformation in the way their enforcement mechanism evolves. In fact, there are many historical examples of institutional change without any apparent change in rules. Hobsbawm cites the English example where social change has always been advocated in the name of tradition, and in this way a new social content was reconciled with an archaic or traditional institutional form (1977, pp. 15–18). Marx ([1867] 1978a, vol. 1) refers to the juridical expression of private property rights which remain unchanged throughout the transition from commodity to capitalist production. In this case, a unique form of juridical property rights covers two different economic contents, namely the

commodity relationship and the wage relationship. In the commodity relationship, private property is justified on the basis of appropriation of one's own labour, whereas in the wage relationship the private property is acquired through the employment of other people's labour power. According to Marx, in the first case, the exchange of commodities is based on the *equivalency* of the value of commodities exchanged, whereas in the wage relationship, the exchange of labour force against capital is founded on *non-equivalency*.

Hence legal rules can stay unchanged while their social or economic content changes. Institutional change is not limited to a change in rules. The crucial point is how the rules are enforced. The liberal ideology has a preference for giving prominence to laws and describes the reality as a brutal force that is determined by rules and not otherwise. In this way, liberalism takes the primacy of legal order over military power as granted. Accordingly, institutional change is described more as a change in laws, whereas the real change comes from the crisis in the enforcement mechanism.

Given the primary role of destructive power in enforcing law, we can construct an indicator to measure the comparative advantage of anarchy over legality in terms of transaction costs. I earlier suggested 'violence preference' as a positive function of radical uncertainty. The distrust or perceived uncertainty of powerful groups about the existing rules leads to violence preference. The enforcement of law requires the intervention of a third party (the judge) and involves transaction costs.⁷⁸ However, an anarchic situation is a two-party relationship and does not imply such costs. Hence, there are two dimensions, namely uncertainty and transaction costs, which distinguish a state of law from anarchy.

If we define 'anarchy' as a Hobbesian state of nature where unconstrained use of violence by law is the rule, and 'legal order' as Aristotle's constitutional state or political association, then we can compare their relative advantage in terms of transaction costs with regard to different degrees of uncertainty. A state of anarchy is marked by violence preference, and a state of legality is defined by legality preference. If $V_t(u)$ and $L_t(u)$ denote, respectively violence preference and legality preference throughout time, then we can say that $V_t(u)$ augments with the increase in uncertainty, whereas $L_t(u)$ decreases with the increase in uncertainty. Moreover, $L_t(u)$ implies positive *ex post* transaction costs, whereas $V_t(u)$ does not involve any transaction costs. Thus, if ΔG_t represents the comparative advantage of $V_t(u)$ over $L_t(u)$, then we can say that at $t = 0$, $V_0(u)$ has a comparative advantage over $L_0(u)$, since it economizes over transaction costs. And this advantage increases with uncertainty. In other words, $\Delta G_0 = L_0(u) - V_0(u) > 0$, and ΔG_t is an increasing function of uncertainty.

Moreover, we have $\Delta G'_t > 0$ and $\Delta G''_t > 0$, since we suppose that there is an increasing return to the marginal comparative advantage of $V_t(u)$ over $L_t(u)$

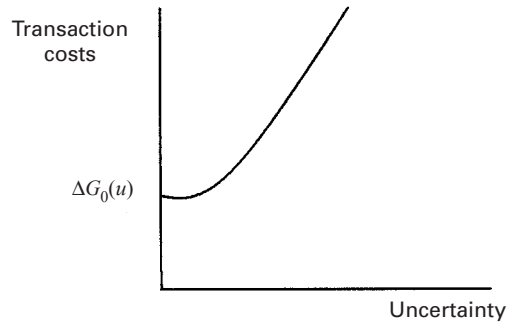


Figure 3.2 Comparative advantage of violence preference over legality preference

with the increase in uncertainty, given that ‘radical uncertainty’ ($U \rightarrow \infty$) implies infinite transaction costs and infinite comparative advantage of violence preference over legality preference. Figure 3.2 shows this relationship.

The comparative advantage of $L_f(u)$ over $V_f(u)$ cannot be examined without a preliminary discussion of the relationship between sovereignty and property rights.

Protection and the Definition of Property Rights

In the first chapter I tried to show the historical embeddedness of all three forms of power as well as the growing separation or autonomy of destructive power with regard to creative power in the capitalist system. This means that destructive power is no longer part of a capitalist productive process, since such a production is based on free contractual relationships and economic constraints and not supra-economic constraints. None the less, even in a capitalist system, there is a permanent need to use destructive power in order to protect property rights and to guarantee the general conditions of production. To clarify this distinction, we take the history of the United States as an example. Before the Civil War, slavery was dominant in the sugar plantations of the southern part of America. The fear of the lash was a necessary element of the slavery system, which ensured total obedience by slaves. In this example, the use of destructive power (fear of the lash) was part and parcel of the creative (productive) system and the two could not be separated. The abolition of slavery and the free development of capitalism set the historical separation of these two powers in motion.

However, the situation was different in the semi-anarchic conditions prevailing in the gold rush in California in 1849, or in Victoria a few years

later. Here, the use of gold mines, unlike the Roman Empire, was not based on slavery, but on free labour. In this case, the use of destructive power was not part of the creative process. However, in a state of complete anarchy, involving a war of all against all (as Hobbes liked to describe it), gold would be useless except to a man so quick and sure with his revolver as to be able to defend himself against every assailant. Such a state of affairs would be unstable, except possibly in a very sparse hunting–plundering population. For instance, agriculture is impossible unless there are means of preventing trespass and the theft of crops. It is obvious that an anarchic community comprising more or less civilized individuals, like the men in a gold rush, will soon try to build some kind of government, such as a committee of vigilantes. These people will endeavour to prevent others from plundering them; and if there is no other authority to interfere, they may plunder others. However, they will plunder with moderation, for fear of killing the goose that lays the golden egg. They may, for example, sell protection in return for a percentage of a person's earnings. This is called income tax. The security cost is then the cost paid for being protected against destructive power. This cost is paid out of income tax even in societies where the productive system is not based on the use of destructive power. As soon as there are rules determining the provisions of protection, the reign of military force is disguised as the reign of law, and anarchy ceases to exist. But the ultimate foundation of law and economic relations is still the military power of the vigilantes.⁷⁹

This example illustrates that despite the growing autonomy and separation of destructive power from creative power in capitalism, sovereignty is inseparable from property. Commons also emphasizes this point:

Sovereignty is inseparable from property. It is the sanctions of sovereignty that make property what it is for the time being in any country, because physical force, or violence, is the last and final appeal when the other sanctions are deemed inadequate to control individuals. Economic science, in England and America, began with the separation of property from sovereignty, on the assumption that private property was a natural, primordial right of individuals, independent of sovereignty which might artificially and unjustly interfere with it. But this was a substitution of justification for fact, as is often the method of argument in economics and politics. Property rights were justified on the ground that the object of property was a product of labour, and belonged, therefore, by right to him who had embodied his labour in it by giving to nature's materials the quality of usefulness. Having this natural right of ownership of his own product, he had the right to exchange it for the products of other labours. (1970, p. 41)

For the neoclassical approach, the autonomy of economic science boils down to the separation of sovereignty from property rights. The exclusion of sovereignty from the scope of economic analysis is in tune with the idea that rational agents do not resort to violence, or real destruction. Social conflict and

equilibrium are not considered to be good bedfellows. However, the separation of property rights and sovereignty muddles the concept of property rights, because one of the distinctive features of property rights is the right to destroy (*abusus*). This is the ultimate control power. Ownership entitles owners to a bundle of controlling rights, some of which can be transferred to a user through a leasing contract. Nevertheless, among these rights, there is one which cannot be alienated; this is the right to destroy. If we rent a house, we can of course put in the furniture or appliances that we like as long as the installations do not imply a demolition of some part of the house or major reconstruction of it. Leasing or contracting, hence, entitles the lessee to some particular control rights, but it does not transfer the power to destroy the property. The right to destroy is the judicial acknowledgement of the fact that the very existence of the property belongs to the owner. In other words, this right draws a demarcation line between the goal (defined by the owner) and the means (the object of property). The owner cannot entirely exercise her/his right on the creative potential of the good without having the full right to destroy the good. Among three different types of property rights, namely *usus*, *fructus* and *abusus* the one which cannot be contracted away is *abusus*, while both *usus* and *fructus* can be contracted without causing any damage to the right of ownership. Thus, the ultimate boundary of ownership is the right to destroy.

The modern strand of property rights theory or contractual incompleteness (Hart 1995; Hart and Moore 1999) defines ownership as the right to exclude.⁸⁰ In this way, this approach endeavours to capture the essence of the property relationship as a judicial power relationship. However, ownership cannot essentially be defined as the right to exclude; it is the right to destroy, since you can transfer through a contract (for example, a leasing contract) some rights of exclusion to the lessee. If you rent a house, you are perfectly entitled to bar anybody you wish from entering, including the owner of the house during the period of the contract. But as a lessee you do not have the right to destroy (demolish) the house, and in the case of partial demolition, you must pay a penalty. The penalty is defined on the basis of the equivalency of prejudices.

It is noteworthy that the ownership of animals implies the right of the owner to kill his/her animal. In Islamic law, girls are their father's property, and if an unmarried girl is murdered, the murderer must pay a fine to her father, equivalent to the price of a certain number of camels. Woman as the property of man also connotes that she can be bought by a man and thus can also be killed by a man. However, the idea of women as men's property is not limited to Islam or any particular religion. According to Veblen, the institution of ownership originated in the early days of predatory life through the seizure of persons and particularly women. He writes:

After this usage of capture has found its way into the habits of the community, the women so held in constraint and in evidence will commonly fall into a conventionally recognized marriage relation with their captor. The result is a new form of marriage, in which the man is master. This ownership-marriage seems to be the original both of private property and of the patriarchal household. Both of these great institutions are, accordingly, of an emulative origin. (1898, p. 364)

The same thing applies in slavery. A slave can be bought or sold; the owner has the right to destroy the slave without prejudice. But since the abolition of slavery and the legal recognition of equality of all human beings regardless of their sex, race, religion and so on, the reciprocity of rights among all citizens is acknowledged. Economic valuation is, thus, limited by legal requirements imposed by sovereignty. Commons pinpoints that:

‘Equality’ and ‘liberty’ are also necessary to the full meaning of value. These values too are institutional. Collectively they are the working rules which ‘institutionalize’ or make these ‘values’ accessible to the individuals as a part of their opportunities. Historically the actual content or meaning of these values, equality and liberty, also have greatly changed, especially after the Civil War of 1861 and the New Deal of 1933. The American Civil War was the most revolutionary confiscation of property values since the French Revolution in that it both nullified four billion dollars of value without compensation to owners by the emancipation of the slaves, and it finally imposed by conquest the protective tariff values for northern manufacturers against the free trade values which had been taken over from the English economists by the southern slave owners. The predominant theory of value was framed by the lawyers who substituted the laws of a stable government for the economists’ ‘natural law,’ or ‘laws of nature.’ The lawyers did it by their authoritative position on the Supreme Court, and afterwards by a change in their theory of value based on the optimistic democracy of our revolutionary civil war. (1970, pp. 159–60)

I entirely agree with Commons that property rights and sovereignty are inseparable, and that by any significant institutional change, economic valuation also changes. However, neither institutional change nor sovereignty is limited to its juridical dimension. In fact, as mentioned above, the transition from commodity to capitalist production was accompanied by a parallel change in the economic content of appropriation, while the legal expression of private property remained unchanged. The problem with Commons is that he narrows the institutional change to juridical change, and this is due to the fact that he chooses transactions as his basic unit of analysis.

The inseparability of sovereignty and property rights boils down to the protection and definition of property rights by destructive power. Legality preference is directly related to the protection and definition of property rights as a necessary condition of production. In a state of anarchy, production will decrease rapidly over time. Hence, the production costs will increase rapidly with violence preference, whereas legality preference reduces these costs. If

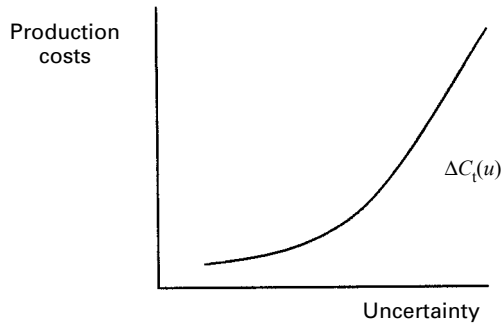


Figure 3.3 Comparative advantage of legality preference over violence preference

$\Delta C_t(u)$ denotes the comparative advantage of legality preference over violence preference with regard to the production costs, namely $\Delta C_t(u) = L_t(u) - V_t(u) > 0$, then we can say that $\Delta C_t(u)$ augments with the increase in uncertainty, since the production costs will be higher under a higher level of anarchy compared to a legal order. Moreover, $\Delta C'_t(u) > 0$, and $\Delta C''_t(u) > 0$, since there is an increasing return to marginal advantage of legality preference over violence preference with increasing uncertainty ($U \rightarrow \infty$) due to indefinite production costs in the case of total anarchy. Figure 3.3 represents the comparative advantage of legality over anarchy with respect to production costs.

In Figure 3.2, we showed the comparative advantage of violence preference over legality preference. Now, we can study the relationship between $\Delta C_t(u)$ and $\Delta G_t(u)$. The intersection between the two curves indicates the equilibrium costs and the equilibrium level of uncertainty. This point determines the equilibrium threshold beyond which either anarchy or order will rule. There are two different possibilities: $\Delta C'_t(u) > \Delta G'_t(u)$ or $\Delta G'_t(u) > \Delta C'_t(u)$. In the first case, the comparative advantage of legality preference surpasses that of violence preference, and hence we will have a legal order. I call this state the 'Aristotelian state or constitutional order' (see Figure 3.4a). In the second case, the comparative advantage of violence preference surpasses that of legality preference, and hence we will have anarchy. I call this state the 'Hobbesian state or anarchy' (see Figure 3.4b). The equilibrium 'uncertainty level' (U^*) represents the normal level of perceived uncertainty. This level depends on the dominant opinion among powerful groups who can effectively use destructive power. Violence preference is principally determined by the expectations of these groups about the stability of the social order, or their perception of uncertainty regarding their dominant position.

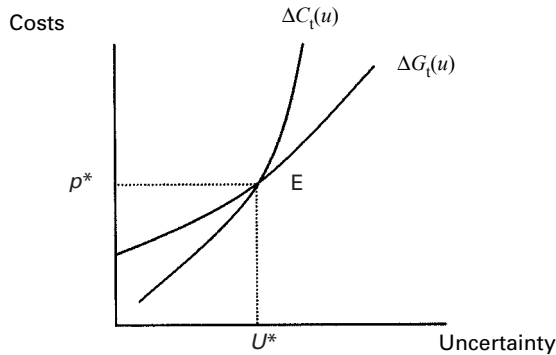


Figure 3.4a Aristotelian state or constitutional order

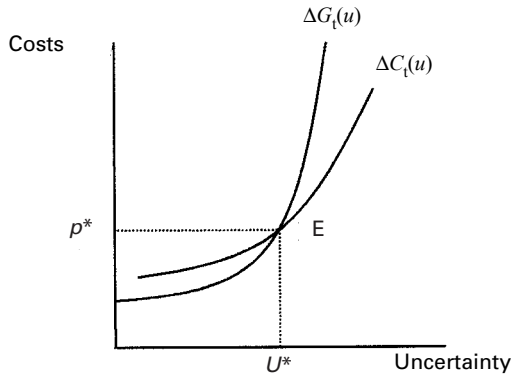


Figure 3.4b Hobbesian state or anarchy

In this simple heuristic model, the choice of institutional setup hinges upon enforcement and production costs on the one hand, and the degree of uncertainty on the other. In fact, while violence preference economizes on enforcement costs (*ex post* transaction costs), it augments production costs. Conversely, legality preference augments enforcement costs, and it economizes on production costs. In this sense, the use of destructive power is inversely related to that of creative power.

DESTRUCTIVE POWER AND THE CHANGE OF RULES

As I noted above, social or institutional change cannot be limited to a change

in rules. Many historical examples illustrate this point. North provides several:

Japanese culture survived the U.S. occupation after World War II; the post-revolutionary U.S. society remained much as it had been in colonial times; Jews, Kurds, and endless other groups have persisted through centuries despite endless changes in their formal status. Even the Russian Revolution, perhaps the most complete formal transformation of a society we know, cannot be completely understood without exploring the survival and persistence of many informal constraints. (North 1990, pp. 36–7)

North introduces a distinction between ‘formal’ and ‘informal’ rules. Formal rules include political (and judicial) rules, economic rules and contracts. There is a hierarchy among this type: the highest place is occupied by constitutions, statutes and common laws running down to specific bylaws, and finally to individual contracts (*ibid.*, p. 47). Informal rules comprise codes of conduct, conventions, traditions and customs. Comparing formal and informal rules, North contends that informal rules are more important in constructing social order. In other words, North regards social order as an organic, evolutionary or spontaneous order. Thus, social stability is based upon informal rules (*ibid.*, p. 83). Since ‘institutional change is overwhelmingly incremental’ (p. 89), the continuous incremental change in informal rules determines the final direction of discontinuous change in formal rules. By ‘discontinuous change’, North means a radical change in the formal rules, usually as a result of conquest or revolution. The question of institutional change, then, boils down to an analysis of evolution in informal rules. At this point, North joins evolutionary economists and cites Sugden (1986), who defines informal rules as ‘rules that have never been consciously designed and that it is in everyone’s interest to keep’ (North 1990, p. 41). Convention is a salient example of such rules. Conventions cannot be understood if we use the starting point of classical game theory, namely perfectly rational individuals in unrepeated interactions. It may be more useful to put less stress on rationality and to think of conventions as the product of evolutionary processes. In this perspective, rules are not the result of any process of collective choice, but are the outcome of patterns of behaviour that are self-perpetuating. John Maynard Smith and his collaborators (Smith and Price 1973; Smith and Parker 1976; Smith 1982) explored this evolutionary game theoretical framework. In evolutionary game theory, conventions can be characterized as an evolutionarily stable strategy (ESS):

An *evolutionarily stable strategy* (ESS) is a pattern of behaviour such that, if it is generally followed in the population, any small number of people who deviate from it will do less well than the others. This, then, is a state of rest in the evolutionary process. I shall define a convention as any ESS in a game that has two or more

ESS's. The idea here is that a convention is one of two or more rules of behaviour, any one of which, once established, would be self-enforcing. (Sugden 1989, p. 91)

Evolutionary stability is a refinement of Nash equilibrium. One implication of evolutionary theory is that conventions can be evolutionarily stable even if they are not Pareto efficient.

The genesis of a particular kind of convention, namely technological ones has been investigated by the economics of QWERTY (David 1985) and path dependency (Arthur 1989). Paul David (1994) suggests applying the conceptual framework of technological change directly to institutional change. Path dependency, collective or organizational learning, and technical interrelations are three characteristic features of technological change that can be applied directly in the field of institutional change. For David, institutional change is also path dependent, and there is a cultural or social learning process which provokes irreversibility and a lock-in process, and finally, institutional rules constitute a coherent and interrelated whole to the point that new rules must be compatible with old ones. North follows David's line of argument, since he also endeavours to apply evolutionary technological change to institutional change. He stresses two forces that shape the path of institutional change: increasing returns and imperfect markets characterized by significant transaction costs (North 1990, p. 95). Although Arthur's technological story is coextensive with the first (Arthur 1994), neither he nor David explicitly deals with the second. North's particular contribution is the analysis of transaction costs in institutional change. Because of transaction costs that imply market imperfections, institutional change is not necessarily efficient or Pareto optimal. Subsequently, North distinguishes between 'allocative' and 'adaptive' efficiency, and argues that the efficiency of institutional change can be better grasped in terms of adaptive efficiency (1990, p. 80). In other words, for North, inefficiency stems from market imperfections, and if markets were competitive or could have been even roughly approximate to the zero-transaction-cost model, the long-run path would be an efficient one. North maintains the neoclassical theoretical framework, but he extends it to integrate transaction costs and related market imperfections. This approach is different from that of Keynes, who questioned market coordination even in the case of competitive markets.

Although North's theory of institutional change focuses on transaction costs, these costs are involved in both technological and institutional change. This brings us, once again, to two basic questions regarding change in the field of technological conventions. First, what are the different theoretical possibilities in the change of conventions according to evolutionary theory? Second, can these possibilities be applied to institutional change?

Concerning the first question, it can be argued that evolutionary game

theory conceives four different possibilities to explain the change from a given type of convention (say convention A) to a new type of convention (say B). These four possibilities are theoretically justified on the basis of an ESS in a game between two players. Robert Boyer and André Orléan (1994, pp. 229–32) sum up these possibilities as follows:

- *A general collapse*, which may destroy all or a good part of existing social conventions, and thus provides a chance to build up new and perhaps more efficient conventions. In the case of labour conventions, Boyer and Orléan identify the Second World War as the source of general collapse of preceding conventions.
- *Invasion* can occur if a population, say P' , adopting convention (B) starts competing with another population, say P , who defend convention (A). If in the new total population, $P + P'$, the proportion of newcomers who adopt (B) exceeds a certain threshold, then individuals who have hitherto adopted (A) will convert to (B).
- *Translation*, which guarantees a certain compatibility between the new (B) and the old convention (A). David calls it 'Gateway technology'. One example is the conversion of 220 volts into 110 volts. According to Boyer and Orléan, this type of change mechanism rarely applies to labour conventions.
- *Agreement* implies a coordination between individual agents through communication, negotiation and compromise to discover a new convention. Collective conventions, based on collective negotiation, are a good example of such mechanisms sometimes involving direct state intervention.

These four mechanisms are derived in the strict framework of evolutionary game theory. However, they do not exhaust all possibilities. For instance, they do not take into account the possibility of the endogenous diffusion of a superior convention. Borrowing from Granovetter (1994), Boyer and Orléan (1994, pp. 232–7) stress the role of social networks among a population in their explanation of an endogenous diffusion of a new convention.

Regarding the second question, one may express some serious doubts that the rules of technological change can be applied directly to institutional change despite many commonalities between them. The main reason is that although institutional change has an organic or spontaneous character, the role of intentional, conscious or deliberate collective action in producing drastic change is undeniable. Revolutions, wars, strikes and social upheavals play a great role not only in changing formal rules, but also in changing informal rules through a change of mentality (by undermining old habits of thinking and questioning dominant ideology), change of social norms and invention of

new traditions. While the change in formal rules is perceptible, the impact of revolution on the change of informal rules is more imperceptible to the extent that it may be completely disregarded by some historians.

Although one cannot find any reference to ‘revolution’ in Boyer and Orléan (1994), the role of the French Revolution in changing some basic conventions radically is incontestable.⁸¹ It instituted the uniform system of weights and measures known as the metric system, which has made its way without benefit of revolution through most of the world outside the British Empire and the United States (Brinton [1938] 1952, pp. 266–7). However, the impact of revolution should be investigated not only in the case of conventions but especially with regard to social norms and invented traditions. Unfortunately, Arthur, David, North, and Boyer and Orléan do not theoretically distinguish between conventions and norms, whereas Sugden draws our attention to their difference:

Rules of behaviour, I have been arguing, can evolve spontaneously. Up to now I have meant by a ‘rule’ nothing more than an established pattern of behaviour. But now I shall argue that such patterns can become rules in a stronger sense. People can come to believe that they *ought* to act in ways that maintain these patterns: *conventions can become norms*. This will not be a moral argument. I have nothing to say about what moral beliefs people ought to hold. My concern is to explain the beliefs they *do* hold. (1989, p. 95, added emphasis)

Sugden’s distinction between norm and convention is inspired by David Hume’s theory of norm ([1740] 1978, Book 3, part 2, sections 1–3). This explains why he emphasizes the moral aspect of norms and considers that ‘the mechanism that can transform conventions into norms is the human desire for the approval of others’ (p. 95). I share Sugden’s distinction between conventions and norms, since conventions refer to regularity in behaviour (what Sugden calls ‘established pattern of behaviour’) or routines, whereas norms allude to the rules that ought to be followed by people. Nevertheless, this obligation is not only moral, but also political and ideological.

As previously noted, a norm originally reflects the balance of power between leading groups, and then, through dominant ideology, it becomes the representation of general or public interest. In so far as a norm represents a social ideal or reference, it is no longer an obligation imposed from outside, but a moral self-imposing obligation. However, the formation of norms hinges upon political and ideological processes. These processes are collective by nature and do not come within the scope of individual selection. While evolutionary game theory can explain conventions as ESS on the basis of individual behaviour, it is inadequate to explain political processes as deliberate collective action. This does not mean that political behaviour cannot be studied at all. It only means that it can be studied on the basis of

individual behaviour of self-interested political entities such as state bureaucrats maximizing their rent-seeking activities. Public choice is a good complement to evolutionary game theory. It is noteworthy that North borrows public choice theory to investigate the political aspect of incremental institutional change.⁸²

Social norms are directly influenced by great political and social upheavals. Moreover, revolution, war and other major political events usually introduce new or invented traditions, which Eric Hobsbawm defines as follows:

[Invented traditions are] a set of practices normally governed by overtly or tacitly accepted rules and of a ritual or symbolic nature, which seek to inculcate certain values and norms of behaviour by repetition, which automatically implies continuity with the past. In fact, where possible, they normally attempt to establish continuity with a suitable historic past. A striking example is the deliberate choice of a Gothic style for the nineteenth-century, rebuilding of the British Parliament, and the equally deliberate decision after World War II to rebuild the parliamentary chamber on exactly the same basic plan as before . . . Revolutions and ‘progressive movements’ which break with the past, by definition, have their own relevant past, though it may be cut off at a certain date such as 1789. (Hobsbawm and Ranger 1988, pp. 1–2)

‘Tradition’ in this sense must be distinguished clearly from ‘custom’ which dominates so-called ‘traditional’ societies. The object and characteristics of traditions, including invented ones, is invariance. The past, real or invented, to which they refer, imposes fixed (normally formalized) practices, such as repetition. Customs cannot afford to be invariant, because even in traditional societies life is not so: ‘Customary or common law still shows this combination of flexibility in substance and formal adherence to precedent’. Hobsbawm suggests a second distinction between tradition and conventions. He contends that ‘convention or routine . . . has no significant ritual or symbolic function as such, though it may acquire it incidentally’ (ibid., p. 3). Inventing traditions, unlike convention, is essentially a process of formalization and ritualization, characterized by reference to the past. One marked difference between old and invented practices may be observed. The former were specific and strongly binding social practices, the latter tended to be quite unspecific and vague to the nature of the values, rights and obligations of the group membership they inculcate: patriotism, loyalty, duty, playing the game, the school spirit and the like.

Revolution and other major political and social upheavals contribute to the invention of traditions. They often revive some past traditions and give a new social content to them, and so establish a bridge between the present and the past. In this sense, they reconstruct our *historical memory* and hence redefine our *historical identity*. Every revolution is not only the destruction of an established order; it is also a destruction of an official version of history. It can lead

to a new official version and new historical falsifications and forgery, but at any rate, it will contribute to a reconstruction of our historical memory and identity. This explains why every revolution invents new traditions and, through them, shapes the mentality and historical memory of people. People do not have the ‘memory of an elephant’, and they usually remember extreme events, like traumas. Invented traditions take on board this selective memory or collective bounded rationality, and try to form people’s memory in a particular direction:

[In France] the invention of tradition played an essential role in maintaining the Republic, if only by safeguarding it against both socialism and the right. By deliberately annexing the revolutionary tradition, the Third Republic either domesticated social revolutionaries (like most socialists) or isolated them (like the anarcho-syndicalists) . . . In terms of the invention of tradition, three major innovations are particularly relevant. The first was the development of a secular equivalent of the church – primary education; imbued with revolutionary and republican principles . . . The second was the invention of public ceremonies. The most important of these, Bastille Day, can be exactly dated in 1880 . . . The third was the mass production of public monuments . . . (ibid., pp. 270–71)

Revolutions change not only formal, but also informal rules through new conventions, social norms and invented traditions. By focusing on revolution, I am not arguing that social order does not have a spontaneous or organic character. Hayek (1973) was right in identifying both *taxis* and *kosmos* as part of *Catallaxy* or spontaneous order. However, in his work, one cannot find the slightest hint of the possibility of a breakdown in spontaneous order, or the relation between spontaneous *order* and spontaneous *disorder*.⁸³ He was uniquely interested in the emergence and the stability of order, and never questioned how the order changed and why revolutions occurred. Emphasizing the role of revolutions in social change brings us once again to a major difference between technological change and institutional change: institutional change involves deliberate collective action, particularly a political one (‘constructivist’ action or ‘social engineering’ in Hayek’s terminology). This difference is undermined in evolutionary game theory.

According to ESS, there are four theoretical possibilities for the change in conventions (Boyer and Orléan 1994). I would like to raise two critical points. The first concerns the role of revolution in the change in conventions. Boyer and Orléan do not make any reference to revolutions to explain the change, and yet the French Revolution established the metric system. Another example is the October Revolution which reformed the Russian calendar, as it reformed Russian orthography, thus demonstrating the profundity of its impact. As Hobsbawm rightly stresses: ‘It is well known that such small changes usually require socio-political earthquakes to bring them about. The

most lasting and universal consequence of the French revolution is the metric system' (1994, p. 57). Even when they refer to the first mechanism, namely a general collapse, they only mention the First World War and not revolutions. However, one of the most striking similarities among various revolutions, be they English, American, French or Russian, is that they all achieved governmental efficiency through their revolutions (see Brinton [1938] 1952). Revolutions engender organizational innovations, and change political as well as administrative conventions. Hence, it is impossible to study technological innovation in state bureaucracy without referring to revolutions.

My second remark is more general. In all four aforementioned mechanisms as well as a fifth one based upon Granovetter's theory of social networks, there is no possibility of a change in conventions through a transition period of dual rules marked by the coexistence of old dominant rules (losing their domination) and new ascending (but not yet dominant) rules. Such a transition period, usually characterized by a dual power or a 'power vacuum', is common to almost all revolutions. Even in recent Eastern revolutions, this period was significant:

Many people had the naïve idea that the elimination of central planning and bureaucratic co-ordination would be followed immediately and automatically by the appearance and operation of market co-ordination. In fact there is a curious 'no-man's land,' where bureaucratic co-ordination *no longer* applies and market co-ordination does *not yet* apply, and economic activity is impeded by disintegration, lack of coordination, and anarchy. (Kornai 1995, p. 178)

My first and second critical remarks are thus closely related. It seems to me that the authors' silence on revolution is related to their reluctance to deal with such a transition period. Perhaps change in technological and contractual conventions is not confronted with the problem of transition, but change in political conventions is surely faced with this problem.

Although evolutionary game theory does not realize the importance of revolutions, this theory in general is not silent about them. Biological as well as technological evolution includes not only long periods of stability and incremental continuous change, but also short periods of abrupt discontinuous change. In nature, and in technology, gradual changes are followed by revolutionary leaps. In fact, the concept of 'punctuated equilibrium' coined by the biologist Stephen Jay Gould (1982), to describe 'discontinuous' change, has been applied by economists in the analysis of technological change (Arthur 1990, 1994; Mokyr 1990, 1991). It should be remembered that the 'equilibrium' concept in biology does not have the same meaning as that found in mechanics and in neoclassical economics, since it includes mutation and change. In addition, the punctuations allude to sudden speciation. According to Gould, there is a hierarchy of evolutionary processes, where exogenous

shocks result in a temporary collapse in the articulation of levels and in rapid changes in speciation. Evolutionary processes also include a hierarchy of multiple selection levels functioning simultaneously. The selection in each level is carried out according to a particular mechanism and a specific temporal horizon. The change in superior levels of hierarchy is marked by longer periods of time compared to lower levels. The temporal gaps in the evolution of these different levels of hierarchy may bring about crisis and abrupt changes.

Joel Mokyr's insightful distinction (1990, 1991) between 'micro-inventions' and 'macro-inventions', as two complementary aspects of technological development, is analogous to micro-mutations and macro-mutations in biology. In this case, there are also different levels of hierarchy in technological innovation, each with their own temporal horizon. While micro-inventions are incremental and more frequent, macro-inventions are more major and enduring. Macro-inventions are regarded as a higher level of hierarchy and it is argued that this level is more rigid, whereas inferior levels of micro-inventions show more readiness to change and variance. This difference in temporal horizon may induce punctuated equilibrium in macro-inventions. Punctuated equilibrium can thus be very useful in explaining technological change. As Arthur points out, technological evolution is marked by positive feedback, or increasing returns. If diminishing returns imply a single equilibrium point for the economy, increasing returns allow for multiple equilibria. In this case, small perturbations at critical times have an influence on the outcome selected, and the chosen outcome may be less favourable than other possible end states. According to Arthur, positive-feedback economics 'finds parallels in the evolutionary theory of punctuated equilibrium. Small events (the mutations of history) are often averaged away, but once in a while they become all-important in tilting parts of the economy into new structures and patterns that are then preserved and built on in a fresh layer of development' ([1990] 1994, pp. 11–12).

Once again, the analogy between biology and technological change is clear. However, concerning social institutions, we have to consider the biological analogy prudently. As Hodgson rightly cautions:

'Institutional mutation' (Harris, 1934) is not the same as genetic mutation, and we cannot automatically assume that a Darwinian process of natural selection is at work. The latter involves the gradual accumulation and selection of small mutations over long periods of time, whereas in the case of institutions adaptation is much more rapid with much less opportunity for any efficiency-breeding selection to work. (Hodgson 1994, p. 257)

This difference reinvigorates the idea that punctuated equilibrium or discontinuous change should be more important in institutional change compared to biological evolution. However, North does not agree with this idea. He claims:

[S]uch discontinuous change has some features in common with discontinuous evolutionary changes (characterized in demographic theory as punctuated equilibrium), but perhaps *its most striking feature is that it is seldom as discontinuous as it appears on the surface* (or in the utopian visions of revolutionaries). It is seldom so discontinuous partly because coalitions essential for the success of revolutions tend to have a short afterlife. (1990, p. 90, added emphasis)

It is true that social and sometimes unofficial political coalitions among various layers of population against a hated regime during the revolutionary period will soon give place to internal division among revolutionaries, and finally lead to a stabilization or even restoration period.⁸⁴ A rupture in a given social order will be followed by the creation of a new order. But this 'new order' is not the simple restoration of 'old order'. In other words, social change is not a stationary equilibrium, since there are some increasing returns to revolution.

What do I mean by 'increasing returns' to revolution? In analysing the collective choice of using destructive power (revolution is a salient form of such power), one should pay attention to the difference between a negative and a positive action. It is always easier to say what we do not want than what we want, since in expressing what we do not want, we do not take any responsibility for what we want and hence we cannot be criticized for our positive agenda. By saying 'yes' to a programme, we have to deal with more constraints, and should clarify our choice, whereas by saying 'no', we have to deal with fewer constraints, and can let our objective be more ambiguous. In terms of costs and benefits, one may say that the cost of a rejection agenda is ambiguity in choice, and its benefit is fewer constraints. Costs and benefits will be reversed in the case of a positive agenda. In this sense, a rejection and a positive agenda are asymmetrical. What engenders costs in the case of rejection becomes benefits in the other case and vice versa. It is easier to be united on a rejection agenda than on a positive one. French President, Jacques Chirac, won against Jean-Marie Le Pen with more than 80 per cent of the votes in the 2002 elections, something unprecedented in an old democracy like France. After the Iranian Revolution, Khomeini was recognized for his charismatic role against the Shah's regime, obtaining 98 per cent of the votes in a referendum that constrained people to choose either the past royalist regime or the Islamic Republic. The hatred against the Shah's regime was a strong political 'subsidy' for the new regime. In both the French and Iranian cases, the leaders represented a rejection agenda, and they won because of increasing returns to rejection.

It is noteworthy that an isolated act of rejection against the Shah's regime was highly costly, since it could provoke imprisonment, torture and even execution. The punishment was so severe that opposition was considered to be a heroic act. In economic terms, the marginal cost of opposition was

$O_{cm} = F(N)$, where N denotes the number of those in opposition. This cost was so high that it could approach infinity, or execution ($O_{cm} \rightarrow \infty$), when N was inferior to a critical threshold, that is, $N < \tilde{N}$. However, O_{cm} decreased rapidly ($O'_{cm} < 0$) when the opposition was shared by others or when the number of people opposing the regime increased and reached the critical threshold \tilde{N} . The decrease in marginal cost was related to increasing returns of rejection. These increasing returns led to multiple equilibria, among which a state of equilibrium could result, for example in the hegemony of mullahs (of course, not necessarily the most efficient one). This state depended on political and ideological hegemony of one (or a coalition of) opposition group(s). However, here, as in any revolution, indeterminacy was the rule.

Revolution is indeterminate, full of surprise and novelty, since it is the outcome of action by millions of people. *Increasing returns to negation (rejection) or destructive activity which constitutes the first phase of every revolution is the cause of its indeterminacy and multiple equilibria.* It is true that when a state of equilibrium is chosen, then a new order will result and incremental changes will follow. Every new order is a recombination of old and existing materials. However, recombination is so intricate that it never repeats the past. Contrary to what North claims, it is not only revolutionary utopians who see in revolution a source of novelty and surprise.

Although North denies the novelty or the importance of revolution in political change, he confirms it with regard to ideological change. Denzau and North (1994, pp. 22–7) contend that:

Bayesian learners are never surprised, or faced within the updating process to completely change the dimensions of the model space. Such surprises or drastically revised models can be interpreted as representational redesigns and involve trajectories which can be described as punctuated equilibria . . . Punctuated equilibrium involves long periods of slow, gradual change punctuated by relatively short periods of dramatic changes, which we can presume to be periods of representational redescription . . . The punctuated equilibrium approach to the dynamics of mental models has implications similar to those discussed by Kuhn (1970) . . . A crucial feature of this sort of evolution is the bringing of new meanings from related mental models, by analogy or metaphor . . . When the ideology finally changes, if it does, it would generate a punctuation, i.e., a short, relatively rapid change . . . Whether we pursue the framework suggested by Arthur (1992) or the notion of punctuated equilibrium for the dynamics of mental models, we get some common results. The presence of learning creates path-dependence in ideas and ideologies and then in institutions.

But political revolution is also a form of collective learning about our social preferences and concerning the way we like to build or rebuild our political association. Why then in this case should a punctuated equilibrium be regarded with suspicion? North does not explain why he adopts a double

standard in dealing with politics and ideology. The only conclusion one can draw is that he follows public choice in politics, whereas in tackling ideology he is critical about the standard Bayesian approach and develops his own evolutionary theory.⁸⁵ I think that North's approach to ideology is not consistent with his adherence to public choice theory regarding politics. This explains his reluctance to use punctuated equilibrium in politics (we find this also in Olson 1965), and at the same time his enthusiasm to apply the concept in ideology.

The application of punctuated equilibrium in politics provides a theoretical justification for the change in rules through revolution. Increasing returns to rejection or destructive activity is the basis of a revolution's indeterminacy. Moreover, revolution not only turns abrupt changes into formal rules, but it partakes in the change of informal rules by creating new conventions, defining new social norms and inventing traditions.

DESTRUCTIVE POWER AND COMMUNICATION

Due to its social nature, destructive power enhances communication and the means of communication. There are three channels through which destructive power influences communication: (i) identification; (ii) extensive integration; and (iii) a form of expression.

Destructive Power and Identification

As indicated earlier, destructive power is intrinsically social and hence, for it to be exercised, one needs to know the identity of the person or group against whom one uses it. In other words, destructive power can be used effectively when one is well informed about the identity of other(s) against whom one tries to exert it. Identification is, thus, a precondition of the use of destructive power. For example, blackmailing is conditional on the possibility that revealing 'secret' information about someone's identity can hurt or destroy that person. Schelling (1963, p. 140) cites a nice example from Shakespeare's *Measure for Measure* which clarifies the importance of identification in a fascinating way. Angelo, acting in place of the Duke, decides to execute one of his prisoners. Before execution, he could torture him, but he has no motivation to do that. The victim has a sister, who comes to Angelo to plead for her brother's life. Angelo, finding the sister pretty, changes his mind and announces that he will torture the victim to death if the sister does not sleep with him. But if the sister accepts the dishonourable deal, he will merely execute the brother. The sister submits. Angelo's only interest in torturing the brother is in what he may gain by making a threat to do so; once there is

somebody available to whom the threat can profitably be communicated, the possibility of torture has value for Angelo – not the torture itself, but the threatening of it. The sister has obtained negative value out of her trip. Having identified her interest and made herself available to receive the threatening message, she has been forced to suffer what she would not have had to suffer if she had never made her identity known or if she could have disappeared before the threat was made.

Threat power is conditional on identification and communication. This explains why two opposing or conflicting parties try their best to know everything, even the slightest details, about one another. However, receiving too much information is as bad as lacking information. Thus, the treatment of information is essential in deciding the optimal level of information and the necessary type of information for decision making. Given the importance of information, misinformation in all its diverse forms such as cunning, deceiving and lying is equally important. Since it is impossible to avoid leaking information, it is better to give contradictory information and provoke confusion. To distinguish right from wrong information, there is a need for spies and double agents. The collection of information as one of the main tasks of secret agencies is as old as the history of warfare. Sun Tzu, who lived approximately two thousand years ago, devoted an entire chapter in *The Art of War*, entitled ‘Book thirteen: Spies and traitors’. This chapter is about the role of information in war. It begins with the following paragraph:

It is important for the warlord to have information coming from all corners of the realm. Some of the information he receives will be good and useful. Other information will lie in the realm of deception/no-deception . . . The wise warlord knows that to beat the enemy he must have information that he can use to win. He must also be aware of receiving too much information. This is as bad as not receiving information and can confuse matters, making it difficult to initiate correct action from wise decisions. (Kaufman 1996, p. 105)

It concludes:

When the warlord is preparing to enter into battle with an enemy he must know the names of the enemy commanders, the size of the enemy army, and the positions they use to bivouac. Without this information he is as a blind and deaf person entering into a perilous journey . . . Without secret operations, a war is a meaningless act of gratuitous violence that does nothing except destroy all the people and all the resources. (ibid., pp. 108–9)

Modern warfare follows the same principle, even if it generally uses sophisticated methods of coding and decoding based on mathematics of combinatorics and graph theory. The importance of war preparation in the development of scientific research is hardly deniable. During the Second

World War, the American Research and Analysis Branch of the Office of Strategic Services (OSS), the precursor of the Central Intelligence Agency (CIA), was one of the main crossroads where scientists from different fields could meet. This agency was built on the model of a similar organization in Britain during the 1930s, namely the famous Section S (Statistic Branch) whose task was to use the latest results of science and technology to strengthen the military capacity of the country. Section S was led by F.A. Lindemann who later became Lord Cherwell, and among its staff one can find Roy Harrod and G.L.S. Shackle. The OSS also recruited many scientists, and among its 50 economists one can find the names of Moses Abramowitz, Sidney Alexander, Paul Baran, Abram Bergson, Carl Kaysen, Charles Kindleberger, Walt Rostow, William Salant and Paul Sweezy.⁸⁶ Another agency which was closely related to military research, particularly in aerial combat, was the Statistical Research Group at Columbia led by Allen Wallis and Harold Hotelling. This agency also recruited many economists, among whom were Milton Friedman, John Savage, George Stigler and Abraham Wald. At the end of the Second World War, a private research agency, namely the RAND (Research and Development) Corporation, was founded. RAND's principal client at the beginning was the US Air Force, and Albert Alchian was one among many well-known American economists who were employed by the Agency (Beaud and Dostaler 1993, pp. 97–9). It is also noteworthy that the first field of application of game theory, developed by John von Neumann, was war and not economics. The conception and development of computers was also generated by military research.

After the Second World War, and during the cold war period, military research in nuclear and conventional weapons was undertaken energetically both by the United States and the Soviet Union. Moreover, the post-war period was marked by an 'ideological war'. Voice of America, created in 1942, was broadcast in 50 languages in 1950. Radio in American Sector in West Berlin, founded in 1946, Radio Free Europe (1950) and Radio Liberation from Bolshevism (created in 1953 and renamed Radio Liberty six years later) were the first three radio stations to be broadcast to East European countries during the cold war period. Taking advantage of press liberty in the West, the Soviet Union had its publishing houses and could count on certain communist parties for propaganda activities (see Jeannesson 2002, pp. 98–115). After the collapse of the Soviet bloc, the importance of research and development (R&D) in the military sector, particularly in the United States, was not weakened, but rather increased. In 1998, US military expenditures represented more than one-third of world expenditures, and amounted to the total military budget of Russia, Japan, France, China, the United Kingdom and Germany. In 2000, we had to include the military budgets of three other countries, namely Italy, Saudi Arabia and Taiwan to reach the total US budget. According to

Science and Engineering Indicators for 2002, more than half of the US state budget for R&D is devoted to military research.

Bart Hobijn (2002) tries to relativize the share of military research in total R&D spending in the economy. According to his estimations, in 2000, the US public and private sectors spent about \$265 billion on research and development of which 9 per cent (\$24 billion) was on defence. If we add the currently proposed \$2.4 billion of bio-terrorism response R&D to this \$24 billion, we would find that defence R&D spending would have been 10 per cent of total R&D spending in 2000 (*ibid.*, p. 31). Nevertheless, Hobijn's calculations ignore the share of military research in the US state budget for R&D. In Europe, France and the United Kingdom are the only countries where military research constitutes a large part of their R&D budget. The American supremacy in military research (production of numerous sophisticated military weapons) will be strengthened even more due to considerable increases in the military budget decided by the Bush administration (\$379 billion in 2003, with an objective of \$470 billion for 2007). The US military budget in 2003 amounts to Russia's total GNP (Achcar et al. 2003, pp. 36–9). The new information technology is first and foremost at the service of the military sector.

Hence, war and war preparation has always been one of the principal sources of scientific and technological research. Victory in modern war depends on the superiority in information technology, communication systems and mobility. However, this is only one side of reality. The other facet of Janus is secrecy and censorship. The need for secrecy in war preparation has repeatedly been the source of censorship and lies, even under the most developed democracies before and after the Second World War. Lies have also been justified as part of the psychological war against the enemy.⁸⁷ Furthermore, the establishment of unilateral or double lines of communication, or a complete rupture in communication in order to avoid any reception of threat messages are different aspects of warfare communication strategies. Information theory and conflict theory have largely contributed to the clarification of these problems.

To sum up, we can say that the use of destructive power not only involves the collection and treatment of information, but also the diffusion of misinformation and deceit. Hence a warrior should behave opportunistically in Williamson's sense:

By opportunism I mean self-interest seeking with guile. This includes but is scarcely limited to more blatant forms, such as lying, stealing, and cheating. Opportunism more often involves subtle forms of deceit. Both active and passive forms and both *ex ante* and *ex post* types are included . . . More generally, opportunism refers to the incomplete or distorted disclosure of information, especially to calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse. (1985, p. 47)

Destructive power provokes real or contrived information asymmetry to achieve its objectives. In this perspective, destructive power is responsible both for enhancing our knowledge and for deceiving us systematically. It induces both strict secrecy and openness. In so doing, destructive power generates a hierarchical structure of information circulation. While some circles have the monopoly of information, others are left with half-truths or outright lies. This hierarchical structure of information diffusion provides a self-reproducing mechanism for destructive power. Destructive power produces information asymmetry, which in turn reproduces destructive power. Increasing returns to information have not only become the source of a growing gap between rich and poor countries, but also between powerful circles and the majority of people in developed countries. The growing separation between civil society and the state reflects this lack of transparency and the extreme hierarchical nature of information diffusion, which is particularly enforced by the alliance between the military sector and information and communication technologies.

Extensive Integration and Communication

The army enhances communication through three main channels: (i) war; (ii) bringing together soldiers from different regions within the same army; and (iii) building the communications infrastructure for military supplies.

First, war has always been a method of interaction between nations that cannot interact otherwise. Given the cultural gap between the Arabs, Mongols and Persians, it is not clear whether there could have been a possible interaction between these different cultures without the Arab or Mongol invasions of Persia.

Second, the army was (and is) a place where soldiers from different regions of the same country or different parts of the world meet. During the Roman Empire, the army was the main means by which ordinary people, usually peasants, were removed from the cultural isolation of their locality and brought into contact with the outside world. This did not generate revolutionary ideologies among the soldiers who were, after all, the core of the Roman state. A mixture of strict military hierarchy and discipline, regular pay, and local recruiting and billeting practices formed a type of two-level hierarchical structure in the Roman army: a homogeneous officer class with a strong commanding role, and a series of local detachments. However,

Where troops did mix in large numbers across localities . . . new and, to the ruling class, slightly worrying – soldier cults developed among them. The cult of Mithras, the ancient Iranian god of light, was the most widespread. This demonstrated that a relatively egalitarian extension of communications networks through the medium of the army would lead to cultural innovation. The soldiers, mixing their stocks of

knowledge, values, and norms, did not remain content with their separate provincialism, nor were they satisfied with the official cults of the state. The empire would have to cope with cultural innovation even in its army core. (Mann 1986, pp. 311–12)

This explains why and how Christianity found its way through the Roman army to conquer the Roman Empire. In recent times, after the abolition of slavery in the United States, the army was one of the first institutions to offer its inferior ranks to black soldiers, abolishing the discrimination between white and black with regard to dying for the country! In the nineteenth century, the American army recruited among emigrants arriving in the country and now, the Bush administration authorizes ‘illegal’ immigrants to stay in the United States as residents if they join the army and fight in Iraq or other parts of the world. Thus, white, black, and coloured soldiers have to live together in the army without discrimination.

Third, as explained earlier, throughout history, particularly during the ‘early’ and ‘territorial’ empires, the army contributed greatly to the development of communication routes. The Roman Empire is a salient example. The legionary economy of the Roman Empire extended communication routes, including land transport despite its high costs, since it was regarded as essential in supplying arms. As Mann (*ibid.*, ch. 9) clearly documents in the case of the Roman Empire, transport was organized primarily to pacify,⁸⁸ not to make profits. If movement of supplies was necessary for pacification, and if it were practicable, it would be attempted, almost regardless of cost. The high degree of concentration, centralization and mobility of military organization was the basis of its extensive integrative power. Because of this integrative power, military action could actively extend communication routes. In the modern age, the world conquest by Europe was due to its maritime superiority. According to Braudel,

[T]he conquest of overseas gave Europe its universal primacy for centuries. This time, the technique of ocean navigation created an ‘asymmetry’, or a privilege at a world level. In fact, the explosion of Europe all over the world seas raises a serious problem: how can it be . . . that the ocean navigation is not shared among all maritime civilizations of the world? In principle, every one could participate in competition. But Europe was alone in the race. (1979, vol. 1, p. 352)

Braudel as a profound critique of ‘Euro-centrism’ in historiography considers the genesis of European superiority as ‘the Gordian knot of world history’ (1979, vol. 2, p. 110) that cannot yet be cut only on the sole basis of European historical reflections. However, he stresses the importance of Europe’s maritime superiority.⁸⁹

McNeill (1982) examines the data concerning Britain’s naval force during

1884–1914. He shows that during this period, while army costs fell short of doubling, navy costs multiplied almost five times. Naval construction and the manufacture of different kinds of machinery that went into warships became really big business. Instead of lagging behind civil engineering, military technology came to constitute the leading edge of British (and world) engineering and technical development. In this sense, welfare and warfare linked together to support the naval race. The ‘industrialization of war and the politicization of economics’ is a distinctive hallmark of the twentieth century (*ibid.*, p. 294).

If communication routes were the basis of Roman’s superiority in Antiquity and maritime power the source of European primacy up to the First World War, radar, aviation and finally atomic warheads were the origins of American and Russian military superiority after the Second World War.

At the beginning, radar was the most notable such innovation. British scientists and engineers discovered how to use reflections of short radio waves to locate airplanes at sufficient distances to allow their interception by fighter pilots during the Battle of Britain. Radar continued to develop very rapidly during the war and found new uses in navigation and gun laying; but other technologies – jet airplanes, proximity fuses, amphibious vehicles, guided missiles, rockets, and most complicated of all, atomic warheads – soon rivalled radar’s early importance. (*ibid.*, p. 359)

These innovations took place before and during the Second World War, since it is hard to believe that any government would have undertaken the enormous expense of such risky projects in peacetime (Freeman 1994, p. 475).

From an economic point of view, there are at least two similarities between the Romans’ primacy in communication routes, European maritime superiority, and American aviation and nuclear hegemony. First, in all three cases, welfare and warfare went together. In the Roman case, a legionary economy prepared a territorial empire; in the European case, naval power was a source of employment and income especially for the United Kingdom; and finally American hegemony in radar, aviation and non-conventional (nuclear) weapons is closely related to the development of electronics, computers and information technology. Second, in all three cases, the development of major military innovations became possible due to political considerations; otherwise such innovations could not be undertaken on the basis of purely economic calculation.

Destructive Power as a Form of Expression

Destructive power is a form of expression and sometimes a very primitive one (for example, when it uses violence), although it has been greatly refined and has become increasingly more sophisticated throughout history. The first method used by an infant or a child to express or impose her/his desire is

crying. Crying, as personal destructive power of an infant (or a child), is also a communication method, and is used as a signal. Crying can bother parents and bring them to pay attention to or comply with the needs of the infant or child. However in earlier ages, crying can be regarded rather as a primitive signal than a wilful use of threat power by a child who has not yet mastered a more sophisticated or refined language. However, while growing up, consciousness develops and the learning capacity of the child allows her/him to talk. Now, s/he can use 'crying', or 'breaking things' and throw a tantrum more strategically to impose her/his desire on parents. Other methods, especially affective ones, are also used frequently. Children making demands of their parents and children trying to attract their parents' attention and kindness reflect different types of relationships or rules established between children and parents. The type of relationship determines the relative weight of each method used to satisfy one's needs. If the rules of the game encourage reasoning and negotiating, then children will find it more advantageous to use other methods than crying or screaming to achieve their ends. In this sense, the rules of the game can contribute to replacing 'scream' by 'voice'.⁹⁰

The first stage of English workers' collective consciousness against the unlimited capital domination was marked by the destruction of machinery in the nineteenth century, as if the machines were the source of unemployment and workers' misery, and is known as 'Luddism'.⁹¹ Destructive power is used here because of workers' ignorance about the real causes of their misery. Luddism is a primitive form of workers' collective movement, and a primitive form of expression of their dissatisfaction and protest. The same thing can be said about city mobs or 'political Luddism' in Hobsbawm's terminology:

'Church and King' movements are . . . social protests, though revolutionary ones only in what I have called their 'Luddite' phases. Generally their object is to preserve the traditional form of social relationships, which implies an acceptance of the traditional hierarchy; though the secular dream of a genuinely and completely free society in which there are neither 'hats' nor 'caps' (to use the Sicilian phrase) occasionally bursts out in wild massacres. ([1959] 1963, p. 120)

The city mob may be defined as the movement of all classes of the urban poor for the achievement of economic or political changes by direct action, namely by riot or rebellion. However, a mob is not inspired by a specific ideology, or if it finds any ideological expression for its aspirations, it will be in terms of traditionalism and conservatism. For instance, a riot can plead to the King's or to Church justice, as in the 'Church and King' movement. Nevertheless, a riot is a pre-political movement, and as such a primitive one. This does not mean that a city mob had no implicit or explicit ideas about politics. Indeed, it often rioted 'without ideas', that is, normally against unemployment and for a lower cost of living, and consequently markets, dealers and

local taxes such as excises were in all countries the obvious and almost invariable targets. Rioters, deprived of creative power (unemployed and poor), used their destructive power to get food or clothing: 'The threat of perennial rioting kept rulers ready to control prices and to distribute work or largesse, or indeed to listen to their faithful commons on other matters' (*ibid.*, p. 116). Hence, rulers confronted with the threat of destructive power by rioters accorded them some economic advantages (creative power).

City mobs can be defined as 'political Luddites'. They were a primitive form of expression compared to more advanced forms such as trade unionism and voting. In fact, some Italian regions that were known for having recurrent mobs were uneasy with modern methods of dealing with social conflict. For example, the Parmesans had the utmost difficulty in adjusting themselves to the new political techniques of the late nineteenth century, such as elections and trade unions, which they regarded as unnecessary: 'Thus as late as 1890 . . . the Parmesans still rioted in spite of their Reformist labour leaders, and in 1895, while Milan and the Romagna voted left, Parma did not. The ballot had not yet come to be considered a serious weapon for the people' (*ibid.*, p. 116). The ballot and trade unions are new means of struggle which allow the establishment of a communication line between the rulers and the ruled and hence replace 'scream' (city mobs or political Luddism) by 'voice' (collective negotiation and elections). This is impossible without a radical change in the rules of game.

A small group of workers taking an employer hostage or threatening him/her with death may also be interpreted as a primitive form of expression. With the rise of workers' collective movements, the need to use personal destructive power against individual employers has decreased. Instead, trade unions engage in collective negotiation with employers and this is a more efficient means of obtaining results for improving workers' conditions than methods such as taking individual employers hostage or lynching them. Freeman highlights some of the major advantages of unionization:

The institution of voice in the labour market is trade unionism and collective bargaining. There are several reasons why collective rather than individual activity is necessary for voice to be effective within firms . . . The major advantages of unionization are that it provides: a direct channel of communication between workers and management; an alternative mode of expressing discontent than quitting, with consequent reduction in turnover costs and increases in specific training and work conditions; and social relations of production which can mitigate the problems associated with the authority relation in firms . . . It creates an institutional mechanism for innovation in labour contracts and what may be termed a 'new market' for labour contracts . . . Union voice can be expected to reduce quit rates, absenteeism and related exit behaviour. (1976, pp. 364–5)

These advantages are explained within Hirschman's theoretical framework

of voice versus exit. Voice is regarded as a collective action, whereas exit is defined as an individual reaction. However, another distinction should be made between two different types of collective action, namely, scream and voice. While city mobs are an example of scream, collective negotiations through unions are an illustration of voice. Concerning trade unions, one should also distinguish between those that are not officially recognized by the state and employers (for example, illegal workers' unions in dictatorial regimes) and those that are considered to be part of industrial relationships (for instance, legal trade unions in democratic regimes). The main difference between legal and illegal unions is the governing rules. While legal trade unions act as a device of voice, illegal ones are usually the means of scream, since their first and foremost demand is to change the constitutional or political rules and be authorized to act as a legal and open organization of workers.

Terrorism is another form of destructive power. There are many types of terrorism, such as state and opposition terrorism. Terrorism as a form of opposition also has different forms and types. Guerrilla or partisan movements in France or other countries against Germany's fascist occupation or during the Spanish Civil War or guerrilla warfare in Vietnam are different examples of 'terrorist' movements as part of a social revolutionary upheaval. Guerrilla warfare against dictatorial regimes (autocratic, military or religious ones) such as the Shah's regime in Iran during the 1970s by the Organization of the Iranian People's Fada'i Guerrillas (OIPFG) is another example. In this case, guerrilla warfare was due to the lack of alternative means of political or legal opposition (see Jazani 1980; Behrooz 1999, ch. 2). A third kind of opposition terrorism is terrorist activities in democratic countries such as *Action directe* or the Red Brigades. In this case, terrorist activity is not due to lack of other means of expression but to a deliberate choice of small groups of revolutionaries who believe in violent methods to overthrow the 'bourgeois democracy'. A fourth type of terrorism can be identified whose object may be 'religious' war (such as Osama bin Laden's group) or 'racial' war (such as extreme right groups in the United States and other countries), or other segregationist causes. This last type of terrorism is not necessarily related to the lack of other means of expression.

State terrorism and the last two types of opposition terrorism have a common thread. They all deliberately resort to violence, and not because of the impossibility of using other methods of opposition. In contrast with these types of terrorism, guerrilla warfare as part of a resistance movement or as an expression of dissatisfaction against a tyrannical regime (autocratic, military, religious, totalitarian), namely types one and two of opposition terrorism, are a primitive way of expression in the absence of other more refined and sophisticated means of expression, such as elections, and parliamentary, political and union struggles.

As the Universal Declaration of Human Rights (10 December 1948) clearly acknowledges, insurrection against a tyrannical regime that does not tolerate any form of opposition is a democratic and legitimate right of people. It was under the Jacobin regime that the first genuinely democratic constitution was proclaimed. In this noble but academic document the people were offered ‘universal suffrage, the right of insurrection, work or maintenance, and – most significant of all – the official statement that the happiness of all was the aim of government and the people’s rights were to be not merely available but operative’ (Hobsbawm 1962, p. 69). However, universal suffrage had to wait a long time to be achieved. The political system in Britain, France and Belgium was fundamentally the same until 1870: liberal institutions were safeguarded against democracy by the requirement of property or educational qualifications for the voters (there were, initially, only 168 000 of them in France) under a constitutional monarch (Hobsbawm 1962, p. 111). In fact, this system was much like the institutions of the first moderate French constitution of 1791 and was very far from the Jacobins’. It is not surprising that the classical programme around which the British working class frequently rallied was one of the simple parliamentary reforms as expressed in the ‘six Points’ of the People’s Charter.⁹² In substance this programme was no different from the ‘Jacobinism’ of Thomas Paine’s generation, and was entirely compatible with the political radicalism of the Benthamite middle-class reformers, as put forward by James Mill. In France, universal suffrage was instituted in 1848. However, despite the conservative outcome of the April 1848 elections, subsequent by-elections frightened the conservative government of 1850 so much that in May it decreed residence and other requirements for having the right to vote and thereby indirectly disenfranchised some of the poorer sections of the population. These restrictions were then lifted in a shrewd move by Louis Napoléon for the purpose of the plebiscite of December 1851 (see Price 1972, pp. 258–60, 322; Agulhon 1973, pp. 149–51).

The transition to universal suffrage became possible not only because of the revolutionary movements of non-proprietor classes, but also due to those moderate middle-class reformers who advocated universal suffrage to avoid revolutions. In other words, the privileged classes finally accepted giving up their privilege in creative power (property, income or education) because of the destructive power of non-proprietor classes. The trade-off between creative and destructive power was the underlying social rationality of universal suffrage in the eyes of moderate middle-class reformers. Hirschman also notes the relationship between revolution and universal suffrage and writes:

If insurrection is justified in the *absence* of free and general elections, as republican opinion maintained at the time, then, in counterpart, the implantation of universal suffrage could be held to be an antidote to revolutionary change. This was indeed

the way the more conservative republicans saw it soon after the February Revolution, and the idea is well expressed in the contemporary slogan, 'the universal suffrage closes the era of revolutions.' All of this is perfectly illustrated in an 1848 engraving . . . showing a Parisian worker in a perplexed and even distraught mood as he discards his rifle for a ballot he is about to drop into an urn labelled 'suffrage universel'. (Hirschman 1982b, p. 113)

The French constitution of 1875 re-established universal suffrage after the fall of the Paris Commune in 1871. However, the young Republic was threatened in the 1877 by the authoritarian tendencies of General MacMahon, who had been appointed president for seven years in 1873. A few days before the elections, Léon Gambetta, the 'father of the Third Republic', implored particularly conservative opinion to stand by universal suffrage. Gambetta defended universal suffrage in parliament in these terms: 'How could you fail to understand that, if the universal suffrage functions in the fullness of its sovereignty, *revolution is no longer possible* because revolution can no longer be attempted and that a coup d'état need no longer be feared when France has spoken?' (quoted in *ibid.*, p. 113). Hirschman also cites Leslie Stephen, the critic, essayist and historian of ideas who wrote in favour of reform rather along the lines of Gambetta: 'In England, of course, he had to argue, not that revolutions would no longer occur *with* the extended suffrage, but, somewhat more imaginatively, that they were threatening *without* it' (*ibid.*, p. 115). Moreover, Stephen argued that, once in parliament, that is, 'out in the open', the workers' representatives would become domesticated and even divided. In other words, the vote delegitimizes more direct, intense, and 'expressive forms of political action that are both more effective and more satisfying' (*ibid.*, p. 117).

I am not quite sure that the recourse to revolution is only related to the lack of universal suffrage. My doubts can be better explained in the light of the English experience. Why were revolutions not so common in this country compared to France? For one thing, universal suffrage was established much later in England than it was in France. However, in Britain, the United States, Switzerland, the Netherlands and Scandinavia, a long-established tradition of mass agitation and organization as part of normal social life (and not immediately pre- or post-revolutionary) existed. Even in constitutional countries like Belgium and France, the legal agitation of the extreme left was only intermittently allowed, and its organizations were often illegal. Consequently, while a restricted democracy existed among the privileged classes of society, the fundamental devices of mass politics, such as public campaigns to put pressure on governments, mass organizations, petitions, public speeches and the like were only rarely possible. As Hobsbawm rightly reminds us,

Outside Britain nobody would have seriously thought of achieving universal parliamentary franchise by a mass campaign of signatures and public demonstrations or

to abolish an unpopular law by a mass advertising and pressure campaign, as Chartism and the Anti-Corn Law League tried respectively to do. Major constitutional changes mean a break with legality, and so *a fortiori* did major social changes. (1962, p. 127)

In fact, the major difference between Britain and France was that ‘mass politics’ were tolerated in England as a means of change, whereas in France this method of expression was inefficient. Universal suffrage in France was a way to institutionalize mass politics, and in this sense it played the same role as ‘mass campaigns’ in England. It is not universal suffrage in itself which makes the difference. For instance, during the Shah’s rule in Iran universal suffrage officially existed, but there was almost no political freedom to use the right to vote and express freely one’s political preferences, or to exert some political pressure on the government. Hence, universal suffrage became a dead letter and its only use was to provide international legitimacy to the Shah’s autocratic decisions. The same thing can be said during Mohamad Khatami’s recent presidency in Iran. People massively participated in presidential, parliamentary and local council elections during 1997–2002. However, with the increasing participation in elections, the real authority of elective bodies decreased and non-elective bodies concentrated all power in their hands under the supervision of Seyyed Ali Khameni as *Vali-Faghih* (the supreme religious authority).

Hence, the crucial question regarding major social changes undermining existing rules is whether the institutionalization of voice (mass politics) can avoid scream (revolutionary outbursts) or not. This problem cannot be studied within the Hirschman dichotomy of voice versus exit. The institutionalization of voice (which Rokkam 1974, p. 33, calls ‘domestication of violence’) and the prevention of scream depends on the trade-off between creative and destructive power of different opposing social groups and their particular compromises and alliances. Russell’s remark concerning the advantages of a democratic government in preventing civil war is insightful:

This is not to say that there is a better form of government than democracy. It is only to say that there are issues as to which men will fight, and when they arise no form of government can prevent civil war. One of the most important purposes of government should be to prevent issues from becoming so acute as to lead to civil war; and from this point of view democracy, where it is habitual, is probably preferable to any other known form of government. The difficulty of democracy, as a form of government, is that it demands a readiness for compromise. ([1938] 1971, p. 131)

Now we can redefine ‘exit’, ‘voice’ and ‘scream’ in terms of creative and destructive powers.⁹³ In my opinion, *exit is part of economic or creative power, although a negative use of this power, whereas voice is the result of a*

trade-off between creative and destructive powers, and scream is part of destructive power. Workers and capitalists both have exit power. However it should be noted that the workers' power to quit their jobs is not as strong as the capitalists' power to 'remove their stock' or resort to 'capital flight'. According to the converging testimony of Charles de Secondat Montesquieu, Sir James Steuart and Adam Smith, the power of the state is challenged by the ability of capital and capitalists to vote with their feet. Because capital flight is a good indicator to gauge the business climate in a country (see Hirschman 1981, pp. 253–8). In political contest, exit can be illustrated by emigration, whereas voice represents pressures through mass campaigns, elections, or other channels of legal or participatory politics, and scream stands for revolution or other forms of radical mobilization such as general strikes, riots and massive or non-peaceful manifestations. While exit does not directly question existing rules, voice attempts to bring change within these rules, and scream undermines them. Exit or voting with one's feet is an indirect way of expressing dissatisfaction,⁹⁴ whereas voice and scream are direct forms of expression.

Destructive power as a form of expression is subject to social choice. But whose social choice are we speaking of? In my opinion, the choice between voice and scream or violence preference depends on the expectations of ruling or powerful social groups regarding their desired social order. This does not mean that non-dominant groups (like certain terrorist groups) have no power to provoke social violence; it only means that such groups have a marginal or secondary role compared to state terrorism.⁹⁵

The relationships between destructive power and communication can be summarized in two points: first, communication is a determinant condition of destructive power, since without identification, this power cannot be exerted, second, destructive power as a means of superiority or as a form of expression is a cause of communication. Destructive power as a cause of communication can be defined by violence preference $V(u)$. This function hinges upon the anticipation of ruling groups regarding uncertainty in building or maintaining their desired order. Although non-dominant groups can generate violence, their recourse to destructive power as a primitive form of expression is either involuntary (due to the lack of other forms of expression) or voluntary but non-determinant. Hence, destructive power as a form of expression is subject to the social choice of ruling groups. Their economic expectations regarding costs and benefits of what order they desire and what anarchy they perceive are part of their social choice.

DESTRUCTIVE POWER: PUBLIC OR PRIVATE GOOD

Neoclassical economics distinguishes public and private goods according to

intrinsic qualities of goods. Wars and revolutions are usually regarded as public goods, since they satisfy the double criteria of non-excludability and non-rivalry. However, as I argued earlier, in neoclassical economics, property and sovereignty are clearly separated and property is justified on the basis of natural rights. Accordingly, the distinction between private and public is not decided on the basis of sovereignty, but on the intrinsic qualities of goods. In my opinion, property is inseparable from sovereignty, and thus the frontiers between public and private are not decided by the intrinsic qualities of goods; rather, they are determined by destructive power as the foundation of sovereignty. It was because of sovereignty that slavery was abolished and the liberty and equality of all human beings regardless of their race, sex and religion were acknowledged by law. Consequently, human beings can no longer be owned.

As Commons pinpoints, the meaning of liberty was further clarified in the *peonage* cases which brought up the danger of going to an opposite extreme of servitude in the enforcement of contracts. The security which the debtor gives to the creditor for the enforcement of the contract conceivably may be either the debtor's property or his/her body. If the body is the security offered, then the propertyless debtor is returned to slavery under the name of *peonage* and under the justification of enforcing the sacredness of a contract. The Supreme Court has consistently overruled statutes where the debtor's body became the security.

Thus market value, equality, and liberty are the related meanings of value in economics which change when economics change from physical or hedonistic philosophies to legal and political philosophies, and when political government changes from slavery and peonage to New Era or New Deal, and the meaning of 'capitalism' itself changes with new and revolutionary meanings of value. (Commons 1970, p. 161)

Thus, valuation hinges upon sovereignty.

In her book, on *Contested Commodities*, Radin (1996) deals with the idea of personhood, with what it means to have the 'integrity and continuity of the self required for individuation' (p. 55). She distinguishes between 'personal' property that is 'bound up with the self in a way that we understand as morally justifiable' and 'fungible' property that is 'not implicated in self-constitution'. Personal property is incommensurable, while fungible property is commensurable. Arrow (1997) calls personal property 'invaluable goods': 'Regardless of our all-embracing market theories, we economists must recognize that there are goods that might be bought and sold but aren't' (p. 765). Although the concept of property for personhood seems to me highly controversial, I share with Radin the idea that certain actions which are essential to personal identity fall under the sway of the market, and are measured by its criteria. Examples discussed at length by Radin are prostitution, the selling of body

parts and of children, and, though less conclusively, the sale of labour. In my opinion, invaluable goods are not limited to personal identity; they can also include environmental goods.

One of the major difficulties of valuing environmental goods is their existence value or their passive or non-use value. The existence value is generally determined by ethical or moral principles rather than by the cold calculation of personal benefits (see Diamond and Hausman 1993; NOAA 1993; Amigues et al. 1996). This can also be observed in the way we evaluate the existence value of a human being. Although Rosen and Thaler (1976) provide a method to estimate the price of life,⁹⁶ this invaluable good cannot be priced. None the less, during wars, revolutions, *coups d'état* and terrorist activities, the existence value of this invaluable good is measured in a cold-blooded manner by conflicting parties. In civil war, one group can easily kill the other group's members. If civil war is rife and intense, human life becomes so cheap that the salary of a grave-digger appears to have more value. In other words, during the intense use of destructive power, invaluable goods are turned into commodities, and can be evaluated, since they find an instrumental value. In this case, the end turns into the means and vice versa. When one participates in a revolution whole-heartedly, one cannot price the cause of revolution, and even one's life may be regarded as a means to achieve this end. The destruction of the old regime and the suppression of its supporters are *a fortiori* the means to realize this end. Hence, the relationship between individuals is not based on reciprocity of rights, but on a hierarchy of end/means.

Criminal activity is different from revolution by its very nature. However, in criminal activity the relationship between end and means also changes radically. One may put a price on the head of one's enemy if one is really determined to kill him/her. One may even hire a professional killer to lynch him/her, and may negotiate with the killer in order to fix the lowest possible price for the killing, namely less than his/her life insurance. In this case, the relationship between the person and his/her enemy is no longer based on the reciprocity of rights, but on a hierarchy of end and means: the death of the enemy is a means to achieve the satisfaction of the person (end). Due to the abolition of slavery and the acceptance of liberty and legal equality among all human beings, the life of an individual cannot be bought or sold. However, in the case of murder, this right is denied, and once again a price is put on one's head (but this time illegally). Destructive activity can transform some non-market goods into commodities, whereas by nature it is a non-exchange, non-market activity.

Moreover, as underlined earlier, the major difference between economic control and economic ownership is that property rights include the right to destroy. The power to destroy something can lead to controlling and owning it. For example, the imperial military power of the United States can destroy

Iraq's sovereignty, colonize it and possess its oil and all its natural resources. In fact the Bush administration has awarded Bechtel Group⁹⁷ of San Francisco the first major contract in a vast reconstruction plan for Iraq that apports no position of authority to the United Nations or Europe. The occupiers' right to make use of Iraq's oil has been studied by Dobie Langenkamp, of the University of Tulsa's law school. He concludes that, under international law, oilfields are 'immovable government property': occupying powers have the right to revenues from the sale of oil from existing fields, but no right to ownership of the underlying assets themselves (*The Economist*, special report, 19–25 April 2003, p. 18). None the less, *The Economist's* recommendation for 'maximising efficiency' is to 'sell off the Iraqi oil industry and reserves to the highest bidder' (p. 19). The American intervention in Iraq can transform Iraq's sovereignty from a public to a private good: the Iraqi state can be sold to a gang of American lackeys who hold power thanks to a strong army and to their loyal service towards the United States, especially by guaranteeing them the unlimited right on petrol and major political decisions.

There is a constant tendency in capitalism to transform everything or almost everything into a commodity. One of the most dangerous domains in which the application of this tendency can bring some particularly explosive and destructive results is war. Wars or waging war as an activity can become a private good or service. As Pareto once wrote: 'Wars become essentially economic. Efforts are made to avoid conflicts with the powerful and the sword is rattled only before the weak. Wars are regarded more than anything else as speculations' ([1935] 1963, vol. 4, p. 1516). In other words, war can change its nature and be transformed from a public affair into a private or personal affair. This can be brought about by accentuating the very tendency of a military institution as a specialized body.

When an institution is specialized in destructive power, it needs an enemy to justify its existence. To preserve its legitimacy and a sense of self-identity or simply to preserve its budget in the case of the armed forces, the specialized institution or person is motivated to create its own enemy. Thus there are entire institutions or particular individuals whose identity is constructed around the concept of a potential or an actual enemy and hence are always looking for a war.⁹⁸ War as a commodity or private war can be an outcome of particular interests of specialized institutions in using destructive power. Military affairs have always been the special concern of governments, since these took over the running of permanent (standing) armies in the seventeenth century, rather than subcontracting them from military entrepreneurs. In fact, armies and war soon became far larger industries or complexes of economic activity than anything in private business, which is why in the nineteenth century they often provided the expertise and management skills for the vast private enterprises which developed in the industrial era, for instance, railway projects or port construction.

Moreover, almost all governments were in the business of manufacturing armaments and war materials, although in the late nineteenth century a sort of symbiosis developed between government and specialized private armament producers, especially in the high-tech sectors such as artillery and the navy, which anticipated what we now know as the ‘military–industrial complex’ (Hobsbawm 1987, ch. 13), with its Star Wars projects and its great supporters among Republican presidents (for example, Ronald Reagan, and George Bush father and son) in the United States. The military–industrial complexes in the United States, Russia, and major developed countries have particular stakes in provoking regional wars. According to the annual report of the Stockholm International Peace Research Institute (SIPRI), in 2000, among the first 100 major companies producing military weapons, 76 were American and West European, ten were Japanese and five were Israeli.⁹⁹ In 2000, the American Department of Defense and the British Ministry of Defence signed a basic contract on military and industrial cooperation. At the same time, five giant American military corporations, namely Lockheed-Martin, Boeing, General Dynamics, Raytheon and Northrop-Grumman signed a cooperation contract with BAES (British Aerospace System). This military pact between the American and British military–industrial complexes was called ‘transatlantic’. In response to this American–British rapprochement, France and Germany also encouraged military corporations to merge. Hence, in 2000, the European Aeronautic Defence and Space Co (EADS) was created on the basis of a merger between Daimler-Chrysler, Aerospace AG, Aerospatiale Matra and Construcciones Aeronauticas SA. Since then, the two giant Western military and aeronautic industries have been competing on an international level.

CONCLUSION

To sum up, we can say that in contrast with the neoclassical economics, destructive power cannot be classified as public or private according to its intrinsic qualities, since this power as the foundation of law and legal rules determines the frontiers between private and public. It can transform public goods into private ones and enhance even the commoditization of invaluable goods while being by its very nature the foundation of sovereignty or public order.

4. The value of destructive power

INTRODUCTION

The value of creative activity (goods and services) has been extensively studied in economic literature since its inception. However, the value of destructive activity has generally been neglected.

The purpose of this chapter is to discuss the value of destructive power. In doing so, I shall first identify the following two peculiar characteristics of the value of destructive power compared with that of creative power: (i) non-equivalency principle; and (ii) more productivity (destructivity) of destructive power.

Then I shall distinguish two different functions of destructive power, namely 'appropriative' and 'rule-producing'¹⁰⁰ functions. I shall argue that in the former case, destructive power is a means to appropriate wealth and is thus subject to the economic calculation of costs and benefits. Although appropriative activity may be social or individual, it has a private nature and can be analysed in terms of individual choice theory. Different strands of neo-classical approach, namely rent-seeking literature, rational conflicts, predation models, socio-political instability models and rational expectations or general equilibrium models of violence have focused on this function. However, this approach has ignored the rule-producing function of destructive power. Destructive power as a rule-producer is no longer a means but an end in itself, and has a public or universal nature. I shall subsequently discuss the limits of an individualistic approach in understanding the universal character of destructive power, and argue that social groups or dynasties, rather than individuals, should be taken as the starting point of the analysis of destructive power.

The value of destructive power in its appropriative function is determined differently from its value as a rule-producer. In the former case, the value of destructive power is based on a fundamental symmetry of action and reaction, and on equivalency of prejudices. There are diminishing returns to destructive power in its appropriative function due to: (i) a trade-off between creative (productive) and appropriative activities, given a common pool available for capture; (ii) the 'paradox of power' implying that initially poorer contenders are rationally motivated to fight harder, to invest relatively more in conflictual activity; and (iii) collateral damage which puts a limit on 'appropriative' activity.

The value of the appropriative function of destructive power is determined by the amount of creative or positive value redistributed without mutual consent. In contrast with this appropriative function, the value of the rule-producing function of destructive power may be negative since destructive power as the basis of sovereignty establishes the judgemental criterion of valuation. There is no unique value for destructive power as an end in itself; it has manifold subjective, conventional valuations. Its manifold valuations are thus marked by the incommensurability principle.

Finally, I shall argue that destructive power in its rule-producing function is subject to increasing returns due to: (i) uncertainty contagion, and (ii) positive or negative externality related to sovereignty. These factors lead to a process of cumulative causation, and a self-reinforcing mechanism regarding the use of destructive power in the presence of uncertainty.

THE SPECIFICITY OF THE VALUE OF DESTRUCTIVE POWER COMPARED TO CREATIVE POWER

The process of value destruction has two peculiar characteristics that distinguish it from the process of value creation. First, its value is based on the non-equivalency principle. Second, destructive power is more destructive than creative activity is productive.

Non-equivalency Principle

It is a well-known fact that everybody can destroy a hundred or even a thousand times more than s/he creates. However, this fact should be examined in order to avoid possible misinterpretations. It is true that, at the individual level, any agent (be it an individual, a group, or a nation) can destroy more than s/he is able to create. But at the aggregate level (all individuals, groups or nations), agents cannot destroy more than actually exists.¹⁰¹

If one imagines Robinson Crusoe on his isolated island and ask how much he can produce, one can conceive that the value of Crusoe's creative power is equal to his marginal productivity. In this state of nature, Crusoe has no social destructive power, but when Friday arrives, he can use his destructive power to enslave Friday. Now, the value of his destructive power is the amount of value that he can appropriate without any exchange by enforcing Friday to work for him. In other words, the marginal productivity of Friday is what Crusoe can grab. However, to ensure a permanent flow of revenue, Crusoe can give a part of the marginal productivity of Friday to Friday and keep the rest for himself.¹⁰² The value of Crusoe's destructive power will augment with the increase in the total social value created by others, as if the creative activity

produced a positive externality for grabbing activity. For instance, if Crusoe's marginal productivity is equal to $W_R = F'(L_R)$, and there are two other individuals whose marginal utilities are, respectively, $W_1 = F'(L_1)$, $W_2 = F'(L_2)$, and:

$$W_1 + W_2 \geq W_R, \quad (4.1)$$

then while Crusoe cannot expect to exchange more than W_R , he can expect to grab more than that amount since the total amount of created value is more than what he has produced. This implies that the expected value of Crusoe's destructive power is more than the expected value of his creative power, since he can violate the exchange equivalency principle.

At an individual level, one can expect to appropriate more than one can expect to produce, since one may escape from what Clower calls 'Say's Principle'. Clower (1965) employs Say's principle as synonymous with budget constraint. It states that 'the net value of an individual's *planned* trades is identically zero' (Clower and Leijonhufvud 1981, p. 80, added emphasis). The budget constraint is regarded as a rational postulate of the individual's planned or intended behaviour. It implies that the individual's total spending *plan* cannot exceed his/her budget constraint, namely the total expected monetary revenue at his/her disposal. Clower intentionally does not refer to the net market value, since Say's principle only holds that the expected or planned purchases of an individual cannot exceed its planned or expected revenues. The trades that Clower refers to are theoretically admissible and are not actual market trades. In this respect, prices and quantities are also conceived in the context of mental experimentation and hence make an allusion to expected purchase prices and planned quantities and not to quantities actually purchased or prices actually paid (Clower and Due, 1972).

Budget constraint as an *ex ante* rational behaviour should always hold true for describing the behaviour of transactors except for 'a thief or a philanthropist' (ibid., p. 320).¹⁰³ All predatory activities avoid the *ex ante* equivalency principle and are subject to the *ex ante* non-equivalency principle. None the less, the total amount of the market value of grabbing *ex post* cannot exceed the total amount of produced value *ex post*. Hence, if Y_c and Y_d represent, respectively, the total amount of created value *ex post* and the total amount of value that destructive power can win *ex post*, then we will have:

$$Y_c \geq Y_d. \quad (4.2)$$

It is true that the total amount of value that can be destroyed may exceed the total amount of value created, since one is able to destroy not only what is actually produced, but also what can potentially be produced. In this way, one may extend the range of destructible things to not only those items produced, but also those goods that can be produced. Nevertheless, we cannot destroy more than what actually or potentially exists. Equation (4.2) will be justified if we focus only on the creation and destruction of exchange values.

More Productivity of Destructive Power

Speaking about productivity of destructive power seems like an oxymoron. The word ‘productivity’ is inappropriate to define the ‘destructivity’ of each destroyer in a unit of time. It is necessary to invent another term like ‘destructivity of destructive power’ to measure it. I propose the *Webster’s Dictionary* definition of destructivity as ‘capacity for destruction’, whereas productivity is ‘quality of being productive, that is yielding benefits, profits’. Although I am aware of the inaccuracy of the term ‘productivity of destructive power’, I shall continue to use it because of its conventional acceptance.

Destructive power is more destructive than creative power is productive, since the process of value destruction is much faster than the process of value creation. One can kill another person in a moment, and thus take a life that has required a complex and long process to develop from an embryo. It takes a few seconds to destroy a bridge by putting some explosives under it, whereas to construct it necessitates weeks, months or even years of diligent work. Capital construction takes much longer than capital destruction. To show the effect of this shorter necessary time of the destructive process on its higher productivity compared to that of creative power, I shall represent the two processes formally.

The creative productivity of each agent can be expressed by the following equation:

$$y_c = Y_c / N_c \chi H_c, \quad (4.3)$$

where Y_c represents the total amount of created product, N_c denotes the number of people actively involved in the creative process and H_c denotes the length of the creative job during a day in hours.

Then the logarithmic variation of the creative productivity will be:

$$\dot{y}_c = \dot{Y}_c - \dot{N}_c - \dot{H}_c. \quad (4.4)$$

The destructive productivity of each agent can be expressed by the following equation:

$$y_d = Y_d/N_d \chi H_d, \quad (4.5)$$

where Y_d represents the total amount of destruction, N_d denotes the number of people actively involved in the destructive activity and H_d denotes the length of the destructive job during a day in hours.

Then the logarithmic variation of the destructive productivity will be:

$$\dot{y}_d = \dot{Y}_d - \dot{N}_d - \dot{H}_d. \quad (4.6)$$

If we assume that the total amount of destruction is strictly equal to the total amount of created product, then we will have:

$$Y_c = Y_d. \quad (4.7)$$

Suppose that the number of active people is equally distributed in destructive and creative activities, then:

$$N_d = N_c. \quad (4.8)$$

Since the length of the destructive job is shorter than that of the creative job, we will have:

$$H_d < H_c. \quad (4.9)$$

Comparing equations (4.4) and (4.6) and taking into account equations (4.7), (4.8), and (4.9), we will have:

$$\dot{y}_d > \dot{y}_c. \quad (4.10)$$

This means that the logarithmic variation of the destructivity of each agent is superior to that of his/her productivity. In other words, the shorter necessary time for the destructive process compared to that of the creative process is the source of higher productivity of destructive power.

TWO DIFFERENT FUNCTIONS OF DESTRUCTIVE POWER

Destructive power has two different functions: appropriative and rule-producing. Although these functions are inextricable, I treat them separately for theoretical clarity. For example, the war of the Bush administration against Iraq is being waged to pirate Iraq's oil, and to control its economy. In this

sense, war as a form of destructive power has an appropriative function. But this colonialist war also has a rule-producing effect, since the United States tries to establish its sovereignty over Iraq, its hegemony in the Middle East, and perhaps to draw a new map for the whole region in cooperation with Israel. These two different functions are present in other forms of destructive power. A revolution is for changing rules, but it also has an appropriative aspect. In the case of strikes, the appropriative function is straightforward, since their objectives are usually to increase salary, reduce working hours and so on. Nevertheless, strikes also decide the way an enterprise should be run. For workers' trade unions, striking is a very potent means that allows them to negotiate with employers concerning workers' participation in management. Even the right to strike is an important political question that involves the rule-producing function of destructive power. Criminal activity, as another form of destructive power, has both types of function. Its pirating or appropriative function is obvious, but it has a more enduring effect, namely a destabilizing or rule-disturbing effect which implies disorder, anarchy and insecurity.

The difference between these two functions is crucial. Destructive power in its appropriative function is a means, whereas in its rule-producing function, it is an end in itself. In the former case, destructive power can be defined as an alternative means of reallocating resources. It can be dubbed 'rent-seeking', 'predation' or 'appropriative' and be integrated in a rational expectations or general equilibrium model of individual agents choosing between creative and destructive activities in accordance with their private costs and benefits. In a perfect world of fully informed agents with no randomness, and exempt of radical uncertainty, it can be shown that the appropriative function of destructive power may be realized with no real destruction or violence.¹⁰⁴ All strands of neoclassical approach, such as rational conflict theory, general equilibrium models of violence and socio-political instability models of new political economy, lead to this result. The analogy to money neutrality in a general equilibrium model of creative activity is violence neutrality¹⁰⁵ in a general equilibrium model of appropriative activity. In both cases, money and violence are considered to be means to achieve a particular end. In neoclassical theory, money neutrality is related to the role of money as a means of commodity circulation, or fiat money (Patinkin 1956). By the same token, violence neutrality is related to the role of destructive power as a means of appropriation. In both cases, money and violence disappear in equilibrium. Agents are regarded as self-interested and calculating individuals endowed with *ex ante* rationality and maximizing behaviour.

Destructive power in its rule-producing function resembles money as a store of wealth that is required for its own sake, for its *liquidity* and can be regarded as an end in itself. What determines the 'liquidity preference' of people?

Our desire to hold Money as a store of wealth is a barometer of the degree of our distrust of our own calculations and conventions concerning the future. Even though this feeling about Money is itself conventional or instinctive, it operates, so to speak, at a deeper level of our motivation. It takes charge at the moments when the higher, more precarious conventions have weakened. The possession of actual money lulls our disquietude; and the premium which we require to make us part with money is the measure of the degree of our disquietude. (Keynes 1937, p. 216)

Uncertainty about conventional judgements resulting from a multitude of agents' anticipation about the state of the market in the future, and their distrust about their own calculations are the sources of liquidity preference. Money can serve as an insurance against uncertainty because of its social or universal value. Liquidity preference is thus decided not by individual agents but by conventional judgements, which are formed through a social process. In this process, the dominant opinion of the leading deciders in financial markets determines the social norm.

Destructive power in its rule-producing function is most likely required for its own sake, since it is the foundation of law or legal order. Destructive power as the last resort to maintain a desired order can overcome or mitigate our distrust about the possible violations of order by others.¹⁰⁶ Of course, there is an important difference between uncertainty concerning a state of nature and uncertainty regarding others' behaviour.

The first type of uncertainty is of a state-contingent kind and can be called 'primary uncertainty' (Koopmans 1957), whereas 'secondary uncertainty' arises 'from lack of communication, that is from one decision maker having no way of finding out the concurrent decisions and plans made by others' (ibid., pp. 162–3). However, the secondary uncertainty to which Koopmans refers is of a rather innocent or non-strategic kind. He alludes to a 'lack of information', but makes no reference to the uncertainty that arises because of strategic non-disclosure, disguise or distortion of information. This type of strategic uncertainty is related to a Machiavellian type of behaviour, which Oliver Williamson (1985) refers to as 'opportunism'. If in the case of liquidity preference, primary uncertainty or a state-contingent uncertainty about the future is determinant, then in the case of violence preference¹⁰⁷ strategic uncertainty is decisive. While the appropriative function of destructive power may be dealt with in an individualistic framework, the rule-producing function can only be grasped in a social context.

Keynes's famous phrase 'in the long run, we are all dead' reveals an important aspect of economic reasoning. Any individual is concerned first and foremost by economic interests during her/his personal lifetime. Individuals do not behave as species or dynasties with regard to their short-term economic interests. However, it is true that in war as well as revolutionary action 'individualism is the first to disappear' (Fanon [1961] 1968, p. 47). Instead, in such

cases, one can observe a kind of group coherence which is more deeply felt and shared by large masses of people and shows a much stronger, but less enduring, attachment than all other varieties of private or civil friendship. Fanon's statement points to the well-known phenomenon of brotherhood on the battlefield, where the noblest, most self-sacrificing deeds often occur on a large scale: 'Of all equalisers, death seems to be the most potent, at least in the few extraordinary situations where it is permitted to play a political role' (Arendt [1969] 1970, p. 67).

We are all born from our mother's womb, but we will leave this life alone. As far as human experience is concerned, death marks an extreme loneliness and impotence. However, faced collectively, death changes its appearance: 'one for all, all for one'! In this context, our own death is only a link in the whole chain of the immortality of the group we belong to. Individual self-consciousness thus turns into a collective consciousness and the immortality of the species takes the centre stage of our experience. It is as though 'life itself, the immortal life of the species, nourished, as it were, by the sempiternal dying of its individual members, is "surging upward," is actualised in the practice of violence' (ibid., p. 68). None the less, it is not only in wars, revolutions or other violent forms of action implying death that we are confronted with such behaviour. In almost all protestations undermining the existing order, individuals become conscious of their role as part of a species or a dynasty. Broadly speaking, if economic reasoning comes to Keynes's dictum that 'in the long run, we are all dead', political reasoning results in an opposite one: 'in the long run, we are all alive'. The time horizon of economic reasoning is different from that of political reasoning.

While economic reasoning comes within the scope of an individual's lifetime, political reasoning bypasses the individual's time horizon and adopts the species' or dynasties' (social groups') time horizon. Destructive power in its appropriative function follows economic or private reasoning, whereas destructive power in its rule-producing function complies with political, social groups' (classes) or public reasoning. This explains why the appropriative function of destructive power is consistent with an individualistic neoclassical framework, while the rule-producing function of this power contradicts such an approach.

THE VALUE OF DESTRUCTIVE POWER IN ITS APPROPRIATIVE FUNCTION

As a general principle, resources can be used not only for production but also for appropriative purposes such as theft, plunder, warfare, insurrection or other forms of destructive activity. Individuals and groups can either produce (and

thus create wealth) or seize the wealth created by others: 'The efforts of men are utilised in two different ways: they are directed to the production or transformation of economic goods, or else to the appropriation of goods produced by others' (Pareto [1927] 1971, p. 341). As I detailed in Chapter 2, Haavelmo (1954) pioneered a canonical general equilibrium model of the allocation of resources among appropriative and productive activities which has been further developed, during the last four decades, in a variety of ways by game theoretical models of rational conflict and different strands of new political economy. In formalizing appropriative activity, economists adopted 'standard (though possibly still highly arguable!) economic postulates like rationality, self-interested motivations, and diminishing returns' (Hirshleifer 1995a, p. 18).

However, recent economic literature does not distinguish the appropriative function and the rule-producing function of destructive power, and provides no explanation of how the value of destructive power is decided. It simply assumes that the value of destructive power is determined in the same way as that of creative power. This explains why, as Hirshleifer acknowledges, 'standard economic postulates' are applied in the analysis of appropriative activity. I shall show that although the value of the appropriative function of destructive power can be decided on principles similar to that of creative activity, the value of the rule-producing function of destructive power is determined by different (if not opposite) principles.

Appropriative activity is carried out in the absence of a third party, such as the state, which can act as the proximate enforcer of claims to property. It is a bi-party relationship, since the relationship between the parties is not regulated by law, and only decided through force or coercion. In such conflictual situations, enforcement is effected either by the first party through a self-imposed code of conduct, or by the second party through retaliation. In both cases, enforcement is based on the symmetry principle and equivalency of prejudices.

Symmetry Principle and Equivalency of Prejudices

The symmetry principle applies to all the sources of power and instruments of enforcement. Power and countervailing power act symmetrically. Any effort to subjugate people will eventually encounter resistance from them: as many aphorisms indicate, 'one fights fire with fire'; 'force begets force'; and 'those who live by the sword shall die by the sword'. The power stemming from personality is usually challenged by a strong personality; a power originating in property is opposed by property; and that generating from organization is met by organization. By the same token, coercive methods and punishments are countered by coercive methods and punishments, whereas compensatory rewards are countered by compensatory rewards. If the instrument of sanction is moral or ideological, then the resistance to it will also be moral or ideological:

There have been striking examples in history of countering or countervailing power that have depended for their effectiveness on their asymmetry . . . Mahatma Gandhi and Martin Luther King, Jr., owe some of their fame to their success; they owe even more to their break with the accepted and accustomed dialectic of power. (Galbraith 1983, pp. 79–80)

None the less, in the dialectic of power, symmetry is the rule.

Appropriative activity is not only subject to the symmetry principle, but also to the equivalency of prejudices. This equivalency is related to what Gabriel Tarde ([1904] 1999, ch. VIII) calls ‘psychological’ or ‘conflictual’ value.¹⁰⁸

Tarde distinguishes two different types of value in every commodity, namely ‘conflictual value’ and ‘assistance value’.¹⁰⁹ Conflictual value is the result of an internal conflict between our contending desires which causes us to choose one commodity instead of another. Choosing a commodity is the result of a teleological duel, since this choice satisfies one desire at the expense of non-satisfaction of other desires. As André Gide ([1897] 1972, p. 66) once said: ‘To choose is to deprive oneself for ever, for always, from all the rest’. This explains why this type of value can be regarded as psychological value. However, desires may be complementary in the sense that the satisfaction of one desire may lead to a better satisfaction of some other desires. In this case, there is an assistance value.

Tarde’s conflictual value bears a similarity to what is called ‘opportunity costs’ in modern economic literature. Following Samuelson, elementary textbooks frequently introduce the production possibilities frontier between guns and butter to illustrate the nature of the economic problem and the concept of opportunity cost. In fact, the use of labour and natural resources for appropriative activity (producing cannon) reduces the allocation of resources to creative activity (producing butter) for the same amount. In this sense, there is an equivalency between what is chosen and what is forgone. However, the concept of opportunity cost is not theorized to make sense of how guns might be used in a predatory fashion to acquire resources from neighbouring peoples or states, and ‘thus push out the production possibilities frontier of the society itself’ (Findlay 1996, p. 42).

Contrary to the opportunity costs concept, conflictual value can shed some light on the issue of warfare and other predatory activities, since it draws our attention to the spoliation value of every commodity, which precedes its exchange value. Take cattle as an example. Before being exchanged, cattle have a spoliation value that can be revealed when they are captured as spoils of war. Although warriors do not pay for the cattle, they risk their lives and it can cost them many injuries. Hence spoliation precedes exchange, and it is the reciprocal form of exchange. In other words, conflictual value assumes that

the idea of equivalency precedes exchange. Exchange is nothing but the commercial expression of division of labour. Price theory has generally neglected a particular category of value, which plays a major role in warfare and in penalty. Following Tarde, this category of value, can be called ‘equivalency of prejudices’.¹¹⁰

The Equivalency of Prejudices and the ‘As If’ Method

The equivalency of prejudices is like the equivalency of services. For warriors as well as thieves, the spoliation value of their plunder corresponds to the costs of capturing it, or the risk which they have to bear. Furthermore, when warriors struggle among themselves, or when a society punishes a criminal, we observe a permanent reference to the notion of equivalency of prejudices. Without this notion, which is the result of a complex reflection on justice and public goods, retaliation during wartime, vendettas or the civilized penal code become meaningless.

In the *Nicomachean Ethics*, Aristotle also notes the importance of retaliation in a society based upon exchange. Nevertheless, he pleads for proportionality and non-equal retaliation, since all people cannot be treated as equals:

The law of retaliation and the law of corrective justice in many cases do not agree. For instance, if a person who strikes another is a magistrate, he ought not to be struck but to be punished. Again, it makes a great difference whether what is done to a person is done with his consent or against it, *and the law of retaliation takes no account of this difference*. Still in such associations as depend upon exchange it is this kind of justice, viz., retaliation, which is the bond of union; but it is proportionate, and not equal retaliation; for it is proportionate requital which holds a state together. (1965, p. 26)

What distinguishes ‘exchange’ (productive activity) from ‘grabbing’ (appropriative activity) is the absence of mutual consent in the latter case.¹¹¹

If the law of supply and demand decides the value of commodities, the equivalency of prejudices determines the value of appropriative activity. While in the former case, exchange of commodities reveals the equivalency of exchanged values, in the latter the equivalency of prejudices precedes exchange and is justified on some non-economical considerations such as military, juridical or moral arguments.

The equivalency of prejudices is also relevant in economic transactions with the presence of a third-party enforcer such as the state or courts. Hold-up literature, as well as incomplete contracts’ theory has already underlined the complexity of contracts in the case of specific investment (Vahabi 2002b). The incompleteness can arise from the fact that although the terms of contract are observable to the parties of a contract, they are not verifiable by judges due to

their bounded rationality (Hart 1990, 1995). The literature on legal remedies for breach of contract, namely expectation damages and specific performance, tries to show how the ‘underinvestment’ problem can be removed on the basis of some juridical obligations (Malcomson 1997). The concept of equivalency of performance in contractual literature is based on specific juridical notions concerning obligations.

The equivalency of prejudices is thus non-neutral with regard to value judgements. However, in the neoclassical approach, destructive power in its appropriative function is regarded as a means to achieve an end, which is to capture the booty. Rational conflict theory and different strands of new political economy share the central thesis of utilitarianism, according to which only ends are the object of valuations, and means are valued only as instrumental to ends. The basic principle of this moral philosophy is that nothing is good or bad in itself, rather its effects can be good or bad. We may also recall in passing that this thesis has been one of the main objects of the institutionalists’ attack on utilitarian philosophy. The gist of the objection is clearly expressed in Myrdal’s works: ‘In any human valuation means have, in addition to their instrumental value, independent values as well. The value premise which has to be introduced in order to allow policy conclusions to be reached from factual analysis has therefore to be a valuation of means as well as ends’ (Myrdal 1958, p. 49). Hence, even if appropriative activity is regarded as a means, it does not imply that it has no independent value. The equivalency of prejudices as the founding principle of the value of appropriative activity is based on specific value judgements. It should not be confused with the equivalency in economic transactions based on exchange.

Institutionalists are not the only ones who take into consideration value judgements in using different types of means, particularly warfare or appropriative activity. Pareto also highlights the importance of non-economic considerations in resorting to violence in order to defend one’s own country against invasion:

People who lose the habit of applying force, who acquire the habit of considering policy from a commercial standpoint and of judging it only in terms of profit and loss, can readily be induced to purchase peace; and it may well be that such a transaction taken by itself is a good one, for war might have cost more money than the price of peace. Yet experience shows that in the long run, and taken in connexion with the things that inevitably go with it, such practice leads a country to ruin. (Pareto 1935, vol. 4, pp. 1517–18)

How, then, can one gauge the value of human life on the basis of equivalency of prejudices? For example, the September 11 attack on New York City took the lives of 3000 people. This number includes those who worked in the two World Trade Center towers, the fire-fighters and police personnel who

responded to the attack, and the tourists and other visitors who were in the World Trade Center complex that morning. Although human life as an invaluable good cannot be priced, Rosen and Thaler (1976) provide a method to estimate it. This method estimates individual economic loss by adding up a worker's pre-tax annual income from the year of death to the year that he or she had expected to retire. Of course, human life cannot be sold or bought since, as previously emphasized, the economic valuation is not free of social judgements. Hence Rosen and Thaler's method is based on an 'as if' hypothesis. In other words, if we suppose that human life has no social value, and is limited to individual or private economic value, then it can be argued that for those who died in the attack, the estimated earnings loss can be calculated by multiplying the average expected level of annual earnings by the average number of years left to work before retirement.¹¹²

Another benchmark in valuing lives lost or saved is the US value of statistical life (VSL). This was developed for cost-benefit analysis to assist in the evaluation of public and private programmes that reduce the probability of death (industrial safety, pollution control and so on) and to settle legal claims for wrongful death. Fisher et al. (1989) and Hall et al. (1989) extensively review the VSL literature. The VSL is calculated from 'wage-risk studies' where the inclination of individuals to bear a higher risk of death is assumed to be a function of wage differentials. The literature estimates the acceptable range of VSL between \$1.7 and \$9.2 million. Wolfson et al. (1992) apply VSL in valuing lives lost during *Desert Storm* operations in the Gulf war. VSL is also based on an 'as if' hypothesis, since it 'only represents the social cost of life to the extent that *the social welfare functions of decision makers reflect individuals' own valuations*. In particular, national civilian as well as military leaders value the lives of their enemies – particularly their military personnel – much lower than they do' (ibid., p. 162).

Bram et al. (2002) use the first method to estimate the value of human life lost in the September 11 attack:

We estimate workers who died in the attack earned, on average, \$127 000 a year. This estimate is based on the average income in 2000 of all workers in Manhattan and all workers in the finance and insurance sectors in Manhattan. The average annual income for workers in the finance and insurance sectors – where about half of the deceased workers had been employed – is estimated to be \$197 275 in 2002. The average annual income of all workers in Manhattan, excluding the two sectors, is estimated at \$57 000. We use the average age of the workers killed in the attack, forty, and assume that they had twenty-two years left to work until retirement. The average income of these workers is assumed to grow at the rate of inflation, which is assumed to equal the average discount rate. Under these assumptions, the current value of the aggregate earnings loss reaches about \$7.8 billion, or an average of \$2.8 million per worker. (ibid., p. 6)¹¹³

The authors acknowledge the difficulties and pitfalls in putting a dollar value on human life as discussed in Dorman (1996). Nevertheless, for estimating individual economic losses, they adopt an ‘as if’ method. The use of this method hinges upon the knowledge of the number of dead people, their average age (necessary to calculate the number of working years before retirement), and average wage. For example, if one asks a similar question about the individual economic losses of Iraqi people as a result of the first and second Gulf wars, one cannot find any answer since: ‘This is a war that may never have a reliable body count . . . Even if taking a formal census of the Iraqi dead were possible, it’s doubtful the U.S. military would try. Americans got out of the business of counting enemy losses after the Vietnam War’ (*Time*, 21 April 2003, p. 39).¹¹⁴ Furthermore, the application of this method leads to an absurd result: individual economic loss due to the death of any Iraqi soldier will be less than that of any American soldier. And the life of each American soldier or worker will be less than that of any American businessperson who worked in Manhattan and died in the September 11 attack! It goes without saying that human life cannot be priced, but from a very narrow economic point of view, such kind of estimation can be operational for deciding the amount of the compensation budget.

In the same manner, insurance companies try to calculate the insurance premium for political risks, which, like other forms of insurance, are partially covered by insurance in order to avoid moral hazard, except for confiscation of assets. The maximum quotient varies from 85 to 95 per cent. The insured value may vary during the period of insurance coverage. Thus, the insurer sets up a risk curve, which relates the fluctuations of insured value during the period of guarantee. The maximum limit of disbursement is calculated as a product of the maximum amount of risk during the guarantee period and the guarantee quotient (Habib-Deloncle 1998). The estimation regarding the amount of physical capital losses and damage due to political risks is similar to that following an earthquake or major natural disaster. Once again, despite the obvious difference between political risk and natural disaster, the method of calculating individual economic loss is the same.

For example,

The cost of replacing destroyed or damaged buildings in the World Trade Center complex and adjacent areas is estimated to be \$11.2 billion. Of this, \$6.7 billion will be for rebuilding the destroyed World Trade Center complex, although it is unlikely that the pre-attack design will be duplicated. The remaining \$4.5 billion is the estimated cost of repairing the damaged buildings. The cost of replacing the contents of the destroyed buildings, including the technology and fixtures, has been estimated to be \$5.2 billion. (Bram et al. 2002, p. 11)

These dollar values are nominal gross replacement and repair costs over a multiyear period, and do not explicitly account for the depreciation of the

assets or any potential offsets from government rebuilding programmes or private-insurance proceeds. The damaged buildings were not insured against terrorist attack. However, after the attack, the market for political risks has extended to cover terrorist threat in metropolitan centres. In fact, one of the peculiarities of the market for political risk is its evolutionary character. This market is not subject to the law of large numbers, and can hardly be analysed in terms of probabilistic and actuarial calculations, although it involves management over long periods. This disadvantage should be balanced by the fact that in such cases insurers will not bear all the costs, and states usually commit themselves to cover part of the losses.

The estimation of all sorts of individual economic losses and damage requires the use of the ‘as if’ method. This method reduces the equivalency of prejudices to a pure economic calculation of the amount of loss. In this perspective, appropriative activity can be expressed in terms of exchange value. But can marginal utility theory be applied to determine the value of appropriative activity?

Appropriative Activity and Marginal Utility Theory

New political economy considers that marginal utility theory can be applied to appropriative activity due to the trade-off effect between productive and appropriative activity given common-pool resources available for capture. Two different lines of argument are developed. The first one is based on a general equilibrium model with no fictitious auctioneer (imperfect competition). The basic model is that of Haavelmo (1954) concerning interregional relations. The second line of argument is developed on a Cournot equilibrium model (duopoly) and is known as ‘the paradox of power’ (Hirshleifer 1991b). This type of reasoning is inspired by rational conflict models of non-zero-sum game theories in which players are both adversaries and partners, and follow mixed strategies of conflict cooperation (Schelling 1963).¹¹⁵

In both types of argument, perfect competition is excluded. Agents in these models have rivals, and the actions of their rivals affect how well they do. But at the same time, agents behaving as producers and fighters are not price takers; when they optimize,¹¹⁶ they take into account how their actions affect the redistribution of income.

Haavelmo’s general equilibrium model

Haavelmo (1954) studies interregional relationships. In discussing the input capacity of a region, he assumes that the volume of output (Y) is uniquely related to the size of population (N), the amount of available capital (K), and the level of know-how (S). If there are n regions, and if Y_i corresponds to the input capacity of region i , ($i = 1, 2, \dots, n$), then it follows that:

$$Y_i = F_i(N_i, K_i, S_i), i = 1, 2, \dots, n. \quad (4.11)$$

If X measures global output of all regions, we assume that it is given by a production function:

$$X = \Phi(Y_1, Y_2, \dots, Y_i, \dots, Y_n). \quad (4.12)$$

We interpret X as the global product resulting from productive activities within each region and from trading activities between the regions. We assume that X has a maximum value for each set of values of the variables Y_i , and that this maximum is given by equation (4.12). The way this global product is distributed among different regions depends on the strategic position of each region in the regional network. Haavelmo (*ibid.*, pp. 88–9) defines a set of characteristic ‘allotment functions’ in order to solve the problem of distribution. Allotment functions are as follows:

$$X_i = \mathcal{U}_i(Y_1, Y_2, \dots, Y_i, \dots, Y_n), \quad (4.13)$$

satisfying the identity

$$\sum_{i=1}^n \mathcal{U}_i \equiv \Phi \quad (4.14)$$

for all values of $Y_1, Y_2, \dots, Y_i, \dots, Y_n$.

The assumption that (4.14) is an identity and not just another equation of the system means an a priori restriction upon the set of admissible allotment functions. In other words, we assume that if a certain global product is somehow brought out, there is a given mechanism by which the allotment takes place so as to exhaust the whole product.

Haavelmo (*ibid.*, pp. 91–2), then, assumes that the total input capacity of a region may find an outlet in two directions, one leading to a larger global output of goods and services, another towards securing a larger share in the total. Hence each region can choose between ‘creative’ activity (production and exchange) and ‘grabbing-protective’ activity.

Let Y'_i and Y''_{ii} , respectively, denote the creative and the grabbing-protecting part of total input capacity, Y_i . Thus we have:

$$Y_i = Y'_i + Y''_{ii}, \quad (4.15)$$

where Y_i is determined by an equation of the type (4.11). The global production function (4.12) will now be defined as:

$$X = \Phi (Y'_1, Y'_2, \dots, Y'_i, \dots, Y'_n) \quad (4.16)$$

Since each region's total share of product hinges upon the amount of its creative and the grabbing-protecting activities, then we assume that a part of the total share (X'_i) is obtained by creative activity (Y'_i), while another part (X''_i), is obtained by grabbing-protecting activity (Y''_i). The creative part (X'_i) is the result of an allotment function:

$$X'_i = \mathcal{U}'_i (Y'_1, Y'_2, \dots, Y'_i, \dots, Y'_n) \quad (4.17)$$

satisfying

$$\sum_{i=1}^n \mathcal{U}'_i \equiv \Phi \quad (4.18)$$

for all values of $Y'_1, Y'_2, \dots, Y'_i, \dots, Y'_n$.

By the same token, we can assume that the grabbing-protecting part (X''_i) is the result of an allotment function:

$$X''_i = \mathcal{U}''_i (Y''_1, Y''_2, \dots, Y''_i, \dots, Y''_n; \Phi), \quad (4.19)$$

satisfying

$$\sum_{i=1}^n \mathcal{U}''_i \equiv 0 \quad (4.20)$$

for all values of $Y''_1, Y''_2, \dots, Y''_i, \dots, Y''_n$, and Φ .

Regarding the nature of the allotment functions (4.19), Haavelmo assumes that:

$$\partial \mathcal{U}'_i / \partial Y''_i > 0, \partial \mathcal{U}'_i / \partial Y''_j < 0, i \neq j \quad (4.21)$$

and that

$$\partial \mathcal{U}'_i / \partial \Phi > 0. \quad (4.22)$$

The meaning of a negative $\partial \mathcal{U}'_i / \partial Y''_j$ is that grabbing activities by one region 'must be assumed to meet with counter-measures from other regions' (ibid., p. 93). The essential observation to be made in connection with Haavelmo's model is that the existence of allotment functions due to grabbing activities (equation 4.19) 'must be expected *generally to lead to a reduction in global output* with the case where all efforts go into production', namely equation (4.17).

If we assume that there are many regions and that each of them operates alone in trying to grab as much global wealth as possible, we will be led to consider equilibrium conditions of the following type:

$$\partial \mathcal{U}'_i / \partial Y'_i = \partial \mathcal{U}''_i / \partial Y''_i. \quad (4.23)$$

This means that the marginal productivity in creative and grabbing activities should be the same. According to Haavelmo (*ibid.*, p. 94),

In a 'free-for-all' system . . . there would be two kinds of constraints that could prevent a region from turning all its capacity into pure 'grabbing' operations. One constraint would be the fact that it is usually more profitable to spend at least some effort in the direction of creative production. Another constraint is the fact that the unproductive activities of other regions make it harder to gain anything that way for everybody.

Of course, the wasted efforts on grabbing activities could be reduced by some agreement on mutual protection between some or all of the regions. In fact, even if no explicit agreement is made, certain 'natural' constraints may rise in the interregional market 'because of certain *conjectural* elements involved in the calculations of net gains from unproductive activities' (*ibid.*). Haavelmo, then, develops a conjectural equilibrium¹¹⁷ model of creative and grabbing activities (*ibid.*, pp. 94–8).

In Haavelmo's model, the diminishing return on grabbing activity is justified for two reasons: first, the trade-off effect between grabbing and creative activities which in equilibrium leads to equation (4.23); second, increasing grabbing activity will lead to less wealth, since competition between different regions makes it harder to gain anything for any region by grabbing. Of course, this second argument is only valid if no region has the monopoly power on the use of sophisticated military weapons. If one or some regions could have an overwhelming supremacy in fighting efforts, then instead of diminishing returns, one could speak of increasing returns to grabbing activity. This result is formally demonstrated in Hirshleifer (1995a, pp. 19–32). Hirshleifer finds that an important condition for the sustainability of anarchy is the existence of diminishing returns to fighting effort, or according to his terminology, when conflict is not decisive. In this circumstance, no one can completely overtake others, and at the same time, there are some incentives to devote a part of resources to production. This case corresponds to Haavelmo's model of 'interregional competition' with no decisive conflictual power for any region. By contrast, under increasing returns for fighting effort (when conflict is more decisive), the party which can devote more resources to fighting activities may win and replace anarchy for a 'Hobbesian "vertical" contract' or an autocratic or dictatorial rule¹¹⁸ (*ibid.*, pp. 36–9).

Nevertheless, in a competing situation with no decisive conflictual power for any party, diminishing returns to grabbing will prevail. Moreover, in a competing situation, grabbing activities lead to a reduction in global output, since the common pool available for capture will be reduced. In other words, increasing quantities of grabbing effort will lead to less wealth. Hence, it seems that grabbing activity is subject to marginal utility theory of value. However, there is only a similarity in appearance and not in essence, since fighting or grabbing effort has no proper utility except the fact that it can appropriate other goods. In other words, unlike other goods, it has a derived utility dependent on the utility of other goods. The marginal utility theory of value argues that the utility of a good or a service will diminish when its quantity augments. But grabbing activity has no utility of its own. Its utility depends on its power to redistribute wealth that is created by creative activity. Put differently, the increasing quantity of grabbing activity will not lead to less marginal utility of this activity, but it results in a diminished amount of wealth redistributed by such activity. As stressed earlier, grabbing activity resembles fiat money which has no utility in itself, and only finds a utility as a means to facilitate the exchange of commodities. Patinkin tried to integrate fiat money into a general equilibrium theory of goods and services through its ‘real purchasing effect’, and concluded that money was neutral. There is no equivalent theory for grabbing activity and Haavelmo’s model does not explicate why marginal utility theory can be applied to grabbing activity.

Hirshleifer’s ‘paradox of power’

Hirshleifer’s paradox of power can be regarded as a new attempt to integrate grabbing activity in the marginal theory of value. In his model, like Haavelmo (1954), agents can choose to divide their efforts between productive and appropriative (or fighting) activities. However, Hirshleifer (1991b), unlike Haavelmo, adopts a *partial* equilibrium (and not a general equilibrium) framework. He studies two-party interactions and employs the Nash–Cournot solution concept.¹¹⁹ The parties are simultaneously cooperating yet competing with one another: (i) the resources devoted to productive activity mainly determine the total income available; and (ii) the contenders’ relative commitments to fighting (or appropriative) activity mainly decide how the total income will be distributed between them.

Furthermore, following Gordon Tullock (1974), Hirshleifer adopts standard economic assumptions regarding agents’ behaviour in conflictual activity: ‘Conflict interactions, like all economic interactions, involve equations of *optimisation* on the decision-making level and of *equilibrium* on the society-wide level’ (Hirshleifer [1994] 2001, p. 18). In this way, he advocates economic imperialism:

What gives economics its imperialist invasive power is that our analytical categories – scarcity, cost, preferences, opportunities, etc. – are truly universal in applicability. Even more important is our structured organisation of these concepts into the distinct yet intertwined processes of optimisation on the individual decision level and equilibrium on the social level of analysis. Thus economics really does constitute the universal grammar of social science. (Hirshleifer [1985] 2001, p. 308)

Hirshleifer's model is very similar to Schelling's rational conflict theory of non-zero-sum games (Schelling 1963). Total war is excluded, and in accordance with the limited-stakes assumption, 'the underlying resources themselves are supposed invulnerable to destruction or capture. Only the income generated by productive use of resources is at issue' (Hirshleifer 1991b, p. 179). Moreover, apart from opportunity costs in the form of foregone production, fighting is assumed to be non-destructive. The model is inappropriate for the analysis of conflicts dominated by single overwhelming or irreversible events like the Pearl Harbor attack, the Hiroshima and Nagasaki bombardments, and the second Gulf war. In the military domain it is more applicable to protracted cold wars or to continuing low-level combats like those between city-dwellers and nomads in early times, or among the small states of pre-imperial China.

In this model, fighting activity is integrated in the utility function of agents as a redistributive mechanism. Decision makers on each side make collectively rational choices aimed solely at maximizing group income. Each side $i = 1, 2$ must divide its exogenously given resources R_i between productive effort E_i and fighting effort F_i :

$$E_1 + F_1 = R_1; \quad E_2 + F_2 = R_2. \quad (4.24)$$

The productive technology is defined by an aggregate production function showing how the productive efforts E_1 and E_2 combine to determine income I :

$$I = A (E_1^{1/s} + E_2^{1/s})^s. \quad (4.25)$$

The production function is thus characterized by constant returns to scale and constant elasticity of substitution. Parameter A is a *total productivity index*. Parameter s , which plays a crucial role in the analysis, is a *complementarity index*: as nations become more closely linked by international trade, s rises.

In parallel with productive technology, there is a technology of conflict, which translates commitments of resources to struggle into distributive success. Inspired by Tullock (1980), Hirshleifer (1991b, pp. 180–81) defines a 'contest success function' whose inputs are the fighting efforts F_1 and F_2 and whose outputs are the distributive shares p_1 and p_2 ($p_1 + p_2 = 1$). The outcome

of the struggle depends only upon the ratio of the parties' fighting efforts F_1 and F_2 , indexed by a single 'mass effect parameter m ':

$$P_1 = F_1^m / (F_1^m + F_2^m); \quad P_2 = F_2^m / (F_1^m + F_2^m). \quad (4.26)$$

The mass effect parameter measures the decisiveness of conflict, namely the degree to which a higher input ratio F_1/F_2 translates into a higher proportionate success ratio p_1/p_2 .

Finally, there are income distribution equations defining the income level of each party, namely I_1 and I_2 :

$$I_1 = p_1 I; \quad I_2 = p_2 I. \quad (4.27)$$

Equations (4.26) and (4.27) together imply that all income falls into a common pool available for capture by either side.

In this model, the paradox of power (POP) emerges when a preponderant resource ratio $R_1/R_2 > 1$ is not reflected in a correspondingly large achieved income ratio I_1/I_2 . POP has two forms: strong and weak:

- POP (strong form): in mixed conflict–cooperation interactions, the two parties which are simultaneously adversaries and partners will end up with exactly identical incomes ($I_1/I_2 = 1$), regardless of the initial differences between their relative endowments. In other words, poorer or richer parties at the beginning will end up, through fighting and cooperating, with identical incomes.
- POP (weak form): in mixed conflict–cooperation interactions, the two parties that are simultaneously adversaries and partners will end up with less inequality than the initial distribution of resources. Thus, if we assume that the first party (R_1, I_1) is the better-endowed side, then $R_1/R_2 > I_1/I_2 > 1$. In other words, poorer or richer parties at the beginning will end up, through fighting and cooperating, with less income differential.

The key to the paradox of power is that, when a contender's resources are small relative to the opponent's, *the marginal yield of fighting activity is higher to begin with than the marginal yield of productive activity . . . Conflict is therefore a relatively more attractive option for the poorer side*. Fighting effort permits you to 'tax' the opponent's production, while your own production is 'taxed' by his fighting effort. When your rival is richer it becomes relatively more profitable to tax him (to capture part of his larger production) and relatively more burdensome to be taxed by him (to devote effort to production which will be largely captured by him anyway). Thus rational behaviour in a conflict interaction . . . is for the poorer side to specialise more in fighting, the richer side more in production. (ibid., p. 187)

POP *allegedly* can provide a rationale for marginal theory of appropriative activity. The marginal payoff of fighting activity is higher for the poorer side, whereas the marginal payoff of productive activity is higher for the richer side. Hence, the more the poorer side redistributes resources through fighting, the more the marginal payoff of his/her fighting activity decreases and the more the marginal payoff of his/her productive activity increases. This implies that marginal utility of fighting activity *increases* for a party when his/her income *decreases* or when his/her income differential with the other party *increases*. Conversely, marginal utility of fighting activity *decreases* for a party when his/her income *increases* or when his/her income differential with the other party *decreases*. If each additional fighting effort can be translated into an additional amount of income redistribution, then according to POP it can be argued that the marginal utility of each additional fighting effort will decrease with the increasing amount of conflictual efforts. It seems then that marginal utility theory can be applied to destructive power in its appropriative function.

However, this conclusion is not valid since POP does not hold universally. It is a well-known fact that in war as well as in politics, sometimes (if not most of the time) the rich become richer and the poor poorer. In fact, in Hirshleifer's model, the validity of POP hinges upon the level of the decisiveness of conflict. High decisiveness is more advantageous to the better-endowed parties, since they can invest more heavily in fighting technology and be in a better position with regard to contest power. Hence, Hirshleifer stresses that POP may apply to 'limited contests that take place within nation-states (class struggles) or firms (labour-management conflicts) or families (sibling and generational rivalries)' (*ibid.*, p. 197). Even in these cases, it is more logical to assume that the richer side has an advantage in terms of fighting technology over the poorer one. But this military advantage cannot indefinitely hinder the outbreak of social movements, since the occurrence of such movements is related to the way rules should be defined or enforced. Social movements, particularly large and massive ones, are not essentially related to appropriative activity. They aim at rule-producing. It is precisely this aspect of destructive power that has been ignored by new political economy.

Given the limits of POP, another line of argument based on 'collateral damage' may be invoked to explicate the limits of fighting effort.

Collateral damage and the limits of appropriative activity

Analysing pressure group competition, Becker (1983) showed how 'dead-weight loss' tends to limit the extent of conflict. Following Becker's view, Grossman and Kim (1995, 1996a and b) account for damage due to fighting. They formulate the concept of 'collateral damage' which measures the destructiveness¹²⁰ of appropriative ('predation' in their terminology) activity.

According to these authors, predation is destructive in the sense that in any

appropriative interaction the predator gains less than the prey loses. For example, a predator's gain is subject to deterioration during shipment, or it needs to be processed in order to be usable. Specifically, if agent A_i (prey) loses the fraction $1 - p_i$ of its endowment, agent A_j (predator) gains only the fraction $(1 - \beta)(1 - p_i)$ of the endowment of agent A_i (prey), $0 \leq \beta \leq 1$. The parameter β measures the destructiveness of predation or collateral damage. Note that the destructiveness of predation deters predation. Usher (1992) also invokes deadweight loss as one of the four costs of theft or grabbing. In his model of anarchy, Usher incorporates deadweight loss by drawing a distinction between types of goods such as food that have to be defended against bandits and types of goods such as clothing that are intrinsically secure. In this model, the deadweight loss is incurred because people produce and consume too much of the good (clothing) that is safe from theft and too little of the stealable good (food) (*ibid.*, pp. 78–89).

However, unlike Grossman and Kim (1995, 1996a and b), Usher distinguishes between deadweight loss and 'pure waste' or destructiveness due to theft. Pure waste is another cost of theft that may result due to the lack of a more amicable way of transferring the property from victim to thief. For instance, in robbing someone of their money, the thief may consider it necessary to physically assault the person in order to reduce his/her ability to defend his/her property, or even go so far as to incidentally or intentionally kill the person. Grossman and Kim (1995, 1996a and b) exclude this type of cost, since they do not account for real destruction in their models. Hence, their concept of collateral damage or the destructiveness of predation does not take into consideration pure waste.

The collateral damage or the parameter β is not included in Hirshleifer (1991b), since the POP provides an alternative explanation for the limits of fighting effort. The POP is not universal, but collateral damage may be regarded as a universal property involved in any destructive activity. None the less, the concept of collateral damage does not imply that predation involves violence and destruction. Like Hirshleifer (1991b), Grossman and Kim (1995, 1996a and b) study rational conflict without any real destruction. Collateral damage only refers to potential deterioration due to the deadweight costs of the transfer process. These costs set limits upon how far any beneficiary group can advantageously push for redistribution.

In the absence of radical technological innovations in military weapons, the collateral damage can provide a universal rationale for the diminishing returns to fighting activity. However, the extent of collateral damage is influenced by two opposed technological trends: greater destructive power and improved aiming precision. Grossman and Kim (1995, 1996a and b) formulate a positive parameter (θ) that indicates 'the effectiveness of offensive weapons against defensive fortifications'. The fraction of endowment that each agent

allocates to offensive weapons and defensive fortifications provides a measure of its security. For example, agent i retains the fraction p_i of its own endowment, where:

$$p_i = 1/(1 + x_i), \quad x_i = \theta g_i/h_i \quad (4.28)$$

In equation (4.28), x_i measures the offensive strength of agent j relative to the defensive strength of agent i , and θ is the indicator of the effectiveness of military weapons. Technological innovations can either increase or decrease θ . It increases with innovations in offensive weapons such as cannon; it decreases with innovations in defensive fortifications such as new fortress designs.

The essential trade-off that each agent faces is that an increase in the amount of endowment that s/he devotes to appropriative activity decreases his/her production but increases the agent's final wealth. In this sense, diminishing returns to appropriative activity are justified by collateral damage, and hence the decreasing amount of the common pool for capture.

In summary, new political economy has integrated destructive power in economic theory as a means of redistributing resources:

The way of production and exchange enlarges the social total of wealth. The way of predation and conflict merely redistributes that total (less whatever is dissipated in the struggle). In a world requiring defence against aggressors, even decision-makers otherwise inclined to be pacific to balance on the margin between these two strategies. (Hirshleifer 2001, p. 2)

The neoclassical theory of marginal productivity implicitly assumes a post-constitutional state in which a completely effective and cost-free enforcement mechanism against theft or predation has been institutionalized. If this were not the case, the usual assumption of selfishness would imply that an individual's income is his/her marginal product adjusted by the income transferred to or from him/her through theft or predation.

Public choice theory adopts an alternative approach to the study of the distribution of property. It postulates a pre-constitutional state in which 'there are no laws or property rights, a state which we label "anarchy", and then apply the assumption of selfishness to derive testable hypotheses concerning the types of property rights that could emerge' (Bush and Mayer 1974, p. 402). Starting from 'anarchy' or a pre-constitutional state, Buchanan (1975), Skogh and Stuart (1982) and Usher (1992) try to show the emergence of property rights on an efficiency basis in a post-constitutional state.

In standard theory, an equilibrium must satisfy Coase's theorem. In rational conflict theory, the analogous proposition might be called Machiavelli's theorem: 'Coase's Theorem says that, in equilibrium, no-one will ever pass up an opportunity for mutually advantageous exchange; Machiavelli's Theorem says

that no-one will ever fail to capitalise on a profitable opportunity to exploit anyone else' (Hirshleifer 1995b, p. 188). In other words, destructive power is regarded as an instrument of redistribution of resources without mutual consent. Its marginal utility is derived not from its own sake, but from its ability to appropriate wealth even in a conflictual way.

The value of destructive power in its appropriative function is decided by the amount of creative value transferred through conflict minus the amount of value dissipated due to struggle (pure waste and collateral damage). In anarchy, war, criminal activity and other types of predatory activity involving violence, human life can be destroyed. Rational conflict theory excludes real destruction and violence. However, the estimation of the value of human life, or material damages requires the application of an 'as if' method in order to abstract from any judgemental value.

THE VALUE OF DESTRUCTIVE POWER IN ITS RULE-PRODUCING FUNCTION

Destructive power in its rule-producing function is an end in itself and not an instrument to redistribute resources without mutual consent. New political economy does not integrate this function of destructive power. However, it is through this function that destructive power has a utility for its own sake. The specific utility of destructive power is its ability to establish sovereignty. As mentioned earlier, while destructive power in its appropriative function resembles fiat money, destructive power in its rule-producing function resembles money as a store of wealth. The problem of valuing destructive power in this latter case is that it is the source of valuation. In other words, destructive power as the source of sovereignty cannot be valued, since sovereignty is the basis of valuation.

For instance, the abolition of slavery in the United States completely changed the basis of valuation. Before the civil war, slaves could be bought or sold, but after the abolition of slavery, the principle of liberty and equality of all citizens before the law regardless of their race was acknowledged. According to this principle, human beings could not be bought or sold. This example clearly illustrates that the question of property cannot be separated from sovereignty, and it is sovereignty that defines the fundamental social conventions or rules from which valuation derives its social meaning. When sovereignty is questioned, then there is no unique fundamental convention that can definitely specify the value of goods, services and even human life. In such circumstances, one can confront manifold subjective valuations regarding goods and even human life hinging upon the position of social subjects involved in the conflict. If the equivalency of prejudices determines the value

of destructive power in its appropriative function, it is the incommensurability principle that decides competing valuations of destructive power in its rule-producing function.

Rival Valuations: The Incommensurability Principle

The first Gulf war provides a very good example for examining both functions of destructive power. If one analyses this war from the viewpoint of appropriative activity, one can estimate the value of destructive power in terms of the amount of Kuwait's oil reserves that has been saved from Iraq's aggression, minus the dissipated values due to the pure waste and collateral damage incurred by the war. However, the war was not only about Kuwait's oil, but also about President Saddam Hussein's claim regarding the hegemony in the region and the US conception of the New World Order. This second aspect is related to the sovereignty question on a national, regional and international level. Different participants in this war, those on the UN side, as well as those on the Iraqi side, had their own concept of benefits and costs, since each of them had their own goals. They can be schematically identified as follows:

1. The UN Security Council's announced objective was to expel the Iraqi army from Kuwait.
2. President Bush's target went beyond the UN's goal, since he officially advocated 'the security of the Persian Gulf'. This meant ensuring the security of the world's oil supply, the removal of Saddam from power, and the destruction of Iraq's military apparatus.
3. General Norman Schwarzkopf aimed at destroying as much of Iraq's military machine as possible with the least sacrifice in terms of the value of US soldiers' lives.
4. The goal of the Europeans, Japanese and other US allies consisted in destroying as much as they considered to be consistent with the marginal cost of their participation in the war effort.
5. Saddam's target was to impose a prohibitive cost on the UN to avoid or defeat an attack.
6. Senator Sam Nunn wished to force Iraq to withdraw from Kuwait by means of sanctions.

Each of these decision makers had his own targets, perceptions of costs and benefits, and his own conclusions. None the less, it was George Bush who had the last word in the UN, although he might not have represented the valuation schemes of the other parties who shared both the costs and benefits of Operation *Desert Storm*. One of the major differences between these different

schemes of valuation concerned the lives of the Iraqi people and military personnel as well as the US military personnel.

If we adopt the US VSL as our benchmark in valuing lost or saved lives during *Desert Storm*, then the different valuations among different decision makers become clearer. First, regarding the different valuations concerning the lives of the Iraqi people, the following ranking can be suggested:

The UN Security Council [1] which wished simply to expel Iraq from Kuwait, presumably reflected the *highest value on Iraqi life*. In contrast, General Schwarzkopf [3] following Clausewitz's dictum that the concept of war should be aimed at destroying the enemy's army, probably placed the *lowest value on Iraq's military personnel* – indeed it must be a *negative value*. Sensitive to political considerations at home and in the likely postwar balance of power in the Middle East, President Bush [2] and Senator Nunn [6] are likely to have *evaluated Iraq's military life somewhere between the two*. Probably European, Japanese and Middle Eastern allies [4] felt much the same, although, as we shall see, their economic cost structure was different. Judging by his actions, Saddam Hussein's evaluation of the life of his personnel *was lower than their own estimate*. (Wolfson et al. 1992, p. 162, added emphases)

Second, regarding different valuations of the lives of US military personnel, the following ranking may be proposed among decision makers:

It is reasonable to assume that President Bush [2] and General Schwarzkopf [3] placed the Statistical Value of Life on US soldiers. It is reasonable to assume that the UN [1] members who had not committed sizeable ground troops *evaluated US soldiers at less than these American decision makers*; allied countries [4] that had substantial forces probably valued them much as did the US. Some military officials of UN members such as the Soviet Union scoffed at the American sensitivity to casualties. Senator Nunn and other congressional opponents of an early ground war [6] probably placed a *higher value on military casualties*. That is not to say they necessarily had a higher level of sympathy than other US decision makers, but sensitive to the experience in Viet Nam, they seemed to feel that the cost of substantial casualties are reflected in the Social Welfare Function implicit in American public opinion would exceed even the valuation of the volunteer army soldiers themselves . . . Finally we should mention the pacifist position expressed by Senator Mark Hatfield (R-Ore) who regarded the value of human life on either side of the conflict as *greater than any benefit that might accrue from war*. Undoubtedly Saddam Hussein's valuation of *American life was negative*. (ibid., pp. 162–3, added emphases)

I have summarized these rival valuations in Table 4.1. The table shows that there is no common basis for these evaluations, since there is no unique sovereignty. Different perceptions about costs and benefits cannot converge due to the lack of a fundamental convention. Hence, these rival valuations are incommensurable. The analysis of costs and benefits in the use of destructive power as an instrument of appropriation can be based on a fundamental convention, since its value depends on the amount of creative value transferred.

Equivalency of prejudices governs the amount of its value. However, destructive power as the source of sovereignty precedes any fundamental convention. Different incommensurable valuations of costs and benefits coexist in so far as one dominant force does not impose its rules and conventions.

In such circumstances, there is no unique value for destructive power as a source of sovereignty, but there are manifold rival valuations of such power. In this sense, the value – or the values – of destructive power in its rule-producing function is (are) completely consistent with Shackle’s notion of a Kaleidic society:

The business scene and its participants can be looked on as staging a contest of rival orientations, rival ambitions, rival exploitations of the world. It is capable, for all the analyst can tell *ex ante facto*, of realising some one or other of these visions in some degree, and thus of presenting an appearance of momentary or temporary orderliness during the ascendancy of one orientation and its sponsors. Or the contest may be inconclusive and sterile, and result in a period of rudderless backing and filling of the sails and of untidy, blind struggle and groping for decisive policy. It will be a *kaleidic* society, interspersing its moments or intervals of order, assurance and beauty with sudden disintegration and a cascade into a new pattern. Such an account of the politico-economic process may at various epochs . . . appear . . . illuminating . . . The partial or mixed success of several [orientations] would lead to interior paths within this boundary, or to the temporary loss of a sense of direction. Such a loss of direction, in the economic aspect of affairs, might consist in a catastrophic slump or an uncontrollable inflation and the destruction of the currency and the society’s confidence . . . The kaleidic approach proposes to deem those affairs to be bounded, but within those bounds to offer a rich manifold of rivalry and indeterminism. (Shackle 1972, pp. 76–7)

The kaleidic approach can also be applied to revolutions. What is ‘the price of revolution’? This is the title of Brogan’s book (1951) which suggests that in making an estimate of the benefits of revolution, the cost of it should also be brought into the bookkeeping. But what are the costs and benefits of the English and French revolutions? There is no unique answer to this question. The English and French ruling classes of the seventeenth and eighteenth centuries propose an answer to this question, which is different from that of the English and French revolutionary classes. Their valuations of costs and benefits of revolution are rival and incommensurable. Regarding the account of revolution, it should be remembered that revolution ‘provided quickly the necessary complementary institutions, the National Debt and the Bank of England, and when the last institution was successfully launched, it might have opened its books with a page entitled “The Revolution; account closed”’ (ibid., p. 3). It is characteristic of the very different histories of the two countries that the Bank of France almost did this. It reduced, year after year, the debt owed to it (against its will) by the defunct Commune of Paris. But it left one franc on the books as ‘a reminder’. It was wise not to close the account; it

Table 4.1 Rival valuations of human life in Operation Desert Storm

Decision maker	VSL of US military personnel				VSL of Iraqi people			
	Negative value	Positive value	High value	Invaluable	Negative value	Positive value	High value	Invaluable
UN Security Council		X					X	
President Bush		X				X		
General Schwarzkopf		X			X			
European, Japanese and other allies		X				X		
President Saddam Hussein	X					X		
Senator Nunn			X			X		
Senator Hatfield				X				X

is still open (*ibid.*, p. 3). By the same token, one can ask what was the value of Louis XVI's or Marie Antoinette's head for French Jacobins? No one would disagree if we said that French Jacobins assigned a negative value to the lives of the king and queen, whereas French ruling classes placed the highest value on them. In our times, pacifist historians may also regard the value of human life on either side of civil war as greater than any benefit that might accrue from revolution.

Destructive Power in its Rule-producing Function and Negative Value

In the preceding section, I referred to negative value several times. Since this concept is not welcome in economic literature, I shall examine it further. First, I should reiterate that destruction in itself does not imply disvalue or negative value. I clarified this point in Chapter 2, where I criticized the moralist theory of value. I underlined that in my approach, in contrast with that of Nozick, there is no moral distinction between value and disvalue in terms of good and evil. Second, I have already distinguished four different meanings of destruction, namely destruction as part of creative process, destruction as a joint product of creation, destruction as a joint product of appropriative activity, and destruction as part of sovereignty creation. My conception of negative value is related to the last aspect of destruction and not to the other three.

Destruction as a moment in the process of creation is part of creation and can be defined as a transformation of creative value. In this sense, it should not be distinguished from creation (see Chapter 1). Destruction as a joint production¹²¹ of creation comes within the scope of *rejectanea*. Jevons ([1871] 1965) and Macleod (1863) pioneered the concept of 'negative and zero value', and Jevons also applied this concept to *rejectanea*:¹²²

Every furnace yields cinders, dross, or slag, which can seldom be sold for any money, and every household is at the expense of getting rid, in one way or another, of sewage, ashes, swill, and other *rejectanea*. Reflection soon shows, in short, that no inconsiderable part of the values with which we deal in practical economics must be *negative values*. (Jevons [1871] 1965, p. 127)

However, as Jevons himself notes in the section entitled 'Joint production' (*ibid.*, pp. 197–202) *rejectanea* is not an independent product but a joint production. By 'joint production', he means: 'the one substance cannot be made without making a certain fixed proportion of the other, which may have little or no utility' (*ibid.*, p. 200). Examining *rejectanea*, Jevons reaches the conclusion that it is a joint production with zero or negative value:

As in the cases of cinders, chips, sawdust, spent dyes, potato stalks, chaff, etc., almost every process of industry yields refuse results, of which the utility is zero or

nearly so. To solve the subject fully, however, we should have to admit negative utilities, as elsewhere explained, so that the increment of utility from any increment dl of labour would really take the form $du_1 \pm du_2 \pm du_3 \pm \dots$. The waste products of a chemical works, for instance, will sometimes have a low value; at other times fouling the rivers and injuring the neighbouring estates; in this case they are discommodities and take the negative sign in the equations. (*ibid.*, p. 202)

Destruction as a joint product of appropriative activity is what Usher (1992) calls 'pure waste'. The destruction of product or the loss of life in the process of appropriative activity (banditry, theft, grabbing, warfare, revolution and so on) is also a joint production of predatory activity. The value of predatory activity is measured by the amount of creative value transferred without mutual consent less the deadweight loss and the value of pure waste. Pure waste may be zero or negative, and can be represented as $du_1 \pm du_2$ where du_1 denotes the increment of utility deriving from predatory activity and du_2 denotes the increment of utility deriving from pure waste. Once again, destruction takes a zero or negative value as a joint production.

However destruction as part of sovereignty may have a negative value without being a joint product, since in this case valuation depends on judgments of rival contending forces. In other words, it can be an independent product with negative value. Sovereignty is the basis of valuation, and hence it can imply both positive and negative values according to what is established by rules and conventions. One of the specific features of sovereignty compared to property is that it always reserves for itself the ultimate right to put a negative price on human life by conserving the right to declare war.

The Changing Frontiers of Costs and Benefits: A Double Transformation

Destructive power (scream) can become an end in itself, and its exercise can become confused with the attainment of its objective. As soon as that happens, its costs (in time spent, or in lives lost, for example) can measure the satisfaction or benefits received from its exercise or 'consumption'. For this mutation of cost into benefit to occur, it is necessary that the exercise of destructive power (scream) be felt as something beyond the many activities that are primarily self-regarding. In this case, the exercise of destructive power (scream) relates to public interest or public happiness. Liberal ideology noted this fundamental transformation when it criticized the idea of 'great sacrifices for utopian ideals':

The problem isn't wanting a better world; it is believing in the utopia of a perfect world. Liberal thinkers are right when they point out that one of the worst things

about not only communism, but all the great causes, is that they are so great that they justify all sacrifices, whether imposed on oneself or on others. This liberal argument is valid when it claims that only those with moderate expectations of the world can avoid inflicting terrible evils and suffering on it. Yet I cannot help feeling that humanity couldn't function without great hopes and absolute passions, even when these experiences defeat, and it becomes clear that human action cannot eliminate human unhappiness. (Hobsbawm 2000, p. 161)

But why is this so?

Hirschman is one of the first thinkers to explain the logic of 'great sacrifices for great causes' by referring to the transformation of costs into benefits in public activity:

It is in the nature of *the* 'public good' or 'public happiness' that striving for it cannot be neatly separated from possessing it. This is so because striving for the public happiness will often be felt not so much as a cost, but as the closest available substitute for it. We all know that participation in a movement to bring about a desirable policy is (and, unfortunately, may be for a long time) the next best thing to having that policy. Uncertainty is an important element in this strange transformation of means into ends, and of costs into benefits. Success in the advocacy of a public policy is always uncertain: nobody knows the size of citizens' advocacy or protest that is needed to impose, change, or stop a given public policy. If a citizen feels strongly, he may therefore experience the need to *negate the uncertainty about the desired outcome by the certainty of participation in the movement to bring about that outcome*. (Hirschman 1974, pp. 9–10, the last emphasis is added)

Social protests, wild-cat strikes, revolutions, patriotic wars and other salient forms of scream¹²³ escape from the fetters of the cost–benefit calculus due to this transformation of costs into benefits. The revolutionary who is struggling for the great cause of revolution cannot be sure whether s/he will live to see the victory. In this sense, the benefit is uncertain, whereas the cost including the possibility of losing one's life is certain. Given the uncertainty about the victory, the next-best solution is to feel it through one's strife. Here the cost turns into benefit. But this is only the first transformation of costs into benefits. There is a second transformation of benefits into costs, when revolutionaries come to power.

Hirschman ignores this second transformation, whereas revolution as a historical process embraces both types of transformation. When revolutionaries are struggling to topple the existing order, they temporarily paralyse the whole productive and exchanges networks, and provoke anarchy and disobedience. The more they provoke civil disobedience, the more the revolution will have a chance of victory. Hence, the costs of social rupture are the benefits of revolutionaries. However, as soon as the day of victory approaches and revolutionaries prepare to constitute a new order, they change tack and aim for the least destruction, since it now becomes a cost. For example, Bolsheviks, who

brought about the October Revolution after a fierce struggle, and who during the revolution regarded general political strikes and armed insurrection as the best methods of ensuring victory, adopted a real economic approach in analysing the costs and benefits of revolution after their victory. According to Bukharin ([1920] 1976, ch. 3: 'The collapse of the capitalist system', pp. 126–7),

All the *real* costs of a revolution come down to the *curtailment of the process of reproduction* and to the reduction of the productive forces. They can be broken down into several headings, according to the *form* they take: 1) The physical destruction of the elements of production . . . 2) The de-skilling of the elements of production . . . 3) The disintegration of the relations between the elements of production . . . 4) The redistribution of the productive forces in the direction of non-productive consumption.

The costs of revolution are not limited to these four items, since they also include the costs of institutional change implying a period of 'institutional vacuum' or 'no man's land'. This period is characterized by the fact that while the old institutional setups are no longer dominant, the new ones are not yet mature enough to regulate social order. The costs of institutional vacuum may be regarded as the fifth type of costs of a revolution. Now, we can review the other four types:

- *The physical destruction of the elements of production* This concerns the destruction of the means of production (factories, machines, railways and so on) and the destruction of people in the process of the civil war.
- *The de-skilling of the elements of production* This refers to the physical exhaustion of the working class, the de-skilling of the technical intelligentsia, and the use of 'surrogates' in the means of production and 'labour power' (a higher percentage of novices, unskilled or semi-skilled workers rather than skilled ones).
- *The disintegration of the relations between the elements of production* This alludes to the disintegration of the hierarchical labour system capitalist economy, the social schism and the loss of equilibrium, all of which entail the temporary paralysis of the production process. It also concerns the disintegration of the relations between town and country and between states and so on.
- *The redistribution of the productive forces in the direction of non-productive consumption* The class war, like any other war, requires the reallocation of resources to the needs of a mobilized economy. Such a war economy increases non-productive consumption of military sectors and reduces expanded reproduction of capital.

According to Bukharin, among these four factors, ‘the disintegration of the relations between the elements of production is the most important cause of the drop in the level of the productive forces in the transition period’ (ibid. p. 127). However, this factor is only one of the aspects of organizational and institutional change that revolution brings forth. Hence, the institutional vacuum or the crisis of sovereignty should be considered as the most important cause of the fall in the level of the productive forces. In this perspective, the transition to a new structure, which is a new form of development of the productive forces, is inconceivable without a temporary reduction of the forces. The experience of all revolutions that have played a colossal, positive role with regard to economic development shows that it was bought at the cost of colossal destruction and plunder.

The post-socialist transition was carried out through a ‘transformational recession’, which was more severe than the Great Depression at the end of the 1920s and in the 1930s.¹²⁴ The destruction caused by the Civil War in America, a war which was a powerful spur to capitalism, is well known, as is the devastation at the time of the French Revolution which advanced the development of the productive forces after a period of profound decline (ibid., p. 224). Consequently, revolutions, like wars, set in motion a process of reproduction that takes on a distorted, regressive and negative character. This means that with every subsequent production cycle, the real production basis gets increasingly narrower and development takes place, not in an expanding, but in a constantly narrowing spiral. What we have in this case is not expanded reproduction, but ever-increasing under-production and this is what war, revolution, or generally different forms of scream are from the economic point of view. Borrowing Marx’s terminology about ‘expanded reproduction’, Bukharin calls this process ‘expanded negative reproduction’. To show this negative reproduction in Marxian terminology, I use the following equations.

If C_t , V_t and S_t denote, respectively, constant capital (including fixed capital and any other forms of capital except variable capital), variable capital (wages) and surplus value (profits) through time t , then the total amount of product at the outset of revolution will be $Y_0 = C_0 + V_0 + S_0$. Subsequently, negative reproduction will be carried out in the first production cycle through a reduction in the surplus value (wages), and the total amount of product will reduce to $Y_1 = C_1 + V_1 + (S_1 - X_1)$, where X_1 denotes the negative value. If the destructive process of revolution or war continues, then in the second production cycle, the total amount of product will diminish further, leading to the complete elimination of profit (or surplus value in Marxian terminology). We will then have $Y_2 = C_2 + V_2$ as the total amount of product. With the continuation of the process, the third production cycle will lead to the reduction of wages or variable capital, and we will have $Y_3 = C_3 + (V_3 - X_3)$. However, further reduction of production in the fourth cycle cannot entirely eliminate

wages, since in that case the production will come to a standstill. Hence, further reduction will be effected through a double decline of wages and constant capital (machinery and fixed capital in general). If the total amount of the reduction is X_t , then it will be decomposed in two parts: (i) $\alpha^n X_{1t}$ being deduced from the total amount of wages through n cycles; and (ii) $\beta^n X_{2t}$ being deduced from the total amount of constant capital through (n) cycles. Consequently, we will have:

$$X_t = \alpha^n X_{1t} + \beta^n X_{2t} \quad (4.29)$$

$$Y_t = (C - \alpha^n X_{1t}) + (V - \beta^n X_{2t}). \quad (4.30)$$

The destructive process of revolution or war can continue up to the total depreciation and devastation of constant capital, and the starvation and famine of all working people. The negative expanded reproduction is a concept that clearly sums up all the economic costs of revolutions or wars. This concept is close to what Usher (1992) calls 'pure waste' in the case of theft. Like pure waste, that is, the joint production of theft, negative expanded reproduction is the joint production of revolution or war.

Intense or protracted civil, class, ethnic, racial or religious wars can lead to total devastation of society. In these cases, the second transformation of benefits to costs and costs to benefits cannot be realized, since if revolutionaries can approach power, they will be obliged to take into consideration the *negative* expanded reproduction as the costs of revolution. During revolutionary outbursts, the most courageous, energetic, determined elements of revolution occupy the front line and are the most exposed to death. Although dying for the revolution is an honour and benefit, after the seizure of power, the lack of them is one of the heaviest costs of the revolution, which explains why revolutionaries become more inclined to make compromises even with their worst enemies whenever they come to power or become more powerful. As new rulers, what they previously regarded as benefits become costs and vice versa. Figure 4.1 depicts this change in the logic of costs and benefits. C_0 and B_0 denote, respectively, costs and benefits before a revolution at $t = 0$. C_1 and B_1 represent, respectively, costs and benefits during a revolutionary period at $t = 1$. Finally, C_2 and B_2 denote, respectively, costs and benefits during a post-revolutionary period at $t = 2$. What is considered to be costs at $t = 0$ transforms into benefits at $t = 1$, and at $t = 2$ it transforms once again into costs.

This process of double transformation of costs into benefits implies a very important result. In analysing the costs and benefits of destructive power in its rule-producing function, it is crucial to know not only who is making the evaluation, but also when this valuation is conducted. For instance, when analysing the costs and benefits of the French Revolution, it is important to know:

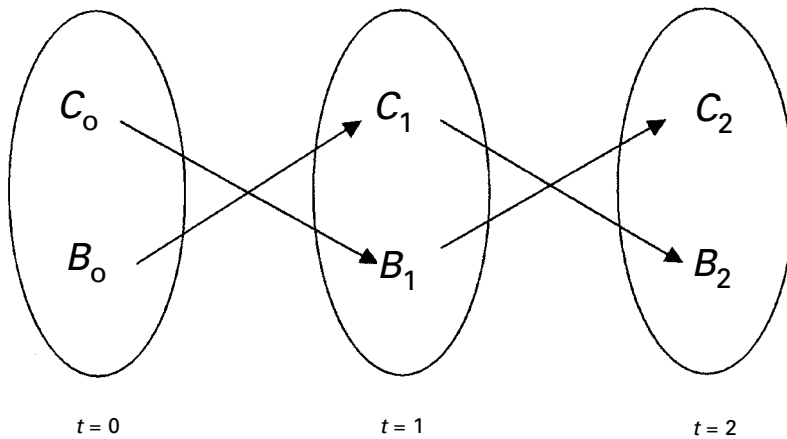


Figure 4.1 Double transformation of costs into benefits

- which social class is estimating costs and benefits; and
- when this social class is making the evaluation.

The first question brings us once again back to rival and incommensurable valuations of costs and benefits among different social subjects. The second question helps us to understand the importance of the historical aspect of valuation. The costs and benefits of the French Revolution can be viewed completely differently depending on whether one is analysing them during the Jacobin period of revolution, the Restoration period, or after the French–Prussian War. Our location in the historical calendar is essential in distinguishing the costs and benefits of revolution, since they cannot be settled before the end of the revolution. Also, a revolution is usually a chain of historical events comprising many half or unfinished revolutions, and hence to know when the revolution ends is in itself historical knowledge. For instance, the Iranian Constitutional Revolution of 1906 was never finalized, and was followed first by Mohammad Mosaddeq’s struggle for the nationalization of oil, and then by the 1979 Revolution against the Shah’s regime. This last revolution is not yet finished, and its costs and benefits cannot be historically evaluated.

Furthermore, the analysis of costs and benefits of each revolutionary period is different depending on our location in the historical calendar. For instance, the costs and benefits of the ‘Islamic Revolution’ are evaluated differently even by its partisans before and after the end of the eight years of war with Iraq in 1988. While at the beginning of the 1979 Revolution and the beginning of

the war with Iraq in 1980, many supporters of the Islamic Revolution were ready to lay down their lives in order to establish the ideal Islamic fraternity, at the end of the war, they realized that the real beneficiaries of the Islamic Revolution were the *Bazaaris* (big merchants). Generally, revolutionary periods are not good times for evaluating the costs and benefits of revolutions, since these periods are fertile grounds for revolutionary utopias or illusions. Minerva flies at night, and the philosopher enters when the feast is over. Thus it is not surprising that the best analyses about the costs and benefits of the French Revolution were formulated by French historians such as Guizot, Mignet and Thierry during the Restoration period.

From these arguments, I draw three major conclusions. First, there is no unique *ex ante* valuation of costs and benefits of destructive power in its rule-producing function. Second, the analysis of its costs and benefits should be historical and *ex post*. Third, its analysis is not limited to an individual time horizon, and embraces the life span of social classes or dynasties. The third result derives directly from the second one.

Indeterminacy of Costs and Benefits

Although the process of double transformation of costs into benefits is a sufficient argument regarding the historical character of costs and benefits, it is not the only one. The indeterminacy of costs and benefits is another argument that indicates the need to adopt an *ex post* vision of time in order to come to grips with the costs and benefits of revolution, war or 'scream' in general. People do not scream in an ordinary situation; it becomes relevant only in a critical situation. A crisis situation 'is one where the deterrent threat may or may not be used, but where there is some doubt about it' (Nicholson 1972, p. 247). A crisis can be defined by three characteristics.

First, it is a period of great uncertainty, where the gap between the best and the worst outcome is very large in comparison with the normal situation. In terms of Shackle's concept of 'potential surprise' (1972, 1989), a crisis 'is a situation where the severely adverse outcome of war, which normally has a positive degree of potential surprise associated with it, has a zero degree of potential surprise' (Nicholson 1972, p. 244). The second characteristic is that the crisis usually takes place over a short period of time. Finally, the third characteristic is that the problems that generate the crisis are unexpected for at least one of the parties involved: 'crises exist where the doubt about the outcome exists in the mind of only one party' (ibid., p. 245). Formal preference theory has some serious problems in representing a crisis situation.¹²⁵ I shall discuss three of them.

First, in an ordinary situation, it is plausible to assume that the decision makers have at least some general notion of their preference orderings and that

the utility function is relatively clear-cut. However, in a crisis situation, it is not plausible to assume that decision makers have a clearly defined utility function over all possible states of the world, including those that are not likely to enter into some current decision problem. It may be suggested that it is sufficient to know only the relevant payoff situations, as is argued in the case of ‘incomplete contracts’ by Maskin and Tirole (1999).¹²⁶ However, in a crisis situation the *ex ante* distinction between relevant payoff situations and irrelevant ones is impossible. Hence, when some new situations occur, the process of defining a utility function involves both time and decision-making resources. Second, in standard theory of decision making, a utility function is assumed to be relatively stable through time. However, in a *crisis* situation, it might fluctuate rapidly. Third, the decision makers are not individuals but social groups or even dynasties. In this case, the process of determining utility ordering involves discussion and possible internal negotiation. It is thus plausible to assume that even when the preferences of the individuals over the relevant alternatives are crystal clear (which in a crisis situation is very implausible), the group will spend some time in deciding its group preference ordering. To sum up, we can say that in a crisis situation, the preference orderings as well as the payoff matrices of decision makers are not known in advance. They may only be defined historically, or *ex post*.

To give an example of a crisis situation, we can cite the September 11 terrorist attacks. It was only after this tragedy that the term ‘homeland security’ was formally introduced. Nevertheless, the federal government had previously been funding several anti-terrorism programmes, many of which span several agencies. In 1995, the National Security Council was assigned to coordinate these programmes and the Office of Management and Budget (OMB) was appointed to supervise their budgetary aspects. In practice, however, most agencies did not specifically account for expenditures as being ‘terrorism related’, until 1998. Since 1998, the OMB has provided Congress with an annual overview of terrorism-related expenditures, which include funds to combat terrorism, to prepare for a response to weapons of mass destruction, and to protect critical infrastructure. In his article, ‘What will homeland security cost?’, Hobijn (2002) substantiates different components of the homeland security costs and estimates that the total annual direct costs of such security would be only \$72 billion, or 0.66 per cent of the 2003 GDP. Such a doubling of inputs would at most reduce the private sector’s labour productivity level by 1.12 per cent.

Hobijn’s article essentially covers only the cost side of a full cost–benefit analysis. But why does he not discuss the benefit side?

The benefits of homeland security are, unfortunately, not always easy to measure: one simply cannot observe how many terrorist activities have been prevented

because of increased security. Clearly, it is difficult to put a value on the heightened sense of safety that the homeland security program provides. Nevertheless, given its relatively small expenses, even if the program prevented just one major incident over the next few years, the return on homeland security expenditures would be high. (ibid., p. 31)

The indeterminacy of benefits accruing to the homeland security programme derives from the unpredictable nature of terrorist activities. This indeterminacy can be on the benefit or the cost side. Bin Laden's terrorist group may have some ideas regarding the benefits of their projected targets, but the costs of their activities in terms of the number of people arrested or killed cannot be known to them in advance.

The indeterminacy of costs and benefits of destructive power in its rule-producing function is one of its essential characteristics.

Increasing Returns to Destructive Power in Its Rule-producing Function

There are 195 countries in the world. It is a well-known fact that in most parts of the world, the state has the monopoly of military or destructive power. Can this monopoly of violence by the state be explained by increasing returns to violence in a given geographical territory? By the same token, can the existence of many national states be attributed to decreasing returns to violence beyond some given geographical territory? Hirshleifer ([1985] 2001, p. 332) answers this question positively:

(1) Within a sufficiently small geographical region such as a battlefield, increasing returns to military strength apply – a small military superiority is typically translated into a disproportionately favourable outcome. The reason is that, at any moment, the stronger side can inflict a more-than-proportionate loss upon the opponent, thus becoming progressively stronger still . . . (2) But there are decreasing returns in projecting military power away from one's base area, so that it is difficult to achieve superiority over an enemy's entire national territory . . . The increasing-returns factor explains why there is a 'natural monopoly' of military force *within* the nation-state. The diminishing-returns factor explains why a multiplicity of nation-states have remained military viable to this date. (However, there is some reason to believe the technology of attack through long-range weapons has now so come to prevail over the defence that a single world-state is indeed impending.)

My answer to this question is somewhat different from that of Hirshleifer. My intuition is that destructive power as a means to appropriate resources is subject to decreasing returns, whereas destructive power as an end in itself is subject to increasing returns. The difference is not so much about the transportation costs of projecting military arms (as suggested by Boulding 1962, pp. 227–33, and Hirshleifer [1985] 2001, p. 332), it is rather about the role of

destructive power in producing rules. It is the rule-producing function of destructive power that generates its increasing returns, whereas destructive power in its appropriative function is subject to decreasing returns.

There are two reasons for this. First, as I explained in Chapter 3, violence preference compared to legality preference depends on uncertainty and transaction costs. The nature of uncertainty is particularly important. Since any uncertainty regarding the stability of sovereignty is not limited to a particular domain, it will contaminate all spheres of economic, political and psychological aspects of social life. In other words, it will be contagious. There is always a positive or negative externality associated with sovereignty. Second, in the absence of law or enforcing mechanism, everybody has an interest in accumulating destructive power. Violence breeds violence, and the contagious character of uncertainty propagates violence even further. In such a situation, there exists a process of cumulative causation that guarantees a self-reinforcing violence. Thus, the contagious character of uncertainty and the *externality* of sovereignty provide the explanation for the increasing returns to destructive power in its rule-producing function.

Once again, the September 11 terrorist attacks is a good example for examining the effect of such actions on people's confidence in their sovereignty and the contagious character of uncertainty or panic. Undoubtedly, these attacks were unprecedented in terms of loss of life and spectacular destruction. However, they were typical in one major respect: terrorism in developed countries has usually been targeted against the financial and political centres of power. Consequently, they were concentrated in big cities.¹²⁷ The attacks on the World Trade Center in New York and the Pentagon in Washington raised an important question: to what extent are big cities resilient to such attacks? Although the impact of the US bombing of Japanese cities in 1944–45 shows that even massive physical damage has no permanent effect on the existence of big cities, the same question may be addressed in the light of terrorist activities. Harrigan and Martin (2002) study this problem systematically. They start by discussing two different economic geography models regarding the existence of cities, namely the 'labour pooling' and 'core-periphery' models. Then they introduce the costs of terrorist activities into these models and arrive at this general conclusion: 'cities in general, and New York City in particular, are highly unlikely to decline in the face of even a sustained terrorist campaign' (*ibid.*, p. 107).

None the less, the authors acknowledge that beyond a certain threshold, terrorist attacks can undermine the existence of cities:

When the direct effect of terrorism on either the costs to firms or the peace of mind of workers is small enough, the equilibrium effect on city size is very small. But beyond a certain point (7 percent in both examples), the direct costs of terrorism have a catastrophic effect by wiping out the gains to labour pooling in the model, and the city loses its economic rationale. (*ibid.*, p. 103)

It is noteworthy that the same threshold effect holds when applying the core–periphery model:

Beginning from a situation where the economy is in a core periphery equilibrium, we find that a terror tax of 1 percent or 5 percent of total costs has no effect on agglomeration . . . The critical value of the terror tax^[128] is 6.3 percent . . . Interestingly, this critical level of the terror tax is close to the critical level of 7 percent found in . . . the labour pooling model. (ibid., p. 105)

This threshold effect also reflects the very non-linear effect of terrorism on cities. It either eliminates the benefits of agglomeration or has no effect on them. Although the authors' evidence points to the latter conclusion, it indicates that there are increasing returns to terrorism by approaching a certain threshold beyond which an abrupt, discontinuous change will occur. The threshold for this punctuated equilibrium is estimated at around 7 per cent. The worst-case scenario, where the urban landscape ceases to exist, appears abruptly but only for large, permanent, increased costs of doing business in the city or for large increases in the perceived risk of living in the city. This risk perception is directly related to the state's ability to root out terrorism and maintain order. Once the risk perception changes, it will affect everybody and provoke a panic situation that justifies the very high amount of terror tax. This interpretation casts some light on the significance of a 7 per cent terror tax in terms of increasing returns to destructive power in its rule-producing function.

CONCLUSION

In this chapter, I emphasized two distinctive features of destructive power in comparison with creative power, namely higher productivity (or destructiveness) and non-equivalency. Moreover, I showed that while there is a unique value for destructive power in its appropriative function, there are manifold valuations of destructive power in its rule-producing function depending on decision makers' perceptions of costs and benefits.

There are many theoretical difficulties in applying marginal utility theory in order to determine the value of destructive power in its appropriative function. However, this value can be measured on the basis of the symmetry principle and equivalency of prejudices, and the 'as if' method.

Different valuations of destructive power in its rule-producing function are incommensurable and are subject to a double transformation of costs into benefits. Moreover, different costs and benefits are often indeterminate. Destructive power in this latter function is the source of sovereignty, and valuation can include both negative and positive values.

5. Sources of destructive power

INTRODUCTION

One cannot systematically study the sources of destructive power without having inquired into its nature and value. In analysing exchange value, economists rightly began with the question of value and its nature. They subsequently studied the sources of value and identified the channels through which the productivity of factors of production could be augmented. However, economists did not follow the same method to understand the sources of destructive power in its two different functions. They are usually inspired by Weber's (1921) work on three sources of legitimacy and contend that: 'These three sources (of power) are personality, property (which of course, includes disposable income), and organisation' (Galbraith 1983, p. 6). But why are these factors particularly considered to be sources of power? To answer these questions, one must study the nature of power, its different functions and values.

Different sources of destructive power can be classified according to different functions of destructive power. Destructive power as a means, or destructive power in its appropriative function, can be called 'naked power' (Russell 1938, p. 27), since it relies principally on the use of destructive technology. Destructive power as an end in itself, or destructive power in its rule-producing function, can be regarded as 'traditional or revolutionary power', since it is a legitimate power that derives its legitimacy from either traditional established rules (imitation) or revolution (innovation).¹²⁹

Economic determinism claims that means of production (creative power) is the ultimate source of destructive power. This thesis is arguable, and it will be shown that means of destruction may also be the ultimate source of creative power. There is no unique causality direction between destructive and creative powers. There are six sources of destructive power that can be regrouped as follows:

- There are two sources of destructive power as a means, namely *technology of destruction* and *commercialization and industrialization of destructive power*.
- *Legitimacy* and *social alliance* are two sources of destructive power as

an end. These sources are the results of intricate relationships between destructive power with both creative and moral powers.

- Finally, *organization* and *entrepreneurship* are two other sources of destructive power in both its functions.

ECONOMIC DETERMINISM AND PRIMACY OF CREATIVE POWER

The role of violence in social development has long been a controversial issue among students of social sciences. Economic determinism insists on the primacy of creative power and gives a secondary role to violence or destructive power in general:

Nothing is more dependent on economic pre-conditions than precisely the army and navy. Their armaments, composition, organisation, tactics and strategy depend above all on the stage reached at the time in production and communications . . . *Industry remains industry, whether it is applied to the production or the destruction of things.* And the introduction of firearms had a revolutionising effect not only on the waging of war itself, but also on the political relationships of domination and subjection. The provision of powder and firearms required industry and money, and both of these were in the hands of the burghers of the towns. (Engels [1878] 1966, p. 185, added emphasis)

The problem with this statement is that it confuses the ‘industry of production’ with the ‘industry of destruction’. Historically, the *military* revolution (Roberts 1956; Parker 1988) in the sixteenth and seventeenth centuries preceded the *industrial* revolution in the eighteenth century. Spain, Italy, the Netherlands and France were the heartland of the military revolution (Parker 1988, p. 24), whereas the heartland of the industrial revolution was England. This military revolution was the basis of Europe’s domination over the whole world:

For in the large measure ‘the rise of the West’ depended upon the exercise of force, upon the fact that the military balance between the Europeans and their adversaries overseas was steadily tilting in favour of the former; and it is the argument of this book that the key to the Westerners’ success in creating the first truly global empires between 1500 and 1750 depended upon precisely those improvements in the ability to wage war which have been termed ‘the military revolution’. (ibid., p. 4)

In fact, in *Capital*, Marx referred to this period as a ‘so-called primitive accumulation of capital’. This primitive accumulation was precisely so because it was based on the use of violence or *supra* economic force, namely colonialism, pillage, enclosure laws and the triangular slave trade. This primitive

accumulation of capital is the origin of capitalist production. Hence, it is crucial to clearly distinguish the industry of destruction from the industry of production. In this case, it is the former that determines the latter.

Furthermore, England's hegemony after the industrial revolution became possible not only because of its cotton industry but was also due to its ability to master the military revolution and its military naval power. The development of communications was also related to the British Empire:

From the 1870s on . . . thanks to its cable network, Great Britain possessed the power to control the global flow of information at a time when information was becoming increasingly vital to *great-power status* and to *economic prosperity*. The history of Britain illustrates this interdependence: If it remained a *great power for several decades after its industries had been surpassed by those of other nations, it is thanks to its empire, its navy, and its global trade, all of which required secure and efficient communications.* (Headrick 1991, p. 273, added emphases)

In other words, even if a country is not a leader in production, it will enjoy a dominant position as long as it can exercise a threat power over the world. It is true that warfare rarely occupies more than 10 per cent of human time and energy. The other 90 per cent or so goes into the agricultural, industrial and service sectors. Nevertheless, due to its higher productivity and its non-equivalency, this 10 per cent can severely influence the redistribution of resources and decide our planet's destiny, particularly after the introduction of nuclear power. As Headrick rightly notes, each stage of imperialism involves certain key technologies either in production or destruction. Thus, the gunboat, created for the East India Company, assured the British victory in the Opium Wars; quinine prophylaxis enabled Europeans to survive in tropical Africa; and sophisticated weapons gave the Europeans an overwhelming advantage over the Africans (Headrick 1981).

A second important assumption of economic determinism is that daily productive activities are usually carried out in peacetime, and only exceptionally during wartime. In this perspective, the allocation of resources according to Samuelson's production possibilities frontier between guns and butter hinges upon the predominance of peacetime over wartime. This assumption is historically unjustified. Between AD700 and AD1000, wartime outweighed peacetime by a factor of about five to one. Similarly, in the eighteenth century, there were only 16 years during which Europe was entirely at peace. The early modern period stands out as unusually belligerent. In the sixteenth century there were fewer than ten years of complete peace; and in the seventeenth century there were only four:

The years between 1500 and 1700, according to a recent study of the incidence of war in Europe, were 'the most warlike in terms of the proportion of years of war

under way (95 percent), the frequency of war (nearly one every three years), and the average yearly duration, extent, and magnitude of war. (Parker 1988, p. 1)

Wartime was also the 'normal' situation throughout the eighteenth, nineteenth and twentieth centuries. The only difference was that thanks to the military revolution and larger armies, 'wars now became longer, less numerous yet more decisive' (*ibid.*, p. 3). This fundamental fact implies that the needs of warfare in human society have been as important as that of welfare in developing production.

TECHNOLOGY OF DESTRUCTION

One of the major sources of destructive power is innovation in the means of destruction and in military strategies and tactics. Historical examples of the importance of decisive innovations in military technology abound.

The invention of horse-drawn chariots enabled the Hittites, an Indo-European people, to build up their powerful kingdom in Asia Minor, to defeat the Babylonians and to conquer their capital, Babylon (1531BC). The same thing happened when the nomadic tribes of Central Asia, Persia and Afghanistan invented riding. This military invention had far-reaching consequences. It led to the victories of the Huns spreading from China to Hungary, and to their devastating invasion of the Roman Empire under the leadership of Attila. Finally, one can mention the successful cavalry of the Mongolian tribes, united by Genghis Khan. Between AD1200 and AD1250, they invaded the old civilizations of China and Central Asia, moved through Russia, which they dominated for centuries, and through Poland and Hungary to the Adriatic Sea and to Silesia. In the Near East, the Mongol army conquered Persia and took Baghdad as well as Damascus.

It was only in the fourteenth century that infantry reasserted itself against the mailed cavalry of feudal knights. This was the result of two military innovations: the English longbow and the Swiss pike. The longbows enabled English kings to defeat the forces of Scotland and the French feudal aristocracy during the first half of the fourteenth century. The pikes enabled the Swiss to succeed against the feudal armies of the Habsburgian kings and dukes, who dominated part of what is now Switzerland:

[After these victories] the Swiss ruthlessly exploited their military superiority to conquer what is now French- and Italian-speaking as well as the north of German-speaking Switzerland and to sell their services as mercenaries . . . It was only with the end of their military superiority that the Swiss became the peace-loving people that they have been known as for about four centuries. (Bernholz 1985, pp. 79–80)

However, the most important modern innovations in the military field occurred during 1560–1660. Michael Roberts (1956) and Geoffrey Parker (1988) called them a ‘military revolution’ in early modern Europe. During this period, four major changes occurred in the art of warfare. The first was a ‘revolution in tactics’, namely the replacement of the lance and pike with the bow and arrow, and musket. The increasing reliance on firepower in battle not only led to the eclipse of cavalry by infantry in most countries, but also to new tactical arrangements that maximized the opportunities of giving fire. The development of volley fire, initially discovered by William Louis in 1594, is a good example of such new tactical innovations (Parker 1988, pp. 19–20). Thus, the feudal knights crumbled under the firepower of massed archers or gunners. The second was a marked growth in army size all over Europe, with the armed forces of several states increasing tenfold between 1500 and 1700 (*ibid.*, p. 24). This second change was closely related to the first one. Large armies required new ambitious and complex strategies to bring them into wider battlefields. This resulted in a third major change, namely a ‘revolution in strategies’. Finally, military revolution radically and perceptibly accentuated the impact of war on society: ‘The greater costs incurred, the greater damage inflicted, and the greater administrative challenges posed by the augmented armies made waging war far more of a burden and far more of a problem than ever previously, both for the civilian population and for their rulers’ (*ibid.*, p. 2).

The military revolution brought about a radical change in the relation between defensive fortifications and offensive weapons. After the proliferation of stone-built castles in Western Europe, which began in the eleventh century, war remained for a long time primarily an affair of manoeuvres, skirmishes and protracted sieges. This stalemate was temporarily terminated by the invention of powerful siege guns in the fifteenth century. Regarding this radical change, Boulding writes:

There has been a certain tendency in history . . . for the destructive power of offensive weapons to outdistance the defensive power of defensive structures. Mobile armies could be thought of as the first guided missiles, as they could carry offensive weapons over long distances. A classical historical example is the collapse of feudalism and the independent feudal baron after the development of the effective cannon, against which suits of armour, castles, and city walls were ineffective. (Boulding 1989, p. 147)

It is true that cannon put an end to stone fortifications of feudal epoch, but it should not be forgotten that the improvement in offensive weapons generated a further advance in fortification systems. In fact, the qualitative and quantitative improvements in artillery in the fifteenth century eventually transformed fortress design. The outcome was *trace italienne*, with angled bastions built

around many fortifications in Spanish Italy (Parker 1988, pp. 12–13, 24, 26, 32, 37, 131). The Great Wall of the Dutch Republic built in 1605–06 is a good reminder that the greater part of military expenditure and military resources in every early modern state was devoted not to offence but to defence.

Thus the military revolution in early modern Europe was marked by three important, related developments, namely a new use of firepower, a new type of fortification, and an increase in army size. But the pace of this revolution was far slower, and the impact less total, than was thought before. Like any other technological innovation, the introduction of new military weapons could not immediately outstrip the old ones due to the inertial force of previous skills and the insufficient maturity of the new techniques. To possess guns was one thing; to use them effectively was quite another:

So throughout the seventeenth and early eighteenth centuries, numerous encounters occurred in which regular troops, equipped with all the tools of the military revolution, were put to flight by the headlong charge of undisciplined clansmen armed with traditional weapons . . . The military revolution was also slow to affect warfare in other areas on the periphery of Europe. (*ibid.*, p. 35)

Furthermore, most of the wars fought in Europe before the French Revolution were not brought to an end by a strategy of extermination, but through a strategy of attrition. The classic conflicts of the age of military revolution were all ‘long wars’ made up of numerous separate campaigns and ‘actions’:

It is sometimes suggested that the conflicts of the seventeenth and early eighteenth centuries became shorter and more decisive . . . But wars still eternalised themselves: the Thirty Years War lasted from 1618 to 1648 . . . the Great Northern War endured from 1700 to 1721 . . . the War of the Spanish Succession continued from 1701 to 1713 . . . The only real difference was that the latter wars were fought with ever larger and more expensive armies than the earlier ones. (*ibid.*, p. 43)

Last but not least, a revolution in naval warfare occurred in early modern Europe, which was no less important than land warfare, for it led to the European hegemony over the world’s oceans: ‘At the centre of this revolution, too, lay the adoption of the gun, which the West used at sea with ruthless skill to control or destroy all its maritime rivals – starting with America, and moving through Africa and South Asia to Japan and China’ (*ibid.*, p. 83).

Translating the consequences of military revolutions in terms of my value theory of destructive power, I have come to the following four conclusions.

- First, every major military revolution radically reduces the time of destruction, and thus augments the destructivity of destructive power

(y_d). This augments the devastating effect of war on society, and increases the efficiency of waging a war by the party that possesses higher military technology.¹³⁰ Borrowing Hirschleifer's terminology, we can say that the decisiveness of conflict (θ) increases, and according to the paradox of power (POP),¹³¹ the marginal payoff of fighting activity is higher for the richer side of a warfare controlling more advanced weapons.

- Second, military revolutions increase the striking range of military action, and thus extend the radius of inner and outer zones of military integration ($a \Pi R_1^2, a \Pi R_2^2$).¹³² It was certainly the effective cannon that produced national states the size of Britain, France, and later on, Russia and Sweden. American's leading position in new military weapons, especially in non-conventional ones and continental missiles, raises the question of a 'global state' for the first time in human history.
- Third, they increase the 'military participation rate' (MPR)¹³³ by increasing the size of the army or citizens' participation in warfare: 'The ideal of every man a soldier, characteristic only of barbarian societies in time past, became almost capable of realisation in the technologically most sophisticated countries of the earth. Accordingly, armies began to count their soldiers by the million' (McNeill 1982, p. 223). This increases the costs of maintaining a permanent standing army. For example, the spread of the *trace italienne* meant that the size of the Spanish army had to be increased drastically to conduct a war of sieges. This imposed heavy taxation on Castilian peasants, and the burdens of maintaining the army provoked economic retrogression. After the mid-seventeenth century, Spain fell behind France, where Louis XIV's intendants could bear the costs of a huge army. Hence, there is a trade-off between the advantages of a higher marginal payoff due to a more sophisticated army and the disadvantages of higher costs associated with maintaining it.
- Fourth, military revolutions increase the accuracy of destructive power, and thus reduce 'collateral damage' (β).¹³⁴ The constant reduction of β increases the efficiency of destructive power and augments the probability of resorting to wars. For example, intelligent bombs are capable of selecting particular objectives and avoiding others. This 'restores the distinction between combatants and non-combatants, which had disappeared in the twentieth century when wars were increasingly directed against civilians. On the other hand, this makes possible an increasingly frequent and frivolous recourse to destruction' (Hobsbawm 2000, pp. 10–11).

COMMERCIALIZATION AND INDUSTRIALIZATION OF DESTRUCTIVE POWER

In the preceding chapter, I underlined the importance of gunfire in the military revolution. However, long before this revolution in the fifteenth and sixteenth centuries in Europe, the Chinese discovered the correct formula for gunpowder around the ninth century AD. They began to exploit the propulsive power of gunpowder after about 1290, when the first true guns seem to have been invented.¹³⁵ This early use should come as no surprise, for artillery was fully compatible with the traditions of Chinese warfare at sea. However, the question is: why did the military revolution occur in the West but not in China? To answer this question, we have to compare the development of the market economy in the West with the Chinese economy.

Military Revolution and the Market Economy

There is a great difference between the 'invention' of a product, and its application on a large scale, and thus the realization of a 'technological innovation'. Chinese command mobilization of resources impeded the transformation of the invention of gunpowder into a technological innovation. The uninhibited linkage between military and commercial enterprise that has taken place in Europe since the fourteenth century provided the necessary condition for introducing this technological innovation and the realization of the military revolution.

The fusion of the military spirit with the commercial one, characteristic of European merchants, is rooted in its barbarian past. Viking raiders and traders can be regarded as the direct ancestors of the eleventh-century merchants of the northern seas. A victorious pirate always had to reappropriate his booty by selling it somewhere. The ambiguity between 'trade' and 'raid' in the Mediterranean was as ancient as the Mycenaeans. It is true that trading superseded raiding when the Romans monopolized organized coercion in the first century BC, but old ambiguities were reborn in the fifth century AD when the Vandals opened their way to the sea. The military development of Latin Christendom in the eleventh century was followed by an expansion of the scope for market behaviour. Christendom was divided into locally divergent political structures, constantly opposed to one another and totally confused by overlapping territorial and jurisdictional claims. This dispersed and decentralized political structure allowed a remarkable merger of market and military behaviour in the most important economic centres of Western Europe: 'Commercialisation of organised violence came vigorously to the fore in the fourteenth century when mercenary armies became standard in Italy. Thereafter, market forces and attitudes began to affect military action as seldom before' (McNeill 1982, p. 69).

The Italian bankers and merchants were the leaders of the commercial economy of Europe. They could extend or withhold credit to lords, clerics and commoners. Long-distance trade needed protection against raids, and thus they hired bands of professional fighting men. As soon as professional bodies of troops emerged, their superior skill made militiamen unnecessary, particularly when success hinged upon the difficult coordination of infantry and cavalry. The accumulation of wealth in rich Italian towns made it possible for citizens to be taxed and use the benefits to buy the services of armed strangers. The creation of professional armies in Italy can be explained on the basis of my proposed heuristic model regarding violence preference and legality preference in Chapter 3. Here also, there were two factors, namely *uncertainty* and *transaction costs*.

First, let us consider uncertainty:

From a taxpayer's point of view, the desirability of substituting the *certainty* of taxes for the *uncertainty* of plunder depended on what one had to lose and how frequently plundering bands were likely to appear. In the course of the fourteenth century, enough citizens concluded that taxes were preferable to being plundered to make the commercialisation of organised violence feasible in the richer and better-governed cities of northern Italy. Professionalised fighting men had precisely parallel motives for preferring a fixed rate of pay to the risks of living wholly on plunder. Moreover, as military contracts (Italian *condotta*, hence *condottiere*, contractor) developed, rules were introduced specifying the circumstances under which plundering was permissible. Thus, in becoming salaried, soldiering did not entirely lose its speculative economic dimension. (*ibid.*, p. 74)

The uncertainty of plunder and the certainty of taxes and salary were the bases of the commercialization or contractualization of organized violence. However, these bases were not sufficient to establish a particular form of contract.

The particular form of contract depended upon the costs of transaction. The merging of military enterprise into the Italian market system passed through two distinguishable stages. The first stage was the establishment of a short-term contractual relationship between cities and captains who promised to hire and command a body of troops in exchange for agreed payments of money. This stage lasted from the 1380s until the beginning of the fifteenth century:

In this way, a city could choose just what kind of a force it wished to have for a particular campaigning season; and by careful inspection of the force in question, magistrates, representing the tax-payers, could hope to pay for what they got, and no more. Contracts were drawn up initially for a single campaign and for even shorter periods of time. (*ibid.*, p. 74)

Nevertheless, a short-term contract, like all classic free-market contracts could not economize on many transaction costs. Each time an agreed period of

service expired, the soldiers faced a critical situation. Unless new employment could be found, they had to choose between ‘raiding’ or ‘trading’. Of course, a successful captain was the one who could find a new contract before the expiration of the ongoing one. Nevertheless, no one could be sure about the future, and thus friction and distrust between employer and employed was an integral part of the relationship.

The second stage began in the early decades of the fifteenth century, and was marked by long-term associations between a particular captain and a given city. Lifetime service to a single employer became usual, ‘though such ties were only the result of repeated renewals of contracts, each of which might run for two to five years’ (ibid., p. 75). To avoid contractual hazards, the contract had to be renewed and renegotiated, although it could last for a lifetime. Regular employment of the same captain was accompanied by the stabilization and standardization of the personnel under his command. Long-term professional soldiers were arranged into units of 50 or a 100 ‘lances’. A lance originally meant an armoured knight and those he brought with him into the field. But commercialization soon required standardization of personnel and equipment, making each lance into a combat unit of three to six men, armed differently but mutually supportive in battle and linked by close personal ties. In this way a regular standing army of known size and capability emerged in the better-governed cities of Italy during the first half of the fifteenth century.

The evolution of *condottieri* to the captains of standing professional armies may be viewed as a development in three stages:

- The first stage is characterized by a nearly free market governance structure. This stage corresponds to the transition from the uncertainty of raiding and plundering to the certainty of salaried jobs, though temporary ones, with high transaction costs.
- The second stage is marked by a bilateral governance structure. This stage is the result of economizing on transaction costs and it leads to lifetime contracts through a permanent renewal of two- to five-year contracts.
- The third stage is defined by a unified governance structure. In this stage, there exists a quasi-monopoly of a professional standing army within each of the larger and better-governed Italian states.¹³⁶

Different Italian states’ armies largely contributed to the development of the market economy through at least three channels. The first was the regulated fiscality of Italian mercenary service. The wage-earning mercenaries strengthened market relationships by buying their necessary goods. The same mercenaries, before becoming wage earners, as raiders had stimulated market exchange by selling their booty (for example, by melting down church treasures). Finally, a

large army in the field with its continual appetite for supplies acted like a migratory city. In the short run, the effects of the passage of plundering armies were disastrous. None the less, in the long run, armies and their plundering expanded the role of buying and selling in daily life.

As emphasized earlier, one of the distinguishing features of the military revolution was sea power. An important characteristic of European sea power in the sixteenth century was its quasi-private character. Until the nineteenth century, sea trade and privateering remained closely related. Even after the development of regular navies in the second half of the seventeenth century, prize money awarded for the capture of enemy vessels constituted an important percentage of the naval officers' income, and crews could happily count on it. Furthermore, sea power particularly contributed to market relationships due to its very nature:

On land, the mingling of mercenary and military motives never worked as smoothly as on the sea. Noblemen, disdainful of pecuniary calculations in principle if not always in practice, played the leading role in European armies. Their ideals of prowess and personal honour were fundamentally incompatible with the financial, logistical, and routine administrative aspects of military management. On the sea, prowess was firmly subordinated to finance because before a ship sailed it had to be fitted out with a rather complicated assortment of supplies, which could only be gathered together by payments of money. (*ibid.*, p. 104)

Hence, not only did the military revolution occur in Europe (and not in China) due to the close relationships between mercenaries, bankers and merchants or trading and raiding, but it also contributed largely to the development of the market economy. The military revolution went hand in hand with the long-distance trade or 'capitalism' in Braudel's sense (1979, 1985); but it preceded the industrial revolution and industrial capitalism. In this sense, we can argue that in the modern period, the market economy enhanced destructive power.

Industrialization of War, Mass Production and Economies of Scale

The historians of the industrial revolution usually ignore or underestimate the role of war. Some historians who were cognizant of it, claim that war either hindered British industrial development or was somehow non-influential in the course of the industrial revolution. This thesis is highly arguable. The huge increase in the British government's expenditures, all devoted to the war requirements, undoubtedly affected supply and demand for every commodity exchanged within the British economy. It was also due to the government's expenditures abroad that the British export industry developed. British policy consisted in granting subsidies to allied governments, totalling £65.8 million

in all (Sherwig 1969, p. 345, cited in McNeill 1982, p. 210). These subsidies allowed European officials to buy British goods to equip their armies:

Without these governmental subsidies to continental allies, and without the transfer of effective purchasing power to the half a million otherwise indigent and under-employed men who wound up in the ranks of the army and navy, it seems impossible to believe that British industrial production would have increased at anything like the actual rate. (McNeill 1982, pp. 210–11)

Without government intervention in providing jobs for the underemployed through the army and navy, and without an assured market for cannon, the iron industry as well as factories and railroads could not expand. Thus, the initial markets for industrial development were largely military.

The Crimean War and the Franco-Prussian War of 1870–71 were the two wars that had the greatest impact on the industrialization of warfare before the First and Second World Wars. Each of these major wars contributed to mass production, and due to economies of scale further developed the industrialization of war.

Mass production came to Europe's small arms business between 1855 and 1870 as a direct byproduct of the Crimean War. Compared to the artisanal manufacturing of arsenals, the new machinery production was more efficient. Quite the opposite happened with the manufacture of artillery. However, similar to small-arms manufacture, the decisive stimulus to new departures in artillery came from the Crimean War. The difficulties of France and Great Britain in this war, which were fully covered by the newspapers at that time, provoked an outburst of warlike inventiveness. Among these inventions, were the discovery of the 'Bessemer process' for making steel, and the design and production of a prototype of a breech-loading artillery piece by Armstrong. The first invention, by English inventor Henry Bessemer, allowed large-scale steel production; and the second, by the greatest private gunmaker of that epoch, William Armstrong, led to a new artillery mechanism more accurate than muzzle-loading smoothbores.

Thanks to commercial competition as well as national rivalry, a global, industrialized armaments business both in ammunitions and artillery emerged in the 1860s. However, armies were insulated from the initial impact of the mid-nineteenth-century mutation in methods of gunmaking due to the fact that anything too heavy for horses could not be transported to and thus used by field artillery. But after the Franco-Prussian War of 1870–71, armies too joined this general mutation: 'In that war, Prussian breech-loading steel guns outclassed the bronze muzzle-loaders with which the French entered the fray. After 1871, European armies therefore rapidly changed over to guns of the new design' (*ibid.*, p. 242).

If the industrialization of war can be dated to the 1840s, the intensification

of interaction between the industrial and military sectors of European society goes back to 1884, which was a time of depression for England and Europe. The stagnation in the great shipbuilding yards was accompanied by massive unemployment of starving artisans in Great Britain. The question of how to aid the unemployed was raised in parliament on 25 October. One idea, supported also by journalists, was to devote the extra expenditure of the state on the navy to increasing the contract work in the private yards. In this way, arms contracts could restore both wages and profits, and strengthen Britain's international position at the same time. This solution could not have been suggested had it not been for William Gladstone's Liberal government passing a bill substantially extending the franchise. In previous depressions, when parliaments represented principally property owners and taxpayers, government expenditure had to be cut without question. Now that the unemployed could also vote, such a solution was not 'politically correct'! This brought political and economic interests closer, since government expenditures could provide a basis for winning both the votes of the unemployed and the support of the private sector.

Furthermore, the close collaboration of certain high-ranking proficient naval officers and private arms manufacturers gave a cutting edge to this realignment of political and economic interests. Captain John Fisher, who was responsible for improving naval gunnery, was one of these naval officers who believed fervently in competition between the Woolwich arsenal and private manufacturers in order to assure an optimal result for the navy. Fisher's ideal was not realized in practice, since the Woolwich arsenal never obtained the necessary plant to compete with private firms on an equal footing:

In 1886, when Fisher became director of naval ordnance, he demanded and was accorded the legal right to purchase from private firms any article that the arsenal could not supply quickly or more cheaply. Though no one realised it at the time, this decision soon gave private arms makers an effective monopoly on the manufacture of naval heavy weapons. The reason was simple. Woolwich never caught up with the grandiose scale of capital investment needed to turn out giant steel guns, turrets, and other complicated devices with which warships came to be armed. Armstrong, on the other hand, recognised immediately after Krupp's demonstrations of 1878 and 1879 that to compete successfully his firm must at once install the machinery needed to produce large steel breech-loaders. (*ibid.*, pp. 270–71)

Once this gap was created, economies of scale made it unbridgeable throughout the 30 years between 1884 and 1914. It is from 1884 that a modern military-industrial complex came into existence, and from this date until the beginning of the First World War, naval command technology attained great achievements such as quick-firing guns and 'torpedo boat destroyers'.

The First World War's most important general change in industry was the

introduction of mass production methods for manufacturing artillery shells and for nearly every kind of infantry equipment. This was due to the fact that ‘from 1914 on, wars were unmistakably *mass wars* . . . in the sense that they used, and destroyed, hitherto inconceivable quantities of products in the course of fighting. Hence the German phrase *Materialschlacht* to describe the western battles of 1914–1918 as battles of materials’ (Hobsbawm 1994, pp. 44–5). Mass war generated mass production and standardization both in military and non-military sectors. Heavy products could not easily be produced on a large scale. However, thanks to the war, production lines for cars, trucks and for aeroplane engines had become standard, particularly in France and the United States.

Economies of scale due to mass production of identical items for military use radically reduced the price of manufactured articles of mass consumption:

As so often before, military demand thus blazed the way for new techniques, and on a very broad front, from shell fuses and telephones to trench mortars and wrist-watches . . . Anyone looking at the equipment installed in a modern house will readily recognise how much we in the late twentieth century are indebted to industrial changes pioneered in near-panic circumstances when more and more shells, gunpowder, and machine guns suddenly became the price of survival as a foreign state. (McNeill 1982, p. 331)

The same tendency was accentuated during the Second World War.

Let us recall that during the Second World War, the US army ordered over 519 million pairs of socks and over 219 million pairs of trousers, whereas the German forces, true to bureaucratic tradition, in a single year (1943) ordered 4.4 million pairs of scissors and 6.2 million stamp pads for military offices (Milward 1979, p. 68, cited in Hobsbawm 1994, p. 45). Once again, mass war bred mass production.

The Second World War also gave birth to the concept of a complete weapons system in which each constituent fitted conveniently with the others. For instance, standard package sizes to fit standardized cargo spaces in railway cars, aeroplanes and trucks could result in considerable economies in time and energy in transport. Similarly, standardized ammunition for rifles, pistols and machine guns simplified the supply in this field. In a word

[The] pattern of a smooth flow-through of all the factors of production that allowed modern business corporations to prosper was applied to the assemblage of the factors of destruction with predictable success in reducing costs and increasing output. War, in short, became well and truly industrialised as industry became no less well and truly militarised. (McNeill 1982, pp. 358–59)

To sum up, we can say that war is one of the major driving forces of the military and industrial revolutions. And in turn, the intimate linkage between

the military sector and private industry or the formation of the modern military–industrial complex is the most important source of destructive power.

Politicization of Industry and Arms Race

Since the fourteenth century, when military power became a commodity, any change in design that reduced the price of the product or improved its performance could draw attention and spread rapidly. Accordingly, an arms race broke out among European countries, especially in Italy. None the less, new and more sophisticated weaponry favoured larger states and more powerful monarchs. The arms race was both the cause of the military revolution, and was accentuated in turn by this revolution. Welfare and warfare linked together to support the naval race, which involved political and economic rivalries.

In Britain, businessmen who were seeking contracts soon discovered that support from their local MPs could be very useful in persuading Admiralty officers to consent to such contracts. Similarly, candidates for parliament soon understood that businessmen could be good contributors to their political campaigns. This brought together political and economic interests. However, intensified interaction between industry and the navy put new pressures on two other aspects of public management, namely the financial and technical ones.

Financial problems were related to the unpredictability of costs, which in turn was the outcome of the very rapid pace with which new products and processes were introduced: ‘Over and over again, a promising new idea proved far more expensive than it first appeared would be the case; yet to halt in midstream or refuse to try something new until its feasibility had been thoroughly tested meant handing over technical leadership to someone else’s navy’ (ibid., p. 287). Of course, the Royal Navy’s expenditures were not supposed to exceed the amount authorized by parliament. However, the Admiralty could borrow from London bankers to meet current expenses whenever parliamentary grants were exhausted. As long as ships and guns changed slowly, costs were predictable, and a prudent Admiralty Board could borrow during an emergency. It could then repay when parliament considered it to be convenient to cover past debts without risking a heavy hazardous debt. But when technology began to change as rapidly as it did after 1880, predictable levels of expenditures faded away. The soft budget constraint was necessary to keep up with the arms race with Germany, otherwise the Germans would outdo the Royal Navy. However, huge deficits could rocket up interest payments. In this way, to keep up with the pace of technical change in the military field, the Admiralty was heading straight towards what would amount to bankruptcy for any private firm. Under such circumstances, parliament began to lose control of naval expenditure. By 1909, the situation was so critical that

it became necessary to look for new sources of tax money to pay off past debts while simultaneously expanding the scale of naval construction:

Lloyd George's famous budget of 1909, with its soak-the-rich and social welfare provisions, was the government's answer to the problem. It showed, clearly enough, that an all-out arms race could be conducted only by a government prepared to intervene drastically in prevailing socio-economic relationships. In particular, progressive taxes, heavy enough to reflect perceptible redistribution of wealth within society, were needed to mobilise resources for public purposes on the necessary scale. (*ibid.*, 1982, p. 288)

Financial uncertainty was not only impending for the Admiralty and the Treasury but also for private armament firms. While some firms were benefitting from good profits, others were on the verge of bankruptcy. The financial difference between firms hinged upon their share of public contracts. In granting contracts, the Admiralty was wavering between strict pecuniary and broader political considerations. And it was usually non-pecuniary or political considerations that determined the final decision. Ordinary market behaviour had only a limited application in this situation. Privileged relationships with procurement authorities and with technically innovative officers or network ties were often more influential than prices in deciding which party would win a contract.

The arms race requires a continuous innovation in military products and processes. This innovative process, which is riddled with uncertainty, cannot be subjected to conventional cost accounting. The arms business is a high-risk activity. Foreign sale is one of the possible methods of curbing this problem. However, the Admiralty and private business may completely diverge regarding what can be sold to foreigners, and to whom one may sell military products. Regarding these questions, private business favours profit considerations, whereas the Admiralty lends the primary importance to political objectives. Here, sovereignty cannot be separated from property, and pecuniary considerations cannot overrule political considerations. National loyalty obstructs profitable dealings with potential enemies. But patent-sharing agreements, for example between British arms firms and Krupp, the German arms manufacturer, some of which were honoured even during the First World War, raises the issue of which comes first, the nation or the firm, public good or private enrichment.

Collusive bidding among competing firms is another method of reducing risks. This method has been used from the beginning by the military-industrial complex. The history of the Maxim Gun Company illustrates how rapidly the merger of British arms firms occurred. This company, which had been founded in 1884 to produce machine guns, merged four years later with the Nordenfeldt Company. In 1897, Vickers bought the Maxim-Nordenfeldt

Company. Armstrong, too, embarked on a series of mergers, among which one can note the acquisition of Whitworth's, its long-time rival, in 1897. Hence, by 1900, Vickers and Armstrong became the two leading heavy armaments manufacturers in Great Britain. Both of them were working on a quasi-public basis with the Admiralty. In other words, the Admiralty decided how to divide the contracts between these two companies and their minor rivals on the basis of political rather than only pecuniary considerations. While pecuniary calculations determined cooperation and collusive bidding among the leading firms, political rivalries and national pride decided cut-throat competition and sometimes set prices at uneconomic levels. The final outcome depended on how these contending forces interacted in each particular case.

However, the growing mergers among giant military corporations radically changed their internal structure. They became increasingly monopolistic and vast bureaucratic organizations. Diversification also strengthened this tendency:

As arms firms became pioneers of one new technology after another – steel metallurgy, industrial chemistry, electrical machinery, radio communications, turbines, diesels, optics, calculators (for fire control), hydraulic machinery, and the like – they evolved quickly into vast bureaucratic structures of a quasi-public character. Technical and financial decisions made within the big firms began to have public importance. The actual quality of their weapons mattered vitally to the rival states and armed services of Europe. After 1866 and 1870, everyone recognised that some newly won technical superiority might bring decisive advantage in war. (*ibid.*, p. 292)

The industrialization of war broadened the application of deliberate, planned invention to the design of new weapons and machines. In this way, the economies of scope and variety combined with the economies of scale. Before 1914, planned invention was led and financed for the most part by the world's leading navies. The First World War enhanced planned invention and applied it to new and old weapons. The development of tanks was the most remarkable example of planned invention. The accelerated pace of weapons innovation that occurred from the late 1930s, and the growing product variety that deliberate invention spawned, made it clear to all the belligerent countries in the Second World War that victory hinged upon some new secret weapon. Thanks to the increasing complexity of arms production, a single nation had become too small to conduct an efficient war: 'Transnational organisation of war thus achieved a fuller and far more effective expression during World War II than ever before . . . This was, perhaps, the main innovation of World War II' (*ibid.*, p. 356).

Transnational organization of war did not stop after the Second World War. It accentuated with arms competition between the United States and the USSR

and attained a new and enlarged scale in the 1960s. Emphasis was on new technologies and new weapons, both conventional and non-conventional ones. Every radical innovation in defensive or offensive weapons could alter the balance of terror, which was established in the decade after 1957 as the two countries installed hundreds of long-range missiles capable of destroying each other's cities, and particularly threatening Europe. After the cold war, the arms race and arms trade did not moderate. The United States maintained at least two-thirds of military expenditures compared to the cold war period, and the neo-conservative governments of Bush, father and son, were ready to down-size the state in every welfare aspect, but not in matters of warfare.

It is the irony of history that the state is increasingly under the reign of those who always advocated a 'minimal state'. Another aspect of the post-cold war period is exponential growth in the international arms trade and arms transfer, as well as the merger of giant military corporations in the United States and the United Kingdom on the one hand, and in other European countries, on the other:

The arms trade is of special interest because of three trends which it embodies. (1) The increasing relevance of the decisions of non-governmental bodies and organisations to national/international security. Arms suppliers are often private firms, sometimes multinational corporations themselves. (2) The world's growing dependence on international economic integration. (3) The augmented arena for external economies/diseconomies as an international free rider issue. (McGuire 1995, p. 34)

In the past, 'guerrillas' were armed with rifles and machine guns. Now, they have rocket launchers and portable anti-aircraft missiles. This is partly a product of the cold war and partly the development of an international private market for armaments in the post-cold war period. During the cold war, while there were no actual wars between the powerful countries, the armaments industry was working at full capacity, as though a general mobilization was in operation. The argument was that every country had to prepare itself for the worst-case scenario. However, as Wolfson (1991) rightly underlines, if readiness causes some of the costs of war to be borne *before* the decision to go to war, then at the time of decision, the true costs of war will in part be 'sunk' and thus diminish the incentive to compromise. In fact, one reason why the United States was happy to intervene in the first Gulf war was that the fixed costs of such a war would be zero:

The military equipment used against Iraq was designed and stockpiled by the US (as well as the UK) to fight a land war against the USSR. Now that the possibility of such a conflict has become so remote, and the US intends to drastically reduce the size of its armed forces, a great deal of this accumulated material represents a sunk cost. Much of the military infrastructure had already been put in place in Saudi Arabia against the possibility of a Soviet thrust southward toward the oil fields.

With the diminution of that threat, much of the material used up in the Gulf would not have been replaced; it would have depreciated without extensive maintenance; and would in any case be replaced by more modern equipment. (Wolfson et al. 1992, p. 166)

According to Wolfson et al.'s estimation (*ibid.*, p. 174), even if none of the promised contributions from allied forces were respected, the United States seemed to have earned a positive quasi-rent and probably a profit on the venture.

The end of the cold war also made available a large quantity of armaments that had hitherto been accumulated. For instance, the conclusion of the civil war in El Salvador suddenly created a vast market for automatic rifles. These rifles were bought at the border for \$100 each, and then resold in Colombia at \$500 each. It was a lucrative business for certain groups: 'Now the world is full of arms, and this creates a new situation in which "freelance" armed groups appear' (Hobsbawm 2000, p. 12).¹³⁷

To sum up, we can say that since the fourteenth century, the arms race and the arms trade have been major sources of destructive power. The commercialization and industrialization of armies intensified the arms race and extended its scale to national and transnational levels. During the twentieth century, the intimate linkage between the arms firms and the state military forces led to a twin process of the industrialization of war and the politicization of industry. In this way, not do only the economic decisions of giant military corporations have an important political impact, but also the political decisions of the state bear great economic consequences. The arms race has both public and private aspects, and destructive power is generated by the alliance of state and private monopoly.

INTERNAL COHESION OR *ASSABIYA*

Internal cohesion or the bonds of *assabiya*¹³⁸ is one of the two foundations of destructive power in its rule-producing function. These bonds are based on social, class, group, family and blood ties as well as national pride or other types of solidarity. They also feed from moral power. For example, the traditional military virtues of courage, self-sacrifice and obedience are moral virtues. While these ties are completely compatible with a command mobilization coordination mechanism, they are contradictory with a market economy.

Perhaps the fundamental contrast between European experience in the early modern centuries and that of Asia resides in the fact that in Asia, command mobilization reinforced and was in turn strengthened by the preservation of primary patterns of social relationships:

Obedience, after all, is always best rendered to persons already known to the follower by long familiarity. Status relationships, traditional social structures, local hierarchies of deference and precedence; all these fitted as subordinate elements within the political command structure. Despite personal rivalries of the most diverse sort among local magnates, the principle that social behaviour should conform to hierarchically patterned roles undergirded and sustained the entire system. (McNeill 1982, p. 115)

Pre-capitalist economies were usually based on hierarchical, personal subordination; and creative power was not separated from destructive power.¹³⁹ In such economies, the bonds of *assabiya* reinforced the command structure.

Market relationships, on the contrary, replaced personal subordination of people to a hierarchical power by subordinating them to the impersonal power of the market. These novel relationships thus tended to dissolve and weaken traditional, local and primary patterns of social relationships.¹⁴⁰ Through trade, market relationships rendered possible the impersonal relationship between people over long distances: 'Power and wealth, in short, could be enhanced by reliance on market incentives to human action, however much rulers and the majority of their subjects may have deplored the greed and immorality that was thus let loose upon the world' (*ibid.*, p. 115). The market economy was opposed to the bonds of *assabiya*, since they required the primacy of pecuniary considerations over other social or political values.

Market relationships had double opposing effects on destructive power. On the one hand, by providing the necessary conditions for the military revolution, market relationships enhanced destructive power in its appropriative function or as an instrument. On the other hand, by dissolving the bonds of *assabiya*, they weakened destructive power in its rule-producing function or as an end in itself. In other words, the market and capitalist economy revolutionized destructive power as an instrument of destruction in an unprecedented manner, and at the same time it made it increasingly autonomous and independent both from society and from the national state. The commercialization and industrialization of military power led to the formation of the military-industrial complex. This complex, stemming from an intimate linkage of arms firms and military officials, was an autonomous power that not only enhanced commercial logic in the most remote part of the state apparatus, but also politically supported all kinds of wars and raids that were instigated for purely pecuniary interests.

In Chapter 1, I extensively discussed the separation of creative power from destructive power through capitalism. However, this separation had two aspects. It implied the organization of capitalist production and exchange without the use of destructive power. But it also connoted that the military sector became increasingly autonomous under capitalism. The market and capitalist economy dominated the world due to its ability to increase destructive power

rapidly and enormously, but it provided at the same time the necessary conditions for the autonomy and dominance of the military–industrial complex over the whole capitalist economy.

This tendency became more pressing in the post-cold war period due to a return to private enterprise in war. This is very clear in parts of the world where states are disintegrating such as in Africa, and where mercenary bands are used sometimes by warring factions and sometimes by governments. The re-emergence in ex-Yugoslavia of ‘warlords’ who have not existed in Europe since the fifteenth and sixteenth centuries, enters within this scope. Other examples include Colombia, Sudan, Somalia, Afghanistan and now Iraq.

The disintegration of the state is not the only phenomenon; the other is the weakening of the state or public order even in the most developed countries:

The change is that citizens are less willing to obey the laws of the state than in the past. I think that one of the first examples of this phenomenon was 68 . . . Another example is public order. In the 70s, British police superintendents informed the government that it would no longer be possible to guarantee the level of internal peace and public order that had been ensured until then. (Hobsbawm 2000, pp. 34, 35)

We can add to this list, the uneasiness (if not disgust) of youngsters with the police, especially in poor suburban districts of big cities such as Paris, London and Madrid. Last but not least, one can notice the significance of the recent huge demonstrations, unprecedented since the Vietnam war, against the second Gulf war across Europe, North America and many other countries. This massive protest against US world hegemony indicates to what extent the extremely powerful military–industrial complex is alienated from civil society all over the world.

The US claim of ‘world hegemony’ is also unprecedented in history. It should be noted that the idea of world hegemony was simply unthinkable until the eighteenth century. Even after that, no country pretended that it could organize the whole world. British hegemony, which was backed by strong creative, moral, and destructive power (Great Britain’s naval power was alone stronger than that of all other countries combined), never advocated more than regulation and certainly not domination of the globe. It is true that during both Napoleon’s and Hitler’s regimes, a single power dominated Europe, but neither lasted for more than a few years: ‘I believe, as a historian, that the idea of a single power, however great and powerful, being able to control world politics is a mistake’ (ibid., p. 49). This idea reveals the paradox of the twenty-first century. American world hegemony is supported by gigantic US military power, which is completely autonomous from civil societies across the globe. Even inside the United States, the ties of *assabiya* are so weak that had it not been for the war, the president and his close associates could have been under investigation for financial irregularities related to the Enron affair.

LEGITIMACY AND SOCIAL ALLIANCES

The second fundamental source of destructive power in its rule-producing function is legitimacy. Sanction through the use of physical punishment is necessary to maintain the rule, since it creates a focal point for mutual anticipations of different actors. Sanction gives a signal to all actors that if anybody violates the rule, then s/he can anticipate that I know that s/he knows that I expect that s/he will be punished. However, this feedback mechanism is not a simple mechanical one, since sanction is not a sufficient condition to maintain the rule. It should be completed by conviction:

The constraint is tied to a conviction. The leaders of a political system have physical constraints over subjects. But this instrument of constraint, whatever its use, and whatever its abuses, has never been sufficient to establish the solidity of a power. There is no political power that does not simultaneously look for, at least, the partial support of, at least, a fraction of citizens. At any rate, it is necessary to ensure the support of those who exert the physical constraint. (Reynaud 1997, p. 40)

A political system that is based only on naked physical power is extremely unstable – which leads us to the importance of ‘legitimacy’.

Three sources of legitimacy may be distinguished, namely tradition, charisma and legality (Weber [1921] 1971, vol. I). Tradition refers to customs, length of practice or use. The charismatic origin of legitimacy alludes to religious, moral or exceptional qualities of a personality and his/her new religion or doctrine. Finally, legality covers all procedures that define the rights and duties of citizens and are decided by a community. In a democratic regime, universal suffrage is the basis of legitimacy.

However, decision making which is deliberate, informed and free requires transparency. The military–industrial complex functions under strict secrecy and opacity. This is often justified for the sake of ‘national security’. During wartime, censorship is systematically effected for the same reason, and the military–industrial complex is immune from serious investigation and scrutiny about the way it functions. Presidents have been assassinated without the public knowing who the authors of the murders really were. Many unfinished, uncovered and puzzling affairs such as Watergate, Irangate and other unknown ‘gates’ are related to this complex. The power of strong lobbies supports this ‘hidden’ state with its *eminence grise*. Once again, the increasing power of the military–industrial complex is contradictory to the legitimacy of destructive power in its rule-producing function. I previously stressed the autonomy of the military–industrial complex from society, and now I shall underline the growing autonomy of this complex from the democratic institutions of a modern state.

Representative democracy and universal suffrage do not reveal the intensity

of voters' desires to elect or oppose a candidate. However, the massive non-participation or the passivity of citizens in elections is a good barometer of public distrust in politics, or a legitimacy crisis of politics. In this case, official or legal legitimacy should be differentiated from informal illegitimacy. If a president is elected with 35 per cent of eligible citizens participating in elections, then although his election is officially legitimate, it suffers informally from a deficit of legitimacy. For instance, the fact that George W. Bush won the 2000 elections with only a few hundred contested votes more, undermined his legitimacy as 'elected President'.

This deficit is usually complementary to an excess of powerful lobbies. The de-politicization of the young is one of the most significant and complicated problems of our times. It is a symptom of the state's weakening and privatization of politics. The more the state comes under the control of strong lobbies, the more the de-politicization process strengthens. There is an inverse relation between the ascendancy of the 'hidden state' and mass politics. Mass politics is the source of legitimacy and destructive power in its rule-producing function, whereas the hidden state is the outcome of the military-industrial complex and its strong lobbying power:

I fear that the more politics is de-politicised and privatised, the more the democratic process will be eroded. Politics is becoming something run by minorities and, as in Italy, it ends up being perceived as not very relevant to the real lives of people. This is not a good thing for the left, or for public life. (Hobsbawm 2000, p. 116)

The success of destructive power as an instrument is measured by its efficiency, whereas the success of destructive power as an end is measured by its legitimacy. Rational conflict theorists who focus on destructive power in its appropriative function (destructive power as an instrument) are concerned with the efficiency criterion:

Conflict, unlike exchange, can rarely benefit all participants. Somewhat more defensible is the contention that conflict leads, ultimately at least, to *efficiency*. That is, as a consequence of struggle, resources will end up under the control of those parties able to turn them to best use. Such a model has been offered by economic imperialists to explain the evolution of law. (Hirshleifer [1985] 2001, p. 318)

However, the analysis of destructive power in its rule-producing function (destructive power as an end) brings us to the legitimacy issue. But it does not mean that legitimacy is completely separated from efficiency, since rules can also be regarded as instruments.

Rules are instruments of collective action and hence they are always embedded in a project. The type of legitimacy of a rule depends on the project to which the rule is subject. For example, the defeat of the union of left-wing

parties in France, which came to power in 1981 to reduce unemployment, led to a loss of the legitimacy of this union in 1983. Consequently, the capacity of this union to act diminished considerably due to this loss. Nevertheless, the efficiency of all rules cannot be tested. For instance, the religious decrees imposed by a prophet regarding pious conduct derive from a general project of how to behave in human society according to the laws of providence, but the efficiency of these rules cannot be verified. The relation between a rule and its final objective is not simple. In this case, there is no objective criterion for evaluating the success of the project. Its success may be measured by the number of adherents, or by the fervour of its cult, or simply by the intensity of personal conviction: 'The legitimacy of a rule is related to a project and is associated with its efficiency within the project. However, it is rather an internal efficiency, or to simplify, it constitutes a coherent entity. To put it in simple terms, a rule is an element of a system of rules' (Reynaud 1997, p. 44). The coherence of rules, or their complementarity, provides a measure for their internal efficiency, although each rule, taken separately, may be inefficient in allocative respects.

The internal efficiency of a rule stems from the fact that rules are instruments of collective action. Thus, any rule is related to a basic community and derives its efficiency to the extent that it can serve this community. This implies that community precedes the rules as social relationships precede social institutions. Herein lie the limits of institutionalism, since not all social relationships are institutionalized and the dynamics of institutions should be understood in relation to the general dynamics of social action. The legitimacy of rules depends on the formation of community, and particularly on the relation between a dominant group and its allies. Social or class alliances are the basis of legitimacy. The ascendancy of the United States after the Second World War was based on Franklin D. Roosevelt's New Deal policy regarding Europe and Fordism within the United States. Both policies followed social alliances and compromises between employed and employers, on the one hand, and defeated or weakened and victorious countries, on the other. The welfare state extended the sphere of citizenship to social citizenship and enforced the adherence of civil society to laws and regulations. The augmented legitimacy of destructive power in its rule-producing function invigorated public order. Thus, the internal efficiency of destructive power as an end depends on its ability to create social or class alliances on the basis of acceptable social compromises.

ORGANIZATION

Organization is a common source of destructive power in both its functions.

Criminal, revolutionary, military or other types of destructive activity become stronger and more efficient when they are organized.

It was the organizational innovation of Al Capone to create a unified syndicate of criminals on a territorial basis that particularly increased the efficiency of organized crime in distributing illegal alcoholic beverages during the 1930s. The same thing is true for revolutions. The French Revolution was not started or led by an established party or movement in the modern sense, or by men attempting to carry out a systematic programme. It hardly even threw up 'leaders' of the kind to which the twentieth-century revolutions have made us accustomed, until the post-revolutionary figure of Napoleon: 'Unlike the revolutions of the late eighteenth century, those of the post-Napoleonic period were intended or even planned' (Hobsbawm 1962, p. 112). How could the Russian Revolution resist the allied forces of 14 countries without an extremely developed organization? One of the main differences of revolutions in the twentieth century compared to the French Revolution is their 'organized' character (Colburn 1994). This is also true for the late twentieth-century revolutions such as the Iranian Revolution of 1979 (Abrahamian 1982, 1994; McDaniel 1991, Green 1994), the Nicaraguan Revolution of 1979 (Chavarria 1994), and the East European revolutions of 1989, particularly in Poland (Chirot 1994).

The importance of organization in military activity is even more crucial, and thus I shall discuss it further. As detailed earlier (Chapter 3), the army with its command system is the original model of hierarchical organization, which is the source of different modes of coordination. Organizational rules, *ex ante* coordination of activities and planning are peculiar features of armies.

The *bureaucratization* of the military administration took place in parallel with the development of commercialized war in Mediterranean Europe between 1300 and 1600. Tax collection for financing standing armies gradually began to conform to bureaucratic regularity over wider and wider areas of the European continent. The internal administration of armies and navies changed in the same direction. Then, in the seventeenth century, the Dutch pioneered important improvements in military administration and routines. In particular, they discovered that long hours of repeated drill made armies more efficient in battle. Drill also imparted a remarkable *esprit de corps* to the rank and file, even when the soldiers were recruited from the lower ranks of society: 'A well-drilled army, responding to a clear chain of command that reached down to every corporal and squad from a monarch claiming to rule by divine right, constituted a more obedient and efficient instrument of policy than had ever been seen on earth before' (McNeill 1982, p. 117). Commercialization soon required the standardization of personnel and equipment, leading to combat teams. In this sense, commercialization influenced the organization of the army. It particularly strengthened the professionalization and specialization within the army and enhanced its bureaucratization.

Rational design and management was the announced goal of a professional army. However, the commercialization and industrialization of war raised a colossal paradox. This paradox lay in the fact that:

[E]nergetic effort to rationalise management, having won enormous and impressive victories on every front, nevertheless acted to put the social system as a whole out of control. As its parts became more rational, more manageable, more predictable, the general human context in which the Royal Navy and its rivals existed became more disordered and more unmanageable. (*ibid.*, pp. 298–9)

The technical revolution unleashed in 1884 could scarcely have had a more ironical outcome. By the eve of the First World War, fire control devices and the mathematical principles involved in their use had become so complex and complicated that the admirals who had to decide what to approve and what to refuse could no longer come to grips with what was at issue – they were unable to choose among rival designs. The same thing went for the secrets of steel metallurgy – the admirals could never grasp the chemistry behind the alloys that revolutionized guns and armour. But guns and armour could be tested in order to find out which would be superior. However, in the case of fire control devices, although tests were possible, the suitable conditions for carrying out the tests were a matter of discussion. Furthermore, the most fundamental issue was how to define the desired level of performance for such devices. This, in turn, hinged upon the way the battle could be envisaged in the future.

Brief, technical questions got out of control on the eve of the First World War in the sense that established patterns of handling them could no longer guarantee rational or efficient choices:

Secrecy obstructed wisdom; so did clique rivalries and suspicion of self-seeking. Most of all, the mathematical complexity of the problem – a complexity which clearly surpassed the comprehension of many of the men most intimately concerned – deprived policy of even residual rationality. (*ibid.*, p. 298)

Since its inception, the army has been the source of a command system and planned allocation of resources. However, thanks to the commercialization and industrialization of war, the technical sophistication of destructive technology has reached a point where army commanders cannot efficiently control military technology. This is the crux of the paradox. The commercialization of war led to a revolution in destructive technology, as well as to the professionalization and bureaucratization of the army. But the efficiency of this bureaucratic administration is under question due to the same driving forces that generated it. In recent times, there has been a tendency to abolish general conscription, even in countries that until now have based their army on national service. The general trend is to concentrate on the use of professional and highly qualified military personnel.

Undoubtedly, this trend creates room for private enterprise. Even in the most advanced countries, there are some fields in which highly specialized military personnel and private businesses that provide security services are working together. In the United Kingdom, retired soldiers from SAS (special air service) command units are employed by private companies, which offer consultancy and operational services to governments with regard to warfare and anti-terrorism. In the Gulf war, we have seen a widespread use of private enterprise for logistical support in warfare. In Macedonia also, an American company follows the NATO (North Atlantic Treaty Organization) troops and provides logistical support. One can easily imagine that munitions, provisions and clothing for the army will be increasingly tendered to private firms. The bureaucratic administration of the army and its shortcomings nourish and strengthen the private sector activity in military and security fields. Hence, the importance of entrepreneurship outstrips even that of organization.

ENTREPRENEURSHIP

The use of destructive power requires a special kind of skill that may be dubbed negative or destructive entrepreneurial activity. In fact, Baumol (1990) has already proposed extending the list of entrepreneurial activities, defined by Schumpeter (1951), so that it includes such items as innovations in 'rent-seeking procedures' and the military field. One can even broaden this list and define 'revolutionary leaders' as 'revolutionary entrepreneurs'. Think of a revolution as a competition between the present ruler and a revolutionary entrepreneur who are competing for support of coalitions of the population. The role of the revolutionary entrepreneur is to solve the problem of free riding in collective action and convince people to behave cooperatively in order to establish new rules. In a game theoretical framework, Roemer (1985, 1988) models Lenin as a 'revolutionary entrepreneur' who promotes preferences for a 'cooperative game' instead of an individualistic prisoner's dilemma: 'I endow Lenin with a charisma which enables him to convince people to behave cooperatively, so long as that action is at least in the self-interest of each in the sense of increasing each one's expected income' (Roemer 1988, p. 234).

If entrepreneurs are defined as persons who are ingenious and creative in finding ways that add to their own wealth, power and prestige, then 'it is to be expected that not all of them will be overly concerned with whether an activity that achieves these goals adds much or little to the social product or, for that matter, even whether it is an actual impediment to product' (Baumol 1990, pp. 897–8). Entrepreneurship might be an impediment to production where it is devoted to the development of destructive power. For instance, warfare can be

pursued as a primary source of income. The Hundred Years' War between France and England during the fourteenth century provided such an occasion for the company of a mercenary group (the so-called *Condottiere*), who offered their service to any side of the war that could better satisfy their terms.

The *Condottiere* was thus a company of entrepreneurs. Al Capone was also an entrepreneur in criminal activity. However, the difference between such a particular kind of entrepreneurship and that described by Schumpeter (1951) must not be overruled. The social function of the Schumpeterian entrepreneur was creative destruction, namely the replacement of old products, methods of production, or outdated organizational forms with new ones; whereas the social function of Lenin, the *Condottiere* and Al Capone was destructive creation. It was the opposite of creative destruction, since their activities, although extremely profitable for revolutionaries, mercenaries and criminals did not add to the national product. In fact, their effects were rather a net reduction in social income and wealth. For instance, it was not by chance that the Hundred Years' War was a period of economic stagnation for both belligerent countries. Thanks to this unhappy century, not only did the *Condottiere* become rich, but also new inventions in military devices were introduced. Among them, one could name a windmill-propelled war wagon, a multi-barrelled machine gun and a diving suit to permit underwater attacks on ships. Nevertheless, the direct consequence of these inventions was destruction.

If entrepreneurs are the well-known egoistic, rational and calculating agents, then how do they allocate their entrepreneurial resources among different types of activities? Baumol (1990) argues that the 'rules of the game' that specify the relative payoffs to different entrepreneurial activities play a key role in determining whether entrepreneurship will be allocated in productive, unproductive (rent seeking), or destructive (military) directions. The question then boils down to: what do we mean by the rules of the game?

In Baumol's terminology, the rules of the game refer to 'the prevailing laws and legal procedures of an economy' (ibid., p. 918). However, the rules of the game are not reducible to written and codified legal rules, since their application depends on the enforcement mechanism. Moreover, warfare and organized crime as lucrative activities are not confined to the prevailing laws. They either determine the prevailing laws (warfare) or are exceptions to them (organized crime). A legal rule is an effective rule, if the enforcement mechanism is sufficiently strong to impose it. The strength of an enforcing mechanism has to be tested against the economic profitability of dismissing or ignoring the law. In the last analysis, the rules of the game are determined by a trade-off between the sanctioning effectiveness of destructive power and the awarding effect of creative power. The allocation of entrepreneurial resources depends on this trade-off.

From this point of view, the Hundred Years' War was not simply a chival-

rous duel between the two dynasties of France and England. It was the outcome of particular French social institutions, namely a weak centre and revolting subsystems. During this period, there was no effective 'national' or central law in France. The nation-state had not yet been built, and the standing army did not exist. Although from the fifteenth century, there existed in France a standing, professional and purportedly 'Royal' army, it was led and raised by the same kind of personnel from the same localities as heretofore, and these characteristics did not disappear until the end of the seventeenth century. This 'central' force was heavily supplemented by mercenary corps, hired for a determined period from abroad. None the less, since their sole loyalty was to their paymasters and not to the prince as such, they were equally willing to serve him or his rivals on the periphery. Until the eighteenth century, the crucial factor in the army formation was the importance of the local subsystems (Finer 1974). The existence of the *Condottiere* was related to the fact that violence was not yet the state's monopoly, since the local subsystems were stronger than the centre. The rule of the game was that there was no central rule!

Thus, entrepreneurship is one of the major sources of destructive power in both its functions. But the allocation of entrepreneurial resources to destructive activity hinges upon the rules of the game.

CONCLUSION

In this chapter, I first critically examined the principal thesis of economic determinism according to which economic order (creative power) determines military order (destructive power), and production and communication is regarded as the ultimate source of destructive power. Then, I identified six different sources of destructive power, namely technology of destruction, commercialization and industrialization of destructive power, internal cohesion or *assabiya*, legitimacy and social alliance, organization and entrepreneurship. While technology of destruction and commercialization, and industrialization of destructive power are the two main sources of destructive power in its appropriative function, internal cohesion as well as legitimacy are the two major sources of destructive power in its rule-producing function. Furthermore, organization and entrepreneurship are the two common sources of destructive power in both its functions.

Our study regarding the sources of destructive power revealed several tensions between the gigantic development of destructive technology on one hand, and the increasing weakness of destructive power with regard to internal cohesion and legitimacy, on the other hand. In all the history of mankind, destructive power has never been so radically revolutionized since the

commercialization and industrialization of warfare and the creation of the military–industrial complex. However, it has never been so autonomous and independent from the whole society and state. In other words, there is a growing tendency towards the dominance of the appropriative function (income redistribution) of destructive power over its rule-producing function (sovereignty). Herein lies the colossal paradox of our century.

Notes

1. It is noteworthy that in France, the number of criminal aggressions against individuals rose from 130 352 cases in 1990 to 279 612 cases in 2001. This translates into a growth rate of 114 per cent with an average increase of 6.9 per cent per year (Allais 2002, p. 15). Can this increase in the rate of criminality be related to the high rate of unemployment and the high rate of income inequality in France (Piketty 2001)? I am not suggesting that every ‘unemployed’ person is a potential ‘criminal’. Unemployment, particularly long-term unemployment, leads to great poverty and discontent. There are many forms for expressing discontent and despair, and committing a crime is only one of them. Another salient example of the direct relationship between poverty and criminality is the situation of African-Americans. Despite comprising only about one-eighth of the population, African-Americans contribute to almost one-quarter of people living in poverty in the United States. It is noteworthy that ‘the black male incarceration rate exceeds the white male rate by a factor of eight to one. And the lifetime chances of a black male youth entering prison exceeds one-fourth’ (Akerlof 2002, p. 426).
2. In a broader sense, creative power includes not only the ability to create value, but also the ability to reproduce human beings. In this sense, sexual reproduction can be regarded as part of creative power.
3. As Boulding himself warns the reader: ‘The perceptive reader will no doubt detect that my life as an economist and as a Quaker have influenced my thinking’ (1989, p. 10). In my opinion, the Quaker bias against violence does not allow a sufficiently ‘objective’ analysis of the *threat power* in Boulding’s work.
4. It should be noted that ‘the *Varna* are the four ancient ranks, in descending order of purity, of Brahmins (priests), Kshatriyas (lords and warriors), Vaishyas (variously farmers and merchants), and Shudras (servants). A fifth *varna*, the Untouchables, was added at the bottom much later. These *varna* are found across all of India, though with regional variations’ (Mann 1986, p. 349).
5. In fact, Dumézil himself suggests that the ‘administration of sacredness’ can be translated in modern times as ‘ideological’ function.
6. François Fourquet (1989, pp. 21–3) also refers to Dumézil’s tripartite

division of power and suggests that the ‘synthesis of these three Indo-European functions’ be called ‘politics’. The problem with this synthesis is that it extends the concept of politics to the point that all distinctions between politics and religious power, on the one hand, and economic power, on the other hand, vanish. I think this definition of politics brings more confusion than clarity compared to Dumézil’s original distinction. In fact, Dumézil’s physical force of warriors corresponds to political power.

7. Dumézil shows that the same tri-functional interpretation can be used to explain the role of different characters in ancient fables. However, the three functions should be reinterpreted as power of intelligence (corresponding to magical and juridical sovereignty), physical force (corresponding to military power) and power of wealth (corresponding to abundance and fertility) (ibid., p. 19).
8. I do not exclude the use of physical power in determining territorial questions between different human tribes even in the absence of surplus product. However in this case, physical power has the same role among human clans that it may have among animals. Furthermore, cannibalism has also been reported among certain primitive men who became hunters. This may be explained by the ‘uncertainty of the sources of food’ (Kautsky 1907, p. 144).
9. Lange’s idea inspired a French economist, Jacques Sapir, who tried to characterize the Soviet economy as ‘*économie mobilisée*’ (mobilized economy); see Sapir (1990).
10. It is noteworthy that in his more recent book, Kornai does not mention ‘aggressive co-ordination’ among his five main types of coordination mechanisms, namely, bureaucratic, market, self-governing, ethical and family (Kornai 1992, ch. 6, pp. 91–109). However, in his earlier article, ‘aggressive co-ordination’ is considered to be one of the four main coordination mechanisms, namely, bureaucratic, market, ethical and aggressive (Kornai 1984, pp. 307–8).
11. Kornai also underlines the importance of destructive force in establishing the socialist system in his recent works: ‘[T]he socialist system is imposed on society by the communist party with brutal force, when it gains power’ (2000, p. 31). He also acknowledges that ‘[t]he key to an understanding of the socialist system is to examine the *structure of power*, which receives little or no attention in many comparative studies of economic systems. In my opinion, the characteristics of the power structure are precisely the source from which the chief regularities of the system can be deduced’ (1992, p. 33). These remarks support my idea that the study of the Soviet system can be integrated in a general theory of destructive power.

12. See also Kryger's interpretation of 'negative activity' in Hegel's and Sartre's works (Kryger 1973, pp. 340–41).
13. *Assabiya* literally means 'party spirit'. In Ibn Khaldun, this term refers to tribal or national pride and partiality based on family and blood ties.
14. It does not mean that these authors consider all human beings as 'murderers' or that they do not see the difference between sexual excitement with some pain and sadomasochist sexual behaviour.
15. The term 'dynasty' is used in intergenerational economic models to define a representative agent who is immortal.
16. Here, by 'personal', I mean the opposite of 'impersonal' and not necessarily individual. A personal process can be a process whose author(s) is (are) an individual, a group of persons or a whole social class.
17. For a case study of this thesis, see Mairate et al. (1986).
18. For a recent interpretation of Commons's theory of destructive competition, see Ramstad (1987).
19. For a study of cutthroat competition in the case of the ocean liner industry, see Davies (1990).
20. For a very interesting review of the relationship between efficiency and social justice, see Robert Boyer (1991).
21. Politicians are also allegedly convinced that moral power is an integral part of creative power: 'All investment is an act of faith, and faith is earned by integrity. In the long run, there is no capitalism without conscience; there is no wealth without character' (Bush 2002, p. A26). George W. Bush uttered these phrases with regard to recent financial scandals of American corporations. Despite this moralistic view, his personal balance sheet is, of course, not so clear: 'Bush, as has been widely reported, dumped his Harken shares not long before ordinary investors learned how troubled the company was. Asked on Monday what he was about the deceptive transaction by which Harken hid 10 million \$ (U.S.) in losses, Bush simply grinned and said, "You need to look back on the director's minutes." ' (Olive 2002, section E).
22. A new type of 'Western crusade' against Islam (or Arab and Middle-Eastern countries) is now in vogue in the United States and some European countries. This new crusade is closely related to political interests, especially to the hegemonic role that the United States tries to play in the 'New International Order' after the collapse of the Soviet bloc (see the extreme position against Islam in general adopted by Oriana Fallaci in her recent book, Fallaci 2002).
23. By 'contributory value', Nozick means the value of an action by reference to 'the difference between the actual situation of its presence and the reorganized one in its absence, not by what it leads to causally as a vehicle' (1981, p. 313). An action does not need to be free in order to

have a ‘contributory value’. For example, a puppet can have a contributory value if there is no other way to make children laugh. In explaining the kinds of value, Nozick explains intrinsic value first, then instrumental, originatory and contributory by the different ways these are related to the intrinsic value that follows them. Later in his book, he shows that the special worth of originatory value does not reside in its contribution to other intrinsic value. In this section, we shall not focus on the contributory value, since it is not directly related to our inquiry, namely the appraisal of the relationship between free will and originative or creative value.

24. This example is given by Graham Oddie (1990) in his interesting paper on ‘creative value’ in which he formally develops a moralist theory of value on the basis of Nozick’s works.
25. For illustrative examples with related calculations in numbers, see Oddie (1990, pp. 305, 307).
26. Vassilie-Lemeny argues that ‘nothingness’ is the active principle of destruction (1972, p. 419). He stresses the role of nothingness as the ultimate border of ‘being’ in existentialist philosophy and thereby infers that nothingness represents both inertia and change (*ibid.*, p. 424–7).
27. Faking activities have always been widespread. Frey gives detailed bibliographical references on the subject and cites a wide range of them: ‘They range from the reproduction of art objects to written texts (such as the *Protocols of the Elders of Zion*), historical relics (such as most chastity belts or “Spanish Inquisition” torture chairs), musical works, forgeries undertaken for political purposes (such as the Donation of Constantine which sought to establish the medieval Papacy’s claim to temporal power) or for war propaganda or espionage, the counterfeiting of banknotes, and – very importantly – commercial copies of branded goods (such as perfumes by Chanel or Dior, watches by Rolex, Bulgari or Cartier, shirts by Versace, Lacoste or Giorgio Armani or luggage by Gucci, Prada or Louis Vuitton)’ (1999, p. 3).
28. Boulding cites sadism and masochism as ‘the darkest side of personal destructive power’ (1989, p. 83; see also Chapter 3 in this book).
29. Buchanan (1976) was the first author who argued that Barro’s equivalence theorem was a rediscovery of the Ricardian equivalence theorem which states that taxation and public debt exert basically equivalent effects. In his ‘Reply to Feldstein and Buchanan’, Robert Barro (1976) enthusiastically acknowledged his intellectual debt to David Ricardo, and from then on, Barro’s theorem has entered economists’ jargon as ‘Ricardo–Barro equivalence theorem’. However, as Gerald O’Driscoll has rightly pointed out, Ricardo’s famous paragraph ([1817] 1951, p. 186) does not plead for ‘equivalent effects’ of two different methods of

- financing a war, namely taxation and issuance of public debt. Ricardo only argues that the two major methods of financing a war are equivalent 'in point of economy', he recognizes that taxpayers suffer from what we now call 'fiscal illusion': 'It was precisely because Ricardo perceived taxation and debt issuance as *nonequivalent* in fact that he was of the opinion that 'preference should be given to the first' (p. 186)' (O'Driscoll 1977, p. 209).
30. Lazear defines 'economic imperialism' as follows: 'Economists, almost without exception, make constrained maximization the basic building block of any theory . . . the theoretical revisions almost never drop the assumption that individuals are maximizing something, even if the something is unorthodox . . . we do not model behaviour as being determined by forces beyond the control of individuals. Most sociologists, by contrast, argue that understanding the constraints is more important than understanding the behaviour that results from optimization, given the constraints' (1999, p. 2).
 31. In this model, Haavelmo acknowledges the rationality postulate (1954, p. 84), but he does not adopt the maximizing assumption. He uses a set of 'conjectural response functions' for describing the possible reaction of one region towards the other regions with regard to 'productive, grabbing, and protection' activities (*ibid.*, pp. 94–8). Summarizing the results of his study regarding the interregional activities compared to a centralized or a completely decentralized economy, the author pinpoints that 'There is absolutely no reason to assume that there should be any automatic tendency towards an "optimal" policy with regard to world output in the same sense as in a centrally directed economic unit. The decisive factors in shaping the historical interrelations between the regions may well have been conjectures regarding countermeasures, coupled with hopes for gains in a free-for-all atomistic market' (*ibid.*, p. 98). Contrary to conflict theory or the political instability models, Haavelmo's early model of 'grabbing' activities is not based upon the maximizing assumption.
 32. In his survey of 'models of domestic political conflict', Lichbach (1992), distinguishes two different branches of formal modelling in conflict theory: (i) international conflict; (ii) domestic political conflict (DPC). He claims that while formal modellers of international conflict think of themselves as working within a field, formal modellers of DPC do not cite each other and do not constitute a real field. The main result of his survey is that 'there are only two modelling traditions in DPC studies that are cumulative: stochastic modeling and expected utility modeling. Stochastic modelers have consistently depicted outbreaks of DPC as random. Expected utility modelers have consistently depicted

rational rebels as choosing not to rebel. These traditions are not only internally cumulative; they also turn out to be externally consistent' (1992, p. 342). The interest of an exhaustive literature review on this topic notwithstanding, Lichbach's survey suffers from some important shortcomings. For instance, he classifies Hirschman (1970) and Gurr (1970) under the general title of 'rational choice models', and more specifically cites Hirschman's (1970) as a 'deterministic utility maximization' model (1992, p. 354) and Gurr's (1970) as 'spatial theory' (1992, p. 357). Gupta's (1990) is also classified as an 'expected utility model' (1992, p. 354), whereas Gupta's model denies the maximizing assumption. Moreover, in Lichbach's long list of references, Haavelmo (1954) and Schelling's work are not cited.

33. For two recent detailed surveys on empirical evidences, see Alesina and Perotti (1994) and Drazen (2000, pp. 522–24).
34. In fact, Roemer tries to rationalize what might otherwise appear as 'ideological' behaviour of Lenin and the Tsar. He models 'ideology' as 'a (self-imposed) limitation by the agent on the set of feasible strategies he might choose in an attempt to achieve a goal' (1985, p. 86).
35. It should be noted that in contrast with Olson's and Tullock's interpretation, even Lenin's 'professional revolutionaries' cannot be reduced to a Blanquist conspiratorial organization, since in Lenin's project, the organization of professional revolutionaries had to be closely linked to workers' organizations. It is also true that both *Iskra* and *Pravda* had strong roots among Russian industrial workers in Saint Petersburg and Moscow (see Tony Cliff 1975, vol. 1).
36. Not only in China but also in many other countries, social banditry is not limited to 'plundering', 'looting' or pirate activities. In fact, social banditry is rural, not urban. The peasant societies in which it occurs know rich and poor, powerful and weak, rulers and ruled, but remain 'profoundly and tenaciously traditional, and pre-capitalist in structure. The bandit is a *pre-political* phenomenon, and his strength is in inverse proportion to that of organized agrarian revolutionism and socialism or communism' (Hobsbawm [1959] 1963, p. 23, emphasis added). Hence, it is a little incongruous to compare 'pre-modern' social banditry in China with modern political revolutions in order to blur the distinction between revolutionaries and pirates. Nevertheless, even in pre-modern social banditry, the importance of Robin Hoodism and the ethical aspiration for justice should not be ignored (*ibid.*).
37. The term 'satisfice', which appears in the *Oxford English Dictionary* as a Northumbrian synonym for 'satisfy', was borrowed by H.A. Simon (1956) in order to describe a particular choice criterion: 'A decision maker who chooses the best available alternative according to some

- criterion is said to optimize; one who chooses an alternative that meets or exceeds specified criteria, but that is not guaranteed to be either unique or in any sense the best, is said to satisfice' (Simon 1987, p. 243).
38. For a more detailed analysis of the distinction between different types of violence with regard to social rules, see Chapter 3.
 39. Hegel says in one of his lectures on the 'Philosophical History of the World': 'The only thought which philosophy brings with it to the contemplation of History, is the simple conception of *Reason*; that Reason is the Sovereign of the World; that the history of the world, therefore, presents us with a rational process. This conviction and intuition is a hypothesis in the domain of history as such. In that of Philosophy it is no hypothesis' ([1837] 1957, pp. 348–9). The sovereignty of reason in history connotes the *rationality* of historical processes, or the existence of some kind of regularity or necessity. But this type of historical or macro 'rationality' is different from individual 'rationality'. In fact, for Hegel, historical rationality is not derived from individual rationality. Hegel even stresses the role of unconscious or unintended results of an individual's actions in shaping a totality or an order that has 'inner necessity' or 'rationality'. In my opinion, Hegel's reason in history corresponds to what I call *ex post* rationality.
 40. It is also noteworthy that Engels follows almost word for word Hegel's interpretation of historical necessity as an 'unconscious or natural process' in a letter to Joseph Bloch on September 21(22) 1890: '[H]istory proceeds in such a way that the final result always arises from conflicts between many individual wills, and even one of them is in turn made into what it is by a host of particular conditions of life. Thus there are innumerable intersecting forces, an infinite series of parallelograms of forces which give rise to one resultant – the historical event. This may in its turn again be regarded as the product of a power which operates as a whole *unconsciously* and without volition. For, what each individual wills is obstructed by everyone else, and what emerges is something that no one intended. Thus history has proceeded hitherto in the manner of a natural process and is essentially subject to the same laws of motion' (Engels 1975, p. 395).
 41. The term 'hysteresis' was first coined by James Alfred Ewing in 1881 to refer to the effects which remain after the initial causes are removed, the context being the behaviour of electromagnetic fields in ferric metals. In the 1980s, hysteresis effects were widely invoked in the economic literature to explain the persistence of high rates of unemployment after the temporary shocks experienced at the beginning of the 1980s. We can also use the hysteresis effect to illustrate the influence of previous

historical experiences in using violence on the behaviour of people in a new historical context. For a distinction of weak and strong forms of hysteresis, see Amable et al. (1995). The authors discuss the non-linear dynamic of a 'strong form of hysteresis' and its particular properties compared to a 'weak form of hysteresis'.

42. Grossman and Kim (1996a) cite the Vikings and the Mongols as historical evidence of the type of specialization in pure predatory activity. But the Vikings and the Mongols were not poor people. The navigation power of the Vikings and the pastoral way of life among the Mongols may be better reasons for their specialization in predatory activity. Another good example is the Spartans who prospered while at war but began to decline once they reached a position of supremacy. They did not understand what being at peace meant and never attached any importance to any other kind of activity than training for war. Aristotle writes: 'Public finance is another thing that is badly managed by the Spartans. They are obliged to undertake large wars, but there is never any money in the treasury' (*Politics*, p. 90). The Spartans were not poor, but they were bad in managing their public finance, whereas they were great warriors. In other words, they could more easily deal with a war economy than with a peace economy; this is also true for the Vikings and the Mongols. In my opinion, specialization in predatory activity does not depend necessarily on poverty or wealth, but on the particular allocation of resources on different types of entrepreneurial talents (productive or predatory ones). Contrary to the contention of Hirshleifer (1991b) and Grossman and Kim (1996a), historical evidence does not always confirm that 'poor agents' choose to specialize in predatory activity. In fact, many historical examples illustrate the fact that rich agents choose to specialize in predatory activity. Skaperdas and Syropoulos's (1996) model as well as Kennedy's (1989) book highlight the close relationship between commerce and war, or between trade and colonialist policies. Aristotle argues that equality of wealth will not put an end to stealing and he also notes that rich people can specialize in predatory activity. He considers this behaviour as 'major crime': 'As for major crimes, men commit them when their aims are extravagant, not just to provide themselves with necessities. Who ever heard of a man making himself a tyrant in order to keep warm? For the same reason, the magnitude of the crime, there is more credit in slaying a tyrant than slaying a thief. So we may conclude that the typical characteristics of Phaleas's constitution would be a protection only against minor crimes' (*Politics*, p. 75).
43. Grossman and Kim (1995, pp. 1279–80; 1996a, p. 60; 1996b, p. 335) allow for the possibility that predation can be destructive. By this, they

mean that the predator gains less from predation than the prey loses. This destruction or damage due to fighting can be called ‘collateral damage’. Grossman and Kim measure this ‘destructiveness of predation’ by a parameter $0 < \beta < 1$. For example, perhaps the predator’s gain is subject to deterioration during shipment, or the predator’s gain needs to be processed to be usable. Specifically, although the prey dynasty loses the fraction $1 - P_i$ of its gross production, the predator dynasty gains only the fraction $(1 - \beta)(1 - P_i)$ of the prey’s gross production. Hence, ‘predatory activity’ should not be confused with ‘destructive activity’ in general. Furthermore, it should be noted that because the destructiveness of predation deters predation, the smaller the cost of appropriative activities, the more destructive predation would be. In a non-military context, Becker’s (1983) analysis of pressure groups competition shows how incidental damage to the economy (‘dead-weight loss’) tends to limit the extent of conflict.

44. In the following paragraph, Aristotle examines the costs and benefits of surrounding a city in terms of offensive weapons and defensive fortifications: ‘For example, when Autophradates was about to lay siege to Atarneus, its ruler Eubulus asked him to consider how long it would take him to complete the capture of the city, and then to count the cost of a war of that duration. “For”, he added, “I am willing now to abandon Atarneus in return for a sum of money very much less than that.” These words of Eubulus caused Autophradates to think again and to abandon the siege’ (*Politics*, p. 76). Undoubtedly, economic calculation is a major aspect of any organized war between two nations, tribes or states. Aristotle also acknowledges the importance of the effectiveness of offensive weapons compared to defensive fortifications (μ) in waging the war.
45. Kuran’s model is based on a distinction between individuals’ privately held political preferences and those they espouse in public. His central argument is that ‘A privately hated regime may enjoy widespread public support because of people’s reluctance to take the lead in publicizing their opposition. The regime may, therefore, seem unshakeable, even if its support would crumble at the most minor shock’ (1989, p. 42). The distinctiveness of Kuran’s theory lies in its emphasis on ‘preference falsification’ (*ibid.*, p. 48). Of course, it is not hard to imagine that under a dictatorial regime, people usually hide their political preferences, especially when these preferences are opposed to those advocated by the regime. But people do not necessarily falsify their preferences, if they are not obliged to. For example, during Mohammad Reza Shah’s despotism, if you were against the Shah’s regime, you obviously could not express it openly because of the Shah’s SAVAK

(secret agents), however you were not obliged to come to the streets for the Shah's birthday and shout 'long live the Shah!'. In other words, 'preference camouflage' should not be confused with 'preference falsification'. In fact, some of Kuran's examples of preference falsification in the Iranian case are unfounded. For instance, he writes: 'Four years before the revolution, when the Shah formed the Rastakhiz [Resurgence] Party, *most politically significant Iranians rushed to join it*' (p. 61, added emphasis). Unfortunately, Kuran does not quote any name, but to my knowledge, no politically significant Iranian rushed to join that Party except those who were already in the service of the Shah. No other political figure, even among the most lenient and legalist opposition parties 'rushed to join' that unique Party created by the Shah in 1975. Another example cited by Kuran with regard to Khomeini's regime runs as follows: 'In Iran, in fact, almost as soon as the Islamic order was established, *the leftist Mojahedin Party set out to organize strikes and demonstrations, in the hope that these would stimulate an anti-Islamic uprising* (see Bakhash, 1984: 219–224). The Mojahedin evidently sensed that the very process that destroyed the monarchy could be used to destroy the nascent theocracy' (p. 68). Kuran cites this example in order to support his theory of 'post-revolutionary repression and indoctrination'. Unfortunately, his example is completely fallacious. First, Mojahedin has never considered itself as a 'Party' and always (and even now) claimed to be an 'organization'. Second, in 1979 Mojahedin was not a strong organization; three–four years before the revolution, the organization split into two groups (one group adopted a Marxist–Leninist ideology and tried to dominate the original Islamic Mojahedin organization through conspiratorial methods) and by the time of the revolution some leaders and cadres of this organization had been liberated from the Shah's prisons. The small circle of Mojahedin did not have the power to 'organize strikes and demonstrations'. Moreover, Mojahedin has never had a popular basis among workers enabling it to organize strikes. This organization grew during 1979–82, and then organized demonstrations. However, the objective of its demonstrations was not to 'stimulate an anti-Islamic uprising'. Because this organization was also an Islamic one and even today, while the majority of Iranian people wish for a secular state, this organization advocates a 'Democratic Islamic Republic'!!! Hence, it is completely wrong to say that Mojahedin's organization is a 'leftist anti-Islamic' one.

46. Using the variables adopted by me, this condition can be expressed as follows : $\sigma > J/J - 1$.
47. Lane and Tornell (1996) also consider a lower bound on appropriation,

- but as Drazen (2000, p. 503) rightly argues, this lower bound plays a less critical conceptual role in their analysis and can be ignored.
48. The same type of argument has been advanced to justify the use of ‘an iron hand’ in China during the Tiananmen events in spring 1989. According to this kind of political philosophy, the new Chinese market economy, like the Chilean economy, apparently needs an authoritarian regime (Pinochet’s type of government) in the first place, then there will come a time when it can have its democratic regime.
 49. It is noteworthy that the political events in May 1968 in France also occurred at the end of a protracted period of economic growth following the Second World War, with a 5.5 per cent average annual rate of growth. These ‘thirty glorious years’ were an unprecedented enduring growth for all developed countries.
 50. Economic determinism is not only a peculiar feature of economic imperialism, but vulgar Marxism also suffers from such approaches (for a criticism of economic determinism in vulgar Marxism, see Plekhanov [1897–98] 1976, pp. 251–82; [1901] 1976, pp. 658–71).
 51. It is rather awkward that Lichbach (1992, p. 354) classifies Hirschman (1970) as a ‘Deterministic utility maximization’, model, since Hirschman rejects both standard neoclassical assumptions, namely rationality and maximizing behaviour.
 52. It is noteworthy that in ancient Persian, ‘to exit’ (*khrooj kardan*) means ‘to revolt’. It should be pointed out that in ancient civilizations, the power of central government over its provinces, and the authority of the king over his local authorities (*satraps* in ancient Persia) were essential for the continuity of the kingdom. In this context, the secession of a local authority from the central authority was the announcement of an insurrection.
 53. There is a more developed and modified recent version of many ideas advocated in this book in L. Hartz and Tom Wicker (1991) *Liberal Tradition in America*, New York, Harvest Books, second edition.
 54. For a good interpretation of Pareto’s position on democracy, see Finer (1968).
 55. For a general overview of deviance theory, see Liska (1981).
 56. This individualistic vision of productive activity has always been an apology for natural-rights theory. Veblen (1898, p. 353) criticizes this vision severely: ‘This natural-rights theory of property makes the creative effort of an isolated, self-sufficing individual the basis of the ownership vested in him. In so doing it overlooks the fact that there is no isolated, self-sufficing individual. All production is, in fact, a production in and by the help of the community and all wealth is such only in society’. Moreover, for Veblen, the isolated individual is not a

productive agent. And since there is no individual production and no individual productivity, ‘the natural-rights preconception that ownership rests on the individually productive labour of the owner reduces itself to absurdity, even under the logic of its own assumptions’.

57. It is noteworthy that even von Mises accepts the role of a minimum state for providing security for citizens against bandits, or thieves. However, he may have revised his position in the light of the recent Chicago school contributions regarding the benefits of privatizing prisons.
58. Russell also distinguishes ‘naked’, ‘traditional’ and ‘revolutionary’ power (Russell [1938] 1971, chs iii, vi, vii). However, while my definition of naked power corresponds with that of Russell’s, the criterion which I adopt to distinguish traditional and revolutionary power, namely imitation and innovation, is not shared by Russell.
59. One of the major concerns of Machiavelli in *The Prince* is to advise the Prince how to run the outer zone of his influence while keeping intact the inner zone of his power (see Machiavelli [1532] 2001, first eight chapters, pp. 37–69).
60. See Chapter 1 of the present book.
61. I have earlier cited Mann regarding the importance of ‘compulsory cooperation’ in the building of early empires (see Chapter 1).
62. According to Alesina et al., ‘In summary, building large empires, and waving the national flag around the world served the purpose of creating markets in a world less than free trade, and kept cultural minorities in check’ (1997, p. 22). By the same token, American expansionism, namely the conquests of Alaska, Hawaii, Samoa, Cuba and the Philippines (among other territories) between 1865 and 1898 is justified on the basis of the necessity to expand American markets and supply routes (*ibid.*, p. 21).
63. Alesina and Spolaore (1996) examine the role of defence expenditures and wars for the equilibrium size of countries. Their model shows that secessions are likely to be more prevalent in a more peaceful world (that is, with a lower probability of conflicts), since the benefit of size for defence purposes becomes less important. However, this result cannot be corroborated by historical evidence. In fact, secessions were either the direct or indirect consequence of international or civil wars.
64. Marshall’s theory is inspired by the British experience of a three-phase evolution towards fuller citizenship. For a critical appraisal of Marshall’s theory, see Mann (1993, pp. 19–21, 157–8).
65. For a general theory of ‘social docility’ as the basis of fitness in the human species, see Simon (1983, 1990, 1997a).
66. It should be noted that ‘bureaucratic co-ordination’ is Kornai’s expression

(Kornai 1984, 1992). Karl Polanyi (1944, 1957) calls it ‘redistribution’ and he acknowledges three other modes of transaction and integration, namely ‘reciprocity’, ‘market exchange’, and finally ‘house holding’ as a separate principle of activities. Knight calls it ‘authority mechanism’ (1947, pp. 308–10), and Arrow (1951, pp. 1–2) follows Knight in distinguishing three mechanisms of ‘customs’, ‘authority’, and ‘consensus’ (or market mechanism). Lindblom’s classification and terminology is close to that of Knight. He distinguishes three systems, namely ‘authority’, ‘market’, and ‘preceptorial’. Hence, Lindblom’s (1977) ‘authority system’ is equivalent to Knight’s ‘authority mechanism’. Von Mises calls it ‘bureaucratic management’ versus ‘profit management’, and he considers German Nazism and Italian Fascism as part of the ‘bureaucratization’ process (1946, ch. VI). My understanding of this mode of coordination is close to that of Kornai. For a detailed discussion of coordination mechanism and social regularity or normal states, see Vahabi (1997a, 1998).

67. The Roman Empire in the period from about 100BC to AD200, is regarded as an example of ‘compulsory cooperation’ by Mann (1986, p. 278). In this empire, the state was largely an army, and the state-led economy was an army-led economy. Mann calls this military-led economy, a ‘legionary economy’ (p. 276).
68. For the meaning of ‘abstract rules’ and *Catallaxy*, see Hayek (1976, chs 7 and 10).
69. For an analysis of Soviet system as an economy in which the active role of money is replaced by state and a reinterpretation of the ‘soft budget constraint’ as an institutional peculiarity of such a system, see Vahabi (2001, 2002a).
70. For the difference between *taxis* and *kosmos*, see Hayek (1973, vol. 1, ch. 2).
71. I am not suggesting that looting of cultural goods is always related to primitive civilizations. The recent American invasion is a good counter-example. According to Isabelle Regnier, reporter of *Le Monde*, on the morning after the American occupation of Baghdad on 13 April, the famous library of Baghdad was completely burnt: ‘When I arrived the walls were yet warm; in some places there was still smoke. Only a few books were saved. It is extremely disappointing. We have the feeling that a whole civilization has disappeared’ (*Le Monde*, 19 April 2003, p. 5). The museum in Baghdad, looted during the first week of the American occupation, had not received any armed guard from American troops by 15 April (*The Economist*, 19 April 2003, p. 22). Mr Donny George, the museum researcher, believes that priceless treasures, including a Sumerian vase from 3000BC, were looted to order.

Similar looting took place at the end of the first Gulf war, and only a handful of the antiquities stolen then have been recovered. A great number of specialists expressed their indignation against the looting and the lack of armed US guards in the 'discussion' column of *New York Times* on 17 April 2003. Following these events, two of Bush's advisers on cultural goods, namely Martin Sullivan and Gary Vikan, also resigned in protest against the looting.

72. By 'radical uncertainty', I mean a kind of uncertainty for which there is no scientific basis whatsoever to form any calculable probability (Vahabi 1997b). My understanding of such uncertainty is based on Keynes (1937, p. 214) and Knight ([1921] 1965, pp. 224–5).
73. For a further development of 'conventional rate of interest', see Shackle (1965, 1972, 1989), Deleplace and Nell (1996) and Deleplace (1999).
74. Marx ([1847] 1970) defines ideology as 'reversed consciousness' which legitimizes particular interests of social groups in the name of public or general interests (see also Jakubowski 1990).
75. The relationship between 'politics' and 'bodily sanctions' is clearly acknowledged in the Persian language, since the noun *siasat* defines politics and the verb *siasat dadan* implies torturing.
76. Herbert Simon defines 'docility' in the following terms: 'To be docile is to be tractable, manageable, and above all, teachable. Docile people tend to adapt their behaviour to norms and pressures of the society' (1997a, p. 229).
77. One of the major differences between Oliver Williamson and Douglass North regarding transaction costs resides in the fact that Williamson assumes enforcement to be imperfect, but does not make it an explicit variable in his analysis, whereas North places a particular emphasis on enforcement. The gist of North's criticism against Williamson on this issue can be summed up in this way: 'Such an approach [Williamson's] simply does not lead the scholar to be able to deal with the problems of historical evolution, where the key problems of institutional change, of contracting, and of performance turn on the degree to which contracts can be enforced between parties at low cost' (North 1990, pp. 54–5).
78. Usher (1992, p. 361) calls this 'intimidation' costs: 'Virtually any task that the public sector is called upon to perform involves the establishment of rules. Rules require enforcement. Enforcement entails costs which must be counted as part of the total cost of public programmes. Among these costs are . . . the cost to the government of identifying infractions of the rules, and the cost to the government (and ultimately to the taxpayer) of punishing people identified as rule-breakers. These

- last two items may together be identified as intimidation cost, the cost borne by the government in enforcing compliance with the rules’.
79. According to Veblen (1898, p. 362), the emergence of the institution of ownership is related to a ‘predatory habit of life’: ‘In its earlier phases ownership is this habit of coercion and seizure reduced to system and consistency under the surveillance of usage.’
 80. For a detailed analysis of the assumptions and results of this strand of property rights theory compared to optimal contracts theory and transaction costs theory, see Vahabi (2002b).
 81. The lack of reference to revolution among the founders of the French regulationist school (the majority of whom were leftist revolutionaries) at the end of the 1960s seems paradoxical at first glance. However, this paradox can easily be resolved if we take into consideration the change in social psychology by the end of the 1970s. It took a decade for young revolutionaries of the late 1960s to be disillusioned about the collapse of the capitalist system in the near future. They then tried to understand the causes of the system’s viability and found that social compromise based on Fordism could generate a new ‘accumulation regime’ of the capitalist system. Since then the dominant social psychology has been ‘social compromise’ and not social revolution. From the inception, the French regulationist school has set itself to provide a theory about the equilibrium, coherence and viability of the system and not the crisis or transition of the system. None the less, since the late 1980s, the crisis of the welfare state and Fordism in France and Europe has brought back the question of transition and social conflict to centre stage.
 82. It is noteworthy that the French conventionalist school (Dupuy et al. 1989) adopts an individualist approach that favours cognitive, contractual and moral aspects of conventions and gives a secondary place to political and conflictual aspects of collective action. Social norms and their difference with conventions are also usually ignored.
 83. According to Keynes [1936] 1964, one good example of spontaneous disorder is ‘free competitive market economy’ which implies the intervention of the state. Obviously, Hayek’s vision is radically opposed to that of Keynes. However, there is another kind of spontaneous disorder, which Engels speaks of, namely revolution. According to Engels, ‘All conspiracies are not only useless but harmful. They [knew] only too well that revolutions are not made intentionally and arbitrarily, but that they were always and everywhere the necessary result of circumstances entirely independent of the will and guidance of particular parties and whole classes’ (quoted in Arendt [1969] 1970, pp. 11–12). Engels was writing these phrases in 1847, and it is true that later revolutions were more organized. However, even more organized revolutions cannot be

reduced to ‘conspiratorial activities’ of elite groups as suggested by Olson (1965). In other words, revolutions are also the outcome of spontaneous and conscious activities of different social groups and large masses. Marxian theory of social change, like Hayekian theory of social order, emphasizes spontaneous change. The only difference is that Marxian theory is even more consistent in its evolutionary character, since in this theory social change includes both spontaneous *order* and spontaneous *disorder*. In this perspective, incremental changes are as spontaneous as revolutionary leaps.

84. Brinton ([1938] 1952, p. 16) describes revolution as a kind of fever and distinguishes five phases in its development: (1) symptoms or prodromal phase of disease; (2) fever (revolution); (3) revolutionary crisis (delirium) or the reign of terror; (4) convalescence (a relapse or two); (5) the end of fever. The last phase marks the end of fever and the return to a normal, or healthy situation. In this sense, the last phase is the restoration of past equilibrium.
85. I examine some of North’s critical remarks regarding the Bayesian theory of learning in Vahabi (1997b).
86. Franz Horkheimer and Herbert Marcuse were also employed.
87. For a critical appraisal of recent war lies during the Gulf war and preparation for the war against Iraq by the United States, see *Marianne* 2002, p. 21.
88. ‘Pacification’ has been one of the five elements of compulsory cooperation in the early empires of domination. It provided the stable, secure environment required for rational economic activity (see Mann 1986).
89. François Fourquet (1989, pp. 87–94) advocates the Braudelian thesis and tries to show that Europe’s maritime hegemony was the source of its world superiority.
90. On the difference between scream and voice, see Chapter 2.
91. According to the *Oxford English Reference Dictionary* (1996, p. 854), ‘Luddites first appeared in 1811 in Nottingham, when knitters began wrecking machines used to make poor-quality stockings at prices which undercut skilled craftsmen. Their name came from a certain Ned Ludd, nicknamed “King Ludd”, said to have destroyed two stocking-frames, although whether or not he existed is uncertain. The movement spread rapidly, large groups storming cotton and woollen mills in Yorkshire and Lancashire, but was quickly put down by the government’s harsh reprisals, which included making machine-breaking a capital offence. Although the Luddites were never well organized, they were considered a serious threat by the government of the day, which was haunted by the spectre of a popular uprising’.
92. ‘(1) Manhood suffrage, (2) Vote by Ballot, (3) Equal Electoral Districts,

- (4) Payment of Members of Parliament, (5) Annual Parliaments, (6) Abolition of property qualification for candidates' (Hobsbawm 1962, p. 114).
93. Silence can be depicted as the non-use of either destructive or creative power.
94. Regarding the impact of emigration, Anne Robert Jacques Turgot wrote to Richard Price: "The asylum which (the American people) opens to the oppressed of all nations must console the earth. The ease with which it will now be possible to take advantage of this situation, and thus to escape from the consequences of a bad government, will oblige the European Governments to be just and enlightened" (quoted by Hirschman 1981, p. 255). As Hirschman rightly observes, Turgot argues about the state losing citizens as though it were a firm impelled by the exit of customers to improve its performance.
95. On an international level, the choice of powerful states, and particularly that of the United States after the cold war, is crucial in determining violence preference. One good example is the recent arrangement to disarm Iraq. While the Bush administration accused the dictator of Baghdad of having some missiles with a mobility of 120 kilometres, Defense Minister Donald Rumsfeld was joyfully boasting about the huge size of some new American bombs that would soon be tested in the war against Iraq. In an article entitled 'How to attack a dictator', *Time* magazine gives some details on new American weapons: the B-1B Lancer and JDAM: 'The first one is the backbone of America's long-range bomber force. It can reach speeds of 900-plus m.p.h. (1448 km/h) and flies at 30 000 ft (9144m). Its three weapons bays can accommodate as many as 24 JDAMs. JDAM (the Joint Direct Attack Munitions) is a guidance tail kit that attaches to a conventional bomb. Steered by its tail fins, it uses the global positioning system (GPS) to guide the bomb to a target.' To attack western Iraq, the AWACS (Airborne Warning and Control System) received the target coordinates and passed this information to a B1-B bomber. The bomber crew checked the coordinates and armed four 2000-lb (907-kg) JDAMs (*Time*, 21 April 2003, pp. 32–4). The American military experts did not hesitate to compare this non-nuclear type of bomb with the nuclear bombs that had been dropped on Hiroshima and Nagasaki. They bragged so enthusiastically about the high destructive power and precision of the new American weapons, that one can ask oneself whether they were not advertising them. Given the high costs of testing sophisticated military weapons in terms of human life and material destruction, the war against Iraq could be interpreted as an attempt to kill two birds with one stone: to provide new products for a highly lucrative

military market, and to test them 'free of charge'. Of course, we do not ignore other advantages such as obtaining free petrol and world hegemony for Enron lackeys in the White House, armed with weapons supplied by the Carlyle group. It is not by chance that the Bechtel Group of San Francisco is hired by the Bush Administration to reconstruct Iraq (*International Herald Tribune*, 19–20 April 2003, pp. 13–14).

96. According to Rosen and Thaler (1976), up to a certain point, an increase in the probability of death will be accepted in exchange for suitable compensation, but when the probability is sufficiently high, no price is sufficient for the risk to be undertaken. High risks do not have any monetary equivalent.
97. The *political* character of this *economic* award can be better grasped if we note that in 2003, President George W. Bush appointed Bechtel's chief executive, Riley Bechtel, to serve on the President's Export Council.
98. One good example is the American military and security institutions such as the army, the Pentagon and the CIA which needed the communist threat to justify their astronomic budgets. During the post-cold war period, the same institutions and their determined advocates in the White House, like Presidents Bush, father and son, argued for maintaining the same budgets due to the Islamist terrorist danger all over the world. We can be sure that after Islamists, they will find other threats to justify their budgets!
99. See www.sipri.se. Concerning the highly lucrative market of military weapons, see *L'Atlas du Monde diplomatique* (Achcar et al. 2003, pp. 38–9).
100. As mentioned in the previous chapter, destructive power is the basis of law, but it cannot produce rules alone. To produce rules, destructive power should be combined with moral power. In other words, rules are the result of force and legitimacy, and hence require a certain level of negotiation and compromise (Reynaud 1997, ch. 2). In this chapter, the rule-producing function of destructive power refers to the role of this type of power in establishing rules.
101. An individual who seeks wealth through the forcible appropriation of others' resources does not add to the national product. The net effect may be not merely a transfer but a net reduction in social income and wealth. However, I am not suggesting that warfare is unquestionably a source of impoverishment for any country and can never contribute to its prosperity: 'Certainly the unprecedented prosperity enjoyed afterward by the countries on the losing side of the Second World War suggests that warfare need not always preclude economic expansion, and it is easy to provide earlier examples' (Baumol 1990, p. 904).

102. This is possible only if Friday can produce more than is necessary to keep him alive, namely a surplus product, otherwise slavery has no economic rationale.
103. For a more detailed analysis of Say's principle and budget constraint, see Vahabi (2001, pp. 161–5).
104. See Chapter 3 of this book.
105. The correct expression is 'destructive power neutrality', since 'violence' is only one form of destructive power. However, I use 'violence neutrality' for the convenience of using a shorter expression.
106. Enforcement is carried out by the first party through a self-imposed code of conduct, by the second party through retaliation, and by a third party through societal sanctions or coercive enforcement by the state (North 1992, p. 9). It is noteworthy that Jean-Daniel Reynaud, in his discussion on 'sanctions' (1997, ch. 2, section 2), is so concerned with the first-party enforcement and legitimacy question that he does not elaborate the coercive enforcement by a third party.
107. Once again, the correct expression is 'destructive power preference', since 'violence' is only one form of destructive power. However, I use 'violence preference' for its convenience as a shorter expression.
108. My translation of the French expression '*valeur-lutte*' is 'conflictual value'.
109. My translation of the French expression '*valeur-aide*' is 'assistance value'.
110. My translation of the French expression '*equivalence de préjudices*' is 'equivalency of prejudices'.
111. Romanists, Canonists and Theologians largely developed the reflection upon fraud, retaliation and corrective justice during the medieval period. For a detailed survey and presentation, see Baldwin (1959), Langholm (1992) and Lapidus (1994).
112. The average age of those who died in the attack was 39.9 years (Bram et al. 2002, p. 16).
113. The authors note that although insurance is expected to cover a portion of these losses, it is unlikely that all of the workers had taken out private life-insurance policies. The earning losses sustained by the workers' families will be partially covered by various charitable funds as well as the federal Victim Compensation Fund.
114. *Time* magazine notes that 'when it comes to American deaths in Gulf War II, U.S. officials are quite precise. In the first three weeks of fighting, 110 U.S. troops were killed. The Iraqi body count, by contrast, is a mystery' (21 April 2003, p. 39). *The Economist* (19–25 April 2003, p. 20) also agrees that the number of Iraqi soldiers killed may never be known.

115. Although Hirschleifer (1991b) does not make any reference to Schelling (1963), it was Schelling who pioneered this type of modelling.
116. It is noteworthy that in Haavelmo (1954), agents are not necessarily supposed to be optimizers.
117. This is one of the first models in conjectural equilibrium, but it is completely neglected by other pioneers of such models. For example, one can find no reference to this model in Hahn (1989).
118. Hirshleifer (1995a) does not examine this latter case of increasing returns in his paper, but he conjectures reasonably that a Hobbesian ‘vertical’ contract will result in such circumstances.
119. In Hirshleifer (1991b), no allowance is made for Stackelberg leadership or for the use of threats and promises.
120. Note that ‘destructivity’ should not be confused with ‘destructiveness’. While the former refers to the capacity for real destruction, the latter measures ‘collateral damage’.
121. For a detailed survey regarding the notion as well as theoretical implications of joint production, particularly in Sraffian economics, see Scheffold (1997).
122. I particularly thank Nathalie Sigot for drawing my attention to this topic in Jevons ([1871] 1965).
123. I have already defined destructive power in its rule-producing function as ‘scream’ in Chapter 2.
124. I have already substantiated this point in Chapter 1.
125. For an opposite view, see Enders and Sandler (1995).
126. For a discussion about the foundations of incomplete contracts, see Vahabi (2002b).
127. Regarding the role of big cities in modern days, Bagehot writes: ‘There is an improvement in our fibre – moral, if not physical. In ancient times city people could not be got to fight – seemingly could not fight; they lost their mental courage, perhaps their bodily nerve. But nowadays in all countries the great cities could pour out multitudes wanting nothing but practice to make good soldiers, and abounding in bravery and vigour. This was so in America; it was so in Prussia; and it would be so in England too’ (Bagehot 1956, p. 35). The story of cities in the East is not the same as in the West. Ispahan, an old Iranian city, big, beautiful and full of historical monuments, was from the outset a centre for the army. Etymologically also, Ispahan derives from the word *Sepahan* meaning army.
128. By ‘terror tax’, the authors mean the ongoing costs of terrorism as a cost that must be borne by firms located in the city. ‘These costs include higher insurance premiums, direct spending on increased security, and

- reduced productivity associated with security-induced delays. We refer to these costs as a *terror tax*: the ongoing cost of doing business in a city threatened by terrorism' (Harrigan and Martin 2002, p. 101).
129. Arendt's distinction between power and violence corroborates the distinction that I have already made between these two different functions of destructive power: 'Power is never the property of an individual; it belongs to a group and remains in existence only as long as the group keeps together' (Arendt [1969] 1970, p. 44). In contrast with 'power', 'violence . . . is distinguished by its instrumental character, since the implements of violence like all other tools, are designed and used for the purpose of multiplying natural strength until, in the last stage of their development, they can substitute for it' (ibid., p. 46).
 130. Hobsbawm notes the impact of new military techniques in causing greater destruction in our times: 'There are estimates that the Serbian economy suffered greater destruction in a few weeks than it suffered the whole of the Second World War . . . The destruction of the bridges over Danube, for example, has seriously damaged the economy of the entire region, which extends from southern Germany to the Black sea and beyond' (Hobsbawm 2000, p. 11).
 131. For a definition of θ and POP, see Chapter 4.
 132. For a definition of the effectiveness of military action $T_M = F(R_1) = a \Pi R_1^2$, see Chapter 3.
 133. For a definition of MPR, see Chapter 3.
 134. For a definition of β , see Chapter 4.
 135. For a detailed historical research regarding the historical background of this invention, see Parker (1988, p. 83) and McNeill (1982, p. 39).
 136. This three-stage transition corresponds to what Oliver Williamson calls the 'fundamental transformation': 'Transaction costs economics holds that a condition of large numbers bidding at the outset does not necessarily imply that a large numbers bidding condition will prevail thereafter. Whether *ex post* competition is fully efficacious or not depends on whether the good or service in question is supported by durable investments in transaction-specific human or physical assets' (Williamson 1985, p. 61).
 137. As Michael Moore has brilliantly documented in the film *Bowling for Columbine* (2002), thanks to companies such as Lockheed, the United States is also full of arms, despite numerous tragedies involving the massacre of youngsters by youngsters.
 138. For a definition of *assabiya*, see Chapter 1 and Chapter 3.
 139. See Chapter 1.
 140. In recent literature, these social ties are often called 'social capital'.

Robert Putnam defines this concept as follows: ‘Whereas physical capital refers to physical objects and human capital refers to the properties of individuals, social capital refers to connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called “civic virtue”. The difference is that “social capital” calls attention to the fact that civic virtue is most powerful when embedded in a sense network of reciprocal relations. A society of many virtuous but isolated individuals is not necessarily rich in social capital’ (Putnam 2000, p. 19).

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