# State policy and the political economy of criminal enterprise: mass incarceration and persistent organized hyperviolence in the USA

Rodrick Wallace [a],*, Robert E. Fullilove [b]

[a] The New York State Psychiatric Institute, United States
[b] Columbia University, United States

## ARTICLE INFO

## ABSTRACT

Atomistic, individual-oriented economic models of criminal behavior fail to capture critical scale-dependent behaviors that characterize criminal enterprises as cultural artifacts. Public policies based on such models have contributed materially to the practice of mass incarceration in the USA. A survey of similar policing strategies in other venues suggests that such policies almost inevitably lead to exacerbation of organized violence. Adapting a Black–Scholes methodology, it is possible to characterize the 'regulatory investment' needed to manage criminal enterprise under conditions of uncertainty at a scale and level of organization that avoids an atomistic fallacy. The model illuminates how public policy that might seem rational on an individual scale can trigger ecosystem resilience transitions to long-lasting or permanent modes of institutionalized hyperviolence. The homicide waves associated with the planned shrinkage program in New York City that was directed at dispersing minority voting blocks carry implications for national patterns of social disruption in which mass incarceration is an ecological keystone. Continuing large-scale socioeconomic decay, in the specific context of that keystone, greatly increases the probability of persistent, large-scale, organized hyperviolence, as has been the experience in Naples, Sicily, Mexico, and elsewhere.

## 1. Introduction

The famous paper by Becker (1968), *Crime and punishment: an economic approach*, in the words of Mochan et al. (2005), created the foundation for the economic analysis of criminal behavior in the USA. His model, extended by Ehrlich (1973), postulates that participation in criminal activity is the result of an optimizing individual's response to incentives such as legal and illegal market opportunities. Rational economic agents decide to engage in criminal activity after comparing the financial rewards from crime with those obtained from legal work, taking into account the probabilities of sanction. Empirical observations, Mochan et al. claim, have generally confirmed the predictions of the original Becker-Ehrlich model, uncovering negative impacts on crime of deterrence variables and improved economic conditions.

Such an atomistic model of criminal behavior is, we will ultimately argue, profoundly challenged – not confirmed – by empirical observations of larger-scale events like the hyperviolence outbreak currently afflicting much of Mexico, or the Crack Wars that convulsed New York City in the early 1990s (e.g., Halbfinger, 1998).

Indeed, the canonical atomistic approach to economic pattern and process is under siege from a number of

* Corresponding author at: Box 47, NYSPI, 1051 Riverside Drive, New York, NY 10032, United States. Tel.: +1 442125675101.
E-mail address: Wallace@nyspi.columbia.edu (R. Wallace).

directions. Tony Lawson's (2006) manifesto on the nature of heterodox economics focuses, first, on describing the essential features of the mainstream tradition in Western economic theory as involving explicitly physics-like, deductive mathematical models of social phenomena that inherently require an atomistic perspective on individual, isolated economic actors. This is a methodology that has long been subject to scathing commentary at the highest levels (e.g., Leontif, 1982). Lawson characterizes the need for isolated atomism in mainstream theory as arising from the mathematical methods chosen for attack: ontological presuppositions of the insistence on mathematical modeling include the restriction that the social domain is everywhere constituted by sets of isolated atoms.

A converse interpretation, however, is also possible: that cultural assumptions of atomicity can drive the mathematical models chosen.

Lawson (2006) describes in particular various heterodox economic approaches – post Keynsianism, (old) institutionalism, feminist, social, Marxian, Austrian and social economics, among others – as representing something of a generalized social science in which the dominant emphases of the separate heterodox traditions are just manifestations of categories of social reality that conflict with the assumption that social life is everywhere composed of isolated atoms.

Here, we will adopt the viewpoint of a powerful criminal enterprise that must regulate its stream of commerce – make regulatory investments of resources – under conditions of uncertainty appropriate to a particular scale. This evades the error inherent to an atomistic analysis of collective behavior when essential interactions vary, and take place, at and across multiple scales. We study the dynamics of an institutionally evolved cultural artifact that may have 'emergent' properties – punctuated phase transitions – different from those expressed at smaller scales. Analogous debate rages in evolutionary theory regarding the 'correct' levels of selection: biology, like social science, is inherently messy, and involves selection pressures that act at all scales and levels (Gould, 2002; Wallace, 2010, 2013).

In fact, a seminal study by Mansour et al. (2006), using game-theoretic methods, found that conventional 'deterrence' policies affect the structure of the market for drugs, leading to the counterintuitive result of lower drug prices in the context of fragmented competition. They assume that the production and distribution of illegal drugs is controlled by well-organized criminal organizations. They find that, for a given market structure – a given number of criminal organizations – an increase in deterrence will initially reduce total output and increase the price of drugs. However, this may not be so when the market structure reacts to such deterrence. Using the mathematical theory of coalition-formation, they show how an increase in deterrence can lead to a splintering of the cartel. From there, they simply argue that when more firms operate in an illegal goods market – when the market is more competitive – the output is larger and the price is lower. Thus, by increasing the number of criminal organizations in the market, increased deterrence leads to an increase in output and a fall in prices.

Of course, given the nature of the illegal drug trade, such competition is very likely to lead to high levels of violent conflict.

A number of significant factors, however, limit the usefulness of game-theoretic approaches. First, the rules of the game, the payoff matrix, will not likely be well understood by the players in complex real-world situations. Second, the rules of a real-world game are always changing, in ways that players may not, or cannot, recognize. Third, the 'contending actors' may not share sufficient perspective as to have similar value schemes, an agreed-upon idea of utility. Finally, most game theory envisions atomistic interactions, although these may be aggregated into coalitions. Real world systems, by contrast, are highly emergent, i.e., the behavior of collective 'actors' is not simply determined by atomic structure, as it were.

In addition, as Martin (1978) put it, game theory often reifies the values of the game formulator in the study of crime. The application, in his view, takes the expected path, leading to severe limitations. These include ignoring collusion between police and criminals, value change, structural change as the equitable distribution of wealth leading to decreased criminal activity. It defines criminal activity as what is discouraged now by police, and ignores structural violence in society – poverty, war, racism – not to mention crime by other classes or occupations, for example white collar transgressions. It assumes the continuance of present laws, which may be unnecessary or unjust, and so on. Martin concludes that game theory as applied to crime does not lead to a real elucidation of the problems in a deep way. It serves most importantly, he claims, as a mathematical esoteric way of perpetuating and justifying existing concepts about crime.

Our contrasting and central assumption in this work is that what criminal enterprises can recognize, according to their own value systems, is the degree of disjunction between what they want and what they get, under particular strategies and at a particular 'cost', and this serves as the basis for a far more appropriate formal approach.

Our model, nonetheless, reaches conclusions roughly similar to the results of Masour et al. – a good sign – but uses a phase transition-based formalism in a rate distortion context, i.e., applies a statistical model based on the asymptotic limit theorems of probability. Under such circumstances, organizations' attempts to regulate the observed disjunction between their intents and their effects are constrained by cost, in a broad sense, which we describe using an adaptation of robust Black–Scholes methods. Our statistical models lead toward a class of 'dynamic regression equations' that can be used for data analysis in the usual fashion.

Our particular interest here focuses on the inevitable levels of violence associated with phase change fragmentations, and the ways in which hyperviolence can become institutionalized and persistent via ecosystem resilience transitions, in the sense of Holling (1992).

There is considerable discussion of real-world case-histories in the international security and law enforcement literature. For example, Guerrero-Gutierrez (2011), applying a sophisticated social science perspective on the Mexican hyperviolence outbreak, found that a critical