An Economic Theory of Crime and Punishment

Lecture 8

Traditional Theory of Criminal Law

Criminal law versus civil law:

- The criminal intended to do wrong
- The harm done by criminal public and private (victimless crimes?)
- Plaintiff is the state
- The plaintiff has a higher standard of proof (?)
- If the defendant guilty-punishment, (confinement to prison, probation, monetary fines, forced labor, being beaten, executed)
- Punishment in criminal law X compensation in civil law

Criminal Intent-Mens Rea
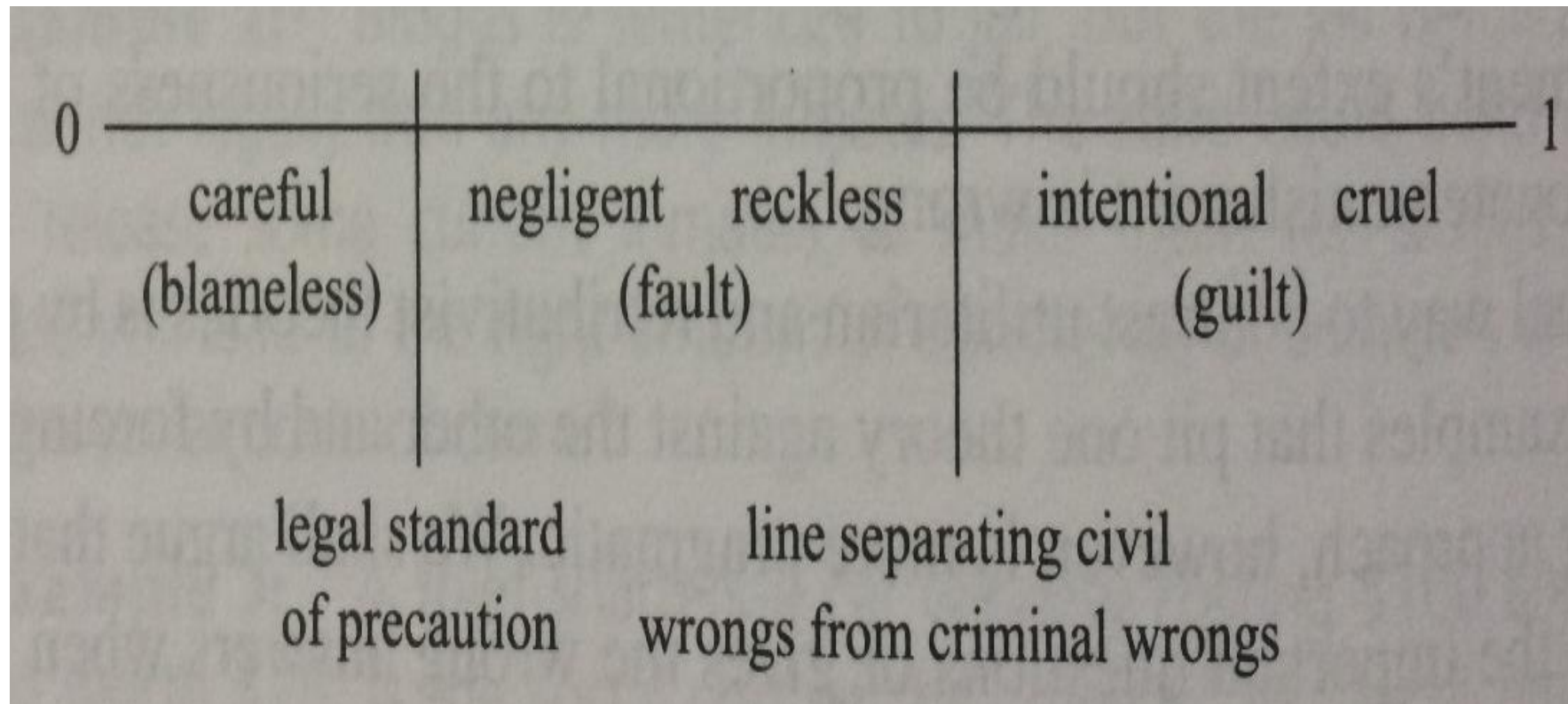
An Economic Theory of Crime and Punishment- Inadequacy of Tort Law, Necessity of Criminal Law

- Criminal punishment aims to deter intentional harm, not to compensate for them
- Perfect compensation impossible sometimes
- Or problem of „preference revelation"
- Property law does not protect the owner´s right to use the property as he chooses without inference from others
- Remedies in criminal law-protect and encourage voluntary exchange
- Punishment necessary for deterrence (civil liability without punishment-theft profitable), the expected net benefit of crime should be negative
- Acts should be punished when the aim is deterrence, acts should be priced when the aim is internalization

# An Economic Theory of Crime and Punishment- Rational Crime
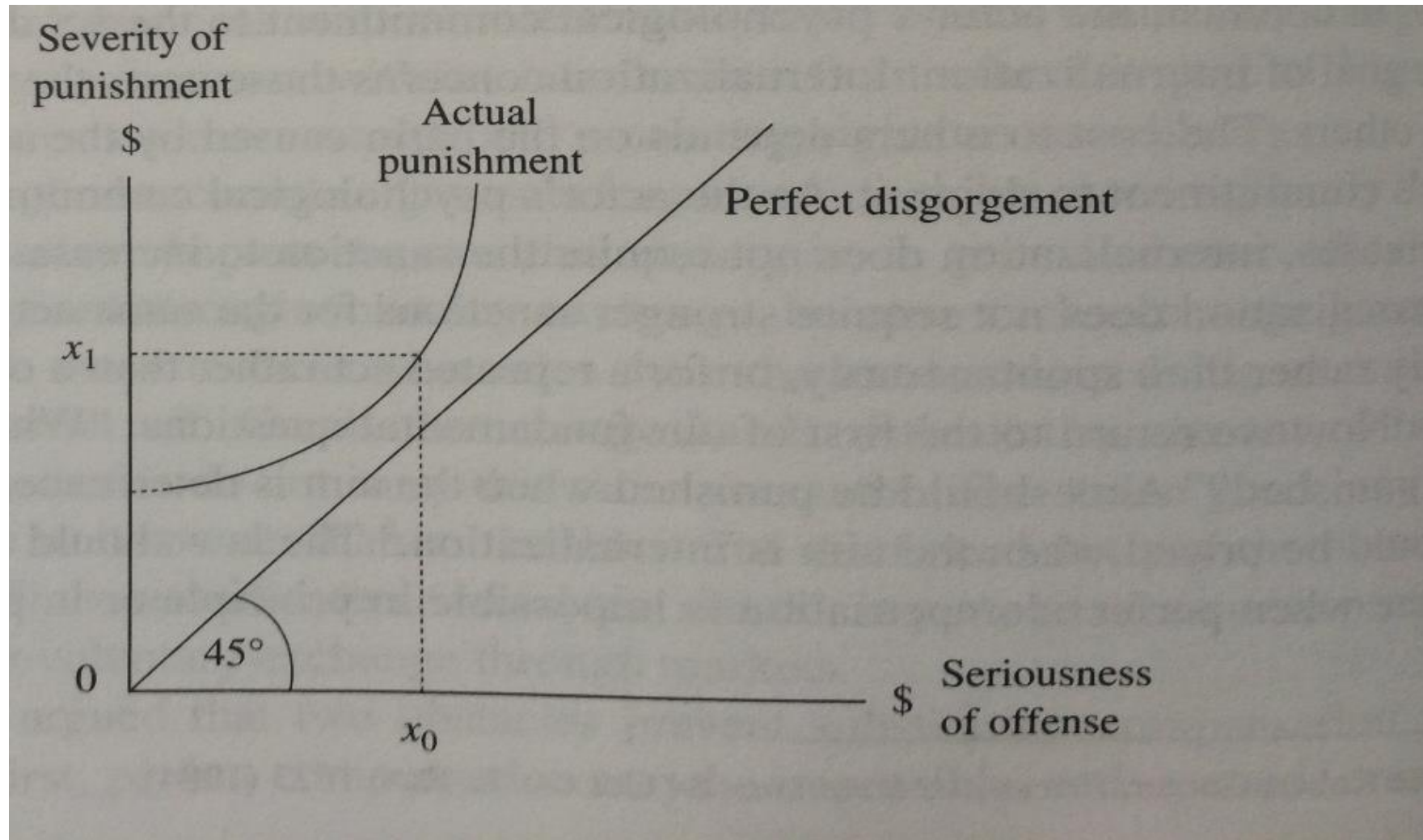
Rational Crime

- Rational amoral person
- the more serious crimes-the more severe punishment (the curve actual punishment)
- when the severity of punishment equals the seriousness of the offense, punishment causes *perfect disgorgement* (45 degree line)
- the actual punishment for embezzlement must exceed perfect disgorgement

An expected value of the crime=the gain –the punishment multiplied by the probability of being caught and convicted

The Effect of Uncertainty in Punishment
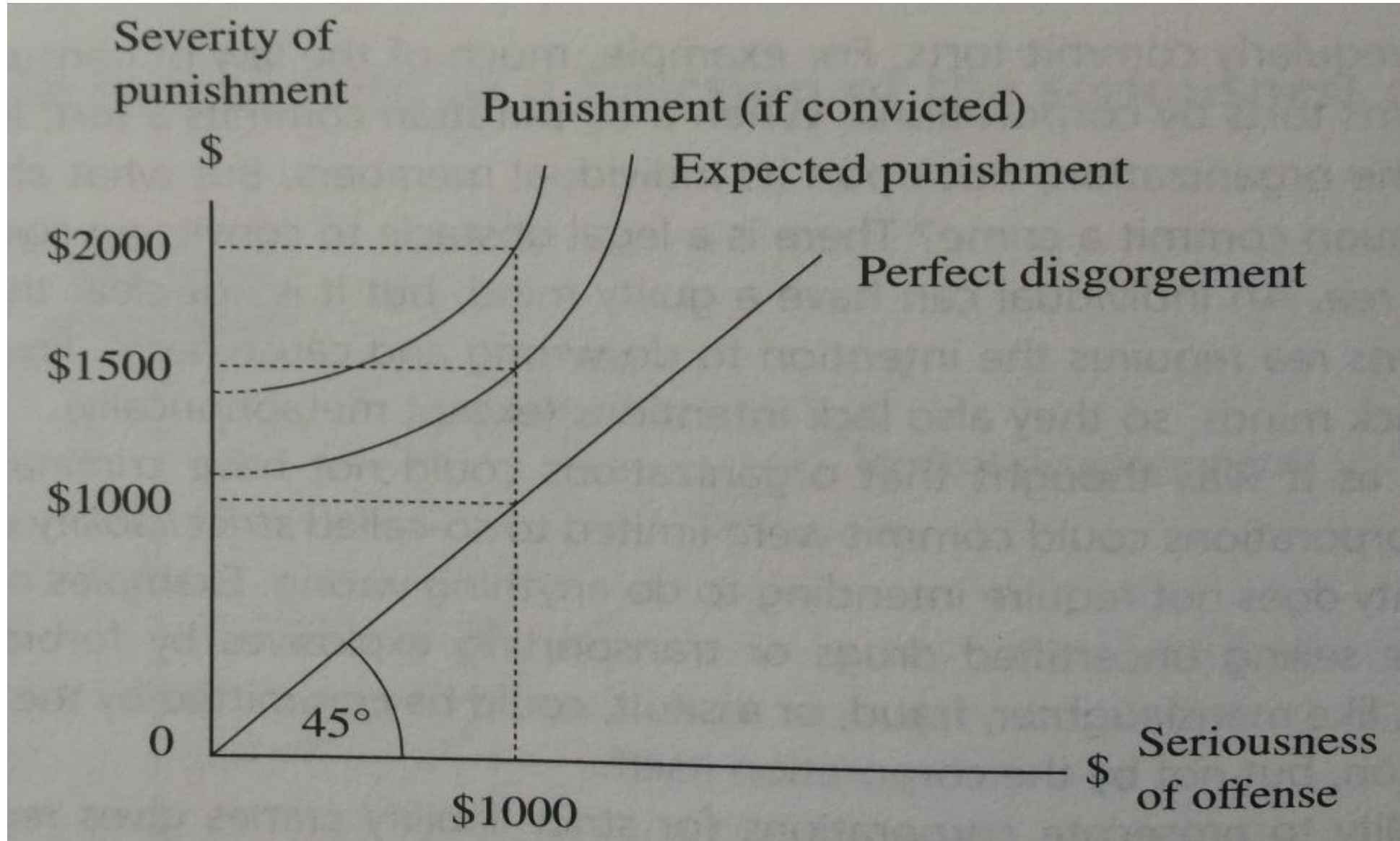
The Effect of Uncertainty in Punishment

- the expected punishment curve-punishment if convicted curve=a discount for the uncertainty of punishment

- rational would embezzle money so long as the benefit exceeds the expected punishment

- even though punishment uncertain, the expected punishment still exceeds perfect disorgement-criminal expects to be worse off for the crime so embezzlement won´t occur

- Crime does not usually pay

Expected punishment and the decision to commit a crime
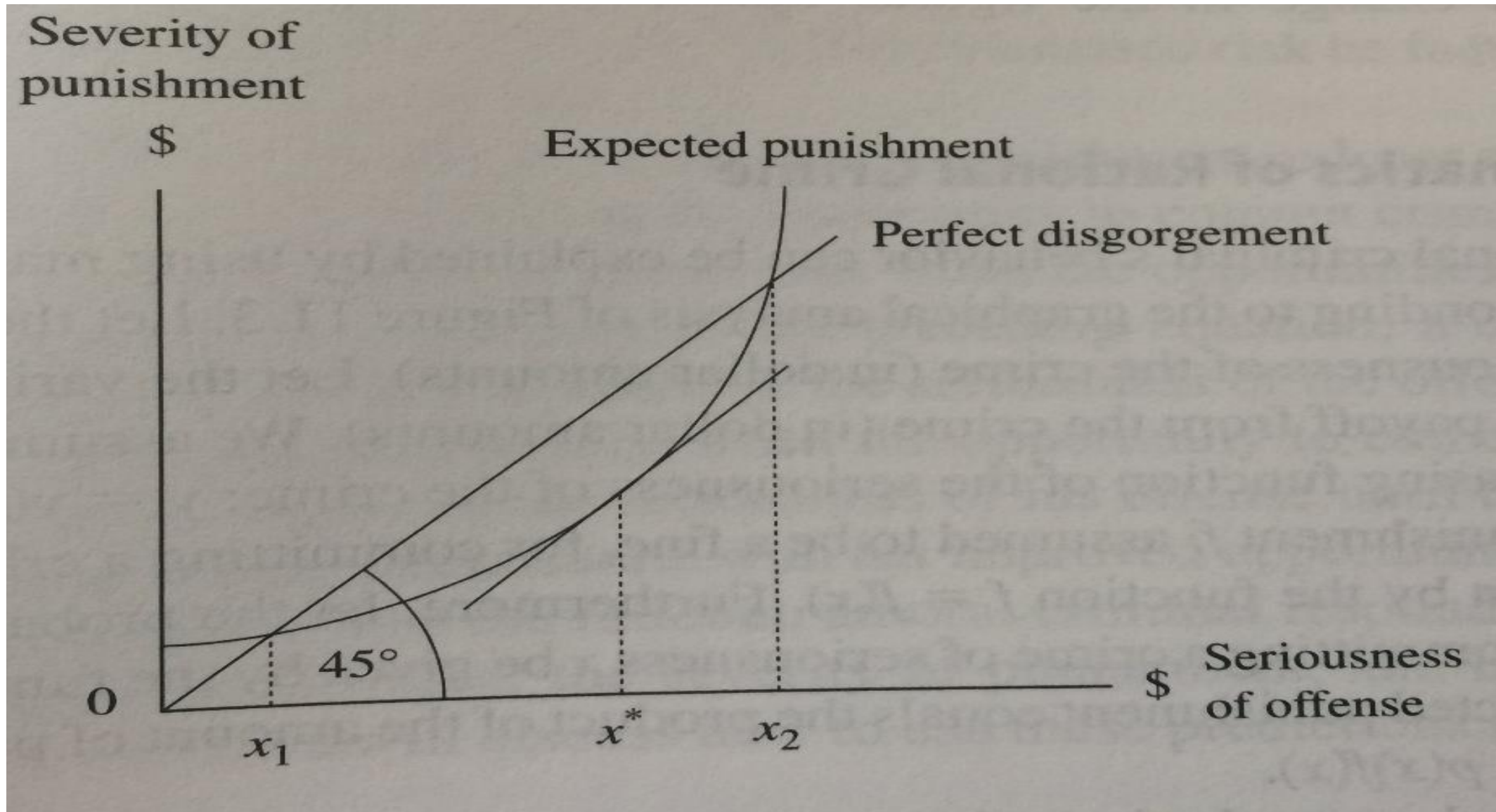
Expected punishment and the decision to commit a crime

- the expected punishment curve is below the perfect disgorgement, so criminal gains more than he expects to lose, so crime pays
- x^*-the maximum difference between expected punishment and perfect disgorgement
- the marginal benefit to the criminal from increasing the seriousness of the offense given by the perfect disgorgement curve
- marginal expected cost equals the expected increase in punishment from increasing the seriousness of the offense, (slope of tangent line to the curve expected punishment)

Summary:

- x‹x^*….MB ›MC…criminal will increase the seriousness of the offense
- x›x^*….MB ‹MC….criminal will decrease the seriousness of the offense
- x=x^*….MB=MC…criminal maximizes his net payoff

Mathematics of Rational Crime

- the rational amoral criminal chooses the seriousness of crime x to maximize his net payoff, which equals the payoff y(x) minus the expected punishment

- *max y(x)-p(x)f(x)*

- the criminal maximizes the net benefits of crime when:

- y´   =   p´f + pf´

criminal´s   criminal´s marginal expected cost of punishment

marginal benefit

# The model of the quantity of crimes
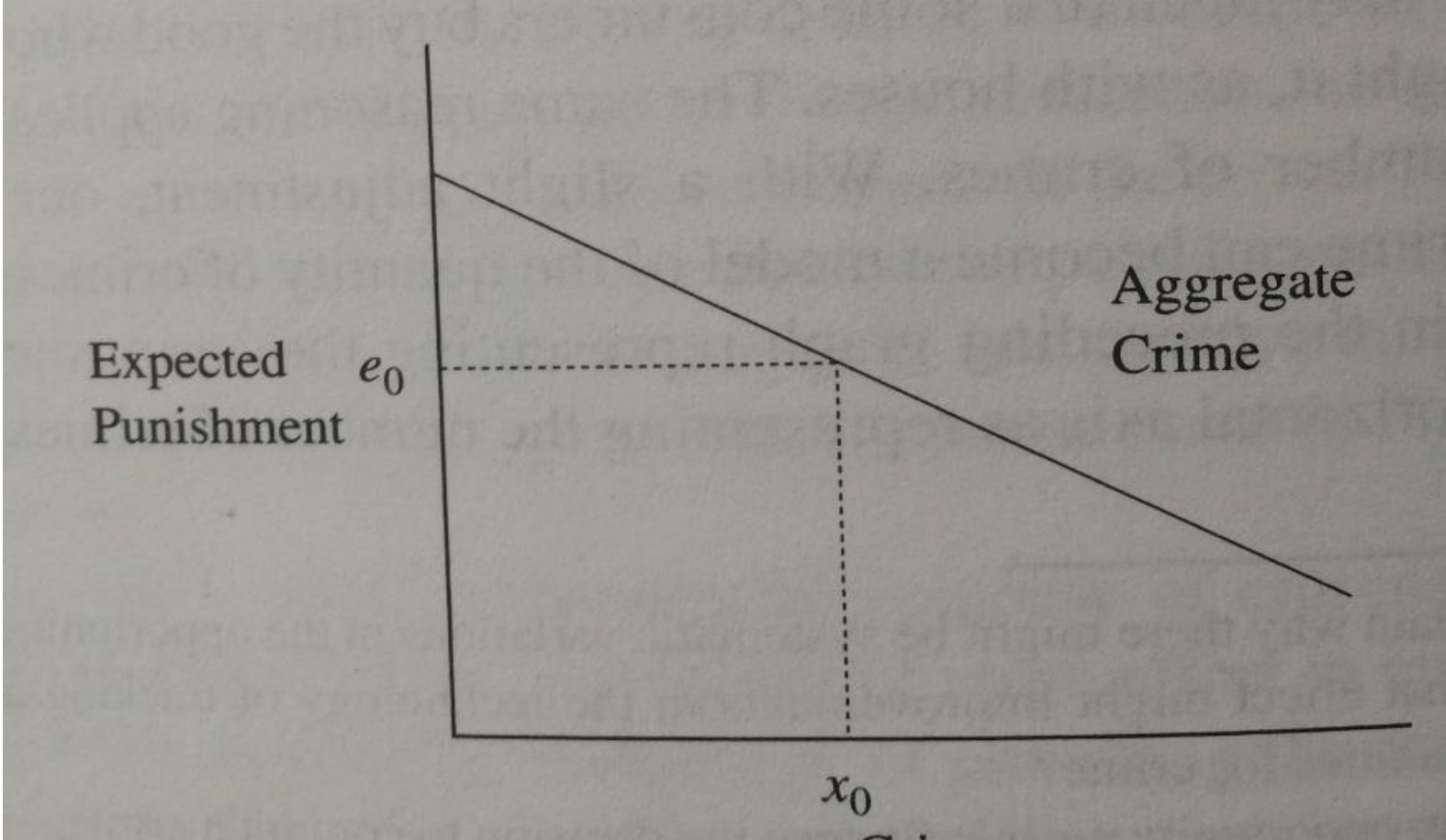
The model of quantity of crimes

- Increase in p´, f´ or decrease in y´ will decrease the number of offenses.

- The first law of deterrence-*people commit less crime when the expected punishment increases.*

- *The elasticity of the supply of crime*-how much crime rates respond to increases in expected punishment? (implications?)

Criminal Behavior and Criminal Intent

- crime may be committed *spontaneously*

- crimes (*premeditated crime*)

- economic model adequate in case of premeditated crimes

- in case of spontaneous crimes-(there is no deliberation)-criminals may not actually reason as in the economic model, but **may act as if they had deliberated**-when presented with the opportunity to commit crimes, (fragment of reasoning)

Saturday Night Fever (diminished rationality)

- The proof of Saturday Night Fever-a person wakes up on Sunday morning and thinks "I can´t believe what I did last night!"

- *Prudence*

- *Imprudence*

- *Occasional imprudence*-kind of lapse in which the actor temporarily discounts the future consequences of his behaviour at much higher level, high discount rate-prevents the actor from giving as much weight to future punishment as he would ordinarily give, (example-draws)

- r...the rate at which the actor discounts costs for futurity and uncertainty

- r*....the tipping point, the discount rate

- if r›r*...an actor commits the wrong

- if r‹r*...an actor does not commit the wrong
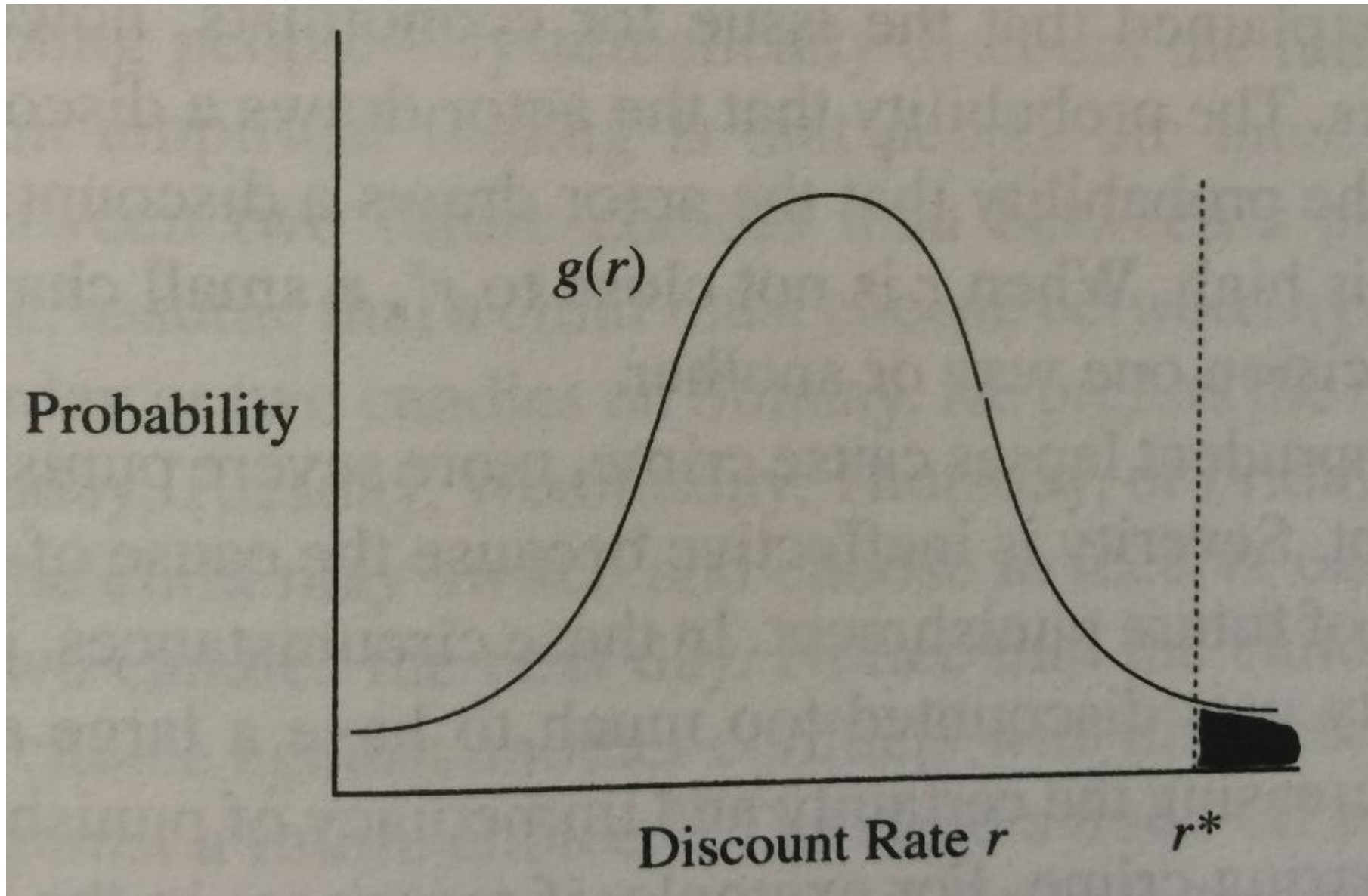
Saturday Night Fever (diminished rationality)

- *Whenever the actor draws a discount rate close to tipping value r^*, then a small increase in punishment c causes the actor to decide against committing the wrong and conversely. Thus punishment deters.*

- *When r is not close to r^*, then a small change in a punishment cannot tip the decision one way or another. Insofar as imprudent lapses cause crime, more severe punishment is not effective deterrent.*

- *Aging reduces variance, (young people-volatile emotions-high variance in distribution)*

- *Policy implications:*

- **Deterrence of youth crime requires certain and swift punishment**

- **Deterrence of adult crime-severe punishment that is uncertain and remote**

- *The state should punish differently youthful crime due to lapses and deliberative crime by adults.*

Civility

- many people obey the law from intrinsic motivation and respect
- suppressing crime requires the moral majority to help the police and other public officials=performing civic acts
- *intrinsic value*-described by the willingness to pay curve
- *instrumental value*-depends on the advantages gained from having the reputation for being a good citizen, (I prefer to do business with someone who is a good citizen), described by cost curve

Willingness to pay to do a civic act
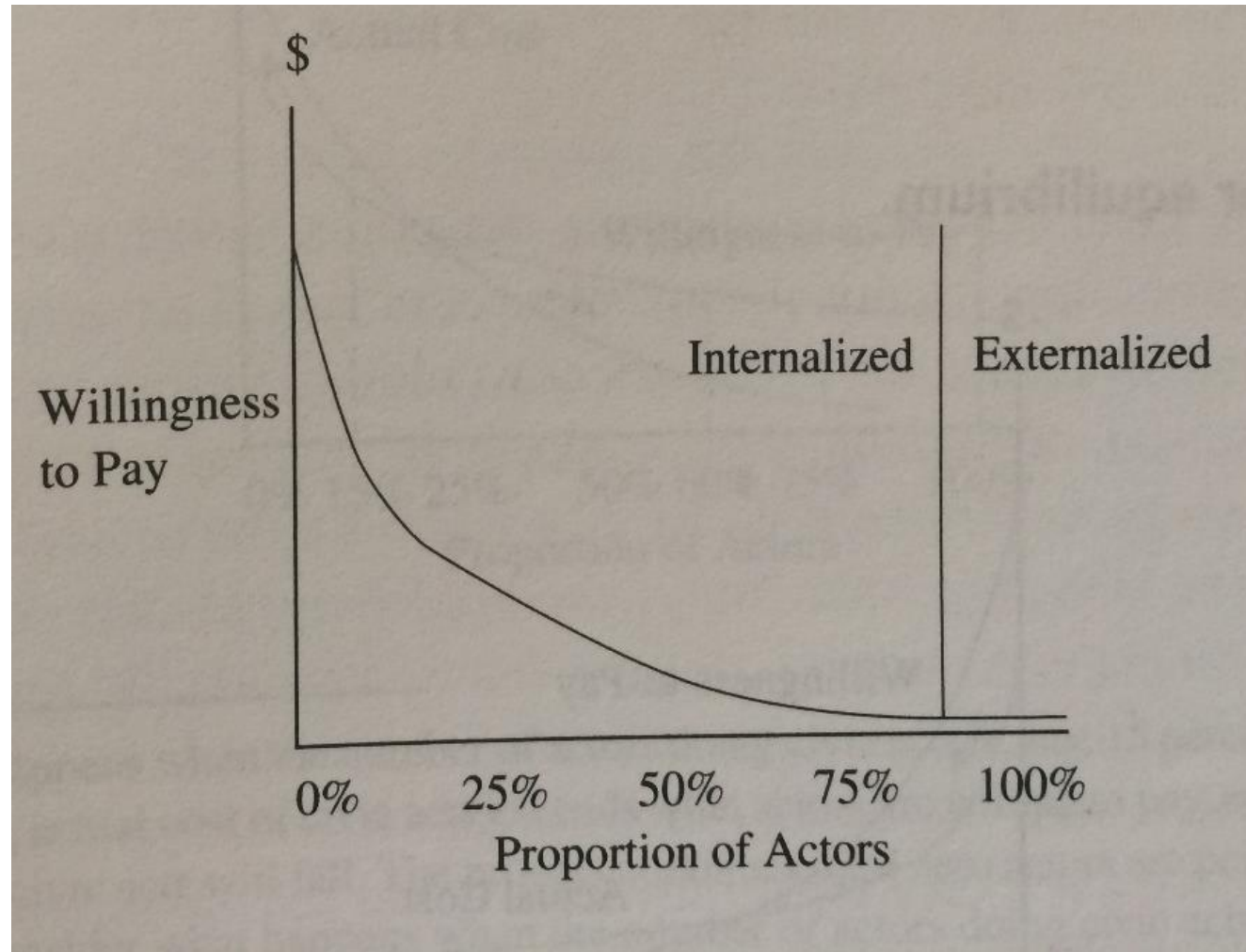
Cost of doing civic act, (money, time, effort,risk)

Cost

Expected Cost

0%   25%   50%   75%   100%
Proportion of Actors
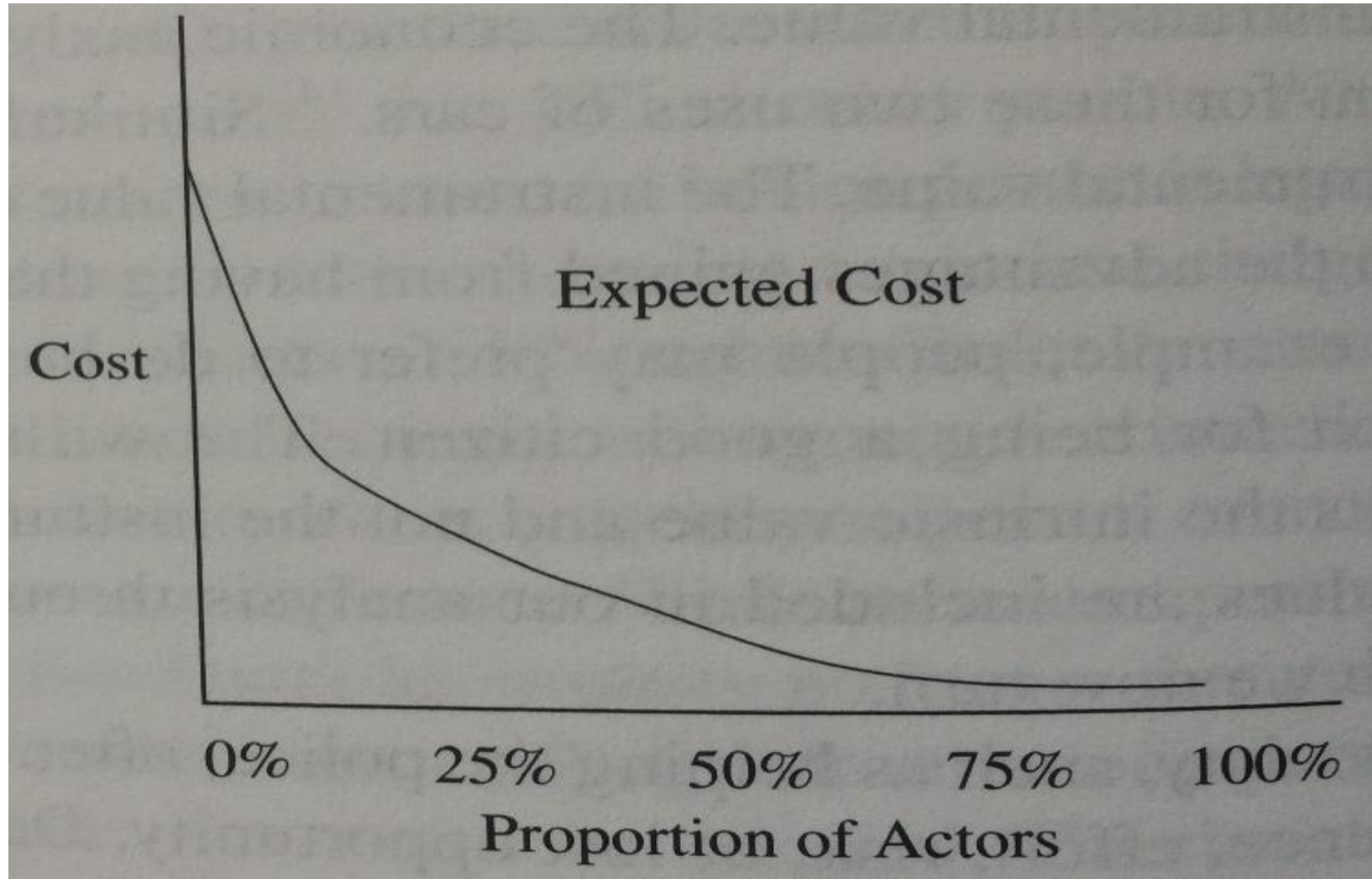
Stable interior equilibrium
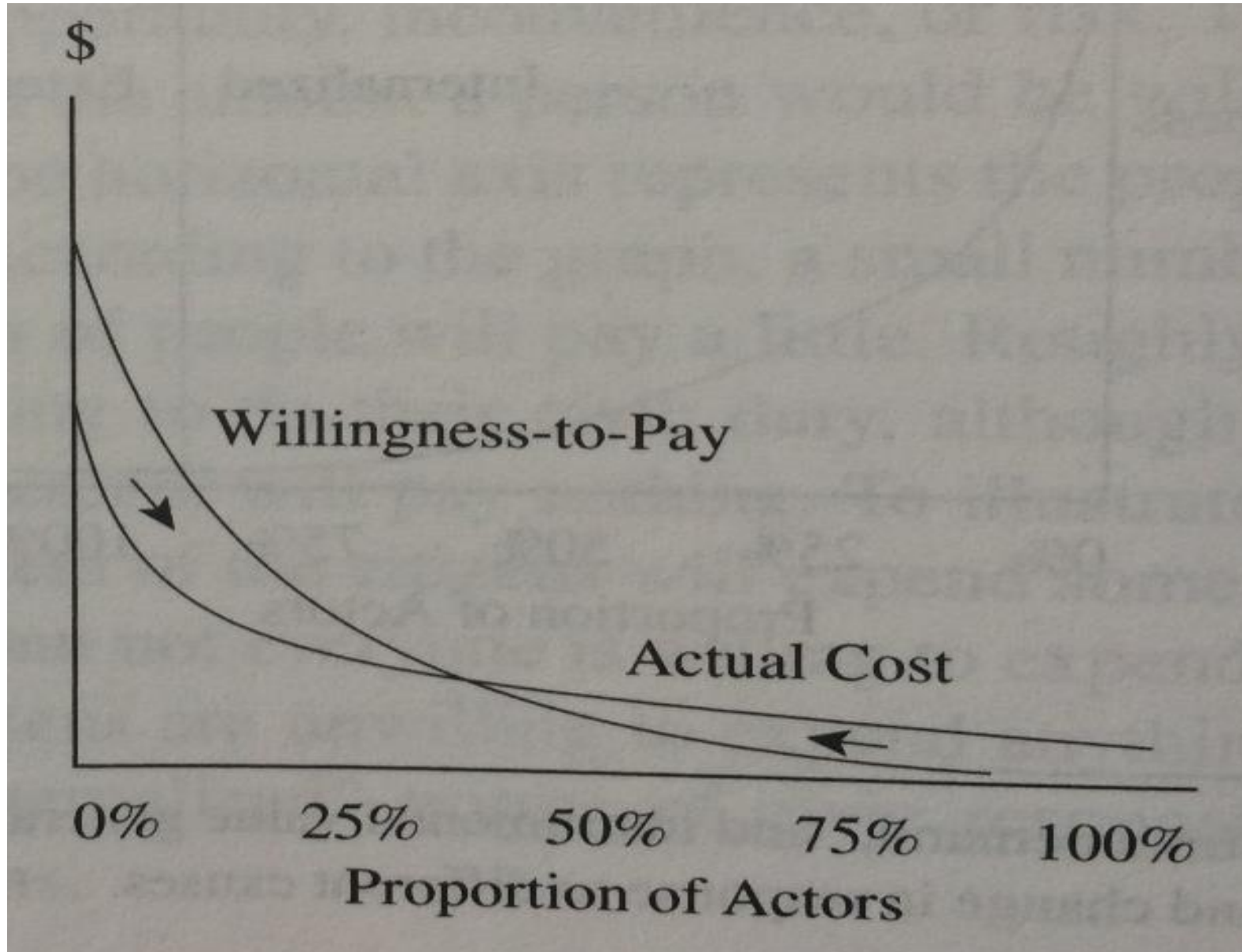
Corner equilibria (danger)
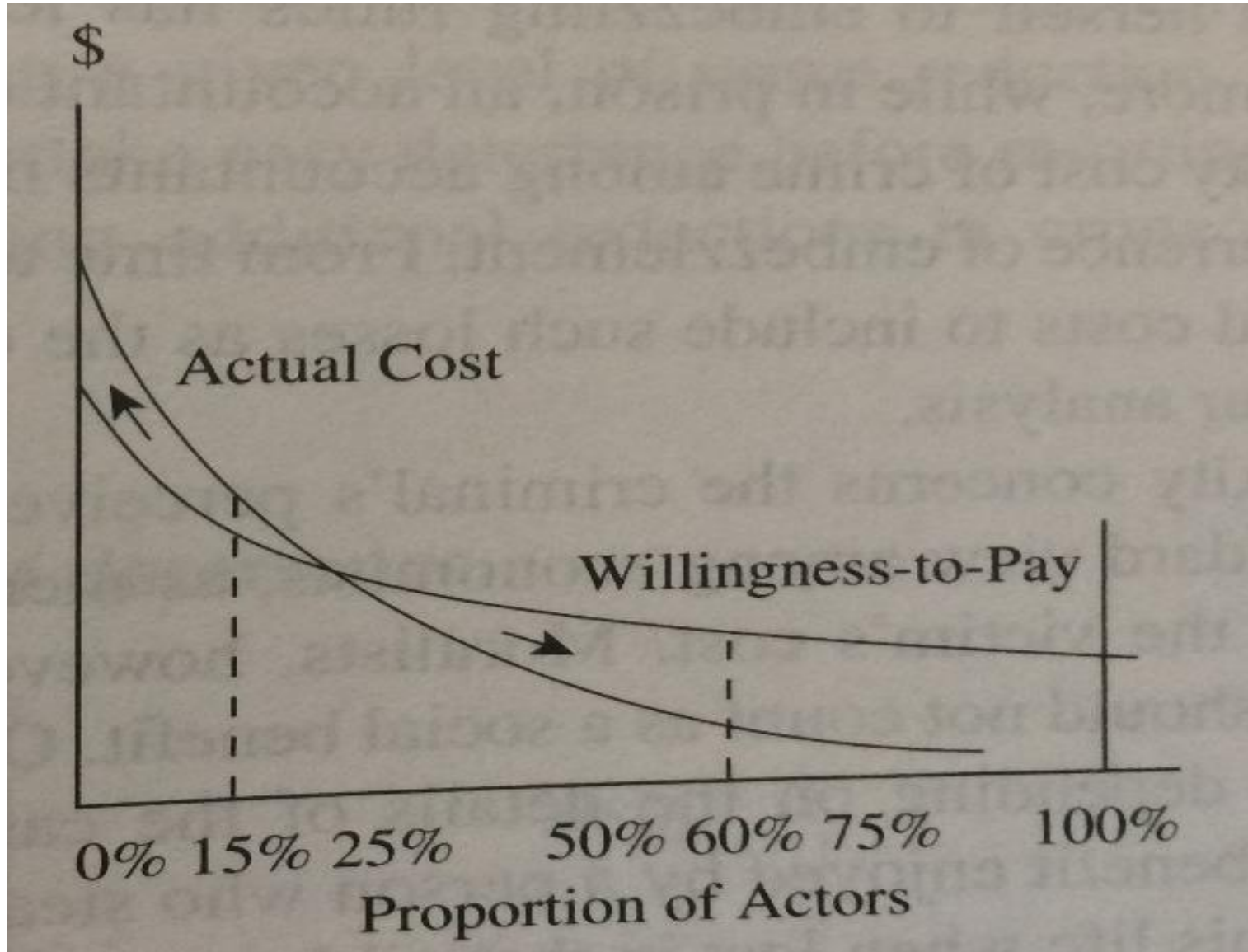
The Economic Goal of Criminal Law

- *Criminal law should minimize the social cost of crime, which equals the sum of the harm it causes and the costs of preventing it.*

- The efficient level of deterrence MSB=MSC$_D$

Mathematics of Optimal Means of Deterrence
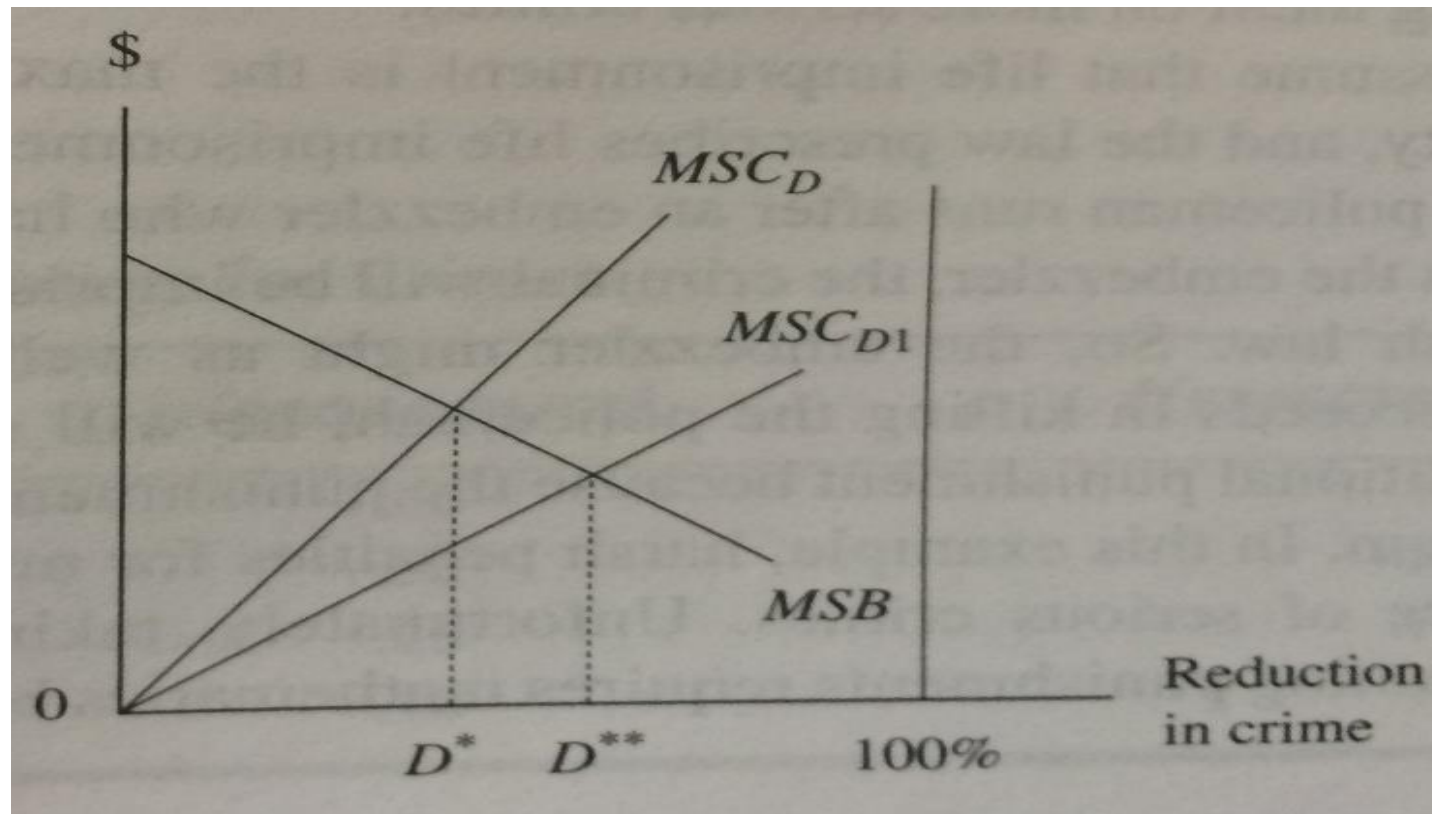
-choice between allocation resources to make punishment more certain (police) or make it more severe (longer sentences)

- fines cheap to administer, certainty of punishment on the other hand costly (more expenditures on police and prosecutors)

- *Large fines with low probability are typically more efficient than low fines with high probability.*

- Many criminals unable to pay-punishment by incarceration

- The maximum fine that the criminal can pay, (G. Becker)

- With high discounting-additional incarceration little deterrence

Mathematics of Optimal Means of Deterrence

Table 11.1

Expected Punishment for Crimes

f (PUNISHMENT)	p (PROBABILITY)	$p \times f$ (EXPECTED PUNISHMENT)
10	1.00	10
20	.50	10
40	.25	10
100	.10	10

Mathematics of Optimal Means of Deterrence

Table 11.2

Constant Deterrence of Criminal by Incarceration

f(PUNISHMENT)	p(PROBABILITY)	P f(EXPECTED PUNISHMENT)
10	1.00	10
30	.50	15
80	.25	20
300	.10	30

Private Deterrence

- *Ex ante observable precaution*-lights on walkaways, camera system, exterior alarm, (tend to redistribute crime)

- *Ex post observable precaution*-locks on interior doors, interior alarms, guns owned by residents, (promote public deterrence by reducing the average profitability of crime)

- *The state should encourage ex post observable precautions and the state need not encourage ex ante observable precautions.*

Topics in the Economics of Crime and Punishment-Crime Rates

- mid-1930-1960- the rate of most crimes decreased (both violent and nonviolent)
- the early 1960s and the mid to late 1970s, a rapid increase in the rate of all crimes occurred
- 1980s and the early 1990s-the rate of nonviolent crimes decreased markedly, the rate of violent crime decreased slightly among adults and increased among youth
- 1990-2000-nonviolent crime continued to decline, violent crime declined from the mid 1990s to 2000, in the early years of new century declines

Comparison with other countries:

- *Nonviolent crimes*-roughly the same, in other countries upward, in US declining, (in 1980s burglary rate in UK below US rate, in 2000 above US rate)
- *Violent crimes*-US the leader in homicide rates compared to Europe, but the rate declining, (24700 homicides in 1991, 16600 in 2004), already low homicide rates in Europe have fallen in last 10 years, (apart from UK, where they have risen)

Social Costs of Crime

- The public and private costs of preventing crime

-government spending- 100 billion USD each year

-private spending-(1993-65 billion USD, 2003-90 billion USD)

- Property and personal losses of victims

the value of all stolen goods in 1992-45 billion USD, personal losses to victims-the medical costs of attending to those injured in crimes 5 billion USD in 1992

The total cost-500 billion USD, (4% of US GDP)

Does Punishment Deter Crime?

- *Deterrence hypothesis*

- *Alternative hypothesis*

Deterrence= f (proxy for expected punishment, certain labour market conditions, certain socioeconomic variables)

Ehrlich Isaac (1973), Alrfed Blumstein, Daniel Nagin (1977), Kenneth Wolpin (1978), small groups of people-Ann Wite (1980), Charles Murray and Louis Cox (1979)

Research on Deterrence and Incapacitative Effects (1978)-research favours deterrence hypothesis

Economic Conditions and Crime Rates, Does Crime Pay?

- Increase in opportunities to earn income should decrease criminality, (1991-2001 USA-the longest period of prosperity)

Thomas Orsagh and Ann Witte (1981)-significant relationship

Cook And Zarkin (1985)-short term X long term

Economic theory of deterrence-business cycle influences the oportunity cost of crime and also the opportunities for crime, (example of recession)-the final effect not straightforward

Does crime pay? James Wilson, Allan Abrahamse (1992)

Abortion and Crime

- Central facts: a 30% decline in property rates and 40% decline in homicides in 90´s (at their lowest level since 30´s!!)

- John Donohue, Steve Levitt (2001)-abortion responsible

-the legalization of abortion in 1973 (U.S. Supreme Court), increase in number of abortions, (from 750 000 in 1973 to 1.6 million in 1980), significant decline in the number of young men who would be 18 years old in 1991 (lapses)

5 factors responsible:

-a smaller number and proportion of the population in the high crime ages

-five states legalized abortion in 70´s before Supreme court decision-decline in crime rates earlier

-a statistically significant correlation between higher rates of abortion and lower crime rates

-no correlation between higher abortion rates in 70´s and crime rates in 70´s

-almost all the decline in crime in 90´s can be attributed to reduction in crime among the cohorts born after abortion legalization

Efficient Punishment

- **Imprisonment**

The Social Benefits,(deterrence, retribution, rehabilitation, incapacitation)

Social Costs of Imprisonment, (direct prison costs, opportunity costs)

Sentencing Reform, (indeterminate sentencing X determinate/mandatory sentencing)

„three strikes and out"

- **Fines**

Much greater reliance on fines in Europe X the greater reliance of US on incarceration

Fixed fine per offense (US) X fixed fine per offense+the day-fine system (Europe)

The Death Penalty

- In 1972-the Supreme Court fund the death penalty to be unconstitutional, (when applied capriciously and discriminatorily)
- After 1972-capital punishment statutes constitutional for the most serious crimes
- Currently 38 states have capital punishments, 12 states and DC not
- 1976-2006...1227 executions of criminals, (41 people per year). 53 people executed in 2006 all of them men, (24 in TX, 5 in Ohio, 4 in Florida, Oklahoma, North Carolina and Virginia and 1 each in Indiana, Alabama, Mississippi, South Carolina, Tennessee, California, Montana, Nevada).
- Declining support due to the dramatic revalations-the men on death row innocent
- Economic literature on topic: Sellin (1967), Ehrlich (1977), Levitt, Katz (2003), Dezhbakhsh and Shepherd (2006), Dezhbakhsh, Rubin, Sheperd (3004), Mocane, Gittings (2003), Sunstein, Vermeule (2005), Donohue, Wolfers (2005)-no evidence about deterrence of the death penalty
- Social costs of capital punishment

The Economics of Addictive Drugs and Crime

- Is there any argument for legalization of drugs?
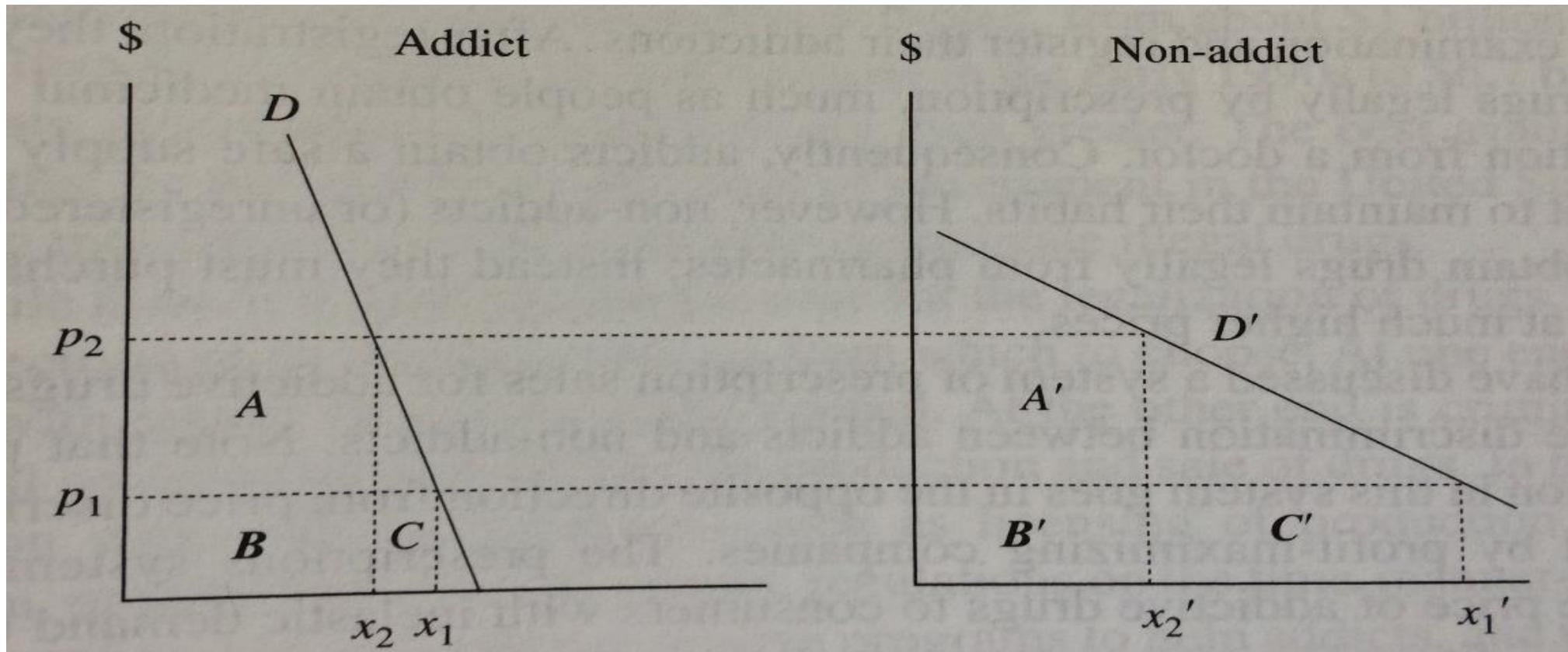
The Economics of Addictive Drugs and Crime

- Public policies raising the price of drugs-reducing their use by non-addicts, rising drug expenditure of those addicted.

- *More expenditures by addicts→ more crimes committed by them.*

- Perfect solution-"discriminating drug policy"(rasining p2, p1 no change)

Examples: UK and policy for addicted

USA and suppresive policy-the failure

Strong economic case for legalization-(example-prohibition of alcohol in USA in 20´s)

Murder rate could be even lower, if drugs decriminalized and regulated by the state. Becker, Murphy, Grossman (2006).

„Allow good to be legal and impose monetary tax on it."

The Economics of Handgun Control

- Does the increased number of firearms cause more or less crime?
- Since 19th century the first law regulation guns
- 1993 the Brady Act-limiting possession of handguns (background check)
- It has been illegal to sell handguns in Chicago since April 1982
- More handguns leading to more violent crime X more handguns implies less crime?
- Examples: Evidence-during 80´s stock of privately owned guns rose-falling crime rates

Correlation betwen private handgun ownership and hot burglaries, (UK, Canada-50%, USA-10%)

Explaining the Decline in Crime in USA

- **1. Increases in the Number of Police**
- Marvell, Moody-10 % increase in the number of police would cause 3 % decrease in crime
- **2. The Rising Prison Population**
- Rise in expected punishment leads to fall in crime (violent and property), 12 % (for both) and 8% for property crime
- **3. The Receding Crack Epidemic**
- -decline of crack cocaine might account for about 15% of the fall of all homicides
- **4. The Legalization of Abortion**

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