In this chapter, I discuss briefly several functions of sanctions apart from deterrence, namely, incapacitation, rehabilitation, and retribution.

1. INCAPACITATION

1.1 Definition of incapacitation. The most familiar form of incapacitation is imprisonment, which prevents individuals from engaging in undesirable acts in free society by removing them from it. More generally, incapacitation can be defined to be prevention of a class of undesirable acts by barring a party from engaging in an activity that would allow the party to commit the acts. For example, a person could be prevented from causing accidents when driving by voiding his driver's license, or a restaurant could be prevented from causing harm from serving spoiled food by being forced to close.

1.2 Incapacitation distinguished from deterrence. Preventing a party from engaging in an activity in which he could do harm is quite different from deterrence, that is, dissuading the party from committing
an undesirable act through the threat to impose sanctions if he commits it. Deterrence works only when the party knows about and considers the possibility of sanctions, and only when the sanctions can actually be applied. (If the person is judgment proof and the sanction is monetary, the sanction cannot be applied; if the person is old or dying of a disease, the imprisonment term cannot be long.) Incapacitation functions independently of these factors.

1.3 Basic model of enforcement and incapacitation. To focus on incapacitation, let us assume that individuals cannot be deterred and, initially, that each individual has an unchanging propensity to commit harmful acts (measured by the expected harm) per time period. Let us further suppose that society incurs expenses in raising the probability of apprehending individuals who do harm and who will be considered for incapacitation, and that society bears certain costs per period of incapacitation.

Under these assumptions, what is the optimal length of incapacitation of a person who does harm and who has been apprehended? The answer is simply that if the person’s propensity to do harm each period exceeds the cost of incapacitation per period, he should be incapacitated each period, that is, forever; otherwise, he should not be incapacitated at all.

The optimal probability of apprehension will reflect the tradeoff between the cost of raising this probability and the benefit in terms of reduced harms through incapacitating more individuals.

1.4 Comments. (a) Assumption that propensity to do harm is constant over time. If the propensity of an individual to do harm diminishes over time, then it becomes optimal to end incapacitation as soon as the propensity to do harm per period falls below the per period cost of incapacitation. This is a significant point, because the evidence is that the propensity to commit many types of crimes declines with age.3

1. For a formal model of incapacitation, see Shavell 1987b; for theoretically oriented discussions of incapacitation, see, for example, Blumstein 1983 and Packer 1968, 48–53. For extensive and still relevant critical discussion of the literature on incapacitation, see Blumstein, Cohen, and Nagin 1978, and for a recent review and assessment, see Spelman 2000.

(b) Optimal sanction unrelated to probability of imposition. It should be noted that the optimal length of incapacitation depends only on the propensity of individuals to do harm, not on the likelihood with which they are apprehended. In particular, from the standpoint of incapacitation, there is no reason to impose a higher sanction if the probability of detection is low. This contrasts with the situation under deterrence, where, as was emphasized in the previous three chapters, lower probabilities of apprehension call for higher sanctions.

(c) Relevance of the commission of a harmful act to the imposition of sanctions. The optimal sanction depends only on the propensity to do harm, that is, the estimated future dangerousness of a person. There is, then, no intrinsic reason to require that a person actually have committed an undesirable act or that he actually have done harm for him to be incapacitated. The commission of a harmful act does often constitute evidence about the propensity to do harm, however, and for that reason a requirement of commission of a harmful act might be socially rational to impose for incapacitation. (In addition, departing from the model, the danger of state abuse of its ability to sanction would be lessened, one supposes, if there is a requirement that a party actually have committed a harmful act for him to be penalized.) According to the theory of deterrence, note, the requirement that there be a harmful act for there to be punishment is fundamental; deterrence can work only if a person knows that he will be punished if, but only if, he commits a harmful act.

(d) Incapacitation and deterrence. Suppose that individuals can be deterred as well as incapacitated. Specifically, consider again the model examined in the previous chapters on deterrence, but now assume that sanctions incapacitate as well as deter. Then, having two useful functions, sanctions will be optimal to employ more often than would otherwise be the case. Thus, where imprisonment would not be justified by its ability to deter, imprisonment might be warranted when account is taken also of its value in incapacitation. Similarly, where imprisonment would not be justified by its ability to incapacitate (suppose an embezzler of funds is discovered after he has retired and will have no future opportunity to embezzle), consideration of deterrence might call for imprisonment (potential embezzlers might be discouraged from acting due to the prospect of sanctions).

(e) Optimal probability of incapacitation and optimal sanctions for deterrence. To accomplish a desirable degree of incapacitation, the probability
of sanctions must not be too low. This in turn may imply that the magnitude of sanctions needed for purposes of deterrence should not be too high. Hence, among other things, the argument (see section 2.5 of Chapter 21) for very low probabilities of apprehension and for maximal sanctions might not apply. For instance, to achieve an appropriate degree of incapacitation of those who rob, it might be necessary to ensure that at least, say, 20 percent of robbers are apprehended. This might mean that the optimal sanction for deterrence purposes should be significantly lower than the maximum possible imprisonment term.

1.5 Actual importance of imprisonment as a form of incapacitation.

The number of people who are presently imprisoned in the United States is 1.9 million, representing about 3 percent of the adult population, and the percentage of the population who will be incarcerated at some time during their lives is approximately 5 percent. The annual cost of imprisonment is on the order of $47 billion, or about $24,000 per incarcerated person. The annual incapacitative benefit of imprisonment—its direct effect in reducing crime by keeping those who would otherwise commit crimes imprisoned—has been calculated by some analysts to be in the neighborhood of 20 percent of the present level of crime. The following calculation is also informative. If one estimates that the average prisoner would have committed ten crimes per year were he not incarcerated, then the incapacitative benefit is that in the absence of incarceration, crimes would increase by about 19 million annually, or by about 90 percent. Even

3. See U.S. Department of Justice 2001b, 488, presenting an estimate of 1.933 million individuals for the year 2000. For an estimate of the fraction of the population who will be in prison at some time in their lives, see Bondar and Beck 1997.

4. Annual expenditures in 1997 were $43.511 billion; see U.S. Department of Justice 2001b, 3. In terms of the consumer price index in 2000, the expenditures equal $46.656 billion; see Statistical Abstract of the United States, 2001, 451. Since there were 1.933 million persons imprisoned in 2000, the annual cost per person is $24,137.


6. The estimate of 10 crimes per year is actually somewhat conservative; see the discussion of literature on incapacitation in Wright 1994, 114–118. See also, for example, Dillulio and Piehl 1991, who find that the average annual number of violations per prisoner would be 141 and that the median would be 12. Using the estimate of 10 crimes per person per year and the fact that there were 1.933 million persons imprisoned in 2000, it follows that had these prisoners been free, they would have committed 19.333 million crimes annually.
if the incapacitative benefit is only 20 percent of the present level of crime, it would save society at least $100 billion, outweighing the $47 billion cost of imprisonment. Accordingly, we can see that incapacitation is a very important and possibly justified function of imprisonment in this country.

2. REHABILITATION

2.1 Definition of rehabilitation. By rehabilitation is meant an induced reduction in a person’s propensity to commit undesirable acts. This change may come about through direct effort of the state, notably through educational programs (such as those provided in prison) or as a by-product of imposition of sanctions, when a person reflects on his behavior and decides to behave in a socially more responsible manner in the future.

2.2 Basic model of enforcement and rehabilitation. Assume that the sole function of sanctions is to rehabilitate. Then it is optimal to impose sanctions if and only if the rehabilitative benefit—reduced future harm—exceeds the cost of imposing the rehabilitative sanction. Thus, it is optimal for a person caught for drunk driving to be put in a class on driver responsibility if and only if the benefit, in terms of a reduction in expected accident losses, exceeds the cost of the class. The optimal probability of apprehending individuals who may be subject to sanctions is governed by the rehabilitative benefits that this brings about, assuming optimal imposition of rehabilitative sanctions.

2.3 Comments. (a) Characteristics of optimal rehabilitative sanctions are similar to those of optimal incapacitative sanctions. The optimal rehabilitative sanction, like the optimal incapacitative sanction, does not depend on

The actual number of crimes committed in 1999 was about 21.84 million; see Statistical Abstract of the United States, 2001, 182, so that an increase of 19,333 million crimes would represent an 88.5 percent increase in the overall level of crime.

7. Anderson 1999, 625, estimates the annual cost of crime-related injury and death to be about $574.395 billion, and 20 percent of this amount is over $100 billion. This cost is an incomplete measure of the social cost of crime, for it does not take into account, among other factors, the efforts made to avoid being a victim of crime and the efforts made to undertake crime.
the probability of apprehension. In addition, the actual commission of a harmful act is not intrinsically important to the rehabilitative sanction; in principle it would be desirable to rehabilitate any person who is known to need rehabilitation and can be improved at sufficiently low cost. For instance, someone who is known to get drunk and to be irresponsible, and thus to be likely to drive when drunk, might profit from a class on driver responsibility even if he has not committed any driving infraction. As stated earlier, however, the commission of a harmful act (like drunk driving) as a prerequisite for punishment may serve a valuable informational purpose and make governmental abuse of its authority less likely.

(b) Rehabilitation and incapacitation. If sanctions both rehabilitate and incapacitate, then the optimal length of sanction will, of course, reflect these functions. A notable implication is that a person whom society chooses to incapacitate would tend to receive a shorter sanction as a consequence of rehabilitation than incapacitation alone would call for.8 This is because rehabilitation will hasten the time by which the person becomes sufficiently less dangerous that his release is justified.

(c) Rehabilitation and deterrence. To some degree, rehabilitation may dilute deterrence. If a person believes that he will change in positive ways—for instance, that he will learn valuable skills in prison—the sting of the sanction may be lessened. This effect can be counteracted, but at a cost, by increasing the length of the sanction.

2.4 Actual importance of rehabilitation. Today, there is much skepticism about rehabilitation because there is substantial recidivism and little evidence supporting the notion that, in the United States anyway, those who go to prison are less dangerous when released (except due to the effect of age on criminality).9 Indeed, it is sometimes asserted that the opposite happens in today’s prisons, that people who are in prison learn bad habits and ways of criminal life, so that they will do more harm, rather than less, as a result of

8. There is, in principle, a possibility that rehabilitation would lengthen the stay of a person who would suffer a positive incapacitative sanction. It could be that, although the date at which he would become less dangerous than it costs to incapacitate comes earlier, it would still be beneficial to incarcerate him longer in order to further reduce his harmfulness.
imprisonment. One supposes that the failure of rehabilitation is more a function of present conditions than of intrinsic factors, however, and that rehabilitation might be of substantial importance in the future.

3. RETRIBUTION

3.1 Definition of retribution. The retributive motive is the desire of individuals to see wrongdoers punished. That is, individuals may derive utility from the knowledge that wrongdoers are punished. Such utility may depend on the proportionality of the punishment to the wrongdoing and may be greater the more serious the act of the wrongdoer. Additionally, retributive utility may be more significant for victims of wrongdoing, or for those associated with them, than for the population at large.

3.2 Comments on the retributive desire. (a) Criticism of the desire. Some commentators suggest that retributive satisfaction should not be credited in the social calculus because the satisfaction is associated with the suffering of another. This view, that certain types of satisfaction should not be counted in social welfare, is problematic and leads to anomalies, as will be generally discussed later.

(b) Sociobiological origin. It has been observed that the desire for retribution serves a helpful sociobiological purpose. The presence of the desire means that those who are attacked will be likely to fight back. This discour-

10. A natural formalization of retributive utility is that it is a function \( r(s, u) \) where \( s \) is the sanction, \( u \) is the degree of wrongdoing, and \( r \) is single-peaked in \( s \) and maximized at \( s(u) \). Here \( s(u) \) is the appropriate sanction given \( u \), and \( s(u) \) is increasing in \( u \).

11. It is explained in section 5.5 of Chapter 26 that any measure of social welfare that is not based on utilities of individuals sometimes will reduce the well-being of all individuals. Therefore, that is true of a measure of social welfare that excludes certain sources of utility. A mundane example of this possibility is that all individuals might sometimes play practical jokes on others, sometimes themselves be the butt of practical jokes, and derive more utility from playing these jokes and enjoying them when others play them than they suffer disutility as victims of the jokes. Therefore, all individuals might prefer a world in which practical jokes are permitted than one in which they are barred. If, however, utility that is derived from the displeasure of others (the victims of jokes) is not credited in the social calculus, practical jokes might be disallowed, making all worse off.
ages attack, which is a good thing because it means that people will not need to devote as much time to protecting what they have nor be as likely to become involved in destructive and wasteful conflict. Hence, one would predict that the retributive urge, at least if not too strong (in which case even slights would trigger conflict), would win out in evolutionary competition (including in animals).\textsuperscript{12}

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\textit{(c) Effect on the probability of sanctions.} The retributive urge also serves a purpose in present day society, which is to give people a motive to ward off transgression and thus to deter it, as well as to report on transgressors to social authorities so that they can be punished. Pure self-interest would often lead individuals not to respond directly, nor would it usually lead individuals to report transgressors to enforcement agents, because that takes effort and may invite retaliation. Hence, the retributive urge may be a significant factor in maintaining the probability of apprehension at its level; in the absence of the desire for retribution, many more enforcement agents would be needed to maintain the probability of apprehension.\textsuperscript{13}
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\textbf{3.3 Basic model of enforcement and retribution.} If the only purpose of punishment were retribution, the optimal magnitude of sanction would be that which maximized the pleasure from satisfying the retributive desire minus the costs of imposing punishment. The optimal probability of apprehension would reflect this retributive gain net of costs as the benefit from capturing a person.

\textbf{3.4 Comments.} \begin{flushleft} (a) \textit{Retribution and deterrence.} As observed earlier, retribution enhances enforcement by increasing the motive of individuals to report what they know to social authorities, so it generally contributes to enforcement. With regard to the magnitude of sanctions, however, the effect of retribution is unclear. On one hand, the optimal sanction from the perspective of deterrence will often exceed that demanded by the retributive goal: The low probability of sanctions, which is best from the viewpoint of deterrence because it saves enforcement costs, raises the sanction \end{flushleft}

\textsuperscript{12} On the biological origins of retribution, see, for example, Daly and Wilson 1988, chaps. 10, 11, Frank 1988, chaps. 3, 4, Hirshleifer 1978, 334, Hirshleifer 1987, and Trivers 1971, 49.

\textsuperscript{13} This point is stressed by Posner 1980.
needed to deter, yet the desire for retribution is not affected by the low probability of sanctions. (From the deterrence perspective, for example, we may want to impose a ten-year prison sentence on a car thief because the odds of finding him are quite low, but the demand for retribution against him may well limit the sentence to a lesser level.) On the other hand, the retributive desire could exceed the proper punishment from the deterrence perspective, as where a person could not have been deterred (suppose a person killed another when in a rage).\textsuperscript{14}

(b) \textit{Retribution and incapacitation}. The optimal sanction from the perspective of incapacitation does not seem to be related in a clear way to what is demanded by retribution. The optimal incapacitative sanction would be lower than that needed to satisfy retributive desires if the wrongdoer would be unlikely to do harm in the future (suppose a person murders another in unique circumstances). Conversely, the optimal incapacitative sanction would be higher than that appropriate for retribution if a person did little harm yet would be likely to do great harm in the future.

(c) \textit{Retribution and rehabilitation}. The goal of rehabilitation appears to conflict with that of retribution, supposing that rehabilitation reduces the disutility associated with punishment. As noted earlier, however, this problem can be mitigated at a social cost by increasing the magnitude of the sanction.

\textsuperscript{14} On enforcement policy in the light of retribution and deterrence, see Polinsky and Shavell 2000b.