

The Problem of Risk Assessment: Can Better Crime Prognoses Reduce Recidivism?

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Abstract

Every society has to face the situation that there are a very small group of people who do not respect elementary rules of human behavior and who commit very serious violent crimes again and again. But how do we know who belongs to this group and who does not? To predict the probability of people re-offending is one of the most challenging tasks for experts and has become an important part of criminal policy in societies aiming to completely abolish crime. Referring to several studies on recidivism, including an investigation accomplished by the Ruhr-Universität Bochum's Department of Criminology, the limitations of crime prognosis and unjustified promises of crime forecast procedures are pointed out in this essay. Despite all recent efforts to improve crime prediction, we are unable to predict human behavior precisely. As a result, other means than unlimited imprisonment of people regarded to be very dangerous by psychiatric or psychological experts are recommended to manage the problem of crime prevention in a way that considers both human rights' aspects as well as public needs.

1 Introduction

The English eighteenth-century lawyer William Blackstone once said, “It is better ten guilty persons escape than that one innocent suffer” (Mangino 2013). Things have changed a lot since that time, and not only in England. After centuries of discussions, which started with Robert Martinson’s famous “Nothing Works”, and continuing on to intensive evaluations and meta-studies, such as by LW Sherman’s “What Works and What Doesn’t – and What’s Promising?” (Sherman et al. 2007), politicians nowadays are promising to eliminate crime completely through preventive measures. Scholars have declared the 21st century the century of prevention and analyzed a preventive and punitive turn in penal and police law (Crawford 2009). The idea of “pre-crime” strategies (Zedner 2007) was not only developed by the police (such as in the context of the movie “Minority Report”), but also criticized as “pre-punishment”. In the aftermath of 9/11, such ideas have been taken as necessary until the NSA-scandal in 2013 when more and more people realized that such pre-crime activities might infringe upon citizen rights. To predict where crime will happen is one thing, but to predict whether an offender will reoffend is something else entirely.

Whenever a new law is established or – more often – when harsher sentences for certain crimes are demanded, this is done in favor of prevention: to prevent those people who have not yet offended from doing so (usually by asking for more of the same: more laws and harsher sentences), and to stop those who have already committed a crime from doing it

again. The prevention of recidivism was and still is in some German states the primary goal in the execution of prison sentences¹.

The German Criminal Code² is one of very few European Criminal Codes that distinguishes between penalties and so-called “measures of correction and prevention” as a state reaction to punish an offender. This twin-track system of sanctions had been considered and discussed since the end of the 19th century when Franz von Liszt started the discussion in 1882. The care orders were incorporated into the Criminal Code by the “act of dealing with dangerous habitual offenders and on measures of correction and prevention” (the “Habitual Offenders Act”) on November 24, 1933, under Adolf Hitler’s Nazi regime. The rules of “Sicherungsverwahrung” (translated as “preventive order” in the following text) remained in force essentially unchanged after 1945 in West Germany, although the allies called for the retraction of this law. But several reforms were enacted by the legislator from 1969 onwards, instead of abolishing the measure of preventive custody.

Penalties in the German Criminal Code (see Articles 38 et seq.) consist mainly of prison sentences and fines. The penalty is fixed according to the defendant’s guilt (Article 46 § 1 of the German Criminal Code).

A care order (see Articles 61 et seq. of the German Criminal Code) consists mainly of either a placement in a psychiatric hospital or a detoxification facility (Entzugsanstalt) or assigned a preventive order (Article 66 StGB), according to a proclivity prognosis. Proclivity, in the sense of Article 66 StGB (“Hang”), means the attitude of a person that predisposes him to commit a crime, that is, the intention to commit criminal offenses, or at least the willingness to do so at the earliest opportunity (Müller et al. 2013, p. 9). The purpose of the measures of correction and prevention is to rehabilitate dangerous offenders or to protect the public. They may be ordered for offenders in addition to their punishment (compare Articles 63 et seq. StGB). They must, however, be proportionate to the gravity of the offences committed by, or to be expected from, the defendant as well as to his/her³ dangerousness (Article 62 StGB).

The temporal applicability of provisions in the German Criminal Code depends on whether they relate to penalties or measures of correction and prevention. The penalty is determined by the law, which is in force at the time of the act (Article 2 § 1 of the German Criminal Code); if the law in force upon completion of the act is amended before the court’s judgment, the more lenient law applies (Article 2 § 3). On the other hand, decisions on measures of correction and prevention are based on the law in force at the time of the decision unless the law provides otherwise (Article 2 § 6) (European Court of Human Rights in the case M v. Germany, application no. 19359/04, judgment of December 17, 2009, p. 11).

The idea of preventive custody was to reduce the risk of relapse of prisoners who had committed severe crimes several times before by keeping them in prison after the time of the sentence was finished. Preventive custody was announced in addition to the sentence in the

¹ After the right for legislation of the prison law had been moved to the states (formerly it was under the Federal Republic), some states put “security” in first place, and prevention (meaning: preparing the prisoner for not committing crimes after release) second.

² There is (contrary to the prison laws) just one criminal code for all of Germany.

³ Only few female offenders have ever been sentenced to such a preventive measure. In 2011, there have been a total of 84 people in care order, and three female offenders in preventive custody.

judgment of the court. In 1934, preventive custody was inflicted against 3,723 convicted persons, and in 1939 and 1940, a little less than 2,000 convicted persons were sentenced to this additional imprisonment.

In 1954, East Germany cancelled the rules of preventive custody because of their Nazi origin, but in West Germany, the Allies accepted most of the regulations of the so-called “Habitual Delinquents Act.” In 1968, preventive custody was imposed on 268 offenders, the largest number since 1945. From 1975 on, preventive custody was not permitted to last longer than ten years when imposed for the first time, but this did not change the tendency of the courts to neglect this additional instrument. The number of persons kept in prison after the end of the regular penalty decreased from 337 in 1975 to 176 in 1996, the lowest rate ever. During the negotiations to accomplish the reunification of Germany in 1990, it was decided to regard the different development in both countries and restrict preventive custody to offences committed on the territory of former West Germany. This agreement was cancelled by the German parliament in 1995.

After singular cases of murder involving children occurred in Belgium and Germany in 1996, efforts were intensified to make it easier for courts to impose preventive orders in addition to the initial penalty, especially against sexual offenders. As a result, in 1998, the number of preceding offenses necessary was lowered and the limit of 10 years as the longest time in preventive custody was cancelled by the “Combating of Sexual Offences and Other Dangerous Offences Act” (Gesetz zur Bekämpfung von Sexualdelikten und anderen gefährlichen Straftaten) of January 26, 1998, which came into force on January 31, 1998. In 2002 and 2004, the Criminal Code was amended, establishing the possibility of imposing preventive custody on proviso or even retroactively after the court sentence had been imposed because of new incidents observed afterwards. German courts took care that only extremely severe incidents in prison were suited to impose preventive custody retroactively, and in most cases applicants had to be released from prison. On December 17, 2009, and in the judgments that followed, the European Court of Human Rights held unanimously that there had been a violation of Art. 5 § 1 (right to liberty and security) of the European Convention on Human Rights by German Courts, retroactively neglecting the 10 year limit for the first period of preventive custody or the retroactive ordering of preventive custody. Due to all these judgments, prisoners had to be released from prison, although prison-officials and psychiatric and psychological experts had argued that there was a high risk they might seriously re-offend.

2 The Risk of Reoffending: Empirical Studies on Recidivism

In Germany, only a few studies have examined the recidivism of small groups released after their court decisions, even though they were still regarded as dangerous. Rusche (2004) examined 32 former inmates from psychiatric-forensic hospitals in East Germany who had to be released after the reunification because their hospital stay was unlawful. Several experts had regarded them as very dangerous. Eight of these reoffended, five of them with severe sexual or violent delinquency. This result is similar to the legal probation of a second group of 31 regularly released patients. Kinzig (2010) studied the records of 22 persons released from

preventive custody and found that of the eight of them who had committed new offenses, two of them were registered with severe violent crimes.

Sepejak et al. (1983), Klassen & O'Connor (1988) and Lidz et al. (1993) examined the recidivism rate after release from psychiatric hospitals and found out that in 41% to 47% of all cases with negative crime prognosis, no relapse occurred (false positives).

Müller et al. (2013) examined all cases that were finally adjudicated according to the German Federal Supreme Court (Bundesgerichtshof, BGH). 37 decisions by the Federal Supreme Court were available up to the end of the study on June 17, 2008. By May 2010, eight preventive custody decisions of lower courts were confirmed by the Supreme Court and the affected persons were retroactively sent to preventive custody; in 29 cases, the orders were overruled by the Supreme Court and, as a result, the persons affected had to be released immediately. Case files were submitted for 25 of these persons who had been considered to be highly dangerous but ultimately were not taken retroactively into preventive custody because there was not enough evidence that they became dangerous after the original judgment. Although there were only 14 corresponding expert predictions, all 25 cases were included in the study to demonstrate the validity of risk assessment (Müller et al. 2013, p. 9):

Table 2.1. Prediction based on determination of proclivity and legal probation

Group	Experts' recommendation: preventive custody, offender dangerous	Experts' recommendation: no preventive custody, no dangerous offense expected
No recidivism/ mild recidivism	5/25 (20%) False-positive	4/25 (16%) Correct-negative
Severe recidivism (penalty at least 1 year prison)	5/25 (20%) Correct-positive	0 (0 cases) False-negative

A detailed analysis of sex offender recidivism in the state of New York shows that only 6% of 556 sex offenders released from state prisons in 1986 were returned to prison for a new sex crime (Canestrini 1996). Between 1985 and 2002, a total of 12,863 sex offenders were released from state prisons. Only 272 of these (2.1%) were returned to prison for new sex crimes within three years of their release (Kellam 2006).

Probation is the most common sentence for sex offenders in New York. Of the 2,944 sentences for offenses requiring registration on the Sex Offender Registry (SOR) in 2006, 1,206 were for probation, representing 41.0% of the total. Prison sentences accounted for

31.0% (913) and sentences to local jails accounted for 16.9% (500). There were 325 offenders in the “other” sentencing category, which includes fines and conditional discharges. A small number of sentences were categorized as unknown (120).

A study that also included those sentenced to probation and county jails examined 19,827 offenders on the New York State Sex Offender Registry on March 31, 2005:

Table 2.2. Proportion of Registered offenders rearrested

Proportion of Registered Sex Offenders Rearrested (among 19,827 offenders on the registry on March 31, 2005)		
Time from Registration Date	Any New Arrest	Any New Registrable Sex Offense
~1 Year	15%	2%
~2 Years	24%	3%
~5 Years	41%	6%
~8 Years	48%	8%
Source: DCJS: NYS Sex Offender Registry and NYS Computerized Criminal History Data Base		

The DCJS data above included probationers, as well as parolees, those under custody, and offenders whose sentence had expired (New York State Division of Probation and Correctional Alternatives 2007).

Utilizing time-series analyses, a study examined differences in sexual offense arrest rates before and after the enactment of New York’s Sex Offender Registration Act. Results provided no support for the effectiveness of registration and community notification laws in reducing sexual offending by: (a) rapists, (b) child molesters, (c) sexual recidivists, or (d) first-time sex offenders. Analyses also showed that over 95% of all sexual offense arrests were committed by first-time sex offenders, casting doubt on the ability of laws that target repeat offenders to meaningfully reduce sexual offending (Sandler et al. 2008).

In a study assessing the practical and monetary efficacy of Megan’s Law in New Jersey, 550 released sex offenders were examined. Ultimately, 9% of them were re-arrested for a sex crime within a time at risk of approximately six and a half years (Zgoba et al. 2008).

In 1999, Margaret A. Alexander examined the utility of sexual offender’s treatment, considering that efforts to treat sexual offenders had proliferated over the last 50 years. At that time, several authors had addressed current views of sexual offender treatment efficacy. Some maintained that offenders can benefit from treatment while others argued that the vast majority cannot. Some researchers said that the field of sexual offender treatment was too new

to be able to accurately determine whether or not treatment works. This latter group noted that most studies in this field had not yet reached the point at which meta-analytic techniques could be applied; for this reason, no definite statement could be made about the utility of treatment. Alexander's analysis examined the issues from a slightly different perspective. Data from a large group of studies were combined to identify patterns, which could be examined later in more detail. More specifically, 79 sexual offender treatment outcome studies were reviewed, encompassing 10,988 subjects. Recidivism rates for treated versus untreated offenders were investigated according to age of offender, age of victim, offense type, type of treatment, location of treatment, decade of treatment, and length of follow-up. Each study was used as the unit of analysis, and studies were combined according to the number of treated versus untreated subjects who reoffended in each category. The 10,988 subjects were divided into the subtypes shown in the following table:

Table 2.3. Subjects in the Data Pool

Subject type	Treated Recidivism Rate	Untreated Recidivism Rate
Juveniles (N= 1.025)	7.1% (73/1.025)	No Data available
Rapists (N=528*)	20.1% (79/393)	23.7% (32/135)
Child molesters (N= 2.137**)	14.4% (41/1.676)	25.8% (119/461)
Exhibitionists (N=331)	19.7% (61/310)	57.1% (12/21)
Types not specified (N=6.967)	13.1% (786/5.979)	12.0% (119/988)
Totals (N=10.988)	13.0% (1.240/9.383)	18.0% (282/1.605)

*Does not include 103 juveniles

**Does not include 47 juveniles

Under specific conditions (type of intervention, sexual offender subtype), less than 11% of treated offenders reoffended, with juveniles responding particularly well to treatment. This led to the conclusion that the question of how best to treat may be as complex as the reasons people offend. Even though research remains in the formative stages, what has been learned so far has practical utility. A variety of treated sexual offenders reoffend at rates below 11%. This finding suggests that some effective components of the treatment process may have been identified. Practitioners working with offenders should master standard curricula explicating these treatment tools, so they can apply them in a uniform and consistent manner. Future research could then enhance what is already known about how to treat sexual offenders (Alexander 1999, p. 10).

In a meta-analytic review, Hanson et al. (2002) examined the effectiveness of psychological treatment for sex offenders by summarizing data from 43 studies. The 43 studies examined a total of 5,078 treated sex offenders and 4,376 untreated sex offenders. Averaged across all studies, the sexual offense recidivism rate was lower for the treatment groups (12.3%) than the comparison groups (16.8%, 38 studies, unweighted average). A similar pattern was found for general recidivism, although the overall rates were predictably higher (treatment 27.9%,

comparison 39.2%, 30 studies). These recidivism rates were based on an average 46-month follow-up period using the variety of recidivism criteria reported in the original studies (Hanson et al. 2002, p. 181). The authors came to the conclusion that given the large numbers in their study (9,454 offenders in 43 studies), the result that the recidivism rates of treated sex offenders were lower than the recidivism rates of untreated sex offenders cannot be seriously disputed. What can be disputed, in their view, are the reasons for the group differences. “Did the treatment reduce the offenders’ recidivism rates, or were the observed differences produced by unintended consequences of the research design? We believe that the balance of available evidence suggests that current treatments reduce recidivism, but that firm conclusions await more and better research” (Hanson et al. 2002, p. 186).

3 Problems of Risk Prediction

Crime prognosis has always been a very controversially discussed matter in the field of psychiatry, psychology, and criminology because in most cases it is almost impossible to predict precisely how a person will actually act in a certain situation. Nevertheless, risk prediction is becoming more and more important in split societies claiming to avoid risks for their members. Politicians promise complete safety from all kinds of threats, and fear of crime is a favorite subject to establish preventive measures. Consequently, the methods of crime prognosis have developed rapidly during the past twenty years. Computer generated models that predict where crime is going to occur are used by the police throughout the United States of America, but so far they are not a profiling tool to identify who is committing crimes (Mangino 2013). Nevertheless, there is great confidence in the U.S. that the remaining problems can be solved by improving statistical procedures (Berk & Bleich 2013; Perry et al. 2013).

Crime prognosis is fundamentally limited by one of the main methodological problems to predict severe crimes: the mathematical construction of “base rates”. The base rate generally refers to the (base) class probabilities unconditioned on featural evidence, also known as “prior probabilities”. For purposes of crime prediction, the base rate is supposed to give evidence of the probability that a convicted offender will reoffend. If the base rate was 1%, only one out of a hundred released prisoners would reoffend. If the base rate was 50 % and the reliability of crime prognosis was about 90 %, one out of two would reoffend. The consequences of low and high base rates for crime prediction can be seen in the tables below (reliability 90 %):

Table 3.1. Prognosis at base rate of 90 %:

	positive prognosis (will reoffend)	negative prognosis (will not reoffend)	
New offense	True positive: 81	False negative: 9	N = 90
No offense	False positive: 1	True negative: 9	N = 10

Table 3.2. Prognosis at base rate of 10%:

	positive prognosis (will reoffend)	negative prognosis (will not reoffend)	
New offense	True positive: 9	False negative: 1	N = 10
No offense	False positive: 9	True negative: 81	N = 90

The higher the base rate, the more often re-offences are predicted correctly compared to the false positive assumptions, and the more often people reoffend unexpectedly (false negative). These results are a lot more apparent when the base rate is very low, as we can see regarding severe forms of crime. A base rate of 1% says that, on the average, one of every 1,000 people will commit homicide for example, which is close to the actual rate of homicide in Germany (1 case per 100,000 population). But it also means that 9,990 will not commit this offense, even if they were regarded as highly dangerous because of the mathematical limitations (Volckart 2002).

According to global studies of the United Nations Office on Drugs and Crime, 437,000 cases of homicide worldwide were reported to the police in 2012 (UNODC 2014). More than a third of those (36%) occurred in the Americas, 31% in Africa, 28% in Asia, while Europe (5%) and Oceania (0.3%) accounted for the lowest shares of homicide at the regional level (UNODC 2014, p. 11). The global average rate was 6.2 homicides per 100,000 population. The annual global rate of sexual violence in 2011 was 36.7 per 100,000, the rate of robbery 138.1, the rate of assault 180.5, the rate of burglary 413.8, and finally, the rate of theft was 981.1 (UN-CTS 2012). All in all, property related crimes are committed much more often than severe violent offenses, and therefore can be predicted much more easily. Severe crimes can hardly be predicted at all without further biographical information about the individual's development.

The idea to predict future crimes (and to prevent them by repressive and/or preventive measures) is not new, but of course very fascinating, as the movie "Minority Report" has shown. In the film, a specialized police department apprehends criminals based on foreknowledge provided by three psychics called "precogs". Although crime forecasting (or predictive policing) in law enforcement has become an important part of policing, especially in the United States, the limits of crime prediction are well-known. "

The key for agencies is to think of the tools as providing situational awareness rather than crystal balls. The system should help agencies understand the where, when, and who of crime and identify the specific problems driving that criminal activity; this information will help support interventions to address these problems and reduce crime" (Perry et al. 2013, p. 136).

While in former times psychiatric experts mostly relied on their professional experience, we now have a wide variety of additional prognostic instruments strengthening the idea that human behavior can be predicted objectively and precisely. Internationally known examples for these instruments of assumed high objectivity, reliability, and validity are the Psychopathy Checklist (Hare 1991), PCL- SV (short version) and PCL-R (revised), Level of Service Inventory – Revised (LSI-R, Andrews & Bonta 1995), the Historical Clinical Risk (HCR-20, Douglas et al. 2013) which is used to predict the risk of violent delinquency, the Sexual

Violence Risk (SVR-20, Boer et al. 1997), Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR, Hanson 1997), Static-99 (Harris et al. 2003), Violence Risk Appraisal Guide (VRAG, Quinsey et al. 2006), and the Sex Offender Risk Appraisal Guide (SORAG, Quinsey et al. 2006). Crime forecast is based primarily on these kinds of actuarial assessment instruments in the Anglo-American countries while most European countries, particularly in Germany, regard them as helpful, but not sufficient enough for crime prognosis (Dahle 2006). They suggest that the behavioral instruments should complement a series of other carefully and clinically informed appraisals and should not be used as a substitute for them when making an assessment about a prisoner. What all of these instruments have in common is that there are rather few items relating to demographic characteristics, criminal history and personality variables with a statistically high probability of severe recidivism that can be listed easily and evaluated according to the score that is reached. Because of the statistical background, they are not sufficient to predict the individual's behavior: a high score on a scale does not necessarily indicate a high risk, because there may be a lot of protective variables in the surroundings of the individual (good relationships, satisfying conditions of living) to keep him from committing crimes again. Because there is a strong emphasis on historical events, the instruments also neglect individual developments and changes. Although courts tend to be satisfied with statements as to the degree of dangerousness shown by a test-score, as a high score at first sight is rather convincing, the actual predictive validity is very limited. In fact, a recent German study came to the conclusion that the Psychopathy Checklist is more suited to predict violent delinquency than sexual delinquency (Eher et al. 2012). Therefore, risk prediction without considering the personal situation of the individual is also not a sufficient method. But even with a methodically perfect approach, the prediction of the behavior of a human being will always be a problem without an appropriate solution. This is indicated by former relapse-studies and can also be demonstrated by the results of an examination we performed at the Ruhr-Universität Bochum/Germany. In this study from 2007 to 2013, the actual relapse-rate of 131 released prisoners who were considered to be very dangerous at the end of their sentence and therefore should be taken in permanent custody (preventive custody imposed retroactively) was examined.

4 The Bochum Study on Recidivism in Preventive Custody Cases was Intended, but not Imposed

The situation in Germany after the decisions of the German Supreme Court and the European Court of Human Rights during the years from 2002 onwards was one of the few opportunities to examine whether the predicted dangerousness by the experts' risk assessment was true or just an assumption that did not correspond with the actual behavior of the prisoners released. As long as people regarded as dangerous are kept in prison, they can never prove that the expectation might have been wrong. The first time a larger group of people had been released from an institution despite of their assumed dangerousness was studied was in 1966. This study is well known as the "Baxtrom Case", when, after a decision of the Supreme Court of the U.S.A., all 967 (920 male, 47 female) inmates of forensic-psychiatric hospitals in the state of New York had to be released, even though they were still regarded as very dangerous. Only nine of them re-offended with severe crimes of violence (Steadman & Coccozza, 1974). In 1971, another group of 438 mentally disturbed inmates had to be released in Pennsylvania

after a court decision (Dixon vs. Pennsylvania) known as the “Dixon Case.” Within four years after release, 14% of the former inmates showed violent behavior (Thornberry & Jacoby, 1979). Such experimental designs are usually quite rare, although the field of experimental criminology is a booming discipline, and some scholars see experimental designs as a kind of “silver bullet” for criminological research.

As German courts rarely imposed preventive custody retroactively since they denied the evidence of high risk concluded from the behavior in prison, about 115 prisoners throughout Germany were released between 2002 and the end of the year in 2006, despite expert testimonies that had considered them to be too dangerous to be released. We used this kind of “natural experiment” to study the recidivism rates of those prisoners released from custody. In nearly all of the cases, the prison administration and external experts (psychologists and psychiatrists) had evaluated those people as dangerous. From 2007 to the end of 2009, another group of about 75 prisoners who were considered to be highly dangerous were also released because of court decisions. The recidivism of 121 out of these about 195 released prisoners⁴ had been examined in a nation-wide study by the Department of Criminology at the Ruhr-Universität Bochum⁵ (Alex 2013; Feltes & Alex 2010). In most cases, in four years after release from prison⁶, 63 people (52%) had been convicted again for a new offense, but only 38 (31%) were sentenced to a prison sentence again (see the following table).

Table 4.1. Sentence in case of recidivism (N = 63)

Recidivism					No recidivism
Fine	Prison on probation	Prison	Prison and additional preventive custody	Other measure (psychiatric hospital)	
16	9	19	17	2	58

The more severe new offenses (prison terms of one year and longer) compared to the index offense were (N = 11):

Table 4.2. Severe re-offense

Index offense	Re-offense	New penalty
Rape	Theft	1 year and 5 months
Aggravated battery	Fraud, violation of terms of conditioned release	1 year and 8 months

⁴ Ten released prisoners had already died before the study was finished.

⁵ www.rub.de/kriminologie

⁶ 25 people had been released only 2 ½ up to 4 years before

Rape	Stalking	1 year and 9 months, hospital treatment order, Art. 63 StGB
Attempted murder	Theft, violation of terms of conditioned release	1 year and 11 months
Attempted robbery	Breach of narcotic law	2 years
Rape	Robbery	2 years and 2 months
Attempted rape	Theft, fraud	2 years and 9 months
Theft	Breach of narcotic law	3 years and 6 months
Sexual abuse	Burglary	4 years
Attempted aggravated robbery	Theft, fraud	6 years and 9 months
Aggravated robbery	Aggravated robbery	9 years

Two of these new offenses (robbery) can be regarded as cases that reveal the assumed high risk of violent recidivism, but the other nine offenses were less severe. 17 further court decisions resulted in imposing additional preventive custody because of very severe recidivism. The most severe new offenses (prison and preventive custody), in comparison to the previous judgment, were as follows:

Table 4.3. Type of offense and sentence (prison and additional preventive custody) (N = 17)

Index offense	Re-offense	New penalty
Rape	Rape	3 years and preventive custody
Robbery	Robbery	3 years and preventive custody
Sexual abuse	Severe sexual abuse	3 years, 2 months and preventive custody
Severe sexual abuse	Severe sexual abuse	3 years, 6 months and preventive custody
Rape	Attempted robbery	3 years, 9 months and preventive custody
Sexual abuse	Sexual abuse	3 years, 9 months and preventive custody
Severe sexual	Severe sexual abuse	4 years, 6 months and preventive

abuse		custody
Murder	Aggravated battery	4 years, 6 months and preventive custody
Sexual abuse	Sexual abuse	5 years and preventive custody (on reservation)
Severe arson	Attempted arson, new aggravated battery	6 years and preventive custody
Aggravated battery	Aggravated battery	6 years, 6 months and preventive custody
Severe sexual abuse	Severe sexual abuse	7 years and preventive custody
Aggravated robbery	Rape, bodily harm	7 years, 3 months and preventive custody
Murder	Aggravated robbery	9 years, 6 months and preventive custody
Aggravated robbery	Aggravated robbery	11 years and preventive custody
Sexual abuse	Rape, severe sexual abuse	11 years, 9 months and preventive custody
Bodily injury	Attempted murder, rape	13 years and preventive custody

All violent or sexual offenses may be regarded as cases where the high risk of serious relapse predicted by the experts came true. Notably, in about 85% of all cases, the assumed severe recidivism did not occur.

Table 4.4. Age and delinquency (N = 121)

Age at release	Sexual index offenses	Recidivism prison > 1 year	Other index offenses	Recidivism prison > 1 year
≤ 40 years	23	9 = 39.1%	32	8 = 25.0%
≤ 50 years	27	4 = 14.8%	14	3 = 21.4%
> 50 years	18	1 = 5.6%	7	3 = 42.9%
Σ	68	14 = 20.6%	53	14 = 26.4%

Only one of 18 sexual offenders older than 50 years at the time released from prison reoffended with a severe crime (severe sexual abuse), whereas 3 of the 7 former prisoners who had committed other offenses reoffended severely. This demonstrates that sexual offenders in particular become less dangerous with increasing age.

Almost 50% of the re-offenses with more serious consequences (defined as a sentence of more than two years) were committed during the first six months after discharge, and only five cases of more severe recidivism (22%) occurred later than 18 months after discharge, as the next table shows:

Table 4.5. Time to severe recidivism (persons who were sentenced to imprisonment for more than two years), N = 23

Re-offense	Time after release			
	< 6 months	< 12 months	< 18 months	18 months and longer
Sexual abuse	2	1	---	24 months 36 months 45 months 61 months
Rape	---	1	1	---
Other violent offense	5	1	3	---
Non-violent offense	4	---	---	---
Arson	---	---	---	28 months
Σ	11	3	4	5

In 70 cases, experts (psychiatrists, or in some cases psychologists) had given corresponding risk assessment reports. 39 out of 53 released prisoners (73.6%) did not commit any new serious offenses, even though they were considered to be very dangerous (following table):

Table 4.6. Risk assessment and legal probation

Group	Experts' recommendation: Preventive custody ordered	Experts' recommendation: No preventive custody, no probability

	retroactively because of dangerousness		of serious relapse	
	N	%	N	%
No relapse/mild relapse	39 false positive	55.8	14 correct negative	20.0
Serious relapse (more than 1 year prison)	14 correct positive	20.0	3 false negative	4.3
Additional preventive custody	7 after serious relapse	10.0	1 after serious relapse	1.4

Compared to the study of Müller et al. (2013), the group of released prisoners that did not reoffend despite being regarded as very dangerous (false positive) was significantly larger (55.8% vs. 20%). This can partly be explained by the different methodological approach, but it also indicates the high rate of false predictions in our study.

In 73.6% of all 53 cases with negative expectations, this prediction did not end up with serious recidivism, but 82.4% of 17 cases with positive expectations turned out to be true. Obviously, it is easier to predict positive legal probation than to predict recidivism.

The following table with the ICD-10 diagnosis of the 23 people with severe recidivism (penalty of more than two years imprisonment) indicates an expected correlation between dissocial personality disorder and recidivism:

Table 4.7. ICD-10 diagnosis and recidivism (N = 23)

Re-offense	Dissocial personal disorder	Combined personal disorder	Drug addiction	Pedophilia	Mental debility	No risk assessment report
Sexual abuse	2	1	---	1	1	2
Rape	3	---	---	---	---	---
Violence offense	6	---	---	---	---	2
Non-violent						

offense	2	1	---	---	---	1
Arson	---	---	1	---	---	---

Regarding all 121 examined people putting emphasis on dissocial personal disorder and the frequency of reoffending, this result is verified:

Table 4.8. Diagnosis and recidivism (N = 121)

Penalty	Dissocial personal disorder	All other diagnoses	No risk assessment report
Prison and preventive custody	9	4	4
Prison	9	6	5
Prison on probation	8	2	---
Fine	7	6	3
No relapse	14	24	20
Σ	47	42	32

18 out of 47 subjects with dissocial personal disorder (38.3%) were sentenced to imprisonment after reoffending, compared to only 10 out of 42 with other diagnoses (23.8%). Nevertheless, 29 subjects with dissocial personal disorder (61.7%) did not reoffend at all or not severely.

The number of previous convictions prior to the index offense is also correlated with recidivism:

Table 4.9. Previous convictions and recidivism

Penalty	Number of previous convictions				
	None	1-4	≥ 5	≥ 10	≥ 15
Prison and preventive custody	0	5	7	4	1
Prison	1	3	2	6	8

Prison on probation	2	2	4	1	1
Fine	5	3	3	3	2
No relapse	16	22	14	5	1
Σ	24	35	30	19	13

28 out of 37 more severe re-offenses (75.7%) were committed by subjects with five previous convictions or more, although only 50% of the released prisoners belonged to the group with five previous convictions or more. This illustrates the higher probability of re-offending by people with many previous convictions and also explains the tendency of experts to come to the diagnosis “dissocial personal disorder” just because of the number of previous convictions. Often, the anti-social attitude is only concluded from the number of previous convictions and not by exploring personal traits. On the other hand, 34 out of 62 offenders with five previous convictions or more (54.8%) did not reoffend severely, which is another evidence for the difficulty of predicting peoples’ behavior.

The results of the Bochum study are not very different from the findings of a nationwide survey on recidivism by the German Ministry of Justice. Jehle et al. (2003) observed the legal probation of all persons convicted (fine, sentenced to prison or probation) or released regularly from prison in Germany in 1994 (N = 947.090). About 35% of them reoffended within a follow-up period of four years. 56% of the released prisoners reoffended, but only half of them ended up in prison again. 27% of those had previously been convicted for robbery, 19% for sexual violence, and 10% for homicide or murder.

In 2008, this study was repeated for the population of convicts or released prisoners in 2004 (N = 1,049.922) with a slightly different approach (follow-up period of only three years resulting in a lower recidivism-rate), and in 2011 it was extended to the convictions and releases in 2007 (N = 1,049.816). The general recidivism rates were 36% and 34%, respectively. After a period of six years after conviction or release (2004-2010), the general recidivism rate increased to 44%. As in the previous study, most released prisoners reoffended, but less than 50% ended up in prison again. The highest recidivism-rate was observed after previous convictions for aggravated kinds of theft and robbery (more than 50%), the lowest rate after previous convictions for homicide or murder. 15% of all subjects convicted for violent crimes committed new violent crimes, while less than 4% of previous sexual offenders committed another sexual offense. Recidivism is found only in few cases after more than three years of legal probation. The rate of recidivism with sexual violence increased from 2% to 3%, the rate of recidivism with any kind of violent or sexual delinquency increased from 9 to 12%, and the rate of recidivism with sexual abuse increased from 3 to 4%. Regarding exact corresponding previous convictions only, the recidivism-rate is higher, however. After six years, 7% of those convicted for sexual violence were again convicted for the same crime, 18% of those convicted for sexual abuse were again convicted

for sexual abuse. The rate of severe recidivism followed by a new sentence to prison varies from 3% (murder or homicide), 6% (sexual abuse), 7% (rape), 20% (robbery) to 23% (aggravated battery) (Jehle et al. 2010, 2013). All in all, there is no significant difference concerning the legal probation of regularly released prisoners compared to the results of the Bochum study concerning prisoners considered to be extremely dangerous.

The study of Jehle et al. on recidivism, of which three waves are now available is a result of a development that can be observed throughout the world during the last two decades. The significance of, and the need for collecting comprehensive data on recidivism and its prevention for purposes of research, for judicial decision making, and for criminal policy have been recognized in many European countries and beyond. Similar efforts as in Germany have been made in England/Wales, Scotland, France, the Netherlands, Scandinavian countries, Switzerland, Estonia, and Ireland. Singular studies on recidivism have been conducted in further European countries. Countries in South America, Asia and Africa are also interested in nationwide and systematic studies in recidivism. In North America recidivism statistics based on available information have been established. Australia regards the European development as a milestone for evidence-based criminal policy (Albrecht 2014, p. 401). “Modern evidence-based criminal policy, which aims to reduce recidivism in general, as well as criminal courts which must increasingly deliver individualized decisions on the dangerousness of offenders based on anticipated recidivism are both in need of substantive and reliable information. Yet, the latter task in particular can hardly be fulfilled based on the rudimentary data provided by official statistics in countries such as Germany; likewise, data gathered through specific research studies most often cannot be generalized due to the specific methodological circumstances under which the data have been gathered.” (Albrecht 2014, p. 400).

5 Discussion

Every society has to face the situation that there is a very small group of people who do not respect elementary rules of human behavior and commit very serious violent offenses again and again. In Germany these people – who are regarded as so mentally disturbed that they cannot be blamed for their crimes – are kept in psychiatric hospitals for an unlimited period of time until, according to an expert report on crime prognosis, no more serious recidivism is assumed.

Against offenders who were at least partly regarded to be responsible for their delinquency the measure of preventive custody was established in Germany in 1934, but this measure had to be imposed in combination with the judgment and was limited to ten years when ordered for the first time until 1998. This limit was cancelled in 1998 by the “Combating of Sexual Offenses and Other Dangerous Offense Act”, and in 2004 a new measure was established for prisoners whose dangerousness was first noticed after judgment during imprisonment. Since 1934 offenders, who were not regarded as mentally disturbed, could not only be punished after previous times of imprisonment, but could be kept in preventive custody after the time of penalty ended. In 2004 the measure of preventive custody was extended to prisoners with penalties of more than five years, if they were assumed to be very dangerous according to events observed during the time of imprisonment.

Single cases of serious recidivism with sexual and/or violent delinquency after release from prison during the last decade of the past century had changed the attitude towards serious crimes in German society and had made the introduction of these new measures possible. On December 17, 2009, the European Court of Human Rights ruled that there had been a violation of Article 5 § 1 (right to liberty and security) and Article 7 § 1 (no punishment without law) of the European Convention on Human Rights by retroactive extension of a prisoner's preventive custody by German courts (M. v. Germany, application no. 19359/04). On January 13, 2011, the court also ruled that there had been a violation of Article 5 § 1 by imposing preventive custody retrospectively, because there had not been a sufficient connection between the conviction and the later decision to impose preventive custody under Article 66b § 1 of the German Criminal Code (H. vs. Germany, application no. 6587/04).

On May 4, 2011, the German Federal Constitutional Court finally accepted this jurisdiction and ruled that the regulations of imposing and executing the measure of preventive custody in the German Criminal Law violated the right to liberty, and as such, Article 2 of the German Constitution had to be changed by May 31, 2013 (judgment from May 4, 2011, no. 2 BvR 2365/09). In the meantime, inmates whose preventive custody had been imposed retrospectively or had been extended over ten years retroactively had to be released from prison, unless they were seen as extremely dangerous (danger to commit most serious sexual or violent crimes because of mental health problems or mental disorder).

The adjusted law was put into force on June 1, 2013, but in a following decision, the European Court of Human Rights from November 28, 2013 doubted whether a dissocial personality alone, which had been found by the German authorities not to be pathological, could be considered as a sufficiently serious mental condition so as to be classified as a "true" mental disorder for the purposes of Article 5 § 1 (e) of the European Convention on Human Rights, providing for detention independent of an offense (G. v. Germany, application no. 7345/12).

It seems that the European debate on preventive custody and the compatibility with human rights standards is not finished yet. Nevertheless, medical, psychological and criminological expertise will often be of much importance to prepare decisions on probation. All over the world, experts are asked in cases of offenders who are assumed to be very dangerous to judge whether these offenders are to be taken into custody or released from prison. It depends on the scientific limits to predict future behavior and on the quality of expert reports to help judges to find an adequate solution. There have been a lot of efforts to improve risk assessments during the last years. Not only have standards with regard to the procedures and contents for risk assessment reports been established, but standardized scales have also been developed to accomplish a more objective prediction of the behavior of offenders expected in the future. Worldwide used actuarial instruments are exemplified by the Psychopathy Check List-Revised (PCL-R), Sexual Violence Risk (SVR-20), Historical Clinical Risk (HCR-20), Static-99, Sex Offender Risk Appraisal Guide (SORAG), Violence Risk Appraisal Guide (VRAG), and the Level of Service Inventory-Revised (LSI-R). What all of these risk assessment instruments have in common is that personal traits and experiences that often correspond with

certain kinds of delinquency have to be checked by experts to predict the probability of recidivism.

As to the quality of risk assessment, Müller et al., based on the results of their study, saw the need for improvement in the quality of experts' reports and came to the following conclusion: "Although most forecast reports (87%) complied with a minimum of requirements, there were gaps, for example, in addressing the initial offense and the conditions with respect to the social support after release. A physical examination was carried out only in one-fifth of the cases, and additional psychological examinations were used only in half of the forecast reports. In addition, one third of the expert's reports only described striking personality traits, without diagnosing a personality disorder in the context of a psychiatric classification system. Around two-fifth of the forecast reports did not use an empirical risk checklist. The discussion about how the residual risk of recidivism might be minimized was missing in about one-third of the forecast reports. By contrast, in the study of interrater reliability, a high correlation in the assignment of psychiatric diagnoses by experts who conducted independent assessments was seen" (Müller et al. 2013, p. 18 with further references). Nevertheless only four out of 25 offenders (16%) reoffended with crimes that ended up with new imprisonment of more than two years, although in ten cases corresponding experts' reports had assumed severe dangerousness.

The results of the Bochum study on recidivism indicate that, despite of all improvements, risk assessments are still no means to reduce recidivism. Too many subjects are considered to be extremely dangerous, even when they are not (false positive prognosis). Only 19 out of 121 surviving discharged offenders (15.7%) committed serious sexual and/or violent offenses after they were released from prison. This rate of recidivism of supposedly very dangerous offenders does not differ at all from the relapse-rate of regularly released prisoners. It shows that in almost 85% of all high-risk cases, no serious new offense is registered after several years.

This result is in accordance with the earlier results and recent studies concerning legal probation of persons released from prison or psychiatric hospital, even though they were regarded as very dangerous. The German studies that we referred to indicate a comparable relapse-rate. The data from New York State indicates that sex offenders have a lower three-year rate of overall recidivism (31%) than the general prison population (42%). Only 8% of sex offenders were returned to prison as a result of a conviction for a new crime. Most were returned for parole violations (Kellam 2006).

The New York Senate Committee on Crime, Crime Victims, and Corrections suggests in their 2009 - 2010 report to examine the method of assessing risk of re-offense among registered sex offenders currently used by the New York State Board of Examiners and to appoint a commission to choose among the various assessment tools available today one that would provide the most reliable determination of risk. "Assessment guidelines were developed more than fifteen years ago, at a time when experts in the state knew far less about how to measure the risk that someone once convicted of a sex crime would reoffend. It is our belief – one shared by many experts – that there are far too many people in New York who are

misclassified in the higher risk level category, and are therefore unnecessarily diverting limited resources away from likely re-offenders” (New York State Senate 2010, p. 28).

The probability that someone who has been convicted for very serious sexual or violent crimes reoffends is much smaller than the chance to become a victim of an offender not having been registered before with similar crimes. In New York, the overwhelming majority (around 95%) of sex offenses, including rape and child molestation, are committed by those who have never before been convicted of an offense (New York State Senate 2010, p. 29). In Germany, among 25,000 persons convicted of sex offenses, murder/homicide or robbery every year, 85% have never been registered with offenses like that before (Strafverfolgungsstatistik, 2009, 2010, table 2.1.).

Looking at the results of the Bochum study in detail, it is not surprising that, due to the emphasis on sexual delinquency, 71 of the offenders intended to be taken into retrospectively imposed detention had been convicted for a sex offense. Three of them had died soon after release from prison. Eight of the remaining 68 sex offenders relapsed with sexual delinquency (11.8%), and only one of them was older than fifty years by the time of discharge. The often-mentioned idea that sex offenders are liable to relapse with sexual delinquency, even when they are old, can be rejected after the results of our study.

The results also give no evidence that sex offenders often reoffend a long time after discharge. 18 of 23 new serious offenses (78.3%) were committed within 1½ years after release from prison, later than that only four cases of sexual abuse and one case of arson were registered. Concerning experts’ risk assessment, there was no difference in the predictability of reoffending with sexual delinquency or violent crimes. The only significant differences between recidivism and non-recidivism were the number of previous convictions and the ICD-10 diagnosis of dissocial personal disorder. This is a self-fulfilling prophecy, though, because people, who have often broken rules tend to do so again more often than people who abide by them.

6 Conclusion

Better crime prognosis will not help to reduce recidivism. Müller et al. come to the conclusion that even though the predictive validity of the experts’ reports as a whole still had room for improvement, there was no denying that there were valuable conclusions to be drawn from the experts’ reports that do not recommend “subsequent placement in preventive custody” (Müller et al. 2013, p. 18). But the results of the Bochum study show that even in those cases, forecasts do not always come true, although there are more correct predictions than in cases where severe dangerousness is assumed.

Even though the quality of risk-assessment reports may have improved during the last decades, the fundamental difficulties in precisely predicting human behavior cannot be solved. The validity of prediction is limited by methodological problems as well as by unexpected developments in peoples’ lives.

Even social scientists who support efforts to use methods of crime forecast in law enforcement activities try to convince people that the nature of predictive policing had

nothing to do with “Minority Report”: “There is an obvious appeal to being able to prevent crime as opposed to merely apprehending offenders after a crime has been committed. For law enforcement agencies, the ability to predict a crime and stop it before it is committed is tantalizing indeed – as it is to the public. Any hype must be tempered somewhat by considerations of privacy and civil rights, however. Predictive methods, themselves, may not expose sufficient probable cause to apprehend a suspected offender. ‘Predictions’ are generated through statistical calculations that produce estimates, at best; like all techniques that extrapolate the future based on the past, they assume that the past is prologue. Consequently, the results are probabilistic, not certain.” (Perry et al. 2013, p. 8).

We have to accept these limits and must look for other ways to deal with recidivism. One way is to improve treatment of sexual offenders and other persons who have committed severe crimes. As the meta-analysis mentioned above shows (Alexander 1999, Hanson et al. 2002), specified types of intervention according to the offenders’ personal needs can reduce recidivism significantly. More than 50% of all prisoners in Germany show personality traits with relevance for psychiatry, or even personality disorders according to ICD-10, F60 (Habermeyer et al. 2012; Konrad 2013), but cannot be classified as “persons of unsound mind” in the sense of Article 5 § 1 (e) of the European Convention of Human Rights (ECHR, judgment of Nov. 28, 2013, application no. 7345/12). Most of them get no treatment during their stay in prison, because they are regarded as being responsible for their offense. Instead of threatening them with preventive detention it is suggested to offer them treatment similar to the treatment in psychiatric hospitals in socio-therapeutic facilities, separated from prison with a staff of psychologists and social workers (Boetticher 2012; Höffler 2013; Konrad 2013). This measure had already been established in the German criminal code in 1969 (§ 65 StGB) but was never put into force and was finally cancelled in 1984, mostly because of the costs for the new institutions. As the extension of preventive detention will also be very expensive, the demand for “recovery” of the former § 65 StGB and a treatment opportunity for prisoners with severe personality disorders is justified and would be a better way to stop violating the European Convention of Human Rights than all past and present efforts to adjust the rules of preventive detention to the Convention (see Arloth 2013 as an example for these efforts).

In addition, positive social surroundings after release from the institution have to be established to reduce recidivism.

Finally, we have to get away from the idea that society could be saved from crime completely. There are many risks in life, and the threat to become victim of a crime is just one of them. This risk cannot be reduced by denouncing discharged prisoners, either. Community notification has been found to have no demonstrable impact on sexual recidivism. In fact, some studies suggest that community notification may aggravate stressors that lead to increased recidivism (Freeman 2012), and requiring broad community notification via the internet may discourage some victims of sexual abuse from reporting incidents to the authorities. Victims may be reluctant to report offenses out of concern for a perpetrator who is close to them (a relative, a step-parent), or out of concern for their own privacy (Sandler et al. 2008). There are many examples in the United States of America (“Megan’s law”, Adam

Walsh Act) and in Germany where released prisoners were threatened by their neighbors so severely that integration was about to fail and the risk of recidivism increased (Tewksbury 2005, Tewksbury & Lees 2006). Zevitz and Farkas (2000) also found that a majority of sex offenders reported negative consequences, such as exclusion from residences, threats and harassment, emotional harm to their family members, social exclusion by neighbors, and loss of employment. These problems might even get worse when addresses and biographical data are published on websites. People have to learn that the risk of victimization by reoffending ex-prisoners is much lower than the risk to be attacked by someone who has not been convicted before, and that positive surroundings are very helpful to reduce recidivism. Risk assessment will not prevent society from crime, but will continue to be responsible for a large number of people kept in preventive custody or other means of imprisonment unnecessarily.

5 Questions

1. *Can crimes be predicted, and if so, how precisely?*
2. *How did crime prognosis procedures develop during the last years?*
3. *Weather forecast vs. crime forecast, what are the problems?*
4. *Can we avoid re-offending completely?*
5. *Which measures are useful to prevent re-offending?*

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