Several recent criminal cases show how inmates on passes or parole, husbands, ex-husbands or boyfriends with domestic violence restraining orders, young people with precocious violence histories or patients with mental disorders released from psychiatric hospitals, commit severe violent acts. These events show the existent of risk for violence in certain individuals (Blackburn, 1999; Buchanan, 1999; Campbell, 1995; Hart, 1998). We are very habituated to considering dangerousness as the key attribute in the estimation of the probability of future violent behaviour, but the development of Criminal Psychology has shown that the predictive capacity of dangerousness is limited and its use is not very efficient for professionals who make prospective decisions in forensic, clinical or penitentiary settings (Webster et al., 1997, Andrews & Bonta, 2003, Scott & Resnick, 2006). In the last 15 years, new techniques for the prediction of violent behaviour have emerged which have shown higher predictive effectiveness.

In this paper these new techniques of violence risk assessment are presented, along with their characteristics and applications. These new techniques significantly improve predictive power and help clarify the process that professionals use in their decisions about the future of violent behaviour, facilitating violence risk management strategies and prevention.

**Keywords:** Dangerousness, Violence, Prediction, Risk assessment

**El comportamiento violento es uno de los elementos más característicos y alarmantes de la delincuencia grave. La atribución de peligrosidad a los responsables de estos delitos violentos ha servido durante muchos años como factor explicativo y sobre todo predictivo de la reincidencia y la gravedad de las actuaciones de estos delincuentes, entre los que destacan los agresores sexuales, los homicidas y los maltratadores familiares. La intensa preocupación social por el comportamiento violento ha demandado a la Psicología soluciones que han superado el ámbito tradicional de aplicación de la Psicología de la Delincuencia al definirse nuevos delitos como la violencia de género y especialmente por el surgimiento de las demandas atencionales que requieren las víctimas. Hoy los profesionales de la Psicología son requeridos para actuar también en la prevención, para evitar la ocurrencia y el mantenimiento de cualquier tipo de violencia. Entre estas nuevas demandas se encuentra la predicción futura de las conductas violentas que tienen una alta tasa de repetición. El atributo esencial sobre el que se ha fundamentado la predicción de la violencia ha sido la peligrosidad. La peligrosidad es un constructo con una capacidad predictiva limitada ya que no es el único determinante del comportamiento violento. En los últimos 15 años han surgido nuevas técnicas de predicción basadas en la valoración del riesgo de violencia que han demostrado tener una mayor eficacia predictiva. Presentaremos estas nuevas técnicas de predicción de la violencia, sus propiedades y sus aplicaciones. Dichas técnicas mejoran de forma significativa la eficacia predictiva, ayudan a clarificar las bases sobre las que los profesionales sustentan sus decisiones relacionadas con el futuro del comportamiento individual y facilitan la gestión y prevención de la violencia.

**Palabras Clave:** Peligrosidad, Violencia, Predicción y valoración del riesgo
been developed based on three main elements: a) more extensive knowledge about the nature and the processes which generate violence, b) the substitution of the term “dangerousness” for “risk of violence”, and c) the development of protocols and instruments for professional use in violence risk assessment (Andres Pueyo & Redondo, 2004). These aspects will be briefly analyzed in order to provide the reader with a new image of violence prediction.

Violence is an interpersonal and social phenomenon (Reiss, 1994) which seriously affects the well-being and health of individuals. At present it has become a first-order collective problem with severe consequences on the political, economic and social development of human groups (Krug et al., 2002). This situation has provoked a social reaction in a context of generalized rejection and intolerance with respect to the use of violence in human relations. In 2002, Gro Harlem Burtland, general director WHO, stated: “violence is present in the lives of numerous people in the world and it affects us all in some sense” (Krug, 2002; pp.2).

The reaction of intolerance and rejection of violence is accompanied by a series of solutions for violence causes and consequences. These demands fall on all social agents, starting from the political-administrative structures of the State and other public administrations, social organizations, media, etc. Consequently, an urgent mobilization of the professionals who work in three specific fields of actuation has taken place: justice, health and social services. All these have a direct effect on the control and prevention of violence. Among these professionals, psychologists have very relevant responsibilities, in the first place attending victims of violence and also in the intervention with aggressors and the avoidance of future violent behaviour. In this context, the techniques for violence prediction are strategies for the prevention and management of violence risk.

VIOLENCE PREDICTION: THE CRITERIA QUESTION
Practices for the prediction of future violence have existed in every cultural tradition and were usually in the hands of “specialists” who did not lack social recognition. At the same time, different prediction techniques have been developed some of which are still being used. Among these, horoscopes, expert card and coffee-ground readings stand out. All these techniques, known as fortunetelling represent the home-made modality of prediction. In contrast to these techniques, others have been developed based on scientific knowledge about the processes which are determinant of the phenomena to be predicted, for example an earthquake or the possible trajectory of a tropical cyclone. This knowledge can range from the simple verification of associations between risk factors (predictors) and phenomena to be predicted (criteria), such as happens in the prediction and estimation of longevity in people or stock market fluctuations, to those causal models which, like astronomic ones, predict stellar incidents with surprising accuracy.

Among the numerous and varied demands that psychology professionals receive, we find those related with the prediction of future behaviour (Meehl, 1954; Borum, 1996, Mulvey & Lidz, 1998; Ozer & Benet, 2006). These demands are often explicit, as is the case of personnel selection, but other times they are implicit and are made in many fields of intervention such as the clinical, judicial-forensic or educational fields. In fact, the prediction of behaviour is present in almost all branches of applied psychology (Andrés Pueyo, 1997). Predicting future conduct is not methodologically different from predicting whether it will rain at the weekend, whether there will be an avalanche in winter, whether a patient who has suffered from a myocardial infarction will die as a consequence of the same, whether vote intention will change the day of the elections or if the Euribor or the Ibex will rise or fall next week. These questions are answered by specialists in meteorology, geology, cardiology, politics and economics. Similarly, psychologists foresee whether a student will finish his studies successfully, whether an aspiring policeman or a bank clerk will be honest and competent workers, or whether a patient will improve after treatment sessions. Prediction forms part of professional exercise; it is based on decisions made by professionals because a prediction is always a consequence of a decision or judgement. In this section we will consider everything which is specific to violence prediction. In order to do this, it is necessary to focus on the definition of violence, its properties and characteristics. Prediction experts insist that the first step for making objective, rigorous and efficient predictions is to rigorously define that which we want to predict. The possibility of making the prediction process a rigorous task and not a subproduct of professional intuition will

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1 A continuación, y a lo largo de todo el texto, utilizaremos el término “psicólogos” como genérico tanto de las psicólogas como de los psicólogos.
Violence is a complex phenomenon very much discussed and speculated on but about which we have limited scientific knowledge and until most recently has not been the object of rigorous analysis and study. In fact, violence in general and, in particular some of its most severe forms - such as gender or sexual violence - have recently become a problem of interest for scientists and is receiving increased attention (see Science, July 28th, 2000).

One of the first difficulties in the study of violence is its conceptual delimitation. Unfortunately, it is frequent to find labelled as violence very distinct phenomena, for example, aggression, impulsiveness or delinquency. The concept of violence has a double connotation which defines it at the same time as an action or behaviour and as a disposition, capacity or psychological attribute. We need to distinguish between the “quality” of being violent, which a priori could be considered a synonym of “dangerousness”, and the act or action of behaving violently. The determinants of an action and those of a disposition are different (Andres Pueyo, 1997). As with all behaviour, violent action is a result of the specific interaction between individual and situational factors. On the contrary, in the case of violence, as a quality or attribute of individuals, dispositional and biographic determinants acquire a more important role.

In 2002, the WHO carried out an epidemiological study about the relationship between violence and health. In that study violence was defined as: “…the deliberate use of physical force or power, whether effective or as a threat, against oneself, another person or a group or community, which causes or has a high probability of causing injuries, death, psychological harm, developmental disorders or privations” (Krug et al., 2002). From this definition we deduce that violence is not simply a conduct, an emotional response, a psychopathic symptom, an irrefrenable instinct or impulse, nor a simple and autonomous or irreflexive response. Violence is a psychological strategy for the achievement of a certain purpose. This means that violence requires, on the part of the subject who executes it, the utilization of different resources and processes which will deliberately convert this strategy into a behaviour or series of behaviours directed at reaching an objective.

In any given violent event or act and in function of the type of violence in question, we can identify a specific conflict usually associated to that type of violence. The causal agent of the violent act is the individual but he/she acts in a context or situation which facilitates or stimulates its appearance. Eliciting, modulating and maintaining components can be identified, but we must also emphasize the key role of the person’s decision to behave violently. This individual decision, more or less conditioned, is made in a specific situation, in the presence of certain stimuli and, above all, in an individual state which can sometimes justify the unconsciousness of the decision or the mistake of behaving violently without taking into consideration the consequences of the behaviour. The determinants of violence as a strategy are not the same as those of violent action, but in the latter the most relevant determinant is the deliberate decision to behave that way. And here lies one of the most important properties of violence, which is useful for its prediction, as all choices have associated to them a probability of occurrence, and it is this probability that can be assessed and this estimation used as a predictive value for the risk of future violence (Van Hasselt & Hersen, 2000; Hart, S. 2001).

According to the WHO (Krug et al., 2002) violence is understood as a strategy for the achievement of a benefit in spite of harming others. Violence has diverse forms of expression although in general, due to the importance of its effects, we almost always consider physical violence as its most representative model. However, other types of violence which form part of this phenomenon exist, such as psychological violence, economic violence, negligence, etc.

We can distinguish the following five properties which characterize violence:

1. Complexity. Violence as a psychological strategy introduces cognitive, attitudinal, emotional and motivational components which behave in an interrelated manner and have a specific purpose. The strategies are defined or characterized by their purpose and in the case of violence we can distinguish specific purposes. Hence, terrorism has as its aim the imposition of political power, domestic violence the personal control over family members, gender violence the execution of power and dominance of women, racial violence the dominance and the subjugation of other ethnic groups, etc…

2. Heterogeneity. Violence is a heterogeneous phenomenon (Reiss et al., 1994) which appears especially evident in an applied perspective, that is,
which deals with the prevention, control and the reduction of violence. There are several types of violence which can be classified according to different criteria: manner of execution (physical, psychological, sexual, and economical), characteristics of the aggressor (youths, adults, women…) and of the victim (gender violence, child abuse, mugging, etc.). In addition, it can be classified according to the relationship between aggressor and victim and thus we find bullying, mobbing, domestic or family violence.

In the aforementioned epidemiological study by the WHO, a violence typology is proposed which seems very useful and appropriate to us. They classify the types of violence according to a double criterion: the aggressor-victim relationship and the nature of the violent act. Thus, more than 30 types of violence are obtained (see Figure 1) which are the result of combining the nature of violence (physical, sexual, psychological or deprivation/abandonment) with the causal agent of violence (self-directed, interpersonal and collective). On many occasions these types of violence appear jointly and in a combined manner, but in an analytical sense they have their own prevalence, rules of appariation and associated risk factors.

The prediction of one type of violence or another has its technical exigencies on which the efficacy of prediction depends (Webster et al., 1997) and to do this professionals of forensic and criminal psychology use different procedures and instruments. This way, if for example we want to predict physical violence in general, we dispose of the HCR-20 (Webster et al., 1997) while if we want to predict partner violence, it is recommendable to use the SARA (Kropp D. et al., 1995), or if we want to predict relapse in rapists or adult sexual aggressors we would use the SVR-20 (Boer, J. et al. 1997).

3. Multicausality. For a violent act to occur, especially severe violence such as a murder, numerous variables must coincide at a given moment, which at the same time, usually do not combine very frequently. Violent acts are to some extent uncertain events like atmospheric, technological or economic changes.

FIGURE 1
CLASSIFICATION SCHEME OF TYPES OF VIOLENCE PROPOSED BY WHO (KRUGG, ET AL. 2002)
The application of predictive techniques which originated in disciplines other than psychology is based on this property (Monahan & Steadman, 1996).

Although it seems paradoxical in order to predict violence we do not need to know what causes it, that is, its effective causes, but rather what risk factors are associated to it. This strategy is very frequently used in health disciplines such as epidemiology and public health, where the complexity and multicausality of some diseases make it difficult to intervene with an exhaustive knowledge of the “how” and “why” of the diseases and events to be predicted. Substituting causes for risk factors in violence prediction has facilitated more efficient professional action in both the management and prevention of violence (Quinsey & Harris, 1998, Hawkins et al. 2000).

Each type of violence has its specific risk and protective factors as criminological studies have demonstrated (Garrido, Stangeland & Redondo, 2006). While a past history of violence is a common risk factor in all types of violence, paraphilias are specific risk factors of sexual violence but not of physical intra-familial violence. The specificity level of risk factors can be very significant. Thus, in the case of predicting partner abuse we can distinguish the risk factors for homicide from the risk factors for serious physical violence (Campbell, J., 1995; Belfrage, et al. 2004). Regarding the risk of murdering one’s partner the aggressor’s psychopathy is less relevant than the presence of an affective disorder; however, with respect to the risk of serious and continuous physical abuse of one’s partner, psychopathy is more important than the presence of an affective disorder.

Due to its multicausality we can state that violent behaviour as an action itself is not predictable, but we can statistically estimate its risk of happening. This is an important distinction, especially when professionals must inform others (probable victims, health professionals, judges or policemen, family members, etc…) or when the decisions can be a matter of debate (Heilbrun, 1997; Heilbrun et al., 1999; Gottfredson, 2006).

4.- Intentionality. Violent actions are the result of a deliberate, intentional and voluntary decision to hurt or bother others. Nevertheless, we should recognize that on several occasions this decision is not penally imputable or it depends on “irrational” factors. However, the decision to behave violently is always going to be influenced, not caused, by a varied group of factors including biological (neurological diseases, endocrine disorders or intoxications), psychological (personality disorders, mental retardation, psychosis and other psychopathic alterations, emotional or mood states, prejudiced convictions, etc.) and social factors (exposition to violent models, violent subculture values, confrontations or situations of intense social crises). In general, these factors behave in a cooperative conjunction and influence the decision-taking process differentially previous to the execution of a violent act.

5.- Infrequency. Despite the current growing sensation that violence is very common, the truth is that it is an unusual, infrequent and rare phenomenon, especially the severe or very severe violence (Krug et al., 2002; Quinsey & Harris, 1998). This does not minimize its importance and does not mean that it is not a motive for great social preoccupation. We shall not confuse these two characteristics. But its low frequency reduces the possibility of its prediction. An earthquake is an infrequent phenomenon, in part, this is the reason for its difficult prediction, but due to its powerful and devastating effect and its catastrophic consequences, it is essential to take preventive measures adjusted in function to the estimated risk of occurrence. Thus, phenomena with very low prevalence rates are practically impossible to predict despite knowing the determinants which produce them (Quinsey & Harris, 1998).

Multicausality and infrequency of violent acts convert the prediction of violence in a difficult task. In addition a third difficulty exists: the lack of specific instruments and techniques for prediction. This has led technicians to take two antagonistic positions. Some consider that violence, because of its complexity, infrequency and multicausality is unpredictable, beyond randomly correct predictions. Others consider that violence is predictable taking into consideration intentionality, heterogeneity and its infrequency. In this second posture, technique proposals have been developed which constitute procedures for violence risk assessment which we will present later on.

One of the keys to the predictive task is precisely delimiting the criterion to be predicted (Hart, 2001), that is the type and characteristics of violence, for example: a) what types of violence are we interested in predicting? b) in which group of subjects or population? and c) for which time interval should the prediction be valid? Edens, Skeem
& Douglas (2006) make reference to the so-called “criterion problem” to describe the variability of the operative dimensions which constitute the phenomenon of interest, such as age (childhood aggression, partner abuse, elderly abuse), context (prison, school, hospital, community, home), the severity (verbal abuse, punches, homicide), or the frequency (mass murder, serial murders, repetitive domestic violence), just to name a few. Due to these numerous dimensions, a wide range of methods for measuring aggression exist (self-reports, criminal records, behavioural observation) and for predicting it (clinical judgement, actuarial designs, psychopathological inventories or of personality, situational/environmental factors). Researchers indicate that the distinction in the operationalization of interpersonal aggression and violence can lead to findings which are markedly divergent with respect to its causes, correlations and consequences, and also that the measure used to register violent incidents will substantially affect the prevalence of the results (Douglas & Ogloff, 2003).

When we refer to any type of prediction, the weather forecast we are so familiar with comes to mind. Do psychologists when predicting violent behaviour do something similar to what meteorologist do? This is a a good analogy. Meteorological predictions are required to be more detailed each time, it is not sufficient to know if it is going to rain but rather we must predict when it is going to rain, where, with what intensity, what its effects will be, etc. The psychologist, especially those working in criminological settings, must also predict antisocial behaviour in a given individual. If an inmate is going to be considered for probation, what is the risk that he/she will break the imposed rules? If he/she is doing a rehabilitation program, what are the probabilities that he/she will abandon it? And what prognosis of the effects of treatment can be expected or what is the existing risk that he/she will reoffend?

At present the most utilized strategy in the prediction of violent behaviour, based on clinical tradition consists of assessing the individual’s dangerousness (Campbell, 1995; Gisbert Calabuig, 1998; Gottfredson, 2006; Maden 2007). In front to this strategy violence risk assessment has been proposed. They both have the same aim but their justification and efficacy distinguish them, as well as the reported advantages for the professionals who compromise their decisions with respect to their ethics and legislation in force. Both approximations will be analyzed in more detail in the next section.

DANGEROUSNESS VS. RISK OF VIOLENCE

Dangerousness, aside from being a judicial concept, is also a common concept which forms part of everyday language and refers to the tendency of an individual to commit violent and dangerous acts (Scott & Resnick, 2006; Mulvey & Lidz, 1998). The concept of dangerousness summarizes, but only with apparent clarity, the idea of the predictor “par excellence” of future violence. It has currently been and is used for this purpose in the penal legislations of most western countries. It has also been the object of controversy in the field of penal law as well as in Criminology and Psychiatry because while for some it is “useful and productive”, for others it is nothing but a “source of problems” (Carrasco & Mazza, 2005). However, it seems that it is still an unquestionable concept in juridical and forensic science (Serrano Gómez, 1974).

Dangerousness is introduced for the first time in the “lombrosian” context of criminology at the end of the XIX century. It is derived from the concept of “temibilitá” proposed by Rafaelle Garofalo (Garrido et al., 2006) according to whom dangerousness is based in the individual’s psychological characteristics and attributes which justify the risk for future violent behaviour. In its original meaning dangerousness made reference to “the constant and active perversity of the delinquent and the quantity of foreseen evilness we should fear on his/her part” (Garofalo, 1893, quoted by Garrido et al. 2006). This initial markedly clinical conception considered dangerousness as a pathological mental state with a constitutional origin. The association between pathology and dangerousness still prevails (although debated) in the psychiatric and psychoanalytical traditions, and we can find an example in the case of sexual violence. This first conception of dangerousness was intimately linked to severe mental disorder and so it prevails.

Due to the development of judicious practice throughout the twentieth century, the concept of dangerousness has lost part of its initial clinical sense and acquired a more neutral, actuarial meaning. Thus, for the distinguished Spanish old lawyer Jiménez de Asúa, dangerousness consisted of the “manifest probability that a subject will become the author of crimes or commit new infraction” (quoted by Carrasco & Mazza, 2005; pp 197). Today, dangerousness is considered to be a legal category by which we know the risk of a person, with or without a criminal history, committing new crimes. During this historical transition, the concept of dangerousness as an
unmodifiable, dispositional attribute linked to mental disorders was substituted by that of “dangerous state” which attends to the variability of this attribute associated to the changes in the delinquent’s mental stability, changes caused by the passage of time, etc. Serrano Gómez (1974) says that “the dangerous state is a situation in which because of dispositional and environmental factors working together, an individual potentially constitutes a being with probabilities of committing a crime, or at least of disturbing the social order established by law”.

In the same way as dangerousness spread to the judicious framework of penal laws, it also appeared in the health field: “for more than 25 years, dangerousness has become a part of the nomenclature of Mental Health due to the fact that legislative institutions use it as a criteria for the hospitalization of the mentally ill” (Monahan & Steadman, 1983; pp.95). Dangerousness has occupied a privileged place in this double professional relationship because of the proximity between justice and health in the problem of violence. For this reason, the assessment of dangerousness has always been an “masterpiece” among psychiatric or psychology professionals who work in criminological contexts.

The belief that “dangerousness” is the cause of violent behaviour has maintained a certain chimera among professionals according to which if the identification of this attribute was “correct”, the security and the prevention of violent recidivism was guaranteed. In some cases it has been this way, but in many other cases two types of errors have been committed. The most serious is called false negative and is that which happens when the presence of dangerousness in a subject is rejected and this subject commits another violent act. The other type of error committed is called false positive and consists of identifying the presence of dangerousness in a subject who, however, does not behave violently in the future. This error has awful consequences for the individual and at the same time important economic costs if, as we are analysing, we are talking about future violent behaviour in delinquents or the mentally ill who, by the identification of the presence of dangerousness, are kept under security measures or in treatment (sometimes psychiatric hospitalization) (Quinsey & Harris, 1998).

What do correct or incorrect violence predictions based on the “diagnosis” of dangerousness depend on? Basically, they depend on the professionals’ experience, the availability of identification techniques and the clarity with which the attribute of dangerousness can be discovered. All these factors are important and they justify the level of correct predictions obtained, which as is proper of the assessment of human psychological attributes, can never reach an accuracy of 100%. However, this conclusion characteristic of traditional clinical thought is incomplete. Epidemiology and actuarial techniques have demonstrated that the level of correct and incorrect dichotomised decisions also depend on the prevalence of the phenomenon to be predicted (Quinsey & Harris, 1998; Douglas & Cox, 1999).

One of the most important limitations of dangerousness as a predictor of violence is its inespecificity. The diagnosis of dangerousness is not useful for distinguishing which type of violence can be executed by the violent subject (except in very evident cases in which dangerousness is linked to a specific pathology such as pedophilia where we obviously deduce that dangerousness is of a sexual type with victims being children). As has already been pointed out, each type of violence has specific risk and protective factors, which is a consideration that is not taken into account when dangerousness is used in the prediction of any type of violence.

As opposed to the latter, risk assessment takes into account the predictive factors in function of the type of violence to be predicted and, this way, the predictive capacity increases considerably. These are the most relevant reasons which have promoted a change in the paradigm on which the prediction of violent behaviour is founded. Prediction experts such as A. Buchanan, J. Steadman, A. Monhanan, J. Webster, W. Quinsey or S. Hart (among the most renowned) consider that the dangerousness argument, with a markedly clinical content, should be complemented with an actuarial foundation, that is, one based on the risk factors and the empirically proven relationship between predictors and criterion (violent behaviour).

Violence risk assessment as an alternative method to the diagnosis of dangerousness in the prediction of violence, takes into account current knowledge regarding the psychology of violence and the role that professionals play in making decisions with respect to the future behaviour of, for example, sexual aggressors or partner abusers. A first assumption in violence risk assessment techniques is that, in general, we cannot predict the risk of any type of violence from the same predictors, but rather each type has its specific risk and protective factors
and, therefore, we must adapt the generic procedures for violence risk prediction to the specific type of violence we want to predict. The second assumption refers to the activity of the psychologist who has to make the prognosis. Predicting the risk for a certain event, violent behaviour, requires making a decision as to whether this problem can happen in the future and to what degree. These decisions should be made taking contrasted protocols into account which are based on empirical knowledge, and not only on expert intuition. We must not lose track of the professional responsibility that technicians assume when, with their decisions, they make predictions regarding issues of such social importance as sexual aggressor recidivism, child abuse and domestic violence and which, in fact, is where these new violence risk assessment techniques are more successfully applied.

Risk can be understood as: “a danger which can happen with a certain probability in the future and whose causes are not completely understood or cannot be controlled in an absolute manner” (Hart, 2001). As opposed to dangerousness, which we have characterized as being a discrete, static and generic variable which helps make decisions of the type (all/nothing) in prognosis, the risk of violence is a continuous, variable and specific construct which allows us to take gradual prognostic decisions regarding future violence. The presence of dangerousness in the individual centres risk control and management strategy in two types of interventions: situational control (hospitalization) and therapeutic treatment of the dangerous subject. Risk assessment increases intervention possibilities as it allows for the adjustment of risk control and minimizing procedures at the individual and contextual levels and therefore, many intervention possibilities adequate to the most probable prognosis are generated.

The application of knowledge about risk factors associated to violence is the foundation for risk assessment. Criminologists and criminal psychologists have extensively researched existing types of violence according to the subjects who execute it, searching for the causes which explain their behaviour for among these we find risk factors. They have also studied which factors have an influence on the reduction or abandonment of criminal activities in order to promote these through therapeutic intervention. At the same time, these factors can also be used as protective factors. Many positive achievements have been reached, and, above all, we dispose of lists of risk and protective factors empirically associated to the most severe types of violence. Beside this distinction between risk and protective factors, if we focus on the nature of violence, we can distinguish between static and dynamic factors depending on whether they are modifiable or not during the course of the aggressor’s future life.

The lists of violence risk factors are very extensive, some being common for certain types of violence and others being specific for each type (Krug et al., 2002; Andrews & Bonta, 2003). Research offers a fairly consolidated view with respect to these factors and their dynamics, and the predictive and preventive facets of violence risk assessment are nurtured by this information. In table 1 different examples of these risk factors can be seen.

What does violent behaviour risk assessment entail? The assessment of violence risk is a procedure for predicting the probability of the appearance of a given violent behaviour. It is possible to predict the risk for violent behaviour in a more precise manner than using one-dimensional predictions or chance alone. We can predict the risk of any given choice if we know its determinant factors and we have information about previous choices and their antecedents. This is true in the field of penal, criminological and psychiatric records as accumulated data exist which can offer this type of information. In order for successful predictions to take place, we would be interested in information about the following aspects: what types of violent behaviour is occurring?, what’s their frequency?, under what conditions or scenarios?, what happened afterwards?, etc. Intensive strategies for psychological assessment, actuarial procedures based on psychological tests and other strategies (clinical, epidemiological…) have been developed for identifying the risk of certain violent behaviours, although an important lack of precision still remains in such predictions. Among the estimations of the risk for more severe forms of violence in need of appropriate prediction procedures due to the seriousness of their consequences, we find the following: suicide risk, homicide perpetrated by minors, different kinds of sexual aggression, domestic and family violence and, naturally, violence in general (Elbogen, 2002).

Lastly, we would like to point out an important consequence derived from the change in the paradigm regarding dangerousness and risk assessment. This refers to risk management. For anyone who receives a “high or imminent” risk for violence prognosis, this information...
should be an incentive to urgently seek measures in order to avoid the confirmation of this prognosis (Moran et al. 2001). The minimization of the risk for violence is the step which follows the risk assessment. This new technical approach is called risk management and it is intimately related to assessment. Risk management is based on the comprehension of why the subject chose to behave violently in the past, on determining if the risk/protective factors which influenced the decision are still present and will be in the future and in promoting those factors which could lead them to make non-violent decisions as alternative conflict resolution strategies. Risk management makes reference to the application of the available knowledge generated in studies on risk assessment in order to minimize the current frequency of violent and delinquent behaviours as well as their effects, and is a field where experts should develop new intervention strategies in their fight against violent behaviour (Douglas, Cox & Webster, 1999; Douglas, Ogloff & Hart, 2003; Björkdahl, Olsson & Palmstierna, 2006).

PROCEDURES AND TECHNIQUES FOR VIOLENCE PREDICTION

We have described the violence risk assessment procedures as an alternative to classical clinical assessment of dangerousness in the prediction of violence. This change came accompanied by a very outstanding development in the design and fine-tuning of specific instruments aimed at helping professionals in this task. These instruments were first emerged in the context of the prediction of violence and recidivism in patients and inmates suffering from severe mental disorders in Canada. Later, they were extended to deal with the prediction of other types of violence and so instruments for predicting sexual violence, partner and domestic abuse emerged, and they were adopted by other countries such as the United States, Great Britain, Sweden, Norway, Germany, the Netherlands, etc. (Hilton & Harris, 2006). New instruments for assessing violence risk in youths and adolescents, prison inmates and also for predicting violence in the workplace have appeared. Table 2 shows an extensive list of diverse prediction instruments, many of which have not yet been adapted to our context. In Spain the Grupo de Estudios Avanzados en Violencia (GEAV) at the University of Barcelona has adapted to Spanish language three of these instruments, the HCR-20, the SVR-20 and the SARA, which are useful to respectively predict serious physical violence in psychiatric patients and inmates, sexual violence and partner abuse. Other teams and institutions have adapted other instruments, for example the VRAG (Violence Risk Appraisal Guide, by Dr. Graña’s research team at the Universidad Complutense of Madrid), the PCL-R and its derived scales (with different versions by several teams in Spain, among these the one headed by Dr. R. Torrubia at the Autonomous University of Barcelona and by Dr. V. Garrido at the University of Valencia), or the SAVRY (Scale for Assessment of Violence Risk in Youths, adapted by E. Hilzman at the Centre for legal studies and specialized formation at the Generalitat de Catalunya). In short, it can be said that in the last 20 years the development and spreading of these techniques has significantly improved the task of violence prediction performed by professionals who work in penitentiary and mental health settings (Esbec, 2003).

Among mental health professionals and criminology experts, risk assessment, and even of dangerousness, is an individual assessment process which begins with the recollection of the individual’s relevant data and finalizes with taking decisions regarding his/her future behaviour. The gathering of data for risk assessment includes personal interviews, standardized psychological and medical assessment, a review of socio-sanitary and judicial records and collateral recollection of information (Webster et al., 1997). In this sense, the information used for making decisions about dangerousness and about the risk of violence is not very different. What is different is the organization and determination of which information is necessary for assessing the risk of violence (it will specifically vary for each type), the weighing of each risk

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<th>TABLE 1</th>
<th>some risk factors, static and dynamic, classified according to the type of violence to which they are associated</th>
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<tbody>
<tr>
<td><strong>Sexual violence</strong></td>
<td><strong>Partner violence</strong></td>
</tr>
<tr>
<td>* Alcohol consumption * Emotional beliefs about sexual relations</td>
<td>* Jealousy * Alcohol consumption</td>
</tr>
<tr>
<td>* Physical violence history</td>
<td>* Breach of restraining orders</td>
</tr>
<tr>
<td>Static</td>
<td>* Sexual abuse suffered in childhood</td>
</tr>
<tr>
<td></td>
<td>* Previous violence history</td>
</tr>
<tr>
<td>Dynamic</td>
<td>* Alcohol consumption</td>
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<td></td>
<td>* Emotional beliefs about sexual relations</td>
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<td></td>
<td>* Machista attitudes</td>
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<td>* Alcohol consumption</td>
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factor and the relationship norms of the assessments performed which define the results of the same. This process, as we will see, can be performed by the “inaccessible” mind of an expert, the cold calculations of a computer which only applies protocol, or the professional who is guided and helped by decision-taking protocols.

Let us take a very brief look at some of the details of each of these procedures and techniques for violence prediction. As well, we will mention some of the main risk assessment instruments which are published and available for professional use. All these have many elements in common as they help in the decision-making process. Any decision making process is carried out based on data obtained using different procedures, the combination of these and the rules which determine the decision to be made. This way of proceeding is similar in all risk assessment techniques but at the same time it is what distinguishes them. There are three great procedures: non-structured clinical assessment, actuarial assessment and structured clinical assessment (Hart, 2001).

**Non-structured clinical assessment.** It consists of the application of traditional clinical assessment and prognostic resources for the prediction of violent behaviour. It has been generalized based on dangerousness diagnostic techniques, being understood as a pathological state of the subject (Gisbert-Calabuig, 1998). It is characterized for not having “explicit” protocols or rules beyond those of the clinical expert. In this procedure we can include objective assessment instruments such as tests or other objective information derived from history records and others, but the data obtained are processed without following any known explicit rule. The main characteristic in this procedure is the freedom of criterion with which each professional approaches the problem of predicting risk in function of his/her formation, personal preferences, professional habits and the nature of demands.

This procedure presents a notable difficulty in finding empirical and systematic justifications as it has low inter-judge agreement levels, little precision and a weak theoretical justification (Buchanan, 1999; Elbogen, 2002; McMillan et al. 2004). The predictions proposed using this method are obtained mainly on the basis of the professional’s “contrasted experience” (Maden, 2007).

The certain loss of prestige of these techniques comes from the difficulty, or sometimes the impossibility, of knowing the key elements which made the clinician take a certain decision, for example considering the release of a patient with an acute mental disorder. This lack of transparency, which many times has more do with the method than with the clinician’s willpower, has been greatly criticized as it does not permit the contrast of the reliability of the decision using careful replication. As we will see later, this is an obstacle which has been overcome by structured or actuarial procedures, especially by the so-called “risk assessment guides” (Andres Pueyo & Redondo, 2004).

**Actuarial assessment.** It is essentially characterized by a careful and detailed register of all the relevant data of an individual’s personal history, especially those facts empirically related to the behaviour or criterion which is the object of prediction. This is why it is described as actuarial, as the term actuary etymologically means to register previous information in great detail in order to make risk assessments. Besides the in-depth register of relevant information, actuarial procedures also involve an adequate deliberation (also obtained empirically) regarding the importance of each piece of information using mathematical combination rules. These rules permit us to obtain a certain probability score which reflects, with great accuracy, the risk that what we want to predict will happen (Hart, 1997; Quinsey & Harris, 1998).

Actuaries predict the future based on one only presupposition according to which the future probability of something happening depends on the weighted combination of the factors which determined their appearance in the past (Meehl, 1954; Grove et al. 2000). There are no theoretical, causal or deterministic models which explain the reason for the behaviour as they are not needed for actuarial prediction. The future is a repetition of the past. It is only of interest to know the probability of something happening in the future, not the why, how or where it happens, only the probability of it happening. If history tells us that the presence of psychopathy and childhood behavioural problems are antecedents for antisocial behaviour in adulthood (Simonoff, 2004) we could predict the increase in the risk of violence in a subject who presents both facts in his personal biography.

From the mid-eighties, multiple actuarial instruments for risk assessment have been developed. Despite not having been generally extended, at present some well-contrasted instruments are available. We would like to emphasize among them the VRAG (Quinsey et al. 1998), the STATIC99 (Hanson, 1999), the ODARA (Hilton et al.
<table>
<thead>
<tr>
<th>Guide or Protocol</th>
<th>Predictors</th>
<th>Criteria and applications</th>
<th>Refer.</th>
<th>Available in Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA Dangerous Assessment</td>
<td>Specific risk factors for uxoricide</td>
<td>Risk of partner homicide</td>
<td>Campbell, 1995</td>
<td>Yes, pilot adaptation GEAV-UB</td>
</tr>
<tr>
<td>ODARA Ontario Domestic Assessment Risk Scale</td>
<td>13 domestic violence risk factors</td>
<td>Partner abuse within the family</td>
<td>Hilton &amp; Harris, 2004</td>
<td>Yes, pilot adaptation GEAV-UB</td>
</tr>
<tr>
<td>VRAG Violent Risk Appraisal Guide</td>
<td>Items of personality development, history of violent and non-violent behaviour. Includes PCL-R.</td>
<td>Predicts, for a 7-10 year interval, the risk of violent behaviour in mental patients.</td>
<td>Quinsey, Harris, Rice &amp; Cormier (1998)</td>
<td>Yes, experimental adaptation UCM-Forensic Psychology</td>
</tr>
<tr>
<td>SORAG Sex Offender Risk Appraisal Guide</td>
<td>Items of personality development, history of abnormal behaviour and sexual preferences and sexual deviant behavior.</td>
<td>Predicts, for a 7-10 year interval, the risk of sexual violence.</td>
<td>Quinsey, Harris, Rice &amp; Cormier (1998)</td>
<td>No Spanish adaptation</td>
</tr>
<tr>
<td>SAVRY Structured Assessment of Violence Risk in Youth</td>
<td>20 Risk factors, similar to the HCR-20 and presented in a single instrument in a protocolized guide format</td>
<td>Severe violence in young adolescents</td>
<td>Borum et al. 2003.</td>
<td>Professional adaptation in catalán exists E. Hilterman CEIFE</td>
</tr>
<tr>
<td>PCL Psychopathy Check List</td>
<td>Actuarial clinical procedure, of 20 items (variable) of criminal history and personality variables. There are different versions for specific age groups.</td>
<td>Violence in general especially that associated to personality disorders</td>
<td>R.Hare &amp; otros</td>
<td>Available Spanish adaptations Dr. Torrubia UAB. Dr. Garrido UV Dr. Luengo USC</td>
</tr>
<tr>
<td>COVR Classification of Violence Risk</td>
<td>Actuarial protocol of risk factors selected by the ICT method.</td>
<td>Severe physical violence in psychiatric patients</td>
<td>Manahan, Steadmany Appelbaum</td>
<td>Not available in Spain</td>
</tr>
</tbody>
</table>
Actuarial procedures apply the rules discovered in group studies on individuals and naturally the risk of making a mistake is directly related to the inter-subject variability of the groups. The greater the heterogeneity of the individuals within a group or class, the more inadequate the application of the actuarial rules on each individual will be. This, which is true of clinical settings where the individualization of treatment is aspired to, must be complied with in the judicial framework where individuality prevails in an outstanding manner in the application of laws. Actuarial assessments are actually not individual assessments but rather group generalizations applied to individuals and this is perhaps the most important limitation of the procedure.

**Assessment using structured clinical judgement.** We can briefly define this technique as a mixed clinical-actuarial assessment. It requires numerous decisions from the assessor, based on expert knowledge about violence and its risk factors, helped by “assessment guides” whose structure comes from actuarial analyses and are designed using an explicit and fixed series of identified and known risk factors. These guides specify the manner and the way of gathering and collecting information which will later be useful for decision taking. However, it does not generally introduce restrictions or orientations regarding the actual decision-taking process (that do appear in actuarial procedures) or the way of summarizing and communicating the obtained results and decisions.

In general these guides of structured judgement, which include the minimum risk and protective factors which have to be assessed for each type of violence and population group, are the most useful for violence risk assessment because they help to avoid the more habitual prediction errors. Among these, they help to avoid oversights, as they assure that professionals check each and every one of the essential areas which have to be assessed for predicting the risk of a certain kind of violence. They also avoid clinician biases in decisions such as estimating the rise or fall in function of the beliefs about the prevalence of the type of violence we want to predict; they avoid being guided by illusory correlations or concentrate only on notable indices.

The same as with actuarial instruments, the guides of structured judgement have multiplied in the last 15 years. Among the most outstanding we find the HCR-20 family (SVR-20, SARA, SAVRY, EARL-B, etc.) which emerged in Canada around the work of D. Webster and S. Hart. The PCL-R family (PCL-SV and PCL-YV) initially developed by R. Hare and other guides such as those of L. Andrews and J. Bonta or of J. Campbell are specific for the prediction of uxoricide (see table 2).

In sum, risk assessment procedures which we have called “guides” as is the case of the HCR-20, are tools at the service of professionals and do not substitute these in decisions taking. The structure imposed by the assessment protocol especially affects the recollection and assessment of the risk factors which compose the guides, that is, it affects the data which we “necessarily” have to identify. Decisions for estimating risk and future plans for its reduction are left in the hands of technicians. Final decisions are up to the professional, not to protocol.

It has been said that the usefulness of risk prediction for violent behaviour is fundamentally the avoidance of it happening. In the most immediate way its specific objectives would be the following:

- **a)** to guide the intervention by professionals in the tasks of prediction and not leave up to their judgement the procedure of risk assessment, because this method has been proved to be unreliable, of doubtful and irrefutable validity.
- **b)** improve the consistency of decisions when taking into consideration the collection of relevant and significant data referring to the subject’s case history, of the clinical state and situational variables (risk/protection factors) which surround the subject whose future behaviour is to be predicted.
- **c)** improve the transparency of decisions as we have a register of the different types of steps which offer transparency in the decision and final recommendations.
- **d)** to protect the rights of the clients and users, as the decisions, sometimes useful and correct but sometimes not, can be analyzed in the light of the rights which project the target group (whether victim or aggressor).

Following these general orientations, it is possible to state that violence risk predictions, performed by the described rigorous procedures, are perfectly comparable with regards to quality and possibilities to those in other recognized professional areas which are useful, such as meteorological prediction, predictions in civil engineering, sociological or economic predictions. The technical rigour which has been defended here considerably increases the efficacy of violence risk assessments by psychology professionals, widening the repertoire of possibilities for intervention in risk management and the prevention of
violence and its consequences (Doyle & Dolan, 2002; Tëngstrom et al. 2006).

CONCLUSIONS
The professional actuality of Psychology applied to the problems of delinquency has been extended along with demands related to violence in its different forms. In this context, the necessity of violence prevention has brought to the front the necessity of having available techniques for predicting violence with greater efficacy than the traditional dangerousness assessment techniques characteristic of forensic and penitentiary settings. The advances in the knowledge of violence and its forms, and above all, the identification of the risk factors which promote it, have permitted the introduction of new procedures. These have been generalized very rapidly and in the last 15 years have been transferred from limited forensic psychiatry and criminology settings to professional practice in clinical psychology, social services and judicial-penal settings.

As has been described, the new risk assessment techniques which follow structured clinical judgement and which are materialized in the form of risk assessment guides have improved the predictive efficacy of the prognosis of violence in penitentiary, mental patient, domestic aggressor and partner abuser populations and in the labour and educational fields. Together with this increase in predictive efficacy, structured guides permit the design of minimization and violence risk management procedures which is as important as future prediction itself. At last, it is convenient to highlight that these techniques help in decision taking and facilitate the clarity and transparency of expert judgement, which frequently is the object of dispute due to the consequences that these kinds of decisions entail. At present, we have available several guides adapted to our Spanish socio-judicial setting and others will soon be available, standardizing professional resources with those of other more advanced countries in the use of these prediction procedures.

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