International Journal of Business, Human and Social Sciences
ISSN: 2517-9411
Vol:9, No:6, 2015

Psychopathic Disorders and Judges Sentencing: Can Neurosciences Change This Aggravating Factor in a Mitigating Factor?

Kevin Moustapha

***Abstract*—**Psychopathic disorders are taking an important part in judge sentencing, especially in Canada. First, we will see how this phenomenon can be illustrated by the high proportion of psychopath offenders incarcerated in North American prisons. Many decisions in Canadians courtrooms seem to point out that psychopathy is often used as a strong argument by the judges to preserve public safety. The fact that psychopathy is often associated with violence, recklessness and recidivism, could explain why many judges consider psychopathic disorders as an aggravating factor. Generally, the judge reasoning is based on Article 753 of Canadian Criminal Code related to dangerous offenders, which is used for individuals who show a pattern of repetitive and persistent aggressive behaviour. Then we will show how, with cognitive neurosciences, the psychopath's situation in courtrooms would probably change. Cerebral imaging and news data provided by the neurosciences show that emotional and volitional functions in psychopath's brains are impaired. Understanding these new issues could enable some judges to recognize psychopathic disorders as a mitigating factor. Finally, two important questions ought to be raised in this article: can exploring psychopaths 'brains really change the judge sentencing in Canadian courtrooms? If yes, can judges consider psychopathy more as a mitigating factor than an aggravating factor?

***Keywords*—**Criminal law, judges sentencing, neurosciences, psychopathy.

I. Introduction

PSYCHOPA0THY is perceived today as being «the most important concept in the criminal justice system» and as «the most important legal notion of the early 21th century [1]». The explosion of research related to psychopathy seems to perfectly illustrate this trend. In our society the psychopath represents 1% of the total population and 15% of the prison-carceral population [2]. Traditionally, many studies tend to focus on links between insanity defense and psychopathy. That is why our purpose in this article is to analyze psychopathic disorders in the scope of judges sentencing in Canada. Indeed, in every Canadian case related to dangerous offenders, judges must balance between fairness and protection of the individual's rights of the accused and protection of society from dangerous predators who may commit future acts of physical or sexual violence. As a consequence, psychopathy is considered as one of the most interesting discussions in criminal responsibility. The psychopathy is often associated to violence, dangerousness and public safety [3]. Personality traits of psychopaths, their aggressiveness and the threat that they represent for society can explain why many scholars consider psychopathic disorders as an aggravating factor. Indeed, many decisions in Canadians and Americans courtrooms point out the fact that psychopathy is often used as an aggravating factor by the judges to preserve public safety. However, with neurosciences, the psychopath's situation in courtrooms will certainly change. The neurosciences ability to explore psychopaths' brains can improve the judge's point of view about this particular disorder. Increasingly, cerebral imaging and news data provided by the neurosciences show that emotional and volitional functions in psychopath's brains are impaired [4]. These data should influence judges sentencing in next few years and possibly assimilate psychopathic disorders to a mitigating factor.

Firstly, we will analyze why psychopathy is often considered as an aggravating factor in Canadian courtrooms. Then, we will explain how neurosciences impact judges' decisions-making in criminal cases with psychopathy.

Kevin Moustapha is currently working as Ph.D candidate and lecturer at the University of Montreal, Canada (e-mail: kevin.moustapha@umontreal.ca).

II. Psychopathic Disorders as an Aggravating Factor in Canadian Courtrooms

A. Definition of Psychopathy

The concept of psychopathy has been built through a psychiatric, a psychological, and a sociological perspective. From the early 19TH century, a French physician, Philippe Pinel (1745-1826), mentioned for the first time psychopath's symptoms, which he called "mania without delirium [5]". A few years later, Esquirol will enrich the work initiated by Pinel with another concept: the monomania. For other scientists like Pritchard, psychopathy is not insanity but only a moral alienation. He analyzes psychopathic disorders with a moral point of view. Benjamin Rush, one of the first phrenologists, considers that psychopathy can be explained by a biological cause. For him, an abnormality in the brain prevents psychopaths to conform their behaviour to the law. Finally, Birnbaum a German scientific argued that psychopathy have an important link with social environment, and Lombroso, one of the founding fathers of the criminology, said that psychopaths are « born criminals ».

Today, scientists, psychiatrists, criminologists and also psychologists use the psychopathy checklist to assess psychopathy. In recent research and clinical practice, Robert D. Hare's Psychopathy Checklist Revised (PCL-R) [11] is the

psycho-diagnostic tool most commonly used to assess psychopathy in the North America.

Furthermore, some international organizations specialized in mental disorders as American Psychiatric Association (APA) and World Health Organisation (WHO). APA, with his Diagnostic and statistical manual of mental disorders (DSM), use the term antisocial personality disorder to refer to psychopathy [6]. WHO uses another common term, which is dissocial personality disorder [7]. Overall, both, antisocial personality disorder and dissocial personality disorder have the same criteria to describe psychopathy. These criteria are generally linked to lack of empathy, difficulties in interpersonal relationships and impulsiveness.

B. Psychopathy and Severity of the Judges

Every day, judges have to facing some difficult decisions [8]. This is truer, particularly in criminal law, when we analyze judges sentencing related to dangerous offenders. In this context, judges must balance issues of fairness and protection of the individual's rights of the accused [9] with protection of society from dangerous predators who may commit future acts of physical or sexual violence [10]. Increasingly, psychopathic disorders are taking an important part in judge sentencing especially in Canada and in United States. This phenomenon can be illustrated by the high proportion of psychopath offenders incarcerated in prisons in North America. Thus, whereas psychopaths represent only 1% of the general male adult population, they make up between 15% and 25% of the males incarcerated in North America prison system [11]. This situation can be explained by the severity of the judges in sentencing related to psychopathic offenders. In North America, especially in Canada, some decisions in the last decade show the particular severity of the judges with psychopaths [12]. Indeed, Canadian courts take generally psychopathy into consideration during the sentencing phase, mainly as an aggravating factor [13]. The Canadian judges consider psychopaths more dangerous than the others because they will probably reoffend. They justify their reasoning with article 753(1) of Canadian criminal code related to dangerous offenders. This article specifies that "the court shall find the offender to be a dangerous offender if it is satisfied that the offense for which the offender has been convicted is a serious personal injury offence […] and the offender constitutes a threat to the life, safety or physical or mental well-being of other persons on the basis of evidence establishing :

(i) a pattern of repetitive behaviour by the offender, of which the offence for which he or she has been convicted forms a part, showing a failure to restrain his or her behaviour and a likelihood of causing death or injury to others persons, or inflicting severe psychological damage on other persons, through failure in the future to restrain his or her behaviour,
(ii) a pattern of persistent aggressive behaviour by the offender, of which the offence for which he or she has been convicted forms a part showing a substantial degree of indifference on the part of the offender respecting the reasonably foreseeable consequences to others persons of his or her behaviour or,
(iii) any behaviour by the offender, associated with the offence for which he or she has been convicted, that is of such a brutal nature as to compel the conclusion that the offender's behaviour in the future is unlikely to be inhibited by normal standards of behavioural restraint";

This article seems perfectly describe psychopath behaviour through many important keywords as recidivism ("a pattern of repetitive behaviour" or "a pattern of persistent aggressive behaviour") and dangerousness which have obviously a link with public safety ("the offender constitutes a threat to the life, safety or physical or mental well-being of other persons", or "the offender's behaviour in the future is unlikely to be inhibited by normal standards of behavioural restraint"). The keywords quoted previously (recidivism, public safety) illustrate not only the Canadian criminal Code requirements but also the willing of the judges to ensure the protection of the public. For some scholars, psychopathy is clearly used by the judges to justify dangerous offender status [14]. Indeed, some sentencing decisions related to psychopathy in Canada show clearly that this disorder is often considered as an aggravating factor in courtrooms.

The first example is the decision R. v. A.N. (2002), where Justice Wilson point out recidivism of psychopaths to explain the dangerous offender status: "Mr. A.N. has a serious, long standing addiction to crack cocaine. He has poly drug dependencies. He is diagnosed as having a severe anti-social personality disorder. According to the PCLR, he meets the cut-off for the diagnosis of psychopathy. His actuarial studies place him at high risk to reoffend. The VRAG places him in the 7th out of possible 9 bins, and suggests that actuarially the prediction for the risk of violent recidivism is 64% in the next ten years. The LSIR predicts the likelihood of recidivism, either violently, or non-violently, as 48% for the one year following release (para. 253)" [15].

In another decision, R v. W.T.W. (1997), Justice Callaghan justified dangerous offender status for a psychopath by the necessity to ensure public safety and preserve the security of the community: "W.T.W. has a very severe personality disorder. He is very clearly a psychopath. In my view, based on the material before me, I have concluded that there is no real possibility that future therapeutic interventions will be effective and that, if released, he would continue as a sadistic sexual deviant by committing further violent sexual offences. The paramount consideration must be protection of the public, and the only way of ensuring that the public is protected is to remove this offender from society. For the reasons given, it follows that an indeterminate sentence must be imposed (paras 38-39) [16]".

According to the Canadian judges, psychopathy is clearly an important aggravating factor. Moreover, their perception of psychopathic disorders is in accordance with Canadian criminal Code and article 753 related to dangerous offender status. Obviously, the increasing sentences given to psychopath's offender have a link with recidivism risk and the necessity to ensure public safety. Recidivism risk [17] is

generally associated to poor capacity of psychopaths to restrain their antisocial behaviour and to their criminal versatility. The necessity to ensure public safety is therefore the main cause of the judges' severity. By the way, they expect to reassure the population and maintain public confidence in the justice. However, the most important handicap for psychopaths in courtrooms is the unavailability of a perfect treatment [18]. Indeed, no specialist can predict with certainty the treatment outcome, because there is no treatment program, which can ensure that psychopaths will not reoffend [19]. Even if some experts have tried to apply an adaptive treatment to them, no treatment program respects perfectly the principles of a successful rehabilitation. As a result, it remains always a doubt on psychopath's capacity to change his violent behaviour after serving his sentence.

III. The Impact of Neurosciences on Judges Decisions-Making in Criminal Cases with Psychopathy

Richard Dawkins for instance argued, "concepts such as responsibility and punishment have been superseded because human behaviour is determined by physiology, heredity, and the environment [20]". He added also "if we look at the nervous system from a scientific perspective, we have to acknowledge that lawsuits about the guilt or the diminished responsibility of human beings are just as absurd as lawsuits against cars [21]". In this context, many scientists, psychologists and psychiatrists in Canada or United States claim that we have the possibility to improve psychopath's situation with the news scientific data provided by cognitive neurosciences. By opening dialogue with other disciplines, criminal specialists think that we will take a fresh and critical look at the law and therefore adapt it to the news legal challenges. In this context, cognitive neurosciences are one of the most interesting and fascinating tool use to improve criminal law, more particularly, in sentencing matter. Indeed, some scholars criticize currents tools as PCL-R [22] and recognize their limitations whereas cognitive neuroscience with his specificity seems bring innovative solutions to scientists and judges [23].

Explaining what exactly are cognitive neuroscience, O. Carter Snead bring us an interesting definition: cognitive neuroscience «is an investigational field that seeks to understand how human sensory system, motor systems, attention, memory language, higher cognitive functions, emotions and even consciousness arise from the structure and function of the brain [24]». The author adds that the «fundamental premise of cognitive neuroscience is that all aspects of the mind [and moral decisions] are ultimately reducible to the structure and function of the brain [25]». With these definitions, we clearly understand that the brain is at the basis of all studies related to cognitive neuroscience. However, a question can rise when we talk about cognitive neuroscience: which tools are precisely used to discover secrets and mystery of the brains?

Many techniques are used to study the areas damaged in the brains. One can quote the magnetic resonance imaging ("MRI") or the computed tomography ("CT"). But the most widely technique used is the functional magnetic resonance imaging ("fMRI"). FMRI «scans detect changes in blood flow in the brain occurring in response to particular mental tasks in which the subject is engaged. When one brain region is more active than other area, the engaged part of the brain draws more oxygen from the body. The fMRI scanner subsequently detects the changes in blood oxygenation levels, as various brain regions are more or less active and accordingly demanding more or less oxygen. Through an exceptionally complex process, the fMRI machine interprets these variations in blood flow as indirect indicators of neural activity». Tools provided by neurosciences are therefore the perfect indicator to understand brain structure, and more specifically psychopath's brains. Because of an important analyze of these brains structures, lawmakers and judges have increasingly changed their vision on this particular offender.

In the first subpart, we will see why exactly these tools provided by cognitive neurosciences are more useful for psychopaths in courtrooms. Then, it will be interesting to know which areas are impaired in their brains and which consequences that can entail. In the last part, we will see why this aggravating factor should be considered increasingly as a mitigating factor in Canadian courtrooms, regarding cognitive neurosciences obviously, but also American jurisprudence and Canadian charter of rights and freedoms.

A. The Psychopathic Disorders Enlightened by Cognitive Neurosciences

The main argument for using cognitive neuroscience in criminal law for psychopaths is that it can show with more precision areas damaged in their brains. Some scholars believe that it is even a novel source of legal evidence for them. Indeed, recent neuroimaging of their brains show abnormalities, which impairs their emotional and volitional faculties [26]. What are precisely areas impaired in psychopaths brains, and which areas are necessary for using faculties related to emotion and volition? To answer to this question, we have to focus our reflection on scientific dichotomy between emotion and volition, but also on the brains areas imply in the psychopath behaviour.

Emotional difficulties of psychopaths are traditionally explained by an important lack of empathy and fearlessness. Neuroscientists as Adrian Raine [27] associate the lack of empathy of antisocial persons to dysfunctions of the ventromedial prefrontal cortex and amygdala. The ventromedial prefrontal cortex (vmPFC) is a part of the prefrontal cortex of the human brain. It is located in the frontal lobe at the bottom of the cerebral hemispheres and plays an essential role in the inhibition of emotional, and in the process of decision-making. He is involved in emotional and motivational processes. Activation of the vmPFC area is associated with the successful mastery of emotional responses. Patients with vmPFC lesions have defects in both the emotional response and regulation of emotions. The second important area affected in psychopath's brains is the amygdala. The amygdala is one of the main components of the limbic system, which play a key role in various emotions such

as aggression, pleasure, and memory formation but especially fear [28]. Indeed, the amygdala is responsible for preventing any external threat by sending threatening stimuli to the body. The main risk factor associated with the amygdala deficit is the absence of fear. Robert J. Blair is the initiator of a tool called violence inhibitory mechanism (VIM) [29]. This mechanism serves to detect the response of individuals to distress, pain or fear. This tool aims to detect the probability that we avoid actions or behaviours that could harm the others. If any suffering or distress was caused by a violent act or event, the VIM is then triggered in the individual author of such violence. Blair makes a comparison between normal people and psychopaths, analyzing their reactions to the VIM. He explains that the propensity of psychopaths to adopt antisocial behaviour is partly explained by VIM, which is not functional. He says for example that psychopaths in prison or children with psychopathic tendencies are less receptive to the distress that other non-psychopathic individuals. According to him, psychopaths have great difficulty to perceive and understand the feelings of sadness and fear. Blair thinks that there is a genetic contribution to psychopathy [30]. This genetic contribution is directly responsible of this emotional dysfunction detected by the inhibition violence mechanism. Blair findings seems confirm Raine suggestions saying that this lack of emotion shown by the VIM arises exclusively from malfunctions in the amygdala and ventromedial prefrontal cortex. However, emotion is not the only one entity affected in psychopath behaviour. The volition is also disturbed by his brain dysfunctions. Indeed, the dorsolateral prefrontal cortex (DLPFC) [31], which is involved in the development of complex cognitive processes, is impaired in psychopath's brain. A dysfunction in this brain region causes a volitional deficit. The individual is unable to reach effectively his long-term goals. This is particularly evident by the fact that he is unable to plan long-term projects or to have a professional life. Finally, the last important brain area impaired which can be associated to psychopathy is the anterior cingulate cortex. The anterior cingulate cortex (ACC) is involved in the processing of emotional information and the regulation of emotional responses. It plays also a major role in the interpretation of emotional signals that maintain effective interpersonal communication. Inhibition is one of the major factors behind the inability of psychopaths to contain their aggressive and violent temper. This inability to exercise restraint in their life makes them very unpredictable and dangerous. The anterior cingulate lesions clearly affect their ability to contain their antisocial impulses.

Psychopaths are therefore unable to integrate some information, keep them in memory and then use them appropriately in order to not harm the others. These news data provided by the cognitive neurosciences show that brain areas damaged in their brains play an important role in psychopathic disorders. These observations of many clinicians and forensic experts confirm psychopath's difficulties to understand the requirements of the law and grasp moral reasons. In spite of these forensic observations, the law continue to assess psychopaths only from a behavioural point of view, disregarding years of clinical observation. Nevertheless, the rise of neurosciences in the last decade has changed traditional perception of criminal law more particularly in judge sentencing matter. Increasingly, courts are using information providing by neuroscientists in decisions making related to dangerous offenders or more specifically psychopaths.

B. Psychopathic Disorders as New Mitigating Factors in Canadian Courtrooms?

According to many scientists but also jurists, these news data have changed the criminal law landscape. Canada and United States are some examples of this evolution. Indeed, in these countries, courts are using increasingly information providing by neuroscientists in decision-making related to dangerous offenders or more specifically psychopaths (even if some jurisdictions have already used tools as psychopathy-checklist in the past). Thus, in many cases related to psychopaths, these data are increasingly used by the judges as aggravating factor or mitigating factor in decision-making [32]. However, many decisions in Canada and United States point out the fact that neuroimaging of psychopath's brain is a tool mainly used by the courts as an aggravating factor [33]. Indeed, although technology provide by cognitive neuroscience seems show abnormalities in psychopath's brains, for some judges these information confirm dangerousness of these individuals and threat that they represent for society [34]. Recidivism and public safety seem explain in many decisions why this apparent mitigating factor (psychopath's determinism which can be explain by emotional and volitional disorders) is considered by many judges as an important aggravating factor. Some scholars have called this phenomenon the double-edge sword. Double edge sword, because judges reasoning related to psychopath in sentencing matter implies to led a reflection on two opposite theories in criminal law: retributive justice and utilitarian justice. Indeed, with retributive justice, the main idea is that everyone has the just dessert for his criminal acts whereas utilitarian theory of punishment implies more to ensure public safety and promote social welfare. Thus, the former could indicate that psychopathic disorder must be considered as a mitigating factor regarding impairments in psychopath's brains. On the contrary, the latter suggests that criminal law and more particularly judges must take into account dysfunctions in psychopath's brain in order to prevent recidivism and reinforce public safety. As a consequence, this biomedical evidence illustrates psychopath's dangerousness and justifies pragmatical considerations, which constrain the judges to increase sentence. However, the double-edge sword's phenomenon is not limited to judge sentencing. Indeed, biomedical evidence related to psychopaths has also an important impact on juror's decisions in the courts [35]. Besides, some scholars point out that "many jurors consider evidence of a defendant's mental illness an aggravating circumstance, even when the defense team presents such evidence as mitigating [36]".

Despite the current trend of the judges or the jurors in Canada and United States to use neuroimaging of psychopath

as an aggravating factor, evidence of psychopathy (provided by neuroscientists' tools as fMRI) is increasingly employed as a mitigating factor in courtrooms. Globally, reduce judgments are justified by emotional and volitional disorders associated to psychopathy. Thus, reduced sentences are generally linked to lack of empathy or lack of control. While psychopathy was seen as an aggravating factor overall, the biomechanical evidence have significantly "reduced the extent to which psychopathy was rated as aggravating and significantly reduced sentencing (from 13.93 years to 12.83 years)". Indeed, many cases implying psychopaths show increasingly a new ability of defense counsels to raise brain injuries or neurodevelopmental issues at trial to decrease sentences for individuals labeled psychopaths. The most important illustration of this tendency is the case State vs Brian Dugan in United States where the defense attorney presents a biomedical evidence to prevent an increasing sentence for his client: "The brain of a psychopath is not a normal brain … and that's based on the behavior and emotional disability that they suffer. This is going to be important science down the road. It's not some kind of voodoo or just showing color slides (of Dugan's brain) to try to mislead the jury". Beyond this famous case, which has had important media coverage, biomedical evidence has really supplemented traditional evidence coming from psychiatry and psychology in United States, in order to avoid death penalty application for psychopaths. For some scholars, the successful defense in death penalty cases including individuals labeled psychopaths, is that consists of describing psychopathy as a mental illness, disorder, or condition and using the genotyping evidence in conjunction with a myriad of witnesses to build a story of an individual who has always been afflicted with this problem [37]. This way to submit a mitigating factor to the judges by defense attorney seems increase the chances for psychopaths to eschew the death penalty. The first case implying biomedical evidence in a death penalty case in United States was State vs Mobley in 1994. However, at this time Americans courts were not ready to admit biomedical evidence at trial and the accused was executed. Today, many judgments underline the fact that biomedical evidence relying on brain imaging is taking an important part in Americans courtrooms and that this evidence can be submit successfully to avoid death penalty. This evidence has been raised successfully as mitigating factor in cases implying frontal lobes abnormalities and impulse control disorders [38], but also traumatic brain injury [39].

All these Americans cases implying mitigating factors in death penalty cases would be interesting to analyze psychopath's situations in Canadian courtrooms. Even though, death penalty does not exist in Canada, these cases could be useful to demonstrate that Canadians courtrooms have to take into consideration the new tools provided by cognitive neuroscience to reduce psychopath's sentences. Above all, neurosciences data will certainly serve the defense interest in cases related to criminal offenders as psychopaths, regarding Canadian charter of rights and freedoms. Indeed, as we see previously, in the majority of Canadian criminal cases, psychopathic disorders are associated to dangerousness, recidivism and severe sentences. However, the neuroscience of psychopathy has created a new paradigm, which supposes a judge reflection on psychopathic disorders. Their brain dysfunctions explained by frontal lobes abnormalities or prefontal cortex malfunction cannot be ignore by the judges in the next few years regarding two fundamental articles of Canadian charter of rights and freedoms: article 7 related to principles of fundamental justice and article 12 related to treatment and punishment. According to article 7, "everyone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice [40]". The main idea of this article is to protect someone against the arbitrary, and to make sure that his liberty will not be deprived for fallacious reasons. How can we analyse psychopath's situation regarding this fundamental principle? Indeed nobody can ignore today, that psychopathy is a disorder, which deprive the individual of his emotional and volitional function. Thereby, how explain the fact that psychopathy is considered as an aggravating factor instead of a mitigating factor? Regarding spirit of fundamental principles of justice contained in article 7, can we deprive an individual from his liberty for a very long time whereas he seems suffer from a dysfunctional brain?

The second article, which is asking questions about psychopathy, is that relating to article 12 of the charter. Indeed, this one says, "Everyone has the right not to be subjected to any cruel and unusual treatment or punishment [41]". Regarding this article, psychopath's situation in Canadian courtrooms seems paradoxical. Indeed, in spite of their brain impairments, the diagnosis of psychopathy is systematically considered as an aggravating factor during sentencing. As a consequence, can we consider the length of the sentence handed down by the courts to psychopaths as cruel or unusual sentences? If we look objectively at psychopath's situation we could answer to this question positively. This argument has already been raised in Q. v. Bishop, where a psychopath offender argued that his sentence amounted to cruel and unusual punishment and therefore violated his rights as guaranteed by the Canadian Charter of Rights and Freedoms. His main argument was that since the treatment required for his psychopathy was not currently available in the federal prison system, the sentence was in fact a life sentence and not an indeterminate one. However the Court of Appeal rejected this argument, explaining "the application with respect to cruel and unusual punishment was premature because the offender had not served enough time to determine whether his sentence was grossly disproportionate to what he deserved [42]". Clearly, in this case, the Court has avoided answering directly to the question of increasing sentences for psychopaths, with a practical argument. However, it is not sure with the raise of cognitive neurosciences in the last decade that this argument works again. Indeed, we think that Canadian judges should take into account psychopaths' emotional and volitional difficulties to adapt their sentences. The apparition of cognitive neurosciences has permitted to clear up the symptoms of psychopathy, and the judges should use it as a perfect tool to

readapt their point of view on these particular offenders. Thus, neuroscience bring evidence that psychopathy as ill cannot be used anymore to help justify life sentences regarding article 12 of the Charter. Moreover, in retributivist perspective, which characterizes Canadian criminal law, we think that it will be increasingly difficult for the judges to increase psychopaths' sentences. Even though, psychopath's dangerousness has a deep impact on public safety and public opinion, psychopath should be punish as he deserve. In our opinion he should not be punished as severely as someone without brain anomalies. Their deserving punishment should be a decrease sentence followed by a long period of treatment. The main difficulty in this case would be to find an appropriate treatment for psychopaths in order to decrease their sentences. As said Ivan Zinger in his paper few years ago, "providing treatment programs for psychopaths may therefore become imperative to ensure that indeterminate sentences do not become cruel and unusual punishment [43]".

IV. Conclusion

As in United States, psychopathy is often considered as an aggravating factor in courtrooms. The necessity to ensure public safety is the main explanation of these severe sentences. Canadian judges argue that their reasoning are in accordance with Canadian criminal Code and article 753. However, in the next few years, it will be interesting to observe how Canadian judges will receive biomedical evidence provided by the neuroscientists. Indeed, cognitive neurosciences undermine the idea of personal responsibility. Dugan Case in United States show that neuroimaging have increasingly an important influence on judge's decision making. Even though Canada has a sentencing system where judges have considerable discretionary power, neurosciences' influence can push the judges to adopt a different behaviour with psychopath offender and change psychopathy in a mitigating factor. The problem is that no treatment program seems perfectly respects the principles of successful rehabilitation. The issue is therefore to find the treatment for psychopaths, which could constrain Canadian judges to adopt another attitude with these individuals.

References

[1] Matt Logan et Robert D. Hare, «La psychopathie criminelle: introduction à l'égard des policiers», (2010), p. 2
[2] Craig S. Neumann et Robert D. HARE, «Psychopathic traits in a large community sample: Links to violence, alcohol use, and intelligence», (2008) 76, p. 893-900
[3] Gina M. Vincent et Stephen D. Hart, «Legal uses and assessment of psychopathy», (2012)
[4] Robert James R. Blair, «Applying a cognitive neuroscience perspective to the disorder of psychopathy», (2005) 17 *Development and Psychopathology*
[5] Henry Werlinder, *Psychopathy : a history of the concepts : analysis of the origin and development of a family of concepts in psychopathology*, Stockholm, Uppsala Universitet, 1978
[6] Jennifer Cox, David S. Dematteo et Elizabeth E. Foster, «The effect of the Psychopathy Checklist--Revised in capital cases: mock jurors' responses to the label of psychopathy», (2010) 28 *Behavior Science and the Law*; Jenny Laurell et Anna Maria Daderman, «Psychopathy (PCL-R) in a forensic psychiatric sample of homicide offenders: some reliability issues», (2007) 30*International journal of law and psychiatry*
[7] Julien-Daniel Guelfi et American Psychiatric Association, *DSM-IV-TR: Manuel statistique et diagnostique des troubles mentaux*, 4e éd., texte rév, Paris, Masson, 2003, p. 808
[8] Organisation Mondiale de la Santé, *Classification internationale des maladies*, Paris, Masson, 1994
[9] Aharon Barak, «The Judge in a Democracy», (2008) 56 *The American Journal of Comparative Law*
[10] Ivan Zinger et A. E Forth, «Psychopathy and Canadian Criminal Proceedings: The Potential for Human Rights Abuses», (1998) 40 *Canadian Journal of Criminology*
[11] Stephen Porter, Leanne ten Brinke et Kevin Wilson, «Crime profiles and conditional release performance of psychopathic and non psychopathic sexual offenders», (2009) 14 *Legal and Criminological Psychology*
[12] Erika Braithwaite, *Examining the incremental validity of psychopathy versus antisocial personnality disorder in understanding patterns of criminal behavior*, Département de Psychologie, Université de Montreal, 2010
[13] Laurent F. Friedman et Simon N. Verdun-Jones, «Blaming the Parts Instead of the Person: understanding and Applying Neurobiological Factors Associated with Psychopathy», (2010) 52 *Canadian Journal of Criminology and Criminal Justice*
[14] Canadian criminal code, art. 753
[15] L. F. Friedman et S. N. Verdun-Jones, préc., note 18
[16] R. v. W.T.W., (1997) B.C.J. No. 3157 (BCPC) (QL)
[17] Jenny Laurell et Anna M. Daderman, «Recidivism is related to psychopathy (PCL-R) in a group of men convicted of homicide», (2005) 28*International journal of law and psychiatry*
[18] Howard E. Barbaree, «Psychopathy, treatment behavior, and recidivism: an extended follow-up of Seto and Barbaree», (2005) 20 *Journal of Interpersonal Violence*
[19] L. F. Friedman et S. N. Verdun-Jones, préc., note 18
[20] Richard Dawkins, «Straf is wetenschappelijk achterhaald», (2006) *NRC-Handelsblad*
[21] G. B. Palermo, «Psychopathy: Early and Recent Clinical Observations and the Law», (2011) 55 *International Journal of Offender Therapy and Comparative Criminology*
[22] Carl B. Gacono, James L. Loving, F. Barton Evans et Michael T. Jumes, «The Psychopathy Checklist-Revised: PCL-R Testimony and Forensic Practice», (2002) 2 *Journal of Forensic Psychology Practice*
[23] Lisa G. Aspinwall, Teneille R. Brown et James Tabery, «The Double-Edged Sword: Does Biomechanism Increase or Decrease Judges' Sentencing of Psychopaths?», (2012) 337 *Science*
[24] Adam Lamparello, «Using Cognitive Neuroscience to predict Future Dangerousness», (2011) 42 *Columbia Human rights law review*
[25] Kimberly D. Phillips, «Empathy for psychopaths: Using fMRI Brains Scans to Plea for Leniency in Death Penaltys Cases», (2013) 37 *Law and Psychology Review*
[26] Adrian Raine, «From Genes to Brain to Antisocial Behavior», (2008) 17*Current Directions in Psychological Science*
[27] Robert James Blair, K. S. Pershardt, S. Budhani, D. G. Mitchell etD. S. Pine, «The development of psychopathy», (2006) 47 *Journal of Child Psychology and Psychiatry*
[28] R. J. R. Blair, D. G. V. Mitchell, K. S. Peschardt, E. Colledge, R. A. Leonard, J. H. Shine, L. K. Murray et D. I. Perrett, «Reduced sensitivity to others' fearful expressions in psychopathic individuals», (2004) 37*Personality and Individual Differences.*
[29] Robert James R. Blair, «The emergence of psychopathy: implications for the neuropsychological approach to developmental disorders», (2006) 101*Cognition.*
[30] Robert James R. BLAIR, «The Cognitive Neuroscience of Psychopathy and Implications for Judgments of Responsibility», (2008) 1 *Neuroethics*
[31] David De Matteo et John F. Edens, «The role and relevance of the Psychopathy Checklist-Revised in Court: A case law survey of U.S. Courts (1991-2004)», (2006) 12(2) *Psychology, Public Policy, and Law*
[32] Sarah Becker, *A glimpse into the future? The Current, Potential, and Appropriate Role of Functional Magnetic Resonance Imaging (fMRI) Evidence as a predictor of Dangerousness in the American Criminal Sentencing Context*, Faculty of law, University of Toronto, 2013
[33] L.G. Aspinwall, T.R. Brown et J. Tabery, préc., note 31
[34] Hyman GROSS, *A Theory of criminal justice*, New York, Oxford Press University, 1979
[35] Judith G. Edersheim, Rebecca Weintraub Brendel et Bruce H. Price, «Neuroimaging, Diminished Capacity and Mitigation», dans *Neuroimaging in Forensic Psychiatry: From the Clinic to the courtroom*, John Wiley & Sons, Ltd, 2012,

[36] L.G. Aspinwall, T.R. Brown et J. Tabery, préc., note 31
[37] Brett Walker, «When the Facts and the Law Are Against You, Argue the Genes? : A pragmatic Analysis of Genotyping Mitigation Defendants in Death Penalty Cases», (2013) 90 *Washington University Law Review*
[38] People v. Morgan (1999) 719 N.E.2d 681 (III.1999).
[39] Rogers v. State (2001) 783 So 2d 980 (Fla.2001).
[40] Canadian Charter of Rights and Freedoms, art. 7
[41] Canadian Charter of Rights and Freedoms, art. 12
[42] R. v. Bishop, 1993 ABCA 274