From the classical to the modern view of suicide
Analysis of Esquirol's work on suicide

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Summary: *Introduction: In 1838, Jean-Étienne Dominique Esquirol published his book Des Maladies Mentales, which has been widely cited ever since in the literature dealing with the problem of suicide. Based on his clinical experience, he summarized the psychiatric knowledge of his time, and up to that time, devoting a special attention and a chapter to suicide.*
In this study, we shall be analysing this chapter in the Des Maladies Mentales, which sometimes contradicts itself, in the sense of the criterion system of modern suicide research.
Method: We shall be showing the chapters, highlighting the key statements Esquirol did, and showing the modern research of the problems mentioned. Our goal is to demonstrate the parallel nature of the contemporary and the19th century theories.
Results:This comparison shows how Esquirol's work laid the foundation and initiated the development of suicidology.
Conclusion: In his approach, which often seems inconsistent and not without contradictions, Esquirol pointed out the complex issues of suicide research with maximum sensitivity and scientific thoroughness.
Keywords: *Esquirol; suicide; psychiatry*

Összefoglalás: *1838-ban jelent meg Jean-Étienne Dominique Esquirol Des Maladies Mentales című könyve, amelyet azóta is széles körben idéznek az öngyilkosság problémájával foglalkozó szakirodalomban. Klinikai tapasztalatai alapján összegezte korának pszichiátriai ismereteit, külön figyelmet és fejezetet szentelve az öngyilkosságnak. Bár Esquirol szövege olykor önmagának is ellentmond, ebben a tanulmányban a Des Maladies Mentales szuicídiumról szóló fejezetét elemezzük a modern öngyilkosság-kutatás kritériumrendszerei szerint.*
Módszerek: Bemutatjuk a könyv ezen fejezeteit, kiemelve Esquirol legfontosabb megállapításait, és ezek után az adott problematikához tartozó modern megközelítéseket említünk. Célunk a jelenlegi kutatások és a XIX. századi elméletek párhuzamba állítása.
Eredmények: Ez az összehasonlítás bemutatja, hogy Esquirol ezen munkája hogyan fektette le az alapokat és indította el az öngyilkosság kutatásának fejlődését.
Következtetés: Esquirol bár gyakran következetlen és ellentmondásoktól sem mentesen közöl megállapításokat, mégis észrevételei maximális érzékenységgel és tudományos alapossággal mutattak rá az öngyilkosság-kutatás jelenlegi összetett kérdéseire.
Kulcsszavak: *Esquirol; öngyilkosság; pszichiátria*

Introduction

Jean-Étienne Dominique Esquirol, a leading psychiatrist of his time, published his book *Des Maladies Mentales* in 1838, in which, in addition to a complex presentation of the known mental disorders (such as insanity, hallucinations, fury, epilepsy, demonomania, dementia), he also discusses suicide at length (1). In this book *Esquirol* presents, for example, the etymological creation of the two concepts he introduced earlier, monomania and lypemania, and the importance of introducing them into the clinical research. Monomania is a type of melancholia in which partial delirium occurs with a violent temper, and lypemania is the opposite, melancholic delirium. Analysing suicide, he works with these concepts. The book's chapter on suicide is divided into five parts and titled as:

- Suicide provoked by the passions;
- Suicide preceded by homicide;
- Climates, seasons, ages and sex, considered as causes of suicide;

- Pathological lesions observed among suicides;
- Treatment of suicide: means of preventing it.

Suicide provoked by the passions

In this chapter, *Esquirol* outlines the problem area of suicide, introduces the concept of momentary mental disorder ("partial delirium"), and illustrates suicides driven by passions with numerous examples experienced in the practice, referring to religious, political, and social changes.

First, in a short, untitled passage, he explains that there had previously been no precise terminology for man ending his own existence, in the century prior to the publication of the text. He states that suicide is a complex phenomenon that cannot be described or defined through a simple name, but later – although providing only a simplified explanation – he insists on monomania, or even lypemania as the reason for suicide.

Esquirol – in addition to several other important observations – highlights that "sanguine" type "men" with intense delirium commit suicide immediately, thus justifying the title of the chapter. Here he defines the concept of partial delirium, in which, according to him, the acute delirium caused by the passions is temporary, and the suicide it causes is committed immediately: he considers this to be a crisis of the moral affection.

Esquirol introduces the concept of lypemania presented above, which means depressive monomania. He writes about the suicide of maniacs that they usually throw themselves down from a height, which is to *Esquirol* equivalent to choosing the easiest way – or something like that. Maniacs are haunted by illusions and "panic terrors". *Esquirol* emphasizes that monomania always leads to suicide. Here he cites several cases such as the Italian shoemaker *Matteo Lovat,* who crucified himself after self-castration, or the church person who ate the seal of every letter he received. *Esquirol* makes a crucial distinction regarding suicidal intent: on the one hand, he mentions hatred of life, which is an active state, accompanied by a certain kind of irritation and exaltation. On the other hand, it separates boredom, which means a passive state, a certain laziness. According to him, in the first case, the "hatred of life" becomes permanent in thoughts. These patients hate suffering, they do not desire for death, but nevertheless, they want pain, opposition, or annoyance to trigger them. He calls this category lypemaniac suicide, and suicide related to boredom with life melancholic suicide. He asks whether the homicidal monomaniac is not driven by some immediate, momentary rage, which could warn the victim as a precursor. According to *Esquirol,* suicides are the result of years of bad luck. However, this approach is contradicted by the category of the above-described momentary mental disorder.

In his opinion, suicide is an inscrutable human phenomenon, because it is often committed by those who should be happy but cannot be.

Modern focus points: the connection between mental disorders and suicide is a widely analysed question, for example in the work of *van Heeringen* (2018) (2), where we can see the two well separated risk factors of suicide: Distal and Proximal. In the Proximal Risk Factors, Psychiatric disorder plays a dominant role. *Van Heeringen* writes, that the presence of psychiatric disorders are in approximately 90% of individuals who took their own life in the Western world such as major depressive disorder, bipolar disorder, schizophrenia, alcohol- and drug related disorders, eating disorders and personality disorders.

The meta-analysis of *Too et al* (2019) (3) concludes, that the risk of suicide is markedly greater in people with a current or previous diagnosis of mental disorder than those without such a diagnosis. *Fu et al* (2021) (4) review studies between 1975 and 2020 and the findings of this analysis are that major depression has the highest pooled suicide rate, and poisoning is the is the most common suicide method of people with serious mental illness. *Moitra et al* (2021) (5) also conclude that mental disorders are an important risk factor in suicide risk: major depressive disorder, dysthymia, anxiety disorders, bipolar disorder, and schizophrenia were significantly associated with suicide risk.

Knipe et al (2022) (6) and *Turecki et al* (2016) (7) review the complex health problem of suicide (and self harm), and how the mental health services should work with this, as a whole, complex question.

Suicide preceded by homicide

In this short chapter *Esquirol* addresses the phenomenon of suicide following a homicide: he examines cases where the perpetrator commits suicide after a crime against life. *Esquirol* also presents many examples from his own practice, where his diagnoses were mania and lypemania. He mentions the importance of friendly medical language in the communication with patients.

Finally, he covers "reciprocal suicide", in which the victims take each other's lives, and "supposed suicide" where the perpetrator of the homicide wants to disguise their crime as a suicide.

Modern focus points: this sub-chapter highlights some of the modern problems like *Santos-Hermoso et al* (2020) (8), where they discuss the core nature of this subtype of homicide: the homicide followed by suicide (HS). Here one important factor is the time between both violent actions. The authors analyse the victim and the perpetrator, and even the event itself of a HS action (the sociological factors, the relationship, mental status, substance usage). *Bills* (2017) (9) demonstrates how this phenomenon (the terminology also) evolved in the history. *Rouchy et al* (2020) (10) has a systematic review about the characteristics of a homicide-suicide offenders, such as sociodemographic characteristics, relationship dynamics in the family, victimology, psychopathological vulnerabilities, criminological and legal history, life experiences, means and method, or motivational factors.

Climates, seasons, ages and sex, considered as causes of suicide

In this chapter *Esquirol* presents extensive statistics of cities and countries (suicide data, numbers of people admitted to psychiatry), talks about the inheritance of suicide, and describes individual cases in detail. The chapter also presents treatment methods.

Esquirol mentions the higher suicide numbers before and after the equinoxes, analyses the effects of fog and bad weather, the seasons (including variations if the previous season was drier or wetter). He then continues discussing the hereditary nature of suicide. *Esquirol* citing cases where generations of family members have killed themselves when they reached the same age. He illustrates the phenomenon of heredity with numerous examples that can be seen in families.

He states that suicide is most likely committed between a person's twenties and thirties. *Esquirol* considers suicide to be a consequence of mental alienation after puberty. Somewhat contradicting this, he also cites the suicidal acts of school-age children and the elderly also. According to him, although mental illnesses are more common in women, suicide is less common among them, but he says, quoting *Hippocrates,* that non-menstruating girls and young women can also commit suicide. Quoting *Brorson,* he states that the male-female suicide ratio is five to one.

Despite this, he calls suicidal behaviour epidemic that primarily attacks women. He states that suicide is the result of "consecutive symptom". This could presumably mean that suicide is not a stand-alone, non-sui generis phenomenon (he describes this several times). However, this is somewhat contradicted by the categorization presented so far. He asks whether this epidemic depends on the hidden state of the atmosphere.

Esquirol states that reading, especially getting to know writings that praise suicide, the power of imitation, contempt for religious ideas, the redundancy of civilization, the militaristic outlook, political revolutions, the decay of morals, the passion for gambling, masturbation, the use of fermented liquors, the physical pain, as well as pellagra (it is now well known that niacin deficiency can be associated with nervous system symptoms such as aggressiveness, depression, insomnia and cognitive decline) can also be among the causes of suicide in men. After that, he examines the role of education and books, es-

pecially considering the disappearance of moral values as a factor increasing the frequency of suicide. He gives examples of classic Roman suicides for the militaristic approach. According to him, pandemics such as the Great Plague in Europe increased the number of suicides, as did the black pox in India in the late 1700s, where people hanged themselves to trees as he cites the work of *Ross Cox*. He considers masturbation to be one of the root causes not only of suicide, but also of insanity, along with drinking alcohol, because it causes lypemania.

People with melancholic and bilious temperaments are also very prone to suicide. Sanguines are often hyperaemic, and especially in women, this increases suicide during menstruation, as does goitre (the cervical lymph node version of tuberculosis). Those who are suicidal and produce hypochondriacal and melancholic symptoms: they all jump from heights, jump out of windows, or jump off bridges according to Esquirol's interviews. *Esquirol* studied many hypochondriacs and lypemaniacs who said that they were in a physical or moral state that was terrifying for the patients, and that they thought their condition was eternal, feeling empty and completely isolated from the world. He points out that suicide is something hidden from other people, and even in this act, self-love can be seen, which "hides" suicide in a mantle ("It is self-love still, that invests suicide with its mantle"). According to him, these things are characteristic of monomaniacs, who mutilate and burn themselves without thinking about the consequences. Many suicide survivors do not mention physical pain, so the organic insensitivity remains (this is a very important and accurate observation, since it is now well known that one of the fundamental factors of the ability to commit suicide is the increase of pain tolerance).

He points out that women prefer to hang themselves, throw themselves into water, drown or starve themselves to death, but use of guns are not typical to them, but at the same time the tool they do use is usually related to their occupation. According to him, it is not the close relationship of the person with the object that plays a role in the selection of the device, but rather the habits and occupation determine their choice for the tool (perhaps today we could say that *Esquirol* draws attention to the point of view of the availability of the devices). Many suicide victims take preventive measures so that they do not survive their actions. For example, they put heavy objects in their pockets before jumping into water, tie their hands and feet, lock others in their houses, or remove any person from the vicinity who might help.

Through his numerous case presentations, he illustrates "concealing suicides" and "ceremonial suicides": He treated the patients with anal leech treatment, foot baths, and mustard, or hitting the patient's leg with folded handkerchief.

Modern focus points: the heredity aspect of suicide is also widely analysed (*van Heeringen,* 2018), such as the weather and territorial positions in *Deisenhammer* (2003) (11). *Deisenhammer* reviews the current knowledge about this topic, and finds, that is not yet found if it is a "suicide weather". He reviews studies about the connection of suicide and temperature, humidity, electromagnetic pulses (thunderstorms), daily sunshine, atmospheric pressure. The weather could determine the social activities, and also the catastrophic nature events, which could be stress factors. *Kurokouchi et al* (2015) (12) found, that air temperature is significantly and positively correlates with suicide by drowning for men, but significantly and negatively correlates with atmospheric pressure. *Cornelius et al* (2021) (13) highlight that the environmental risk factors (meteorological, pollution, geographic exposures) can affect the risk of suicide, include meteorological factors (sunlight and high temperature), pollution factors (pesticide, heavy metal, and noise pollution), and geographic factors (high altitude, population-level). *Casand* and *Helbich* (2022) (14) review the suicide mortality across urban and rural areas. they found that men were more at risk by rurality that women, but they state there is no obvious rural-urban pattern. The meta-analysis of *Caldero et al* (2022) (15) is about the heredity of suicide: how the familiar transmission of suicide behaviour risks the offsprings. They found that ,,experiencing a parental suicide was associated

with an almost three-fold increased risk of dying by suicide and an almost two-fold increased risk of attempting suicide in offspring compared with offspring of two living parents".

Kendler et al (2020) (16) search in Swedish national samples the parental-child transmission of risk for suicide attempt and death. They analyse deeply the genetic factors, such as psychiatric and substance use disorders. From the WHO mortality database *Ajdacic-Gross et al* (2008) (17) analyse the methods of suicide. They derive and clears the differences between regions in the sense of patterns, such as poisoning with pesticide was common in Asia and Latin America, in Eastern Europe hanging was more common, and in the United States firearm was the preferred method.

Pathological lesions observed among suicides

This chapter discusses the pathophysiological background of suicide, based on this time's contemporary scientific results. He notes that although he had many suicide skulls in his possession, their measurements did not show the thinness and density that *Franz Joseph Gall* predicted but mentions that he would do a separate study on this. He cites the findings of doctors that the brains of persons who committed suicide contain more phosphorus. In this chapter also he cites many suicide cases and presents the results of autopsies.

Modern focus points: the biomarkers of suicide is now a well analysed area of research, such as genetics, neurobiology, structural and functional changes of the brain regions. The Neuroscience of Suicidal Behavior (*van Heeringen,* 2018) presents for example molecular or brain imaging analysis of suicidal behavior. *Van Heeringen* shows that changes in cholesterol, sex hormones and serotonin may increase the risk of suicide. The molecular characteristics contribute ,,to our understanding of the dynamics of suicide". The cognitive neuroscience of suicidal behavior and systems neuroscience and suicide are two separated chapters in van Heeringen's book.

Lengvenyte et al (2019) (18) review the contemporary results of the biological bases of suicide: genetic bases, gene-environment interactions, early life adversities, neuropsychology, neuroimaging, HPA axis, inflammation biomarkers, inflammation pathways, testosterone in men. They states that "data from genetic and epidemiological studies show that there is some

degree of genetic predisposition for suicidal behaviours. However, genetic studies have failed to identify genes with large effects".

Treatment of suicide: methods of prevention

In the chapter on the treatment of suicide, he states that the suicidal urge often disappears on its own over time: for example, the suicidal person becomes angry and does not actually commit the act. A purgative should be performed for suicidal patients ("hepatic purgative"), since "the liver is the seat of the evil", and the bile is the cause. People suffering from onanism should be put in a cold bath or doused with cold water. *Esquirol* says that *Avenbrugger* successfully treated suicidal patients using liver tapping, but *Esquirol* describes that he had no favourable experiences with this method.

According to *Esquirol,* suicidal people, like all lypemaniacs, think too much, so they need to be prevented from doing so or forced to think differently. They must be kept on the ground floor of the building, permanent supervision and a night guard must also be provided, and a "camisole" (today we can say straitjacket) can also be a solution. He points out that this requires extra caution because some patients have suffocated themselves with it. Those who are prone to suicide should never be alone, always be in the community. *Esquirol* credits his own work for being the first to lay down the ground rules for working with suicidal patients. You have to act energetically, he says, and appeal to their imagination by scaring them, for example with a cold bath (a view shared by *Pinel* also). He also presents several other methods, for example, he points out that a tube reinforced with whalebone

is recommended for feeding to prevent the tube from coiling up.

Finally, he explains that according to him, suicide should not be punished because all suicide victims are "insane persons" (This question was also discussed by the Paris parliament in 1777, but no decision was reached). According to him, experience has shown that legal threats are enough to prevent suicide. He concludes his work with a historical and legal reflection and points out that the statistical indicators of big cities do not necessarily reflect the truth, as the police often classify cases as suicides when they cannot determine exactly what happened.

Modern focus points: the method of the therapy and its complexity is well analysed in *van Heeringen* (2018) (2) from the dimension of neuroscience. He states, "there are no medication that will keep all suicidal individuals from taking their own life". On the other hand, "the adequate treatment lower the risk of suicide". He analyses the role of Medication (antidepressants, mood stabilizers, hypnotic and anxiolytic medications, antipsychotic drugs, pain killers, ketamine, and other pharmacological agents), Neurostimulation (electroconvulsive therapy, transcranial magnetic stimulation, magnetic seizure therapy, and other neurostimulation techniques), and Psychotherapy. *Mann et al* (2021) (19) also review the strategies in suicide prevention, including the training of primary care physicians, educating the youths on depression and suicide risk, and the active outreach of patients after discharge. The paper also analyses the Pharmacotherapy, the Psychotherapy the comparison of these, the Group psychotherapy, the Contact and/or active outreach the Brain stimulation, the Collaborative care, the Internet-based intervention, and the Restriction of Means. The workgroup of *Jacobs et al* (2010) (20) created a 183 pages long Practice Guideline about the assessment and treatment of patients with suicidal behavior. *Meerwijk et al* (2016) (21) wrote their paper about the meta-analysis about direct and indirect preventions of suicide and suicide attempts. *Rihmer* (1996, 2017) (22, 23) highlights the strategies in suicide prevention, such as elimination of acute suicide risk, improving the diagnosis and treatment of mental disorders (especially of depression) and the education of patients, relatives and health care workers, the aftercare of persons with high suicide risk, and the public education.

Summary, conclusions

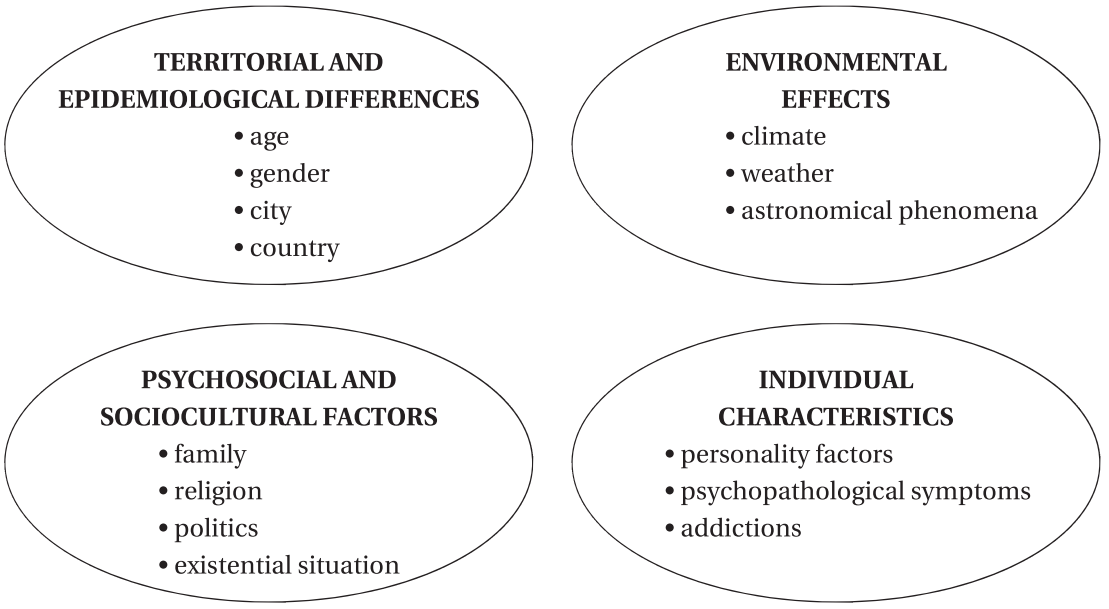
Although in the public mind, Esquirol's name is mostly associated with the momentary mental disorder theory the "partial delirium" (and this leads to the misinterpretation of the act of suicide in many cases today, as it enables people living in the environment to excuse themselves and reduce the guilt of survivors), we can also read many modern observations that are still valid today.

During the comprehensive analysis of the self-destructive process, the author started to establish the most important directions of today's suicide research, such as: territorial and epidemiological differences (age, gender, etc.); environmental effects (climate, weather, astronomical phenomena); psychosocial and sociocultural factors (family, existential situation, religion, politics); individual characteristics (personality factors, psychopathological symptoms, addictions).

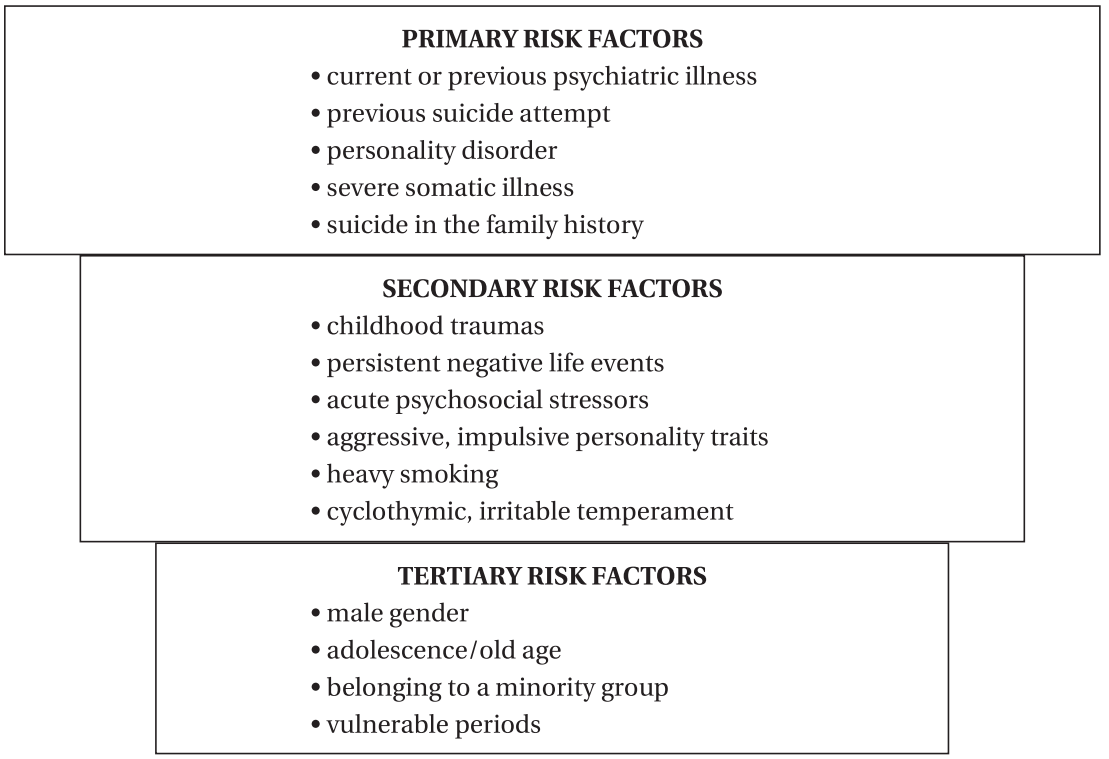
We can draw interesting conclusions if we compare Esquirol's aspects with the grouping of suicidal risk factors that is the most widespread nowadays according to *Rihmer* (1996 and 2017).

This comparison shows very well how Esquirol's work affected the scientific foundation and initiated the development of suicidology. In his approach, which often seems inconsistent and not without contradictions, *Esquirol* pointed out the complex issues of suicide research with maximum sensitivity and scientific thoroughness. Without the concepts of lypemania, monomania, or partial delirium, which unfortunately narrowed Esquirol's research findings, his work would perhaps be even more modern.

Esquirol's epoch-making work can correctly be considered the origin of suicide research. The development of the complex bio-psycho-social approach of modern suicidology vividly demonstrates the development of a multidimen-



The areas analyzed by Esquirol



The hierarchical system of suicide risk according to Rihmer (1996)

sional examination model, in which a more comprehensive analysis of the dynamics of self-destructive behaviours becomes possible with the help of psychological, psychopathological, social, cultural, and neurobiological-genetic factors can be made.

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