1 Introduction

Looking to the future: how can research prevent suicide?

Stephen H. Koslow, Pedro Ruiz, and Charles B. Nemeroff

Suicide is a leading cause of mortality and morbidity. Suicide represents a major public health problem based on the fact that there are more than 1 000 000 suicides worldwide and approximately 40 000 in the United States per year. Many people throughout the world have therefore had direct experience with a suicide by having a relative, friend, or acquaintance solve their problems by taking their own life. This is a devastating experience, which on the surface is hard to understand and hard to recover from. Reducing the suicide rate and ultimately preventing suicide is a challenging task. The chapters in this Guide were developed to provide state of the art information on what is known about suicide, how we currently study it, and how we can reduce its frequency. The latter is the most important goal. Currently most preventive efforts are aimed at erecting physical barriers to suicide and/or hospitalization. None of these efforts are totally effective.

We designed this Guide for several audiences including clinicians and researchers but also others interested in this topic. The chapters that comprise this monograph are purposefully concise but are sufficiently comprehensive. It has been organized into sections on a common theme starting with a series of reports on understanding suicide that provide a context for the remainder of the book. This Guide goes on to provide information ranging from specific psychiatric disorders of unique "special" at risk populations highlighting the context of suicide and treatment within these illnesses and populations, through mediators and moderators of suicide from societal to biological mechanisms, including genomics, and ending with suicide prevention.

What makes suicide prevention and research so difficult? This theme is focused on throughout this volume. The answer is manifold and includes: (a) the incidence of suicide is low compared to other illnesses making subject availability low; (b) there is no accurate method to determine if any individual is going to take their own life in the next day(s) or year(s); and (c) potential suicide is based on a variety of factors which includes signs and symptoms and assessment of high-risk cognitive states or high-risk behavior, but there are obvious differences between suicide attempts and completed suicides. Studying the brains of subjects who have taken their life ensures that your sample is from a suicide; however whether the biology underlying suicide is transient or lasting and the debate as to whether there is a unique biology of suicide that cuts across diagnostic categories versus suicide as a symptom of various disorders with their own unique biology remain unresolved. One of the most important areas for research is obviously the development of an accurate, sensitive, and specific method to detect suicide potential. This can be a behavioral measure, clinical signs or symptoms, or a biological marker. All of these are active areas of research.

Promising data is offered from genetics research. Current major approaches, all with advantages and disadvantages, include Genome-Wide Association Studies (GWAS), candidate gene studies, and epigenetics. GWAS is an examination of many common genetic variants in large populations to determine if any variant is associated with a trait. GWAS typically focus on associations between single nucleotide polymorphisms (SNPs) and disease traits. Candidate gene studies focus on SNPs in systems previously implicated to be involved in the pathogenesis of suicide, such as serotonin. Epigenetics focuses on genes that are impacted and changed due to the environment. Both GWAS and epigenetics studies can be conducted from completed suicides. Here the biggest challenge again is the relative low incidence of suicide in the general population compared to, for example, diabetes or

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hypertension, rendering it difficult to get the large samples needed for GWAS. Similarly epigenetics reports are more often based on small numbers of subjects and use postmortem brain tissue. Additional research in this area is warranted given the paramount importance of identifying a biological marker for suicide. Clearly large sample GWAS studies, candidate gene studies, and more epigenetics studies on well-defined patient populations and controls are warranted.

Another major research goal is to integrate findings across high-risk populations including patients with mood and anxiety disorders, schizophrenia, personality disorders, substance abuse, eating disorders, epilepsy, and child and adolescent disorders as well as specific high-risk populations such as the armed forces, emergency room, bereavement and grief, college students, other medical illnesses, pregnancy, postpartum depression, LGBT, and older adults in order to distill core mediators and moderators leading to suicide and understand the biology underpinning these changes. To do this effectively and efficiently we need to develop and agree upon developed standard instruments to use in common in all these studies which are quantitative and objective. Subjective assessments are often biased and affected by the rater's experience and do not provide acceptable inter-rater reliability between individual raters. An excellent example of the ability to integrate among and between studies are the emerging imaging studies. These studies have different diagnostic groups; the selection of suicidal subject is based on various criteria including suicidal behavior, previous attempters, suicidal ideation, and seriousness of the attempt. Different imaging modalities have been employed including structural MRI, fMRI, DTI, SPECT, and PET. All of these are a rich source of direct brain data and we need to integrate these data across population and structure, function, neural circuitry and receptor/transporter binding which have yielded and will continue to yield new insights into the underlying neural suicide circuit. These could then be the groups studied for neuroregulatory systems and genomic expressions yielding both new information for understanding the processes involved in suicide, as well as new targets for pharmacological, genetic, or other interventions.

In this Guide specific sections focus on the behavioral assessments and clinical signs and symptoms currently used to assess suicidality in subjects who are deemed at risk. These include hopelessness, helplessness, described suicidal behaviors or intention to carry out suicide, comorbid substance abuse, and/or alcohol abuse as well as specific alterations in cognitive functions including decision-making. Understanding the neural network and processes involved in decision-making may start to provide insights into the altered thinking and decision-making that often occur in suicidal individuals. Other important risk factors discussed in this volume include age, trauma history, family history, past personal history of suicidality, and of most promise biological markers including genetics. It is paramount to develop a standardized objective assessment to be used in all studies. If this is accomplished we can begin to create databases to achieve adequate analytical statistical power.

Currently two drugs which appear efficacious in preventing suicide in specific populations are lithium and clozapine. Whether these drugs have specific antisuicidal properties or reduce suicide because of their superior efficacy remains unresolved. Should these drugs be used in other populations specifically for suicide prevention? To address this question requires a large-scale clinical trial of both drugs. The question of the dose required to produce an antisuicidal effect is important because at the doses they are currently clinically used they are often poorly tolerated and have unacceptable side effects. Low doses of either of these drugs may be effective in suicide prevention. Equally important is determining which psychotherapies are most likely to reduce suicide.

In summary and conclusion the research on suicide should focus on:

1. Development of a valid, easily usable algorithm predicting suicide risk with high sensitivity and specificity
2. Definition of biological markers that correlate with the predictor algorithm (1) above
3. Mapping the neural circuitry and the biological mechanisms involved in suicide
4. Development of effective and specific antisuicide treatments including pharmacological and/or psychotherapeutic
5. Establishment of an objective standardized assessment to be used in all studies on suicide.

Section 1 Understanding Suicide

Chapter 1

Brief history of suicide in Western cultures

Leonardo Tondo

Introduction

Western culture has never been completely indifferent toward those who take their own lives. Attitudes and beliefs concerning suicide have been complex and varied over the centuries. Some suicides were considered heroes, but mostly suicide was considered an offense against God, an insult to the state, or a particularly painful gesture toward those left behind after an an unexplained death. Yet, considerable tolerance toward suicide is evident in ancient times when death was more frequently encountered in everyday experience than in modern times. Nevertheless, suicide was punished as a criminal act in many cultures for centuries before becoming a medical-psychological issue in our current society and culture.

The contest between reason and passion

Since ancient Greece, suicide was not accepted, though most cases were not explicitly blamed for having committed a criminal act. Since the fourth century BCE, suicides usually were denied burial or traditional pre-burial preparation or cremation and were considered to have committed a greviously antisocial act. In Athens, for instance, the hand of a suicide was cut off and buried away from the rest of the body (Manson, 1899). Only suicides in which it was possible to find sufficient reason for self-destruction were deemed comprehensible; such reasons might include heroism, love-rejection, or serious and painful illness. Other suicides were considered to be unjustified and were punished; examples include soldiers who had deserted or criminals avoiding punishment or prison. The standard of "understanding" was – and largely still is – considered the key to assessing suicide as a justified action. Even nowadays, the suicide of a young healthy person is likely not to be "understood," whereas that of an elderly person with a terminal illness may seem more reasonable.

Judgments concerning suicide changed when ancient Greek philosophers became interested in the primacy of reason over the emotions. Their influence became dominant and continued to influence Western culture and the great religions to modern times. The dominant view has been that suicide was an immoral or criminal act. Early philosophers based their prohibition of suicide primarily on the basis of its incomprehensibility or irrationality. It was viewed as an aberration against the natural urge of the individual to survive, and became interpreted in the Jewish, Christian, and Moslem religions as an insult to God. Many cultures of ancient times as well as of today have tried to subject the emotional side of the individual to rational control. This fundamental principle has guided many laws and customs seeking to impose limits on the expression of emotion-driven behaviors. Religions borrowed the thinking of the Greek philosophers and transformed many passions into sins with the simple equation that rational behavior is directed by God, and the irrational by the Devil (Tondo, 2000).

Ancient cultures

A possibly first recorded suicide dates from the era of Egyptian Pharaoh Ramses II (1303–1213 BCE), in a written description of the story of two brothers who had committed suicide nearly two centuries previously. At that time, death was often actively sought for various reasons, to the point that groups gathered to discuss the least unpleasant ways to die, and it seems likely that was sufficiently frequent as often to pass unnoticed (Moron, 1976).

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The spirit of ancient Greece (mainly from the 5th and 4th centuries BCE) highlights a widespread melancholy toward life that encouraged appreciation for its end, in contrast with limited acceptance of suicide. A rejection of life, joined with a deep spirit of freedom characterized the Epicurean, Stoic, and Cynical philosophical schools to support decisions to die. Many celebrities of the time killed themselves, including the philosophers Empedocles, Democritus (to avoid old age), Diogenes, Zeno (held his breath after falling at the age of 98 years), Hegesias, Cleanthes (held deep contempt of life), Socrates (forced to kill himself), and poets including Sappho (love pain), Aristodemus (remorse), Cleomenes (honor), Demosthenes and Isocrates (both for patriotic reasons). Heroic suicide or self-sacrifice was almost unanimously approved in ancient Greece, and often was considered an example to follow. Kodros, the last legendary king of Athens, probably would have killed himself to avoid loss of a battle with the Dorians, as prophesied by the oracle of Delphi, but was killed by the Dorians. Themistocles, according to some historians, killed himself because of guilt resulting from his betrayal of Athens to join the service of the Persian king.

Plato (424–347 BCE), however, was opposed to suicide. He claimed that men are social individuals with responsibility to others and therefore property of a state that could not afford loss of its citizens. Along the same line, Aristotle (383–322 BCE) disapproved of suicide, seeing it as a transgression against a civic duty and an act of cowardice. He states (Moore, 1790):

> The law never commands a man to kill himself; but what it does not command, it forbids. Moreover, when any one hurts another contrary to law, having received no previous injury from him, he voluntarily commits an injury against that man . . . Now when anyone, impelled by anger or resentment, kills himself, he does this voluntarily against right law, because the law does not permit it . . . But [against] whom? Rather to the state than to himself . . . To die only in order to avoid poverty, or [for] love, or uneasiness of any kind, is not the character of a brave, but rather of a servile spirit. For it is the part of an effeminate mind to fly from calamitous and laborious situations.

In ancient Rome, suicide was not a rare event. Grisé (1982) describes 314 suicides among prominent Romans between the 5th and 2nd centuries CE. For different reasons, but always with a character of integrity, many prominent politicians killed themselves rather than being subjected to Caesar; they included Cato Uticensis, Appius Claudius, Atticus, Crassus, Anthony, Brutus, Cassius, and Quintilio Publius Varus. Even the Roman emperors Marcus Cocceius Nerva and Nero killed themselves. In 69 CE, the year following the death of Emperor Nero, 32 politicians committed suicide. Suicides in Imperial Rome included many famous writers and philosophers, including Diodorus, Seneca, Petronius, Lucan, and Lucretius. The two prominent philosophical schools of ancient Rome, Epicureanism and Stoicism, approved of suicide for different reasons. The Epicureans stated that the goal of man was the pursuit of happiness and, when this could not be achieved, life lost its purpose. The Stoics placed reason, virtue, and morality above pleasures and common interests, sometimes to the point of reaching a state of detachment and a lack of interest in life. This philosophy influenced the laws so that weariness for life (*tædium vitæ*) leading to suicide was approved if it resulted from incurable diseases, accidents, deaths of others, or even from squalor or wounded pride (Manson, 1899).

Although suicide was culturally accepted, Seneca considered death as a refuge against the evils of life, but did not support suicide. He emphasized control of the emotions and submission to the will of superiors, according to the light of reason, but these principles led to his own suicide when ordered to do so by Emperor Nero for alleged treason.

The Neo-Platonic philosophers saw suicide as the result of a disturbance. However, Plotinus (204–270 CE), the most important leader of the movement, argued that this type of death prevented the soul from breaking away from the body, making it impossible to reach the Elysian Fields.

In general, in ancient Rome free men (but not slaves) could choose to commit suicide without problems. In fact suicide was praised for widows who followed their husbands after death, or had been raped (e.g., Lucretia), and for men who wanted to avoid dishonor or were becoming old (Minois 1999). Nevertheless, suicide was widely considered dishonorable or a crime from the 6th century, particularly by soldiers (as well as in feudal Japan), slaves, and embezzlers.

Despite several exceptions, the general attitude toward suicide in ancient Greece and Rome was relatively tolerant, and suicide was considered legitimate in many circumstances, especially when life was no longer considered worth living, based on philosophical principles or even individual judgment.

Early Christianity

Christianity spread easily, especially among the most wretched, offering hope for a better life, at least in the next world. At the same time, it had to stand against reaching them too early in order to avoid losing too many of the faithful too quickly. Initially, Church attitudes about death resulted in a propensity toward it so that for several centuries, religious writings counted enthusiastic stories of martyrs. However, in ca. 420, St. Augustine (353–430) forbade suicide in his *City of God*, considering it an act against God as an extension of the fifth Commandment to Moses (*Thou shalt not kill*). Suffering, rather than being deemed a reason to commit suicide, became a positive value that only increased the worthiness of those who would bear it (Manson, 1899).

With Roman Emperor Constantine (272–337), Christianity became the official religion of the Roman Empire, and was supported by law from the 4th century. Sanctions by the church and the state against suicide gradually became increasingly strict and punitive, including confiscation of property if suicide was a means of avoiding a legal trial (interpreted as an admission of guilt). It is likely that early legal and religious views were very similar – probably less spiritual and more practical, if not partly economic. It was important, even for the civil power of Rome, to encourage interest in life, given the high mortality of the times and life expectancy of less than 40 years, and concern about maintaining the population of a vast empire that needed an enormous amount of labor. In fact, in the year 374, infanticide was banned by Roman law, and soon suicide by servants or slaves also was outlawed, as well as for the military, who were considered property of their owners or of the state.

However, a problem of no small importance arose: how to punish criminal suicides after their death? Gradually increasingly imaginative and dramatic forms of brutality to the bodies of suicides arose, not only for a symbolically directly punitive effect, but also for a spectacular and hopefully deterrent effect upon onlookers. Legal authorities collected the assets of suicides, and the Church increasingly attempted to avoid the loss of the faithful by discouraging the practice of voluntary martyrdom. It is also surely not a coincidence that, in the same era, the Church emphasized the sacredness of marriage, the blessing of procreation of many children, as well as the repression of all non-procreative sexuality as a sin.

Hebraism

Old Testament (probably written between the 9th and 5th centuries BCE) reports on five suicides not associated with a sinful judgment. However, it required that the body of a suicide could not be buried until sunset and without the usual rites. Laws and customs had been continued through oral tradition, and were transcribed by rabbinical scholars in the Mishnah between the 2nd and 3rd centuries. It taught that a suicide's body should not receive respect from family and friends. However, this prohibition was enforced only if the act was intentional and without external pressure, whereas suicide was considered as natural death if the act was induced by a mental illness or by the fear of a terrible torture.

The Committee of Jewish Law and Standards (1998) affirmed the prohibition of suicide, but supported an obligation of understanding why some people think of suicide, so as to ameliorate those circumstances. Even for terminally ill patients, increased pain control is recommended.

Despite that suicide is forbidden in Judaism through the same arguments proposed by Christians, there may be some extreme circumstances where a choice other than suicide is impossible. Such was the case in the mass suicide at the siege of Masada (73–74 CE) when more than 900 Jews killed themselves instead of falling prisoner to the Romans.

Islamism

As in the other Abrahamic, monotheistic religions, for Islam suicide is one of the worst possible sins. Unlike the Old Testament in which there is no explicit condemnation of suicide, the Koran warns: "Do not kill yourselves, certainly Allah will be more merciful with you." In several other passages of the holy Islamic text, there are warnings against suicide. In fact, most early Islamic scholars forbade suicide even in the case of terroristic attacks, citing that Koranic verse. This prohibition seems not to have prevented Islamic fundamentalists from killing themselves through the ages as well as currently, sometimes while killing scores of other persons.

Muhammad (570–632) taught that it is necessary to submit to divine will under any circumstance. For this same reason, the Islamic religion does not allow any form of euthanasia. Suicide is so sinful in Islamic countries that it would explain why official data on it are lacking or extremely low – much lower than among Muslims living in Western countries.

Middle Ages

Mass suicides occasionally occurred at the end of banquets in Scandinavia as a means of gaining entry to Valhalla, possibly close to Odin's seat – normally, a concession granted only to those who had died violently but courageously in battle, but then extended even to those who self-inflicted death (Moore, 1790). The Gauls and Visogoths sometimes elected suicide to avoid being enslaved by the Romans and to reach heaven (Moron, 1976). Yet, through their contact with the Romans, these northern peoples eventually absorbed Roman laws regarding voluntary death (Manson, 1899).

Perhaps in part to avoid legal penalties, suicide was replaced by medieval knights with violent and dangerous practices, such as tournaments or duels. Indeed, the Church synods of 813 (Châlons), 829 (Paris), and 855 (Valence) in France declared that duel to death was prohibited.

Theodore of Tarsus (602–690 CE), Archbishop of Canterbury, acknowledged the Roman tradition of legal non-liability in cases involving obvious lack of rationality at the time of suicide. This tradition was incorporated into English law and later accepted by the Church of England following the reign of King Henry VIII (1491–1547). Early English laws against suicide are attributed to King Edgar I of England (943–975) and were promulgated in 967 CE, including the distinction maintained over the centuries between those who committed suicide when of sound mind or were insane (*non compos mentis*). That is, suicide was not considered a sinful or criminal act in cases of insanity. English laws of that time also included the provision that the goods of a suicide had to be forfeited to the state, and did not exclude other forms of punishment or defilement carried out on the dead bodies of suicides.

During the brief Viking conquest of England (1013–1042), the Danish rulers supported the confiscation of goods from suicides. In *De Legibus et Consuetidinibus Angliae* (*Treatise on the Laws and Customs of the Kingdom of England*; ca. 1188), Henry of Bracton formulated the relationship between crime and intent in suicide by importing Roman law as interpreted by the school of Bologna. He stated that: (a) a suicide could not have heirs, and his goods were to be confiscated by the Crown because his act was an admission of criminal guilt; (b) this measure could not be implemented if the suicide had not been accused of crimes, (c) movable assets were confiscated from those who suicided for apparent weariness of life, severe physical pain or grief, but the family would inherit their real estate. In the same document, a difference was drawn between suicides resulting from *felo de se* (crime against himself) versus *non compos mentis*. In England, consideration of the issue of confiscating the property of suicides became increasingly sophisticated following its first application (MacDonald & Murphy, 1990).

MacDonald and Murphy (1990) report evidence from the King's Bench which show a steady increase in suicides in England from 1510 to 1590, and an initial criminal (*felo de se*) judgment in 95% of such cases. There was an evident conflict of interest in the certification of suicide. It is quite likely that this increase reflected payment of a fee to coroners in the case of a verdict of voluntary or criminal suicide resulting in the confiscation of goods by the Crown. However, coroners could sometimes be persuaded to make judgments of mental illness after receiving bribes greater than their "commission," and these were gladly paid by the families of many suicides. With the passing of centuries, English laws gradually were interpreted less strictly and mental illness was recognized more frequently among suicides, to the point of recognizing the very act of suicide as an indication of mental illness after 1600.

Laws concerning confiscation of property of suicides gradually spread across Europe and were applied unless the suicide was associated with insanity. Starting in about 1600, attitudes in European legal systems toward suicide became more indulgent and less punitive. In the 1700s, the majority of suicides were judged to be based on mental illness (*non compos mentis*). It is also likely that the accuracy, recording, and reporting of data from the English courts since the Middle Ages led to increased awareness of the issues surrounding suicide, and may have contributed to the steady decrease in suicides from about 1700 to modern times. Even today, the English suicide rate is far less than that in other European countries, although suicide rates vary markedly among countries, within regions, and over time (Baldessarini et al., 2007).

Throughout Europe between the 18th and 20th centuries, many ordinary people entangled hopelessly in wretched living conditions committed suicide, evidently in despair (Minois, 1999). Hanging was a prevalent method among both commoners and aristocrats. If they were publicly acknowledged at all, such acts committed by aristocrats might be considered honorable. However, for the poor, suicide usually was considered cowardly and a way of avoiding responsibility, calling for

selective and furious punishment and retribution. It was also deemed noble and understandable when Christians who did not want to fall into Ottoman hands carried out collective suicides, or for a woman to take her life in order to avoid sexual assault. In addition, deaths in war were considered heroic even when preceded by the killing of many other human beings.

The clergy could arrange for suicides to avoid punishments or refusal of burial in consecrated ground by ascribing suicide to physical or mental illnesses, again often citing suicide itself as evidence of mental illness (Minois, 1999). In addition, many Christians enacted mystical forms of suicide with their isolation from the world until dying of starvation or thirst.

MacDonald and Murphy (1990) reported that suicide rates among the rich in early modern England (18th and 19th centuries) were much lower than in the lower classes, which increased during periods of poor harvest, hunger, and disease. Ironically, people who were punished for suicide most often were laborers or peasants with little property to confiscate, leaving their families impoverished even further.

The Italian Dominican priest, Thomas Aquinas (1225–1274) adduced several reasons to condemn suicide: it was an act against nature and against the benevolence we should have toward ourselves, and therefore considered a mortal sin. It was also an insult against the community to which we belong and to which we have duties. Finally, it represents an act of usurpation of the laws of God who gave us life and is the only one who may decide to take it back (Manson, 1899). Aquinas concluded that, *Whoever kills himself sins against God* (Clark, 2000).

Following strong ecclesiastical condemnations of suicide from the 12th century onwards, jurists viewed suicide as requiring punishment in addition to the eternal damnation expected by canon law. This view led to severe sanctions concerning disposition of the bodies of suicides: often they were not buried, were dismembered or left as food for the animals, exposed at crossroads, buried under large boulders, dragged through the streets face-down, taken out of the house through a window or a passage under the threshold of the house, or nailed to a barrel and left to drift at sea (Minois, 1999). It was believed that the body of a suicide could contaminate the land, lakes or rivers, that if a pregnant woman approached the burial site of a suicide, her offspring would follow the same fate. The spirits of suicides were considered vengeful and able to evoke anger and despair in those who came in contact with them. Of note, it was believed that suicide was a result of anger (more than melancholy), which could be aimed at the survivors (Kushner 1989).

In France, suicides were hanged by their feet and dragged through the streets as a warning to others (Minois, 1999). Similar procedures were followed in Germany, and included exposure of the unburied corpse, as well as removal of stones on which a suicide had walked. In Zurich, the Swiss stipulated, precisely, that a person who had stabbed himself was to have an awl driven into his head, those who had drowned were to be buried in the sand two meters from the lake shore, and those who had died by jumping off a cliff should be buried under a pile of stones.

Although spectacular, the retributions inflicted on the bodies of suicides apparently did not have a desired deterrent effect. Nevertheless, such fury continued for centuries. The last known abuse of the bodies of suicides occurred in Paris in 1749 and London as recently as 1823 (Minois, 1999).

Renaissance and Enlightenment

During the Renaissance (14th to 17th centuries) living conditions and culture improved markedly, and there was a renewed interest in the teachings of the classical Mediterranean world. This renewal of scholarship and learning was greatly facilitated by rapid adoption of the printing press in the 16th century. This process brought reminders that suicides had included many prominent ancient leaders or philosophers, as reviewed above, and their popularization tended again to cast doubt about the sinful or criminal nature of suicide.

Growing interest in humanism resulted in frank admiration for suicide in which intellectuals found an implicit message of freedom. The revaluation of suicide in that period manifested itself in the appreciation for Lucretia (in the early Roman Republic, 5th century BCE), whose suicide after being raped was featured in *De Claris Mulieribus* (*Of Famous Women*) by Giovanni Boccaccio (1313–1375), in the *Divina Commedia* (*Divine Comedy*) by Dante Alighieri (1265–1321) among the noble spirits of Limbo, and in more than one hundred paintings produced between the 1360s and the early 20th century (Cutter, 1983).

In addition, the Protestant Reformation stimulated growth of individual thinking and efforts to set aside the rules and rigidity of the Catholic Church, as notably manifested in the Inquisition.

This development strongly favored a more liberal and questioning attitude toward suicide. Civil and religious convictions resisted acceptance of suicide, but one could discuss the matter more openly and relatively freely.

Sebastian Brant (1457–1521) in his poem *The Ship of Fools* (1494) justifies suicide as a means of eliminating the suffering of life. Desiderius Erasmus of Rotterdam (1466–1536) in his *Praise of Folly* (1511) expressed sympathy for suicide as a way out of a life full of problems and evils, although he still considered suicide an insane act.

In this period a high number of suicides were recorded throughout Europe. Nevertheless, doubts remain about the accuracy of the reports since estimated rates of suicide were easily distorted or misrepresented, including being inflated, perhaps in response to increased attention afforded to the phenomenon by philosophers, writers, and moralists.

In 1594, William Shakespeare (1564–1616) wrote the poem *The Rape of Lucretia*, which stresses the political effect of her suicide during the transition from monarchy to republic in ancient Rome. In the following 40 years in the early 1600s, more than 200 suicides of characters appeared in British theatrical works. The dramatic effect of suicide fits very well in a play associated with special events, often romantic in nature, and suicide was sometimes used for the conclusion of a drama, with cathartic effect. In Shakespeare's plays, suicides involved famous characters of the classical world (Anthony and Cleopatra), or were for love (Romeo and Juliet), blame (Othello) or despair (Ophelia), and Hamlet debated whether to live or die. These works anticipated an association between suicide and melancholy.

The most intense expression of the English debate on suicide was by clergyman John Donne (1572–1631) in an essay on the topic, *Biathanatos* (*Violent Death*), where he wrote about the "paradox" that self-murder is not a sin against nature (1647). Donne, despite being an Anglican clergyman and the Dean of Saint Paul's Cathedral in London, justified suicide. Nevertheless, evidently owing to its controversial content, his book initially was shown only to close friends and finally published 16 years after Donne's death. In it, he argued that suicide was not contrary to nature, as there were other ways of mortification of human nature imposed by civilization. Human nature was guided by rationality and it could be considered appropriate to commit suicide and not contrary to reason. Moreover, Roman law had not condemned it for a long time. Donne also rejected the persisting argument that suicide deprives the army of a soldier, since soldiers could retire from military life without being condemned. A further point concerned the development of the divine law. Donne had no difficulty in arguing that the Bible did not condemn suicide, though murder was deemed sinful. A further irony is that many more men die during wars and are considered patriotic or even heroic than those who die by their own hand.

English political philosopher, Thomas Hobbes (1588–1679) saw suicide as a destructive act against natural law, and therefore should not be allowed. However, suicide could not be considered illegal, even accepting the Platonic position on the loss of an individual belonging to the community. Also the relatively moderate French philosopher, René Descartes (1596–1650) argued against suicide pragmatically, in considering that leaving the safe for the uncertain did not make sense, that life is not always happy but often offers consolation, and that good things may be even more frequent than bad ones. He rejected the idea of sin and punishment with regard to suicide. He believed these considerations to be unnecessary, since suicide is a punishment by itself. Finally, in a letter, Descartes expressed doubts about the mental health of suicides (Minois, 1999).

Robert Burton (1577–1640) of Oxford, in his *Anatomy of Melancholy* (1621) saw suicide in a much more modern view than his contemporaries. For the first time, he suggested the presence of mental illness behind suicidal behavior, considering melancholy of the Hippocratic and Galenic traditions. He put suicide in a non-religious, contemporary perspective and described conditions contributing to suicide, including agitation, hopelessness, and impulsivity. Nevertheless, most writers of the next century continued to oppose suicide, supported by ecclesiastical powers (Brown, 2001).

In 1788 English physician William Rowley (1742–1806) wrote *A Treatise on Female, Nervous, Hysterical, Hypocondriacal, Bilious, Convulsive Diseases; Apoplexy and Palsy with Thoughts on Madness, Suicide, et cetera, in Which the Principal Disorders are Explained from Anatomical Facts, and the Treatment Formed on Several New Principles*. It reiterated the views of previous centuries, arguing that suicide was an act against religion and so a

crime against civil society because it deprived others of expected physical and mental services, and was immoral for being contrary to the individual's duties to maintain relational ties. Following such thinking, Rowley attacked the ideas of Jean-Jacques Rousseau (1712–1778) as expressed in *Julie, la Nouvelle Héloïse* (*Julie, The New Eloise*; 1761):

> Seeking good and avoiding evil when you do not cause harm to others, it is a law of nature. When life becomes bad for us and it is not good for anyone, we can get rid of it.

Rowley's position was mainly utilitarian in seeing only the duties of men toward one another. However, he introduced advanced ideas concerning *remote* causes of suicide, which might include mental illness (*insania*) or bodily pain. In addition, he described *proximate* causes, including not being sufficiently brave or balanced as to endure misfortunes, or basically, not being of sound mind (*non compos mentis*). He noted that, "In every violent passion there is a degree of madness." He concluded that, when an individual contemplates suicide, his mental status must necessarily be compromised.

Rowley's condemnation of suicide was out of keeping with contrary trends that had been evolving on the Continent. For example, two centuries earlier, French Renaissance writer, Michel Eyquem de Montaigne (1533–1592) spoke in his *Essais* (*Essays*; 1580) quite favorably about suicide: "death makes life precious, but at the same time decrees its vanity." Following the footsteps of suicides in the classical period, he argued that "the wise man lives as much as he ought to, not as much as he can" and even if he thought that "death . . . is the remedy for every illness." Nevertheless, in his essays, Montaigne did not encourage anyone to commit suicide, and moreover, although he became very ill and was in a constant pain, he did not hasten his own end. His point of view is close to that of those who must deal with a person at risk of suicide: understanding the wish to die, but at the same time making all efforts to avoid it. Charles-Louis Baron de Montesquieu (1689–1755) in his *Lettres Persanes* (*Persian Letters*; 1721) spoke of legal convictions for suicide as an injustice because, "if the gift of life is a blessing, it is justifiable to give it up when it seems no longer to be a blessing." French Enlightenment philosopher Voltaire (François-Marie Arouet [1694–1778]), more than many other writers influenced thinking about suicide in the direction of liberalism, defending self-destruction in cases of extreme necessity.

Another tolerant view of suicide was expressed by Scottish Enlightenment philosopher David Hume (1711–1776) in his *Essays on Suicide and the Immortality of the Soul* (1755). He stated that suicide could not be seen as an offense against God. It was not condemned in the Bible and he considered the Augustinian interpretation of suicide as homicide and therefore against the fifth Commandment, as not justified. He noted that the commandment, *Thou shalt not kill* "evidently has sense only to exclude the killing of others over whose lives we have no authority and that many precepts derived from the Scriptures should be changed by reason and common sense."

During the 17th and 18th centuries, suicide was sufficiently common in England as to be called *la maladie anglaise* (the English disease) by the French, evidently following the still-present tendency for each country to attribute eccentric, outrageous, or distasteful customs to the other. It is likely that suicide was not at all more common in London than in Paris, although the British press reported on suicides more frequently. The first weekly publication, *The Gentleman's Magazine*, appeared in London in 1731, and frequently reported news about suicides. In contrast, in France the subject was considered private or shameful and not often reported in publications. Later, however, evidence was uncovered that the suicide in France was nearly three times higher than in England at the same time (Minois, 1999).

A particularly harsh position against suicide was taken by Prussian philosopher Immanuel Kant (1724–1804) who, in his *Metaphysics of Ethics* (1786), reasoned that suicide is contrary to the love we owe to ourselves. In addition, he claimed that suicide could not be considered an act of free choice since it limited the universal duty of acting as if individual actions belonged to the universal law of nature.

English clergyman Charles Moore (1771–1826) wrote a treatise, *A Full Inquiry on the Subject of Suicide* (1790). The introduction of his comprehensive book on the topic states:

> Though many excellent sermons and short essays have been written on the guilt of suicide, yet it has never been treated (as far as the author's knowledge extends) on a large and comprehensive scale, so as to unite all its several parts branches in one and the same work.

Moore leaned toward then prevalent religious ideas, but added that "the usual arguments brought in favor of suicide will be proposed and answered." He discussed Donne's *Biathanatos*, Hume's *Essay on Suicide*, and "the book of most pernicious influence, called *The Sorrows of Young Werther*" (*Die Leiden des jungen Werthers*; 1774) by German writer-politician Johann Wolfgang von Goethe (1749–1842), as well as works of famous philosophers of his time, including Beccaria, Montaigne, Montesquieu, More, Rousseau, and Voltaire.

Nineteenth century

A court case in London in the early 19th century shook prevailing moral opinion. It involved the suicide in 1822 of Robert Stewart (Lord Castlereagh, Second Marquis of Londonderry [1769–1822]), a very powerful and conservative man. The London coroner had to decide between the act as a crime or the product of an unsound mind. If the death were adjudged to be a crime, a member of the ruling class had to be buried ignominiously under a crossroad; if it was considered the product of mental illness, that information would become public. The coroner decided in favor of mental illness, noting his recent expression of suicidal thoughts and persecutory ideas, and Lord Castlereagh was granted a funeral at Westminster Abbey. His funeral provoked angry reactions from the public and many of his colleagues, but also consideration that suicide could be a noble act. The debate raised a range of considerations about suicide, prominent among which was the frequent connection of suicide with mental disorder.

In the following year (1823), Abel Griffiths, a 22-year-old law student, clad only in underwear, socks and a winding sheet, was interred at the crossroads formed by Eaton Street, Grosvenor Place, and the King's Road in London. His bloodied, unwashed body was quickly dropped into a hole following removal of a stake driven into his chest. The young man had killed himself after killing his father. A neighbor reported that he had suffered "depression in the brain." Nevertheless, despite this and other evidence, a jury decided that Griffiths had been in a sound state of mind. Remarkably, there was no public resistance to this outcome. However, in the same year, a law was promulgated to prohibit further burials under crossroads (Gates, 2013).

In the British colonies in America, laws pertaining to suicide were the same as in England. For instance, in Massachusetts, Chief Justice Samuel Sewall (1652–1730) was unconditionally opposed to suicide and applied full sanctions against people who attempted or committed suicide (Kushner, 1989). For the Justice it was the worst kind of murder and melancholy – even when recognized – instead of being considered a defense added culpability because it made one vulnerable to Satan's temptation of suicide. Puritans insisted that suicide was an individual act and punishments had to be directed to the individual suicide and not to their families so that, contrary to English custom, there was no confiscation of goods (Kushner, 1989). Also in colonial New England, attempted suicides were punished with whipping and incarceration.

Puritan values in the British colonies resisted the evolution of thought in 17th century England that viewed melancholy as a disease. Even the recognition of a *non compos mentis* was left to interpretation. The English county Justice Michael Dalton (1564–1644) stated in 1619: "If a lunatike person killeth himselfe" while lucid "he shall forfeit his goods" (Dalton, 1618). Although there were isolated cases in which the law against suicide was strictly enforced, in other colonial jurisdictions such as Providence Plantantions (today part of Rhode Island), Pennsylvania, New Jersey, Maryland, North Carolina, and Virginia, as well as in some coroners' juries in Massachusetts, suicide associated with melancholy was considered a mental illness and not punished. However, in most cases a suicide was still a sinner and thus denied religious burial.

The 19th century German philosopher Arthur Schopenhauer (1788–1860) was not in favor of suicide and argued that it did not really offer a plausible escape from difficulties intrinsic to an essentially irrational world. Suicides indeed want to live, but not on terms that are offered; they need to give up life because they are unable to give up the will to live better. Schopenhauer's suggested solution in his book, *On Suicide, in The World as Will and Representation* (1818), was to reach a negation of life through asceticism.

The French Enlightenment philosopher Paul-Henri Thiry (Baron of Holbach [1723–1789]) even more vigorously proclaimed the legitimacy of suicide, considering it neither an act against nature nor an act of cowardice. At the same time, he rejected the idea of philosophical suicide to be attributed to moral or physical suffering, whether conscious or unconscious.

During the 19th century, while old ideas were still present, the prevailing attitude seemed to be that suicide was a result of an altered mental state. Modern