

PAIN: HISTORY, CULTURE AND PHILOSOPHY

BOL: POVIJEST, KULTURA I FILOZOFIJA

Murad Ahmad Khan¹, Fauzia Raza², Iqbal Akhtar Khan³

SUMMARY

Pain, one of the universals of existence, has a long and venerable history, its origin initially attributed to godly punishment for disbelievers; and, with improved understanding, to physical and psycho-social factors. "Pain is emotion or sensation?" has been a debatable issue. Razes developed pleasure-pain theory, founded on the theories of Socrates, Plato, Aristotle and Epicurus. Descartes' Dualism shifted the centre of pain from the heart to the brain but negated the psychological contribution to its pathogenesis. Gate Control Theory, fascinated with the idea of "neurological gates", highlighted the important role of the brain in dealing with the messages received. The International Association of the Study of Pain, in 1979, coined a definition of pain which is currently in use and was last updated on 6th October 2014. Its validity has been challenged and a new definition has been suggested. Whereas the experience is personalized, immeasurable and unsharable, different cultural groups react differently to pain from relative tolerance to over-reaction. Gender and ethnic differences in the perception of pain are well proven and the effects of various religious beliefs adequately scored. Despite extensive research over centuries, understanding of pain mechanisms is still far from optimal. Untiring efforts to identify a pain centre in the brain have been futile. Had it been possible, millions of pain sufferers would have been relieved of their physical agony and mental anguish by the prick of needle.

Key words: Pain; Pleasure; History of Medicine; Culture; Philosophy; Ibn Sina

¹ Department of Pharmacology & Therapeutics. RAK College of Medical Sciences RAK Medical & Health Sciences University. Post Box: 11172. Ras Al Khaimah. United Arab Emirates. Electronic address: murad@zeast.com

² Department of Medicine RAK Hospital. Post Box 11393. Ras Al Khaimah. United Arab Emirates. Electronic address: fauziarazamd@gmail.com

³ Independent Scholar. Lahore, Pakistan

Corresponding Author: Prof. Iqbal Akhtar Khan, MBBS DTM FACTM PhD.
Electronic address: profiakhan@gmail.com

INTRODUCTION

“Halfway between the world of emotions and the realm of sensations, the history of pain, refers back to history of experience” [1].

Pain is one of the universals of existence. Despite its long and venerable history, the true nature has not been precisely conceptualized. The present paper is an attempt to broaden and deepen understanding of the culture and philosophy of pain, in its historical context.

The word “pain” is derived from “*Poena*”, the “Roman Spirit of Punishment” [2]. The Greek goddess of revenge “*Poine*”, was sent to punish mortal men who had dared to anger the gods [3]. In middle English (circa 1250 – 1300 AD), the word “*Peine*” meaning punishment, torture, pain, was derived from an old French word “*Peyn*” [4]. According to the ancient Egyptians, several demons and gods were thought to inflict pain. “*Sekhmet*”, the most powerful goddess, was associated with causation of pain in non-believers. Another god inflicting painful disorders was “*Seth*” who was the god of deserts, storm and chaos. The Egyptians believed that evil spirits entered the human body through the nostrils and ears. The ancient Indians attributed pain to the god “*Indra*”. The Chinese concept of pain includes two opposing unifying forces, the “*Yin*” a negative passive force and the “*Yang*” a positive active force. Pain results from an imbalance of the two. Pain has different names in different languages, *Dolor* in Spanish, *Tong Ku* in Chinese, *Itami* in Japanese, *Pathei* in Greek, *Alam* in Arabic, *Dard* in Persian and so on.

With the passage of time, our understanding of the origin of pain has enormously improved. Now the belief that pain is an enemy, something coming from outside and invading, has many cultural and historical expressions in literature and art [5]. The origin of pain can be physical and psychosocial, but its persistence might be due to life conditions, norms and gender related factors which have been unrecognised in research [6]. It has been established that different cultures react differently to pain [7].

HISTORICAL THEORIES OF EVOLUTION OF PAIN

GALEN’S THEORY

Claudius Galenus (130 - circa 200 AD) theorized that physical pain involved intense violent irritation of nerves and viewed pain as the lowest form of sensation. He accepted the Greek theory of humours that the influx of toxic black bile or acrid yellow bile was usually associated with painful

diseases. He was the first to recognize referred pain and explain it on the basis of humours [8]. Interestingly, he demonstrated that sectioning the spinal cord caused sensory and motor deficits [9]. However, he implicated heart as the central organ for the sensation of pain.

DESCARTES' SPECIFICITY THEORY

The French Philosopher Rene Descartes (1596 -1650 AD), Latinized as Cartesius, perceived pain as a sensation, like hot and cold. He was the first to separate the body from the soul by his perception of man as a machine. He describes pain as "fast moving particles of fire.....the disturbance passes along the nerve filament until it reaches the brain". He theorized that pain is due to nerve impulses that are produced by an injury and are directly transmitted to a pain centre in the brain. Pain is, thus, directly proportional to the extent of the injury [10]. Strangely, there was no room for a psychological contribution to pain, in his theory.

PATTERN THEORIES

Descartes' Theory, to thoughtful clinical observers, was clearly wrong [11]. Several theories collectively labelled as pattern theories were attempts to find a new understanding. Notable researchers included Arthur Goldschider (1920), William Livingstone (1945), Willem Noordenbos (1953) and Henry Beecher (1959). However, none of their theories could explain the explicit role of the brain other than as a passive recipient of messages.

GATE CONTROL THEORY

In 1965, a Canadian psychologist, Ronald Melzack (1929 -) and a British neuroscientist, Patrick David Wall (1925-2001) proposed that pain signals were not free to reach the brain as soon as they were generated at the site of injury. They encountered certain "neurological gates" at the level of the spinal cord which determined whether the pain signals would reach the brain or not. In other words, the brain is not a passive receiver of pain information but can influence the information received, deciding whether it is important enough to be registered [12]. The theory specifically includes psychological factors, like emotions and thoughts, as an integral component of pain experience. Their paper has been described as "the most influential ever written in the field of pain". Although, certain types of pain, phantom pain and pain in paraplegics could not be explained but this does not negate the theory. To resolve the unanswered issues, Ronald Melzack produced the "Neuromatrix Theory" which proposes that pain is a multidimensional

experience produced by characteristic “Neurosignature” patterns of nerve impulses generated by a widely distributed neural network – the “Body Self Neuromatrix” – in the brain [13].

PLEASURE AND PAIN

“The history of pain problems is as long as that of human beings, however, the understanding of pain mechanisms is still far from sufficient” [14].

“Complete physical well-being” (an integral component of the official definition of health, by World Health Organization), is based on the absolute absence of pain. There is a consensus statement that pain and pleasure are opposites. [15]. An Ancient Greek philosopher, Epicurus (341-270 BC), the Founder of Epicurean School of Philosophy, viewed supreme pleasure as a total absence of every type of pain [16]. His compatriot, Plato (428-348 BC), compared pain to pleasure so that in a situation where a person is suffering from acute pain, there is nothing pleasanter than to get rid of that pain. Pain and pleasure would be opposed to one another as to very great to the very little [17, 18, 19]. Ibn Sina (980-1037 AD), a great thinker and a versatile genius, describes pleasure as “the feeling of a harmonizing stimulus while pain was feeling of an incongruous stimulus” [20].

“Pain is emotion or sensation?” has long been debated. . Despite this extensive debate pain, still, has no clearly defined status, – is it an emotion or a sensation? [21]. Aristotle (384-322 BC), a towering figure in ancient Greek philosophy, labelled pain an emotion like joy saying that “pain destroys the nature of the person who feels it” [22]. Sir Thomas More (1478-1535 AD), known to Roman Catholics as Saint Thomas, stated pain as the “direct opposite of pleasure”. David Hartley (1705-1757 AD), a British philosopher, defined pain as “pleasure carried beyond a due limit”.

William Penn Rogers (1879-1935 AD), American entertainer, asserts “pain is such an uncomfortable feeling that even a tiny amount of it is enough to ruin every enjoyment”. Albert Schweitzer (1875-1965 AD), a medical missionary in Africa, goes further by calling pain more terrible lord of mankind than even death itself. Roselyn Rey, the author of *The History of Pain*, says “Pain always has a specific language, whether it is a cry, a sob, or a tensing of the features, and it is a language in itself as well” [23].

The renowned Experimental Scientist Muhammad bin Zakariya al-Razi (865-925 AD), Latinized as Razes, developed a Pleasure-Pain Theory.

“Pleasure consists in the restoration of that condition which preceded the suffering of pain” [24]. This theory could be augmented by the story of the classical Greek philosopher Socrates (470-399 BC). On the last day of his life, when he was released from the chains, he said “What a strange thing that which men call pleasure seems to be, and how astonishing the relation it has with what is thought to be the opposite, namely pain. A man cannot have the both at the same time. My bonds caused me pain in my legs, and now after their removal pleasure seems to be following”. Socrates limited himself to asserting that the states of pleasure and pain were inseparably linked. The Marquis De Sade (1740-1814 AD), French philosopher, has elaborated Socrates’ assertion by saying “It is always by means of pain one arrives at pleasure”. Don Garret, a renowned academician and philosopher, has asserted that the pain of the anticipation of pain would be stronger than the pleasure of the anticipation of pleasure [25]. Immanuel Kant (1724-1804 AD), a Prussian philosopher, views pleasure as the feeling of furtherance of our life while pain as the feeling of its hindrance [26].

PAIN: A PERSONALIZED, IMMEASURABLE AND UNSHARABLE EXPERIENCE

*It was evidently impossible to transmit the impression of pain by teaching,
since it is only known to those who have experienced it.*

Claudius Galenus [8]

The French physiologist, Marie Francois Bichat (1771-1802 AD), labelled pain as the “cry of life”. The British psychologist, Havelock Ellis (1859-1939 AD), describes pain and death as a part of life; to reject them is to reject life itself. However, pain, although universal, is a personalized experience. Elaine Scarry, in her scholarly monograph “The Body of Pain”, claims that the experience of pain is unsharable because it is a private subjective event that does not simply resist language but actively destroys it [27]. Rene Leriche (1879-1955 AD), commemorated by The Rene Leriche Prize of the International Society of Surgery asserts “Physical pain is not a simple affair of an impulse, traveling at a fixed rate along a nerve; it is the result of a conflict between a stimulus and the whole individual. It is like a storm, which hardly admits of assessment, once it is over” [28]. Jean Jackson, Professor of Anthropology at MIT, views pain as “an aversive feeling experienced in the body that cannot be measured directly” [29]. Renowned novelist and poet Gibran Khalil (1883-1931 AD), erroneously written Khalil Gibran, in a

unique philosophical approach states “your pain is the breaking of the shell that encloses your understanding”.

ROOTS AND TYPES OF PAIN

Hippocrates (460-377 BC), the Founder of Medicine as a Rational Science, considered pain as purely a clue to disease of which it is a symptom. The Roman encyclopedist, Aulus Cornelius Celsus (circa 25 BC-circa 50 AD), well known for his work “De Medicina”, one of the best sources of medical knowledge in the Roman world, reiterated the Hippocratic view that pain suggested specific disorders and provided a prognosis [30].

Ibn Sina (980-1037 AD), the author of “Canon of Medicine” which has been justifiably labelled as “The First Textbook of Medicine on Earth” [31], defines pain as one of the un-natural states which afflicts the animal body. He asserts that pain is sensation produced by something contrary to the course of nature [32]. He challenged Galen’s concept of pain that injuries (breach of continuity) were the only cause of pain. On the contrary, he suggested that



Figure 1- Pages 54 and 55 Chapter 20 Volume 1 of the book “- Kitab al-Qanun fi al-Tibb” Source: SAAB Medical Library-American University of Beirut [34]

the true cause of pain was a change of the physical condition (temperament change) of the organ whether there was an injury present or not [33]. He has used the term “*Alam*” (pain) interchangeably with “*Waja*” (hurt) to describe the feelings of the person in pain. It is interesting to note that in old Arabic usage “*Waja*” indicates the presence of disease [33].

Ibn Sina has described 15 types of pain which are enumerated below, in the same chronological order as in the original Arabic text, along with their English translation [20, 32, 34, 35].

Table 1: “Types of Pain”

Serial No	Arabic	English
1	<i>Hakak</i>	Itching
2	<i>Khasin</i>	Rough
3	<i>Nakhes</i>	Pricking
4	<i>Daghet</i>	Compressing
5	<i>Moumaded</i>	Tension
6	<i>Moufasekh</i>	Incisive
7	<i>Moukaser</i>	Tearing
8	<i>Rakhou</i>	Dull
9	<i>Thaqeb</i>	Boring
10	<i>Masalee</i>	Stabbing
11	<i>Khader</i>	Relaxing
12	<i>Dharabani</i>	Throbbing
13	<i>Thaqeel</i>	Heavy
14	<i>Ayani</i>	Fatigue
15	<i>Lathe</i>	Irritant

MODERN DEFINITION OF PAIN

John J Bonica (1917-1994), a towering figure in anaesthesia and the founding father of “The International Association for the Study of Pain (IASP)” in 1973, had the vision to envisage multidisciplinary/interdisciplinary pain programmes. It was under his guiding hands that the IASP, in 1979, proposed a definition of pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage” [36, 37]. It is currently in use and was last updated on 6th October 2014. In 1996, Anand and Craig voiced their reservations about

the validity of this definition [38], which opened a new debate. In his comprehensive review, Andrew Wright, in 2011, argued that IASP's definition lacks the clarity and coherence necessary to provide an adequate definition of pain. Notable among the issues raised in support of his criticism were the following:

- the definition does not apply to those incapable of self-report (newborn, small children, mentally retarded, comatosed, demented or verbally handicapped)
- the definition excludes actual pain experience from being classified as pain because self-report is necessary for attribution of pain
- the vagueness of the word “associated” might be thought to imply that the pain is always caused by tissue damage [39]

To resolve the issue, Andrew Wright has proposed an “Alternative Definition of Pain” as follows:

“Pain is the unpleasant sensation that has evolved to motivate behaviour which avoids or minimizes tissue damage or promotes recovery”. This definition, according to him, is “more accurate, more parsimonious and less ambiguous than the IASP's definition” [39].

PAIN: SHOULD WE CURSE IT ALL THE TIME?

Pain might be called a protector, a predictor, or simply a hassle/discomfort [40].

Clifford J Woolf, Neurobiologist at Harvard, classified pain under three headings: as an early warning physiological protective system, as adaptive and protective, and as mal-adaptive [41]. This approach seems logical. Considering that lepers are unable to feel pain in affected parts of the body, the renowned orthopedic surgeon Paul Wilson Brand (1914-2003 AD), a pioneer in developing tendon transfer in the hands of affected patients, said “If I had the power to eliminate human pain, I would not exercise that right. Pain's value is too great”. This is a protective purpose of pain. Adrian Roger (1931-2005 AD), President of the Southern Baptist Convention, in “Love Worth Finding” said, “I can tell the health of a human body by its reaction to pain. If the body does not react to pain, I know that something there is dreadfully wrong”. He believes pain to be a sign of God's love and that it has predictive and corrective purposes. Imam Ruhollah Khomeini (1902-1989 AD) asserted that realistically life without anguish or pain, and happiness without grief exist only in imagination.

Richard Sternbach, a pain specialist, reviewed 17 probable cases of inability to experience pain in whom the ability to survive was seriously impaired [42, 43]. The condition is now described as Hereditary Sensory and Autonomic Neuropathy, together with another group which has congenital indifference to pain, in which pain is felt but the response is deficient [44].

The Ancient Greek philosopher Epicurus (341-270 BC), was the first to assert that the “State of No Pain is Not a Pleasure” [15]. In the modern era, David Morris, author of “The Culture of Pain”, admitted that “Painlessness is not a gift but a disguised curse” [45]. John Milton (1608-1671 AD) in his famous poem “Paradise Lost”, says “But pain is perfect miseries, the worst of evils, and, excessive, overturns all patience”. He seems, however, to have over-reacted in these remarks. A more balanced opinion is that of Michael Houdmann, the Founder President of “Got Questions Organisation”. He believes “although pain is not pleasant, we should thank God for it because it alerts us that something is wrong in our body” [46].

CULTURAL INFLUENCE ON PAIN

Physical experiences such as pain are strongly determined by culture and religion. (Dr. Jan Frans Dijkhuizen) [47]

While the pain is a ubiquitous condition of human beings, its perception is “composed of highly interactive emotional and cognitive as well as sensory components” [48].

The perception and behaviours associated with pain are significantly influenced by the socio-cultural context of sufferers. Religious beliefs, in addition, play an important role in reaction to painful stimuli.

The two commonly used terms, for describing pain perception need to be explained. According to IASP’s Taxonomy (updated 6th October 2014), the pain threshold is defined as the minimum intensity of a stimulus that is perceived as painful; the pain tolerance level is defined as the maximum intensity of a pain-producing stimulus that a subject is willing to accept in a given situation [49]. The other important term is stoicism which literally means endurance of pain without a display of ill feelings. It also denotes an Ancient Greek School of Philosophy founded in Athens by Zeno of Citium – characterised by indifference to pleasure and pain.

PAIN AND CHRISTIANITY

Dear God, Help my unbelief. When I am in pain, I forget that you care about me. I forget that you have helped me through my trials. I forget that you hold me in your arms to keep me safe. I forget that you are feeling my pain with me. I forget that you love me. I forget that I am important to you. Show me your presence, let me feel your enveloping love. Heal my hurting soul. Thank you for staying with me even in my unbelief [50].

Arthur John Gossip (1873-1954 AD), Professor of Christian Ethics at the University of Glasgow concluded “Pain is a kindly hopeful thing, a certain proof of life, a clear assurance that all is not yet over, that there is still a chance” [51]. The word pain or some form of it appears 70 times in Scripture. The word’s first usage explains the origin of pain in childbirth. “I will greatly multiply your pain in childbirth, in pain you will bring forth children” [Genesis-3:16 NASB].

According to the Old Testament in Job 33:19 “Man is also rebuked with pain on his bed and with continual strife in his bones”. The commentary tells us that Job complained of his disease, and judged by it, that God was angry with him; his friends did so too but Eliha (one of Job’s friends) shows that God often afflicts the body for the good of the soul. Pain is the fruit of sin, yet by the grace of God, the pain of the body is often made a means of good for the soul. It is noteworthy that, according to Islam, Job was Ayyub (Apostle of God).

In certain cultures, endurance of pain is considered to be a praise-worthy attitude. Certain Christians, in remembrance of the sufferings endured by Holy Christ try to idealize him by accepting naturally occurring pain or even by self-chastisement [52].

PAIN AND HINDUISM

The renowned Hindu mystic philosopher and Nobel Laureate Rabindranath Tagore (1861-1941 AD) said “Let me not beg for the stilling of my pain but for the heart to conquer it”. In Hinduism, the third largest religion of the world, pain and suffering, both mental and physical, are thought to be part of the unfolding of “*Karma*” (consequences of past inappropriate actions - mental, verbal or physical - that occurred in either one’s current life or in a past life). It is not seen as a punishment but as a natural consequence of the moral laws of the universe in response to past negative behavior [53].

PAIN AND BUDDHISM

Buddha is a Sanskrit word meaning “the awakened one”. The core teachings of Gautama Buddha (circa 563 or 480 BC—circa 483 or 400 BC), the Founding Figure [54], are contained in the “Four Noble Truths” as following:

- *Dukkha* (Life is characterized by pain)
- *Samudaya* (The cause of pain is craving - *tanha*)
- *Nirodha* (Pain can be ended by cessation of craving)
- *Magga* (There is way to achieve the cessation of pain)

In Pali (a language near to Sanskrit), the term “*Dukkha*” is generally translated as “pain” or “suffering” even though it has a wider philosophical meaning including dissatisfaction, unhappiness, distress, sorrow, affliction, anxiety, anguish and so on. Buddha refers to all of these things, which are unpleasant, imperfect and which we would like to be otherwise [55].

PAIN AND ISLAM

Pain receptors are present in the skin without which a person would not be able to feel pain. Although pain receptors were discovered by the Nobel Laureate and British physiologist Sir Charles Scott Sherrington (1857-1952 AD) in 1906 [56], there is an interesting mention in Sura Al-Nisa (4:56) of Holy Quran. This verse has been translated from the original Arabic text, by the British Orientalist Arthur John Arberry (1905-1969 AD), in “The Koran Interpreted” as following:

“Surely those who disbelieve Our signs; We shall certainly roast them at a Fire; as often their skins are wholly burned, We shall give them in exchange other skins, that they may taste the chastisement. Surely God is Al-mighty, All-wise”.

PAIN AND ETHNICITY

Dr. James Marion Sims (1813-1883 AD), considered by some “Father of Gynaecology”, is well remembered for developing the first consistently successful surgical technique for repair of vesico-vaginal fistula. He assumed that people of African descent were less sensitive to pain than those of European origin. Consequently, during 1845-1849 AD, he operated upon many African slave women for repair of the fistula without administering anesthesia to any one of them [57]. Dr. Sims, because of his speciality, could experiment on women only. It is, therefore, not known what he thought of men of African descent. Moreover, it is uncertain if his assumption was based on personal

observation or if he was influenced by the unknown quote “Man endures pain as an undeserved punishment. Woman accepts it as a natural heritage”?

How different cultural groups have been known to react to painful events has been summarized by Wolff as follows:

“Scandinavians are tough and stoic with a high tolerance to pain; the British are more sensitive but, in view of their ingrained “stiff upper lip”, do not complain when in pain; Italians and other Mediterranean people are emotional and overreact to pain and Jews both overreact to pain and are preoccupied with pain and suffering as well as physical health” [58]. Anthony Alvarado, while discussing cultural diversity in reaction to pain, concluded that in Mexican-Americans emotional self-restraint and stoic inhibition of strong feelings and emotional expressions are evident while in African-Americans, the pain expression may be open and publicly voiced. Chinese-Americans may exhibit stoicism, restraint of anger and pain. The behaviour of Japanese-Americans is similar to that of Chinese-Americans [59].

PAIN AND GENDER

Wise et al have developed a pain specific “Gender Role Expectations of Pain” (GREP). The findings indicate that women report lower threshold and tolerance comparable to men and enduring pain for relatively less time and conversely, more willing to report pain. [60]. Unruh, while discussing gender variations in clinical pain experience, has shown that women report clinical pain more frequently, with longer duration and greater severity, than do men [61]. The meaning of pain for males and females is quite often different [62]. In a survey conducted by the United States National Center for Health Statistics, to assess the perception and reaction to pain in both sexes, the following consistent clinical observations were observed [63,64]:

- males and females report differing symptomatology associated with the same disease process
- females report higher levels of pain with the same clinical conditions
- females report elevated levels of pain with similar amount of tissue injury
- females have a higher propensity to use analgesics than do males.

In an interesting study in pain clinics in North London, Bendelow found that the perception of physical pain was gender related. Women were better equipped for pain in relation to childbirth. For women, pain was natural and common, whereas for men, it was unnatural and uncommon [65]. Rhudy and

Williams suggest there are gender differences in the experience and perception of emotions that, in turn, differentially alter the processing of pain [66]. The following ways of inducing positive emotions have been shown to reduce pain:

- Experimental induction of positive mood [67]
- Sexual excitation [68]
- Relaxation [69]

Conversely, negative emotions have been found to be associated with increased pain. Situational anxiety results in greater sensitivity to pain [70].

CONCLUSION

“It is a shame that we possess such insufficient knowledge concerning the character of pain - those symptoms which represent the essential part of all body sufferings of man”[Arthur Goldschider-1894]

Pain has a long and venerable history, with origins attributable initially to godly punishment for disbelievers; and with improved understanding, to physical and psycho-social factors. Aristotle did not include a sense of pain when he enumerated the five senses. Hippocrates and Galen theorized that pain was caused by an imbalance in the vital fluid of humans. However, neither was convinced of any role of the brain in the causation of pain. They viewed the heart as the central organ for the sensation of pain. Ibn Sina challenged Galen’s concept of pain that injuries (breach of continuity) were the only cause of pain. To him, the true cause of pain was a change in the physical environment, with or without an injury.

Descartes’ Specificity Theory perceived pain as a sensation, like hot and cold but had no room for a psychological contribution. However, the center of pain was shifted from the heart to the brain. The Gate Control Theory, of Melzack and Wall, was a great breakthrough demonstrating that the brain was not a passive receiver of messages. The idea of “neurological gates” at spinal cord level was fascinating to those not convinced by the previous theories. Cartesian Dualism (holding that the mind is a non-physical entity), which had dominated the scientific literature for more than 300 years, was absolutely negated by the Gate Control Theory.

Whereas experience is personalized, immeasurable and unsharable, different cultural groups react distinguishably to pain from relative tolerance to over-reaction. Gender and ethnic differences in the perception of pain are

well proven. Razes developed a pleasure-pain theory, founded on the theories of Socrates, Plato, Aristotle and Epicurus. This theory was enriched by Baruch Spinoza and Immanuel Kant. Although, pain is said to “destroy the nature of the person who feels it”; its predictive, protective, adaptive and corrective roles cannot (and should not) be underestimated. However, it frequently exceeds its protective function and becomes destructive. The state of painlessness is not to be taken as a blessing or a divine gift. It is rather disguised misery because life is inseparable from and unthinkable without pain.

The International Association of the Study of Pain, founded in 1973, coined an official definition of pain which was first published in 1979. It is currently in use and was last updated on 6th October 2014. However, it met strong criticism from certain quarters on the grounds that the definition lacked the necessary clarity and coherence. The debate goes on and an alternative definition has been suggested by Andrew Wright. Now the ball is in the court of a Working Group of the IASP to reach an agreeable solution, in consultation with experts in academic and hospital medicine.

A fitting closing sentence would be a quote from Ronald Melzack (2001) “Pain may be the warning signal that saves the lives of some people, but it destroys the lives of countless others” [13].

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SAŽETAK

Bol, jedna od univerzalija egzistencije, ima dugu i štovanja vrijednu prošlost, čiji se izvori mogu primarno pripisati božjoj kazni za nevjerni; i s unaprijedom shvaćanjem fizičkog i psihosocijalnog. "Da li je bol osjećaj ili utisak?" pitanje je za raspravu. Razes je razvio teoriju zadovoljstva-boli, na temeljima Sokratove, Platonove, Aristotelove i Epikurove teorije.

Descartev dualizam premjestio je centar boli sa srca na mozak, ali je negirao psihološki doprinos u patogenezi. Teorija ulaznih vrata (Gate Control Theory) fascinirana idejom "neuroloških ulaznih vrata" pokazala je važnu ulogu mozga u prenošenju poruka. Nepobitnost njenih pojedinih elemenata bila je dovedena u pitanje, te je predložena alternativa, nova definicija. Međutim iskustvo je osobno, nemjerljivo i nedjeljivo, različite kulturološke skupine različito reagiraju na bol: od relativne tolerancije do pretjeranih reakcija.

Spolne i etničke razlike u percepciji boli jasno su dokazane, kao što su adekvatno zabilježeni učinci različitih vjerskih uvjerenja na nju. Unatoč višestoljetnim opsežnim istraživanjima, razumijevanje mehanizma boli, vrlo je udaljeno od optimalne razine. Neumorni napori kako

Ključne riječi: Bol; zadovoljstvo; povijest medicine; Kultura; Filozofija; Ibn Sina