Technology empowers and enslaves at the same time. Given our proneness to misjudgment and abuse of power, the dangers of technological failure and catastrophe are well known and often discussed. Technological and legislative measures are effective up to a point, but they usually ignore the dignity of the human person that is inalienably related to personal identity, freedom and meaning. So, before we propose new ethical rules we need to make sure they respect the dignity of the human person. The following study chooses the three characteristics of the dignity of the human person as starting points for properly defined ethics. It aims to strengthen ethical awareness and debate in domains where technology becomes confronted with the interests of humanity.

**Keywords:** Technology, human person, dignity, deification.

1. **Introduction**

The theme of our paper juxtaposes two areas of human knowledge: the natural sciences and the humanities. The first type of knowledge (science, technology) [1, p. 598] has been very successful in creating basic unity among the scientists, while the other (the humanities) is notoriously fraught with controversy. The progress of science and technology created great hopes about the coming of the better and bright future [2] but after the two destructive world wars, and enormous ecological problems caused by human interventions, there has grown a general skepticism about the potential of science both to further well-being and to overcome global challenges. The progress in science has not been accompanied by a similar progress in morality.

The problem has been aggravated by the opposite attempts of the natural sciences and the humanities to define the philosophical areas of ontology, epistemology and axiology solely in their own terms and by their own methods. This is what some authors have labeled “deification” - making the claims of one type of knowledge absolute. Such developments make cooperation and mutual respect very difficult. Nevertheless, the survival of humanity today requires a *modus vivendi* (ethics) based on some foundational principle acceptable to both sides.

Using some historical and philosophical arguments, we want to demonstrate that the foundational principle of such ethics can hardly be anything else than the common idea of human dignity which is experienced and understood in quite similar ways by all humans. In our opinion, recognizing this *epistemological* common ground can be used as a *method* to reach common agreement on the principles of a viable ethics for contemporary humanity.

2. **The two cultures**

In 1959, physical chemist and novelist C. P. Snow, gave his lecture on “Two Cultures” [3, p. 4]. He said the literary intellectuals were haughty and ignorant. For him the knowledge of the Second Law of Thermodynamics is “…about the scientific equivalent of: “Have you read a work of Shakespeare’s?” [3, p. 15] and he goes as far as asking a rhetorical question: “Didn’t the influence of all they [the literati] represent bring Auschwitz that much nearer?” [3, p. 7]. Snow was answered by the literary critic F. R. Leavis who made such an angry reply in his 1962 lecture that the debate is still remembered for the strong words he used [4].

Our task is to analyze how the “Two Cultures” split [5] relates to the deification of technology and the dignity of the human person, and so we are going to focus on the philosophical foundations of ethics. The question we are asking is: Is it possible to found and develop ethical theory accounting with the existing two cultures? In order to find an answer, we firstly explain three epistemological options and their ontological implications. Secondly, we describe two dynamics of deification that can go...
hand in hand with the two cultures. Thirdly, we formulate a stance from which a valid ethics can be developed, and by which we can deal with the three problems caused by the tension between the scientific-technological culture and the domain of the humanities. We conclude with a few remarks about the proposed question.

3. Three epistemologies

Ever since Immanuel Kant, epistemology has been at the centre of philosophical analysis. Metaphysics (ontology) and axiology have since been discussed as disciplines whose very existence is either doubtful or, at best, derived from the way the human mind constructs what we call “knowledge”. Discussing the relationship between different types of sciences (fields of knowledge), we treat the traditional three core areas of philosophy (ontology, axiology, epistemology) from the epistemological viewpoint. The ontological and axiological positions generally depend on the chosen epistemological theory (concerning the sources and the limits of knowledge), so we cannot draw a sharp line between them.

The attempt to build the epistemology of the humanities on the lines similar to the natural sciences has failed. In our opinion, one of the reasons is the over-estimation of physicalism that claims that the world is essentially and entirely physical [6].

The postmodern social scientists approach the problem from the opposite direction - social constructivism makes an astonishing claim that even the natural sciences belong to social reality and its interpretation [7].

Dualism, the third view, has been called “the official doctrine”, but labeled “absurd”, by Ryle, since, he says, physical concepts belong to another category of language than mental concepts [8]. (Daniel Dennett says dualism is “forlorn” and he has been on the defensive ever since the Ryle’s attack [9]).

In order to clarify the three positions, we shortly discuss the difficulties of each. Physicalism suggests two difficult fundamental questions: (1) “What is this scientific method that is alleged to be the key to the success of physics?” and (2) “Is it legitimate to transfer that method from physics and apply it elsewhere?” [10]. In the opinion of Hilary Putnam, “scientizing” the social sciences is a confusion and a source of confusion [11, p. 76]. The answer to the first question is that finding causal relationships between phenomena has been greatly successful. By keeping strictly to this paradigm science has brought a lot of revolutionary insights. The application of this paradigm (say to historiography), however, raises many problems. How can we, for example, prove by empirical testing that event A in 1600 caused event B in 1601?

The difficulties of the thoroughgoing social constructivism are obvious to all realists: “…in order to claim that they have made their case, cultural constructivists must demonstrate that their arguments for unreliability outweigh those of conventional scientific papers for reliability in the realm of phenomena addressed by the latter” [12, p. 49].

The often-discussed difficulty of dualism is “…how a person’s mind and body influence one another…” [13, p. 2], in other words “A ghost in the machine is of no help in our theories unless it is a ghost that can move things around” [14, p. 35].

Mathematician and philosopher A. N. Whitehead neatly summarized the three views in one sentence: “There are the dualists, who accept matter and mind as on an equal basis, and the two varieties of monists, those who put mind inside matter, and those who put matter inside mind” [15, p. 82].

4. Deification – on both sides

Deification/divinization is negative for all sides – for theists: it is idolatry, for atheists: it is nonsense. According to both of these positions deification is a threat because it makes somebody or something into an ultimate ruler of human affairs. If it is not really God (who has no need of it), it will always fail to fulfill the manifold needs of human existence, leading instead to enslavement and suffering. In religion, deification/idolatry is as old as religion itself, in science it is closely related to the idea of progress.

The origins of the idea of progress can be traced to the Judeo-Christian idea of salvation history. In the beginning of modernity scientific scholars believed in God as the great mover. Science was only helpful in getting to understand the ongoing process. This position is known as ‘deism’. Later on, great scholars no longer assumed that the initial force was necessary [16]. Such progress has the attributes of the personal God - it is an incontestable force (~ the omnipotence of God), it is positive (~ the goodness of God) and gives rational results (~ the wisdom of God) [17, p. 400]. This description can be labeled as deification [18] . The deified progress, in turn, leads to deified technology as “the culture seeks its authorization in technology, finds its satisfactions in technology, and takes its orders from technology” [19, p. 71].

On the other hand, the current postmodern idea of science can be viewed as a cultural construct motivated by the resentment against the enslavement of the human psyche by technology. We can perceive in it deification of human beings [20] standing against the deification of impersonal technology. Here, humans are viewed as creators of reality which is the prerogative of Divine Being. The optimism, that human creativity can bring peace and well-being independent of laws given by nature, is a dangerous delusion.

These are the two extreme positions: divinization of technology and divinization of the human culture. (Of course, there are also positions that avoid these extremes, but in our opinion, dealing with polarities is a better way to mutual respect and understanding.) How can we avoid the process of deification we have observed in the two positions described above?


5. Ethics, technology and human dignity

Ethics is often taken to mean “a set of rules for right conduct”. The view of ethics as a certain collection of commandments is apparently supported by the Decalogue of the Bible. But a closer look will prove that the laws of the Decalogue are given as the expression of the attributes of God without whose authority these rules lose their coherence and ultimate meaning.

Aristotle in his Ethics begins with the description of the nature of human life, and only after that he proceeds to discuss ethical conduct [21, p. 153]. Postmodern ethical theories tend to disagree with the Aristotelian steps of reasoning (i.e. - first articulate the essentials of the phenomenon and only then proceed to discuss its implications), but we use the Aristotelian method by first formulating the essential starting point - what it means to be human. It is also our opinion, that the “problem of contemporary ethics” revolves around the modern concept of the self” [22, p. 17]. The terms “self” and “personal identity” are often considered and used as synonyms. The idea of the self has been explained (and denied) in very different and contradictory ways both in philosophies and religions.

In whatever way we explain what it is to be a human person, we do not want to be treated as less than what we intuit by it. The explanation may be difficult or impossible, but the experience is common enough that we can communicate it.

Personal dignity in its relation to science and technology can be discussed in three analogous problems:
(1) The problem of atomism and individuation;
(2) The problem of determinism and human freedom;
(3) The problem of power and meaning.

The first problem is related to the rise of science and technology at the beginning of modernity. To clarify causality, scholars in the 16th century started to split up reality into its building parts. The study of the human body required cutting it - otherwise it was impossible to analyze what was inside. Analysis led to fragmentation which in turn led to impairing of the unity of the human person, of the self. But psychology defines individuation as a process of a person’s “identification with the totality of the personality, with the self” [23, p. 138], and as “a separation and differentiation from the general, and a building up of the particular” [24, p. 562]. Such experience of selfhood is sufficiently common and we can agree it should not be brushed away by use of technology, however promising it looks, and, occasionally, is very necessary (for example in certain physical or psychological problems). Whether we agree with the Catechism of the Catholic Church that the “dignity of the human person is rooted in his or her creation in the image and likeness of God” [25], or we asent to Kantian ethics that “human worth elevated above all price” [26, p. 93] inheres in human freedom, or we concur with naturalism that human dignity does not presuppose human freedom, we are likely to agree that human beings are to be treated with dignity, which means with respect for this unique non-fragmented wholeness. “We agree on these rights, providing we are not asked why” [27, p. 77].

The second problem is how to account for the foundations of freedom. The human dignity and selfhood are coterminous with the idea of human freedom [28]. The real problem lies less in the fact of causation of human behavior than in the question whether the origins of behavior are internal in relation to the self that is an ontological unit [29, p. 48]. Some philosophers of science face these issues by proposing the theory of non-reductive physicalism [30], others espouse the theory of emergentism [31, p. 239].

Recently this position has got even more radical. Research in neuroscience has shown that even emotions can be predicted by the neurological processes in the brain [32]. Nevertheless, for those who disagree, determinism makes the universe a prison [33, p. 155]. The powerful concepts of the so called “folk psychology” (e.g., desire, pain, pleasure) [34, p. 5] would be emptied and become just involuntary states originating in the impersonal processes of nature.

But whatever their view of the matter is, in ethics scholars of different epistemological persuasions still adhere to the presupposition of freedom: we reward virtue and punish vice. So again, on this basis we should be able to communicate about ethics even if we disagree about its foundations [35, p. 83]. Of course, focusing on human dignity cannot mean that the discoveries of e.g. neurological laws should be ignored: nevertheless, human dignity will always be foundational because it is universal.

The question “What does it mean to be human?” becomes even more acute when we consider the third problem - the relationship between power and meaning [36, p. 215]. Technology gives power that is the ability to influence and control something. Having power means being in control. But however powerful we become by using technology, we cannot derive meaning of life from it [37, p. 5]. The paradoxical situation is that while we have become incomparably more powerful, we have become also incredibly more insignificant. “Nature, in ceasing to be divine, has ceased to be human”, said John Dewey [38, p. 8]. We can give examples in professional care and in education. Technical devices are very effective and can affect many parts of the body in one instant. And too often it happens without the consent of the person touched. In education - the learning process can be controlled by tests and interventions that disregard the vulnerability of the pupils. Science and technology pose threat to the human dignity and meaning and cannot be the sources of meaning.

Psychiatrist Viktor E. Frankl said that one of the three important avenues to meaning in life is love [39]. It is important, then, to know how power [40] that comes from technology relates to love. Love presupposes openness and openness makes one vulnerable. Vulnerability - susceptibility to injury - is a very negative concept everywhere - in medicine, politics, sociology, psychology, etc. Everywhere it is the exercise of power that gives
on the other hand, its use should be restricted in cases when human vulnerability is unprotected.

6. Conclusion

The discussion between the natural sciences and the humanities has led to what some thinkers call “science wars”. On both sides we have seen excessive valuation of the authority and applicability of respective types of knowledge and methods – this has been called “deification” or “divinization” of science, technology and human ego. Such division stands in the way of constructive discussion of badly needed ethical response to new technologies that threaten human dignity. The dignity of the human person, (recognized by all parties) can point the way out of difficulties and help us find directions in ethical dilemmas. We have seen that the three aspects of dignity – identity, freedom and meaning of life – can give us clues for decisions that will be acceptable both for those who work in the natural sciences and for those who are engaged in the humanities.

References

[1] COLLIN, S.: Dictionary of Science and Technology, London: A&C Black, 2007. ISBN 9780713686517.
[2] TAYLOR, C.: A Secular Age, London: Belknap Press & HUP, 2007. ISBN 9780674026766.
[3] SNOW, C. P.: The Two Cultures, Cambridge: CUP, 2012. ISBN 9781107606142.
[4] Snow’s lecture “was conceived and written by someone who had not had the advantage of an intellectual discipline of any kind”. LEAVIS, F. R.: Two Cultures? The Significance of C. P. Snow; Cambridge: CUP, 2013, 56, 59. ISBN 9781107617353.
[5] Isaiah Berlin discusses the controversy as The Divorce between the Sciences and the Humanities. BERLIN, I.: Against the Current, New York: The Viking Press, 1980, 80. ISBN 9780670109449.
[6] NAGEL, E.: Physicalism. The Philosophical Review, vol. 74, No. 3, 1965, 339-356. ISSN 0031-8108. It is important to reflect critically whether “the proud pursuit of objectivity without a recognition of human limitations, and the dimension of subjectivity in the process, has proved to be a dead end that emits the stench of manipulation, loss of human dignity, and finally nihilism.” VALCO, M. & VALCOVA, K.: The Epistemological Challenge of Kierkegaard's Truth is Subjectivity Principle. Communications - Scientific Letters of the University of Zilina, vol. 16, No. 3, 2014, 25-28. ISSN 1335-4205.
[7] From the several expressions of constructivism we render the radical version for reasons of clarity of the argument. DOWNES, S. M. Constructivism. In The Shorter Routledge Encyclopedia of Philosophy. CRAIG, E. (ed.), London: Routledge, 2005, 147. ISBN 9780415324953.
[8] RYLE, G.: The Concept of Mind, London: Routledge, 2009, 1.6. ISBN 9780226732961.
[9] DENNETT, D.: Consciousness Explained, New York: Back Bay Books, 1991, 33. ISBN 9780316180665. Nevertheless, authors writing in 2008 see it more positively. See ANTONIETTI, A., CORRADINI, A., LOWE, E. J. (ed.): Psycho-physical Dualism Today. Lanham: Rowman & Littlefield, 2008, vii. ISBN 9780739123843.
[10] CHALMERS, A. F.: What Is this Thing Called Science? Indianapolis: Hackett Publishing, 1999. ISBN 978-0872204539.
[11] PUTNAM, H.: Meaning and the Moral Sciences, London: Routledge, 2010. ISBN 978-0415581240.
[12] GROSS, P. R., LEAVITT, N.: Higher Superstition, Baltimore: JHUP, 1997. ISBN 9780801857072.
[13] RYLE, G.: The Concept of Mind, Chicago: University of Chicago Press, 2000. ISBN 9780226732961.
[14] DENNETT, D. C.: Consciousness Explained, Boston: Little, Brown, 1991. ISBN 978-0316180665.
[15] WHITEHEAD, A. N.: Science and the Modern World, New York: Macmillan, 1925.
[16] TAYLOR, C.: A secular Age, Cambridge: HUP, 2007, 221-295. ISBN 9780674026766.
E.g. Adam Smith’s “invisible hand” is suggestive of the “hand of God”. SMITH, A.: The Wealth of Nations I., London: J. M. Dent & Sons, 1957.

“Treating of anything as a god”, Oxford English Dictionary (e-version). Oxford: OUP, 2009. ISBN 9780198611868.

POSTMAN, N.: Technopoly, New York: Vintage Books, 1993. ISBN 978-0-8047-4273-3.

Deification (theosis) of man in theology is another expression of the theological doctrine of the Christian life as “being in Christ”.

IRWIN, T.: The Development of Ethics, Oxford: OUP, 2007. ISBN 9780198242673.

MENSCH, J. R.: Ethics and Selfhood, New York: State UNY, 2003. ISBN 9780791457528.

JUNG, C. G.: Analytical Psychology, New York: Vintage Books, 1970. ISBN 9780394708621.

JUNG, C. G.: Psychological Types, New York: Pantheon Books, 1953.

Catechism of the Catholic Church, #1700.

KANT, I.: The Moral Law, New York: Hutchinson’s University Library, 1947.

MARITAIN, J.: Man and the State, Washington: The CUA Press, 1998. ISBN 9780813209050.

But we also can find: “Retribution as a moral principle is incompatible with a scientific view of human behaviour.” (https://www.edge.org/q2006/q06_9.html#dawkins (22. 7. 2016))

SKINNER, B. F.: Beyond Freedom and Dignity, Harmondsworth: Penguin Books, 1976. ISBN 9780140216615.

Physicalism in which some entities cannot be reduced to physical entities.

MEEHL, P. E., SELLARS, W.: The Concept of Emergence, FEIGL, H., SCRIVEN, M. (ed.) Minnesota Studies in the Philosophy of Science, vol. I, Minneapolis: UMP, 1968.

SWAAB, D.: We are our Brains from the Womb to Alzheimer’s, New York: Penguin Books, 2015. ISBN 9780141978239.

BERLIN, I.: Liberty, Oxford: OUP, 2002. ISBN 9780199249893.

CHURCHLAND, P. M., CHURCHLAND, P. S.: On the Contrary, Cambridge: A Bradford Book, 1998. ISBN 9780262531658.

DENNETT, D.: Elbow Room, London: OUP, 1984. ISBN 9780262040778.

PUTNAM, H.: Philosophical Papers 2, Cambridge: CUP, 1997. ISBN 9780511625251.

There are several other mechanisms in technology that threat meaningfulness, we cannot discuss in extent. A well-known example is the danger for intimate relationships. Technology in media causes enormous streams of indirect communication instead of direct communication. “If power positions become rigidly entrenched, then lines of communication also begin to close down and intimacy rapidly deteriorates.” LAYDER, D.: Intimacy and Power. Basingstoke: Palgrave Macmillan, 2009. ISBN LAYDER, D.: Intimacy and Power. Basingstoke: Palgrave Macmillan, 2009. ISBN 9780230245143.

DEWEY, J.: Characters and Events I, New York: Henry Holt and Co., 1929.

The other two are: creative work, love and growing beyond oneself (in suffering). For more on the topic of how personal experience of WWI and WW2 influenced many important thinkers, see: KRALIK, R.: Kierkegaard and his Influence on Tillich’s Philosophy of Religion, European J. of Science and Theology, vol. 11, No. 3, 2015, 183-189. ISSN 1841-0464; PAVLIKova, M.: The Concept of Anxiety and its Reflection in Auden’s Work ‘the Age of Anxiety, European J. of Science and Theology’; vol. 12, No. 4, 2016, 111-119. ISSN 1841-0464.

For analysis of types sociological power see RUSSELL, B. Power, London: Routledge, 2004, 23n. ISBN 9780415325073.

“Both Kierkegaard and Bonhoeffer invite us to cultivate human self that is aware of the other and puts oneself in relationship with the other, for it knowingly receives one’s being, value and direction from the Divine Thou”. VALCO, M.: The Concept of the Subject and Faith. Lublin: KUD Apokalipsa & CERI-SK, 2016, 96. ISBN 978-961-6894-79-1. For more on the contemporary relevance of existentialist interpretation of human being, see: VALCO, M., KRALIK, R. & BARRET: Moral Implications of Augustine’s Philosophical and Spiritual journey in his Confessions, Communications - Scientific Letters of the University of Zilina, vol. 17, No. 3, 2015, 106. ISSN 1335-4205; KONDRLA, P. & KRALIK, R.: Authentic being and Moral Conscience. European J. of Science and Theology, vol. 12, No. 4, 2016, 155-164. ISSN 1841-0464; KONDRLA, P. & PAVLIKova, M.: From Formal Ethics to Existential Ethics. European J. of Science and Theology, vol. 12, No. 3, 2016, 101-111. ISSN 1841-0464; VALCOVA, K.: Thinking with Kierkegaard about Current Challenges in our ‘Practice in Christianity’. European J. of Science and Theology, vol. 12, No. 2, 2016, 203-212. ISSN 1841-0464.

BROWN, B.: Daring Greatly. New York: Gotham Books, 2012. ISBN 978-1592408412.

VALCOVA, K., PAVLIKova, M., ROUBALOVA, M.: Religious Existentialism as a Countermeasure to Moralistic Therapeutic Deism. Communications - Scientific Letters of the University of Zilina, vol. 18, No. 3, 2016, 101-102. ISSN 1335-4205.