TECHNICAL LANGUAGE AS AN INDICATOR OF TECHNICAL CULTURE

TEHNIČKI JEZIK KAO INDIKATOR TEHNIČKE KULTURE

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Abstract

The article presents a crucially important the contemporary issue of a technical language and its influence on technical culture and popular culture. Many experts emphasise that a language is the most significant feature concerning creating culture. In this view, it may be claimed that a technical language is one of the components and creators of man's technical culture which then influences the development of popular culture. Its considerable influence on the development of technology, and connected with it technical culture, may by proven by a fact that the names of particular culture ages in the history of man derive from the tools operated by man in a given period. There is Neolithic, Bronze, Iron culture and lately IT and information culture. Words are also tools of thinking and thoughts are the reflection of reality including the technical reality.

Sažetak

Rad se bavi iznimno važnom suvremenom temom – tehničkim jezikom i njegovim utjecajem na tehničku kulturu i popularnu kulturu. Mnogi stručnjaci naglašavaju da je jezik najvažniji oblik koji stvara kulturu. Po ovom shvaćanju, može se tvrditi da je tehnički jezik jedan od sastavnica i kreatora čovjekove tehničke culture, koja zatim utječe na razvoj popularne culture. Njegov značajan utjecaj na razvoj tehnologije i povezanost sa tehničkom kulturom može se dokazati činjenicom das u imena pojedinih kulturnih razdoblja u razvoju čovjeka izvedena iz imena oruđa koje je čovjek koristio u određenom periodu. Tako postoji neolitik, brončano doba, željezno doba a, kasnije i IT i informacijska kultura. Riječi su također oruđe razmišljanja i misli su reflekcija stvarnosti koja uključuje i tehničku stvarnost.

Technical culture

The influence of technology on culture is proven by the fact that the process of creating culture is inseparably connected with the development of technology. Apparently it is noticeable that the names of particular human culture epochs have derived from technology since ages, particularly, from the role of tools within the civilisation development which have been used by people, that is why we have the culture of the Neolithic Age, the Palaeolithic Age, the Bronze Age, the Iron Age, Culture of Steam (or Steam Century), Electricity, Atom, IT and Information.

It is really difficult to define explicitly the notions of *technical culture*, due to the fact that the notion of culture has not been explicitly defined yet, as the notion of technology is not explicit and differently approached by many experts in this field of knowledge. Due to the fact that the term culture has some meanings there is a need to interpret this notion in such a way that would include all aspect of people's actions which are of historical character. Such phenomenon is technology. As a consequence, it is essential to offer a definition of technical culture which is the set of two designates *culture* and *technology*. Some authors define technical culture broadly, globally as a component of culture in general, others define it as a theoretical construct for determining the personal features of a human being.

Technical culture from a global perspective refers to the content and the whole of the results of technical activity. It is also a material and non-material (e.g. technical knowledge, technical notions) of social property aimed at developing and modifying the nature. Such technical culture encompasses the level of social awareness depicting the assessment,

opinions and outlooks on the technical system and its particular elements as well as their results, knowledge, skills and habits significant for a given society in accordance with the functioning system of values. The definition of technical culture from a global perspective, is an attempt to determine it by H. Pochanke who the notion of technical culture defines as follows: …*technical culture constitutes the whole of human property in the field of science and technical devices and at the same time, the whole of skills (based on proper knowledge) embodied in the manner of using this property, developing it and transferring it – along with appropriate skills - to the young generation* /**1**/. In this definition, the author encompasses both the object side as well as the subject side of technical culture. J. Bańka (1983) writes, *technical culture shall be understood as a set of thinking projects which are correlated with a certain technical object or a set of internationalised skills as well as ways of thinking and actions determining the acquirement of material goods. In other words, technical culture shall encompass mental patterns of actions and the techniques possible to implement, and at least possible due to the development of human knowledge and practice* /**2**/.

Such understanding of the notion of technical culture refers, excluding its content, to the whole of the content in its technical activity. As a personal feature, technical culture (as defined previously) is the theoretical construct for defining the personal features of a human being. The author considering this fact that is i.a. T. Nowacki emphasising the skills of optimal use of technology by man and writes… *technical culture is expressed in adjusting human activities to the technical devices within a proper, i.e. optimal use of the possibilities given by technology, skills of using each device in accordance with its construction and function. Technical culture is expressed in proper operation of technical devices as well as in their designing and manufacturing* /**3**/. Such approach to technical culture may be, according to T.Nowacki, defined on three levels:

1. Level encompassing the users of technical goods and materials included in the use of natural environment of a human being.

2. Level encompassing producers, that is why the scope of technological production skills, manufacturing of usable objects – construction goods.

3. Level encompassing the technology manufactures and organisers of social and economic life, including designers, constructors, architects and inventors etc. /**4**/.

Similar interpretation of technical culture, on the basis of humanities, philosophy and pedagogy may be encountered in the works of W. Furmanek, J. Bańka, R. Polny, J. Klimczyk.

Generally, it may be claimed that technical culture from a personal perspective is rational, flexible and socially useful relation of an individual to technology and the use of technology for improving the level of spiritual life, economic level, social life and everyday life in compliance with the state of technological progress. In such definition of technical culture there are three connected elements of the relation human-technology.

1. Operative, basic technical knowledge (combined with a technical language and its material which are **technical notions**), allowing for understanding technology, assessment itself and its products and developing a creative attitude towards it.

2. Technical intellectual and manual skills which allows for reasonable operation of technical devices and tools as well as manufacturing new material goods of technical character.

3. Attitudes towards technology, depicted in the interests and engagement in the issues of technology and responsibility of each human being for the results of technical activity /**5**/.

The basic element of technical culture is perceived as the skills connected with technical activity encompassing the range of motor activities related to the use of technical devices during processing materials into new products as well as the service activity and intellectual activities indispensible while designing technical products and planning production processes, searching for the reasons for the ineffectiveness of technical products and connected with the process of passing technical information verbally, by means of words i.e. by proper command of technical notions as well as by other means of expression and coding information. The important element that influences the results of the technical activity is also a social and moral attitude revealed while dealing with technology. It is expressed by the human's relation to phenomena, processes and technical products and also in the relation to technical activity. Reasonable and responsible dealing with technology and its products requires the knowledge of its regulations, principles and regularities. It may be provided only by proper knowledge on construction and operation of technical products of energetic, technological and organisation bases of manufacturing processes about the principles of using technical devices and of the significance of technology within the national economy. Such knowledge constitutes a major component of technical, may be acquired by a person having rich vocabulary of **understood technical notions** because thanks to a language and words such knowledge is saved, stored and transferred.

Technical language and technical culture

A very important component of technical culture is a technical language and its products which are technical notions. As it was mentioned, a language is a tool of thinking, thoughts are the reflection of reality in the people's mind. As it was mentioned, a language is a tool of thinking, thoughts are the reflection of reality in the people's mind. These changes are the causative measures and drive forces for the development of a language. A language is also a means of social interaction and that is why it is a necessary condition of satisfactory and efficient communication among group members in order to perform a common activity and especially to achieve own and socially beneficial aims. Practical use of tools and symbolic forms of activity connected with speech constitute a complex psychological unit in which symbolic activity is aimed at organising practical operations by means of creating second degree stimuli and planning its own actions. The causative measures shall encompass among others: social and political, cultural and educational determinants and technology /**6**/. Their meaning and influence of technical vocabulary on the development of culture is the fact that among many changes which are experienced at the turn of 20th and 21th to which belong demographic, social, ideological, geopolitical, cultural and civilization changes that are the most significant for our future constitute the ones connected with the changes in science and technology /**7**/. The changes are also reflected in the language which is used.

I. Bajerowa /**8**/ writes that it is necessary to pay attention to the influence of the technique which by means of permanent (faster) development is a distinctive feature of our times. It also contemporary hope and threat for human kind, so the force on which depends the whole of our social living including our language.

Dependence of a language upon technology was carried out when man constructed and named the very first tools – the moment of introducing technical vocabulary /**9**/. A vast number of technical terms has accumulated since the moment of creating the very first technical notions till the contemporary times. Technical vocabulary seized to be only a matter of language culture, it is mostly a tool of work, on which accuracy and precision from material tool is demanded.

In the book *Outline of the Polish language history in the years 1939-2000* in the chapter *Technology as the causative determinant* I. Bajerowa specifying concrete technical phenomena and their influence on the development of the Polish language. There can be included the development of mass media

such as: radio, television, tape recorder, video player, photocopiers, computers, Internet and also the development of communication in the scope of road transportation (both public and private), rail and air transportation of general electrification of the country, completely finished in the 1970s and determining the use of modern media. Moreover, the author recalls the influence of dozens of inventions which did not have the direct influence on a general situation of the Polish language, though they enriched its vocabulary with many neologisms filled with the overall language in the process of so called terminolgisation. She writes that the *technology is the basic feature determining the language communication, upon which quality and range of information channels depend* /**10**/.

The number of technical terms decide on the meaning of technical vocabulary in the communication processes, i.e. developing the technical culture of man. It is also connected with rapid development of technical knowledge in the scope of particular fields of technology as well as deeper mutual penetration and engaging many different, mostly distant fields of this knowledge. This penetrates all walks of everyday life, both at home and work – especially the vocabulary needed for purchasing, expressing their own thoughts, needs, wants, discussing the manner of repair, reading a book, newspaper, understanding messages and opinions of the represented in the television and radio programmes etc. It is the cause that not only engineers and technicians, educating or specialising in certain fields of technical knowledge, deal with technical vocabulary but also the whole of the society, almost all the time they deal with technical notions as well as are connected with the problems of understanding and use of these notions. The aforementioned fact reveals the inseparable relation between the technical language and technical culture is the cause for existing the needs of popularisation among the people not directly connected with the technical activity of all fields of technical knowledge especially the vocabulary belonging and developing in a very fast pace. Another significant meaning has the precise, detailed, not ambiguous and mistaken, naming in the industry of devices, machines, process tools and ways of manufacturing the technical products. As well as for theses aims, the technical names must be comprehensible for the recipients without adding explanation. The aforementioned results in an increase in vocabulary belonging to particular fields of technology as well as in an increase in general vocabulary, used every day. Another very significant factor influencing the specific meaning of technical vocabulary is a major increase in

technical literature, both in form of concise works and numerous press titles dealing with many fields of technology (e.g. construction, photography, motorisation, IT etc.) We everyday experience many messages encompassing some technical notions, norms, documents and instructions (e.g. manuals – washing machine manuals – including a vast range of technical vocabulary). What is more, on the radio and television there are many programmes aimed at many groups of recipients and devoted to technology, its various aspects and phases of the activity compliant with seven phases of technical activity of man – starting with recognition by designing, constructing, planning of actions, production, operation, maintenance and liquidation /**11**/.

Due to so much amount of various studies and programmes of a technical character or encompassing technical notions and terms, it is important and even indispensible to have some necessary technical vocabulary. The vocabulary that will be known and used properly.

Conclusion

Development of modern means of technology, which are currently experienced and their anticipated influence on man's life, in a further perspective, with a special emphasis on education defined by R.Pachociński in the book titled Technology vs. education and the fact that a language is one of the most basic components creating and developing culture of a society, confirms that a technical language is a crucially important component of technical culture.

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