СЕКЦІЯ 2. ІСТОРІЯ ПСИХОЛОГІЇ

CYBERPSYCHOLOGY: EVOLUTION OF THE NOTION AND CURRENT STATE

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The article is aimed to analyze of a relatively new area of psychology – cyberpsychology. It was analyzed a number of cyberpsychology notions and researches which highlights a road map of this field. Cyberpsychology is defined as the study of using of computer-based technology, including online and offline interaction and their application to different human activities.

Key words: *cyberpsychology, Internet psychology, human – computer interaction, computer-based technology, Internet behavior.*

Стаття присвячена аналізу нової галузі психології – кіберпсихології. Проаналізовано низку понять і досліджень кіберпсихології, в яких висвітлюється «дорожня карта» цього напряму. Кіберпсихологія визначається як наука про використання комп'ютерних технологій, включаючи взаємодію в Інтернеті й офлайн-взаємодію, їх застосування в різних видах людської діяльності.

Ключові слова: *кіберпсихологія, інтернет-психологія, взаємодія людини й комп'ютера, комп'ютерні технології, поведінка в Інтернеті.*

Цокота В.Р., Кравченко Е.В. КИБЕРПСИХОЛОГИЯ: ЭВОЛЮЦИЯ ПОНЯТИЯ И СОВРЕМЕННОЕ СОСТОЯНИЕ

Статья посвящена анализу относительно новой области психологии – киберпсихологии. Был проанализирован ряд понятий и исследований киберпсихологии, в которых представлена «дорожная карта» этого направления. Киберпсихология определяется как наука об использовании компьютерных технологий, включая взаимодействие в Интернете и офлайн-взаимодействие, их применение в различных видах человеческой деятельности.

Ключевые слова: *киберпсихология, интернет-психология, взаимодействие человека и компьютера, компьютерные технологии, поведение в Интернете.*

Problem Statement. In the USA and the Western Europe there is extensive development of cyberpsychology with emphasis in human-computer interaction (HCI) since the early 2000s. The international scientific community has shown considerable interest in this question in parallel with the growth of the Internet and including large numbers of people in interaction with computers. But there are researches and publications that we can now include in this area since the 1980s or earlier. This movement is starting to involve new states in Eastern Europe nowadays. In this situation, the importance of the correct systematization of expert meetings to deepen understanding of cyberpsychology field now took on particular significance.

Theoretical Framework. The term "Cyberpsychology" formally approved in recent years. But, it is also true that occasional terminological ambiguity is still in place.

When examining the meaning attributed to the term "Cyberpsychology", we should take into account their change in recent years:

– "Cyberpsychology is the study of the impact of computers, technology, and virtual environments on the psychology of individuals and groups" (Kent L. Norman, 2008) [1, p. 9];

– "Cyberpsychology examines how we interact with others using technology, how our behavior is influenced by technology and how our psychological states can be affected by technologies" (Andrew Power, Grainne Kirwan, 2013) [2, p. 3];

– "Cyberpsychology (or Internet psychology) is a branch of psychology that unites (and is responsible for) the methodology, theory and practice of researching the types, ways and principles of people's use of social Internet services (A.E. Voiskunsky, 2013)" [3, p. 88];

– "Cyberpsychology is a recent branch of psychology whose main research objects

are the processes of change induced by new technologies. Some of these processes are related to and involve a variety of affective computing and human-computer interaction in general is significant, yet its psychological origins suggest that the research communities have somewhat different focuses (Giuseppe Riva, 2014)" [4, p. 547];

– "Cyberpsychology considers the psychological processes, motivation, intentions, behavioral outcomes, and effects on both our online and offline worlds, associated with any form of technology" (Alison Attrill, 2015) [5, p. 268];

– "Cyberpsychology is the branch of psychology that examines how we interact with others using technology, how our behavior is influenced by technology, how technology can be developed to best suit our needs, and how our psychological states can be affected by technologies" (Irene Connolly, 2016) [6, p. 3];

– "Cyberpsychology is the study of individuals societies and digital technologies and the psychology of how these interact" (Monica T. Whitty., Garry Young, 2016) [7, p. 1];

– "Cyberpsychology – the study of the impact of technology on human behavior" (Mary Aiken, 2017) [8, p. 4].

Leading scholars from Europe and North America were agreed as to academic and practical field of cyberpsychology is much broader than Internet psychology or web psychology and it is including of an interaction between man and machine, in particular, human – computer interaction (HCI).

Table 1

Manuals dedicated to cyberpsychology

Author/Editor	Title	Year	Pages
Angel J. Gordo-Lopez and Ian Parker	Cyberpsychology	1999	244
Giuseppe Riva, Carlo Galimberti	Towards Cyberpsychology: Mind, Cognition and Society in the Internet Age (Emerging Communication: Studies in New Technologies and Practices in communication	2001	332
Gackenbanch	Psychology and the Internet	2006	392
Joinson et al.	The Oxford Handbook of Internet Psychology	2007	520
Barak	Psychological Aspects of Cyberspace	2008	336
Kent L. Norman	Cyberpsychology: An Introduction to Human-Computer Interaction	2008	553
Icon Group International	Cyberpsychology: Webster's Timeline History, 1998–2007	2010	26
Amichai-Hamburger	The Social Net	2013	296
Andrew Power and Grainne Kirwan	Cyberpsychology and New Media: A thematic reader	2013	264
Alison Attrill	Cyberpsychology	2015	304
S. Shyam Sundar	The Handbook of the Psychology of Communication Technology	2015	616
Monica T. Whitty and Garry Young	Cyberpsychology: The Study of Individuals, Society and Digital Technologies (BPS Textbooks in Psychology)	2016	264
A. Attrill and C. Fullwood	Applied Cyberpsychology: Practical Applications of Cyberpsychological Theory and Research	2016	266
Irene Connolly and Marion Palmer	An Introduction to Cyberpsychology	2016	348
Mary Aiken	The Cyber Effect: An Expert in Cyberpsychology Explains How Technology Is Shaping Our Children, Our Behavior, and Our Values – and What We Can Do About It	2017	400
Thomas D. Parsons	Cyberpsychology and the Brain: The Interaction of Neuroscience and Affective Computing	2017	460
Juan Moises de la Serna and Магна Alejandra Camacho	Cyberpsychology	2017	66
Olivia A. Hurley Giuseppe Riva and Carlo Galimberti	Sport Cyberpsychology	2018	232
Andrew Dr Power	Cyberpsychology and Society: Current Perspectives	2018	244

Russian school of cyberpsychology stays (A.E. Voiskunsky) for its part, at an earlier stage of equating cyberpsychology and Internet psychology.

Nowadays cyberpsychology is developing as independent discipline at the intersection of Psychology and Computer science which has academic texts and Peer-reviewed academic journals.

The table 1 gives an list of manuals and the table 2 gives an list of peer-reviewed academic journals dedicated to cyberpsychology which is available in chronological order.

In that sense, John Suler can be considered a father of cyberpsychology. His book "The Psychology of Cyberspace" (1996) was only the early warnings of an emerging trend. This book is one of the first and most widely cited online hypertext books in cyberpsychology area [9].

These are high-impact journals that focus on cyberpsychology which give opportunity to researcher "to stay in touch" in ever-evolving and developing area of research. The importance of this item has been recognized. It is being increasingly realized that the professionals should be given training and education as cyberpsychology experts.

The first Master degree in cyberpsychology was developed and carried out in 2005 in Dъn Laoghaire Institute of Art, Design and Technology (Ireland).

For today there are three countries (Ireland, United Kingdom, Australia) and five universities that host MSc Cyberpsychology degree. Lomonosov Moscow State University (Russia) announced MSc Cyberpsychology degree since 2018. The table 3 provides a summary of courses dedicated to cyberpsychology.

Purpose of the Study is to provide information about the current status of cyberpsychology, complementing it with an systematizing approaches to cyberpsychology notion and research.

Findings Results. Kent L. Norman indicates cyberpsychology as unique synergistic combination and presents his scheme of "Cyberpsychology as the intersection of human and computer activity" which set out in Figure 1 [1, p. 9] below.

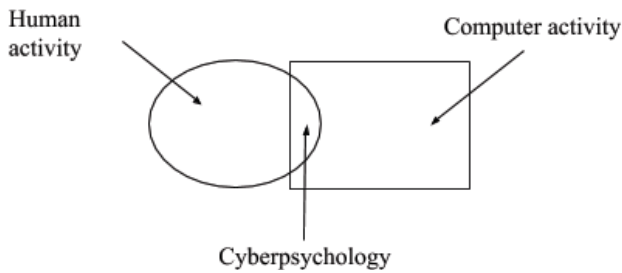The active development of cyberpsyhology field started from intensive Internet deve-

Table 2

Peer-reviewed academic journals dedicated to cyberpsychology

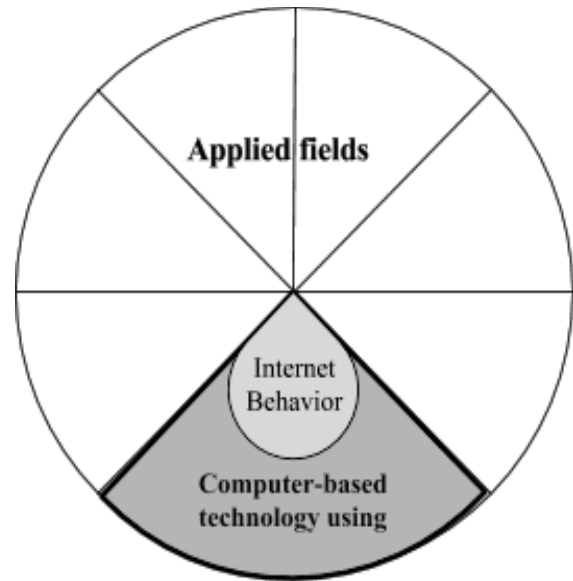| Title	Country	Publisher	Issues Per Year	Coverage	H Index
Computers in Human Behavior	United Kingdom	Elsevier Ltd	1	1985-ongoing	111
Presence: Teleoperators and Virtual Environments	United States	MIT Press	4	1992-ongoing	72
Journal of Computer-Mediated Communication	United States	Wiley-Blackwell	4	1996-ongoing	90
Cyberpsychology, Behavior, and Social Networking	United States	Mary Ann Liebert Inc.	12	1998-ongoing	106
New Media & Society	United States	SAGE Publications	8	1999-ongoing	74
Media Psychology	United States	Lawrence Erlbaum Associates Inc.	4	1999-ongoing	54
Cyberpsychology: Journal of Psychosocial Research on Cyberspace	Czech Republic	Masaryk University	4	2007-ongoing	9
Journal of Media Psychology	Germany	Hogrefe-Verlag GmbH und Co., KG	4	2008-ongoing	17

Table 3

Courses dedicated to cyberpsychology

Country	University	Type of course
Ireland	IADT	MSc. in Cyberpsychology
		Certificate in Cyberpsychology
United Kingdom	University of Bolton	Cyberpsychology
	University of Wolverhampton	MSc. in Cyberpsychology
		Cyberpsychology Research
	Nottingham Trent University	MSc. in Cyberpsychology
Australia	University of Sydney	Cyberpsychology and E-Health
Russia	Lomonosov Moscow State University	MSc. in Cyberpsychology

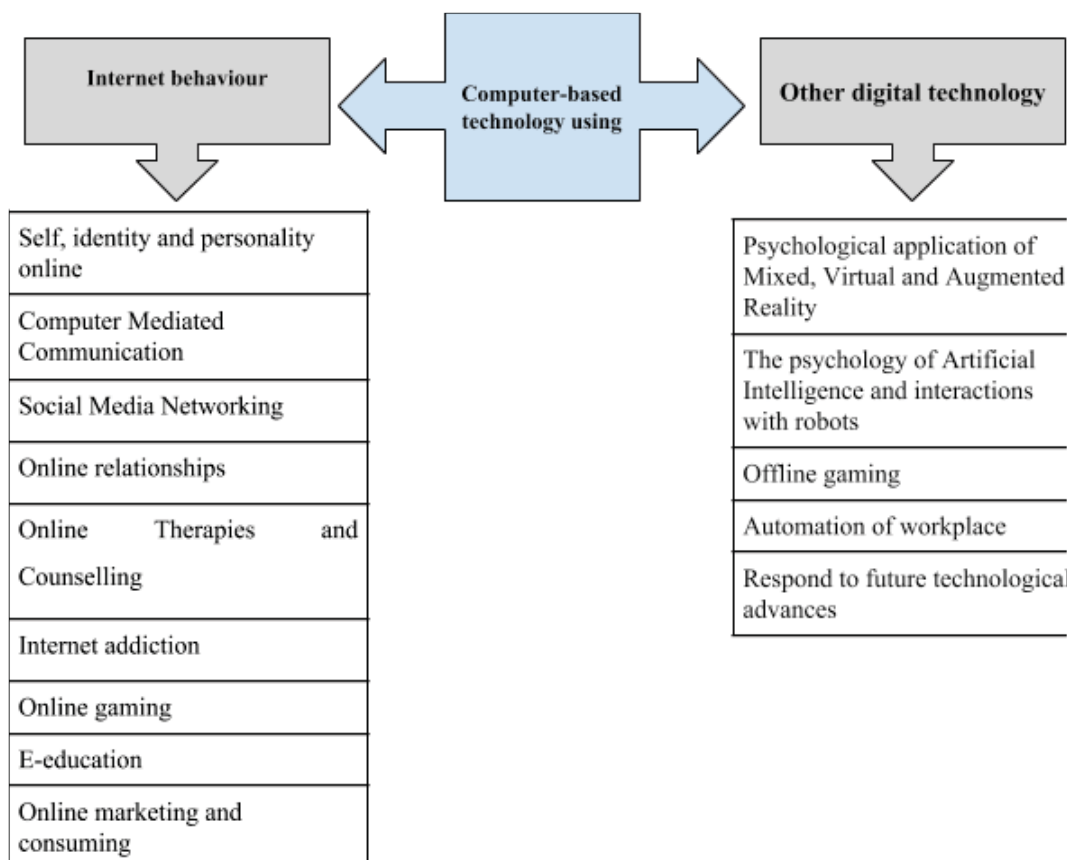**Figure 1. Cyberpsychology as the intersection of human and computer activity (Kent L. Norman)**

lopment that's why Internet behaviour rests mainstream of current research in this area. But new applied fields within cyberpsyhology has a trend towards differentiation during huge technology developments of last decades. There are forensic cyberpsyhology, clinical cyberpsyhology, sport cyberpsyhology and others. Its also considers how interfaces can be designed and how psyhologycal teatment can be providing with using of new gadgets.

Whereas previously the cyberpsychology was defined as a relatively new field within applied psychology with several journals and texts, the new provisions define the cyberpsychology as an independent study with its own

Figure 2. Relations between cyberpsychology areas of research and practical application of cyberpsychology

applied fields. A general scheme of cyberpsyhology research has been developed for demonstration of relations between these areas of research and practical application and is shown in figure 2.

Figure 3. The main directions of research and practical appliances of cyberpsychology

This scheme is a revolving wheel, which are different sectors of applied fields of cyberpsyhology. There is also fixed section which is overlaid on applied field during rotation. This fixed section consists of computer-based technology using which includes as central part as Internet behavior.

The scheme shows that the computer-based technologies is leading to consideration of a new practical areas that have never been possible before. New generation moves from computer illiteracy to computer high intelligence.

The use of the possibilities of information and communication technologies for health, within the framework of cyberpsychology, allows expanding access to psychological assistance, regardless of location and obstacles to treatment. This area of research is called Telemental health. Human interest in technical innovations due to the novelty effect translates the unpleasant process of treatment into an exciting game procedure. Achievements in scientific and technological progress increase the effectiveness of psychological care and its degree of confidentiality. There are different kinds of online and offline counseling and treatment as Computerized and Internet-mediated Cognitive-behavioral therapy, Virtual Reality Exposure Therapy, Augmented Reality Exposure Therapy (ARET) and mobile therapy (mTherapy).

Based on the above described cyberpsychological innovations and whole human functioning in a digital world it can be noted that it has both tremendous opportunities and serious limitations. These risks are connected with Internet and computer addiction, stress due to the loss of access to Internet or smartphones as nomophobia, cybercrime, cyber-bullying, the problems with virtualization of relationships and transfer of life in virtual world, etc.

This technological movement results to new opportunities and threats which should be recognized during research investigations. Current research is focused on positive and negative aspects of human-computer interactions. The main directions of research and practical appliances of cyberpsychology is shown in figure 3.

Finally, the analysis presented gives us criterias for defining of cyberpsychology. Cyberpsychology is the study of using of computer-based technology, including online and offline interaction and their application to different human activities.

Conclusions:

1. The scheme of relations between cyberpsychology areas of research and practical application of cyberpsychology was developed. It includes computer-based technology using whit Internet behavior as central part which is overlaid on applied fields.

2. The main directions of research and practical appliances of cyberpsychology is described. There is divisions between research of online and offline aspects of human-computer interections.

3. The notion of "cyberpsychology" has been defined based on an analysis of research of recent decade. Cyberpsychology is interpreted as the study of using of computer-based technology, including online and offline interaction and their application to different human activities.

In future it is planned to study the particular parts of cyberpsychology research and providing practical cyberpsychology method of training and treatment.

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