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Final Death of the Author: Creativity in the Age of Information Society

Abstract

If we assume that creativity is a result of the inner dialogue of creative individual (author), during which he creates an improbable combination of elements (i.e. new information), how can we comprehend creativity today, after we technologically extended our individual consciousness and connected it into a “global brain” via telematics? Prevalence of information and communications technology enables us to create more new information than ever, and allows us to store it in artificial memory, where it could be reused by almost anyone. In the age of ICT, author seems to be superfluous and the inner dialogue has been replaced by interpersonal dialogue. Taken into consideration Vilém Flusser’s and Marshall McLuhan’s theory of media, I will try to problematize new paradigm of creativity, as it is disclosing in information society.

Key words: *augmentation of communication processes, digital materialism, democratization of information production, aesthetics of information.*

1. Communication Systems and Information Systems

Technical progress, as many theorists have so far agreed, is a crucial factor to the social and cultural changes throughout history. It has been argued by some media theorists (such as Benjamin, Innis, McLuhan, Flusser, Manovich, et al.) that technological advances correlate with the new forms of social systems and specifically with the augmentation of communication processes. Flusser, for instance, exclaimed that “every revolution, be it political, economic, social, or aesthetic, is, in the last analysis, a technological revolution”⁸², while Marshall McLuhan identified every technological invention as a new extension of our physical and psychic bodies.⁸³

In the last few decades, media studies research has been increasingly focused on communication and information systems and, ever since the occurrence of the information theory, the ambivalence between social categories and the technical aspect of such systems has been problematized. An interesting aspect of this dichotomy is collating communication in cultural and natural systems; in computer theory, for example, evolution can be understood as a logical and communicatory process, while its transitional forms are considered statistically, “a probabilistic distribution of histories (...).”⁸⁴

Since information theory defines information as an objective (mind-independent) entity⁸⁵, communication is no longer understood merely in terms of social categories, but as a process that, as with all phenomena, submits to physical laws, and therefore it is a process which may be mathematically analyzed. However, the philosophical tradition of communication theory refuses to concentrate merely on the mathematical laws of communication and often stresses the semantic aspect of messages and the *forms of representation* of (objective) information in interpersonal communication.⁸⁶

Phenomenologist Vilém Flusser points out how, on account of the isomorphism in natural processes, we tend to forget the artificiality of human communication, which lies in codification. He believes the main characteristic of human communication is *conventional coding* initiated by *conscious intention*, rather than by natural instincts, while considering human communication as natural induces ignorance of the artificiality of an underlying code.⁸⁷ In fact, Flusser initially understood communication from a phenomenological point of view, as a struggle *against* nature, claiming: “Human communication is an artistic technique whose intention is to make us forget the brutal

82 Vilém Flusser, ‘On Writing, Complexity and Technical Revolutions’, Interview by Miklós Peternák in Osnabrück, European Media Art Festival, September 1988 (10’30”).

83 The originality of many of McLuhan’s concepts has often been questioned by his critics and it should be mentioned at this point that the idea of media as an extension of our senses most probably initially appeared in Freud’s *Civilization and Its Discontents* (*Das Unbehagen in der Kultur*, 1930). Nonetheless, McLuhan elaborated on it as one of the key concepts of his work.

84 Robert Audi (ed.), *The Cambridge Dictionary of Philosophy* [2nd ed.], Cambridge University Press, 1999, p. 167.

85 *Ibid.*, p. 435

86 *Ibid.*, p. 435; Robert T. Craig, ‘Communication Theory as a Field’, 1999, <<http://www9.georgetown.edu/faculty/irvinem/theory/Craig-CTF-1999.pdf>>, 23 November 2012.

87 Vilém Flusser, ‘What is Communication’, in *Writings*, ed. Andreas Ströhl, University of Minnesota Press, 2002.

meaninglessness of a life condemned to death.”⁸⁸

The rising importance of such debates lies in the fact that increasing numbers of people are able to communicate with others in ever more diverse locations in the world (this phenomenon is commonly known as mass communication), while in the last few decades importance was placed on the enhanced efficiency of information processing. Finally, with computers, whole world(s) can be disassembled to elementary particles, translated to numbers (algorithms), consequently allowing us to process, collect, calculate and compute bits of information faster than with any other medium invented. The change of paradigm, such as the case of digitalization, which meant that all the traditional means of encoding messages had been submitted to discrete values in binary numeric form, significantly affected not only information processes, but inevitably communication processes – but can those two categories be considered independently at all?

Friedrich Kittler, in *The History of Communicating Media*, noted: “the transition from writing to technological media led to a decoupling of communication and information,”⁸⁹ and eventuated the information theory, concerned mainly with the technical aspects of information. Information systems, Kittler claims, “are optimized in terms of the storage, processing and transmission of messages”⁹⁰, while communication systems “in addition to messages, also control the traffic of persons and goods”⁹¹, and comprise all kinds of media – not only technical, while the information theory was triggered merely by the latter, and in deviation from the socio-cultural and socio-psychological conditions of communication. Kittler, however, suggests there is no reason not to analyze communication systems in the same way as information systems – with an emphasis on the technical aspect of media – since the features of communication systems can be sufficiently reformulated in terms of information theory, which would rid even the “triad of things communicated”⁹², *messages*, *persons* and *goods*, of their sociological burden. In the context of information systems, he explains, “messages are essentially commands to which persons are expected to react. (...) As system theory teaches us, persons are not objects but addresses, [while] goods represent data in an order of exchange between said persons.”⁹³

In reply to the above, it seems interesting how a discourse can immediately be considered less encumbered with laxity if it is derived from “more objective” natural sciences – and such is the case with information theory which initially tends to *explain* the phenomena of communication rather than *interpret* it.⁹⁴ However, we cannot ignore the fact that modern information theory, alongside relying on statistical mathematics, relies highly on statistical mechanics (thermodynamics), which is in many ways an interpretative, rather than strictly explanatory, discipline itself, demonstrating

88 *Ibid.*, p. 4.

89 Friedrich Kittler, *The History of Communication Media*, 1992, <<http://hydra.humanities.uci.edu/kittler/comms.html>>, September 2012.

90 *Ibid.*

91 *Ibid.*

92 *Ibid.*

93 *Ibid.*

94 See: Vilém Flusser, ‘What is Communication’, p. 4.

that the more we step into the area of the unknown, the more we are susceptible to interpretative theoretical methods, as “solid” and “objective” facts seem to be ever amending in time and space, which thwarts the idea of an absolute truth.⁹⁵

Media studies, however, strongly rely on social and political categories from the outset, including the significance of free will in inducing changes in society. It is not surprising, then, that many media theorists were initially concerned with the power of manipulation implanted in the emerging mass media in the second half of the 20th century. As the discipline developed, more and more theorists abided by the idea of reciprocity as the inherent technical characteristic of a medium and its social function, alongside its remodeling of the social systems and reforming our sensory mode.

According to *The Cambridge Dictionary of Philosophy*, communication theory does not exist as an independent discipline, or rather, it is simply equated with information theory; “a primarily mathematical theory of communication,”⁹⁶ while its philosophical engagement with the semantics of information is considered a mere repurposing of the angle of interest. In response to this confusion, in his essay *Communication Theory as a Field* (1999), communication theorist Robert T. Craig reconsiders the field of communication theory through defining seven main underlying traditions, as “each (...) [of these traditions] derives from and appeals rhetorically to certain commonplace beliefs about communication, while challenging other beliefs.”⁹⁷ The purpose of the essay is, as he reveals, to reconstruct communication theory as a field, with the goal of dialogical or dialectical coherence, that is to say, not as a chimera of unified theory that would cover all of the seven traditions identified by Craig, but a “theoretical diversity, argument, debate”⁹⁸ which would be compatible with the lively and ever changing concept of communication. The suggested traditions cover social sciences in a narrower sense (the socio-psychological tradition, the socio-cultural tradition), along with more philosophical tendencies (the critical tradition, the phenomenological tradition, the rhetorical tradition, semiotics), as well as the theories examining information processing (the cybernetic tradition), in relation to which Craig provides the aforementioned example of the dictionary entry on *Communication theory* in *The Cambridge Dictionary of Philosophy* to indicate the confusion: “Communication theory. See INFORMATION THEORY.”⁹⁹

Vilém Flusser comments on this confusion himself, when he notes: “The theory of information should be a method for the theory of communication, but it is often confused with it!”¹⁰⁰ At this point we can definitely see how the realization of the importance of rejoining the technical and semantic levels of the communication process has persisted ever since the pioneer work in information theory –

95 See: Rudolf Arnheim, ‘Entropy and Art: An Essay on Disorder and Order’, 1971, <http://academic.evergreen.edu/curricular/emergingorder/seminar/Week_7_Entropy_and_Art_Arneheim.pdf>, January 2013; Michael Baranger, ‘Chaos, Complexity, and Entropy’, <<http://necsi.edu/projects/baranger/cce.pdf>>, December 2012.

96 Robert Audi (ed.), *The Cambridge Dictionary of Philosophy*, p. 435.

97 Robert T. Craig, ‘Communication Theory as a Field’, p. 119.

98 *Ibid.*, p. 123.

99 Robert Audi in Robert T. Craig, ‘Communication Theory as a Field’, p. 141.

100 Vilém Flusser, ‘On the Theory of Communication’, in *Writings*, ed. Andreas Ströhl, University of Minnesota Press, 2002, p. 20.

Warren Weaver's translation of Claude Shannon's *Mathematical Theory of Communication* from mathematical language into theoretical terms, which expanded it with the inclusion of cultural categories. On the one hand, it is true, as Kittler notes,¹⁰¹ that Shannon's work strictly covered the engineering aspects of the communication process and was therefore focused on the technical level (LEVEL A), however, put in theory by Weaver, the addition of LEVEL B (semantic problem) and LEVEL C (effectiveness problem) was inevitable for comprehensive understanding, taking into account the interaction of all three levels. In the beginning, Weaver explains: "[The term] *communication* [in the *Mathematical Theory of Communication*, 1949] is used (...) to include all of the procedures by which one mind affects another."¹⁰² And even though Shannon clearly emphasizes the objective nature of *information* in stating: "The semantic aspects of communication are irrelevant to the engineering aspects,"¹⁰³ Weaver adds: "But that doesn't mean that the engineering aspects are necessarily irrelevant to the semantic aspects."¹⁰⁴

In contemporary media studies, one of the leading theorists on the subject of new media, Lev Manovich, intentionally replaces some recurring terms in this field with expressions less connoted with social sciences, in order to grasp the current media reality through the scope of computer science. In the monograph *The Language of the New Media*, he introduces the term "new media object", "rather than "product", "artwork", "interdisciplinary media" or other possible terms¹⁰⁵ with the explanation that he aims to discuss "the general principles of new media which would hold across all media types, all forms of organization and all scales."¹⁰⁶ No less important is the association of the term "object" with its standard use in the discipline of computer science, which confirms Manovich's intention behind his adopting the language of a given discipline in order to gradually analyze (theorize) the "computerization of culture"¹⁰⁷, progressing in the name of information technology. Manovich explains his method as follows: "I scrutinize the principles of computer hardware and software, and the operations involved in creating cultural objects on a computer, in order to uncover a new cultural logic at work."¹⁰⁸ It seems, just as Flusser suggested some time ago, that Manovich indeed uses the knowledge of information theory primarily as a method, a method he declares "digital materialism".¹⁰⁹

101 Friedrich Kittler, *The History of Communication Media*, 1992, <<http://hydra.humanities.uci.edu/kittler/comms.html>>, September 2012.

102 Warren Weaver, 'Recent Contributions to The Mathematical Theory of Communication', 1949, <<http://ada.evergreen.edu/~arunc/texts/cybernetics/weaver.pdf>>, July 2012, p. 5.

103 *Ibid.*

104 *Ibid.*

105 Manovich, *The Language of New Media*, 2001, <<http://www9.georgetown.edu/faculty/irvinem/theory/Manovich-LangNewMedia-excerpt.pdf>>, November 2012, p. 39.

106 *Ibid.*

107 *Ibid.*, p. 32.

108 *Ibid.*, p. 35.

109 *Ibid.*

2. *Great Expectations: Deceiving Commons and the Automation of the Mind*

Ever since the popularization of information technology, the common user expectations on new media have been high and are summarized quite well in the following definition: “New media is a broad term in media studies, that emerged in the latter part of the 20th century, which refers to on-demand access to content anytime, anywhere, on any digital device, as well as to interactive user feedback, *creative participation* and community formation around the media content. Another important promise of new media is the “*democratization*” of the creation, publishing, distribution and consumption of media content.”¹¹⁰

The source of this quote is Wikipedia, and since it is not (yet) a standard practice to use such a reference in an academic paper, I suppose this aberration should be briefly vindicated. First of all, unlike many theoretical definitions, Wikipedia, as a digital, interactive (collaboratively edited) and hyperlinked encyclopedia, is closely related to the idea of new media epistemology, that is, rather than proceeding from a single point of view, like the expert theoretical definitions, it is based on incorporating the combinations and constant interactive modifications of many points of view, developing in appropriation of the broadband context. Secondly, as academic Richard Cavell pointed out in his conference speech at *Vilém Flusser’s and Marshall McLuhan’s Theories of Communication Revisited*, the percentage of mistakes in Wikipedia is comparable to the average inaccuracy in the Encyclopedia Britannica, regardless of the fact that the latter has been composed by world-class experts.¹¹¹

More importantly, however, Wikipedia breaches the original principle of the “end to end argument”, introduced by network architects Jerome Saltzer, David Clark, and David P. Reed in 1981, following their ambition to introduce a free platform for the unlimited exchange of data, which would obtain the simplicity of a network and retain the complexity and intelligence at its ends (the users)¹¹², rather than accumulating intelligence within the network (like the Internet). Conversely, Wikipedia and other such websites for creating and accumulating knowledge on the network follow the principle of uniform template and introduce automation in the production of knowledge as well as in related creativity. As Lev Manovich observes, mass information processes are increasingly transmitted to automation, relying on statistical calculations in the “pattern of user interaction with information objects and displays”.¹¹³

An important utility of automated programs is to translate “personal” messages to objective entities (statistical data) and produce calculations which estimate the user’s intentions. In this way, we can

110 ‘New Media’, Wikipedia, The Free Encyclopedia, <http://en.wikipedia.org/wiki/New_media>, March 2012, my emphasis.

111 Richard Cavell, ‘Mechanical Brides and Vampire Squids’, “Vilém Flusser’s and Marshall McLuhan’s Theories of Communication Revisited” conference, Winnipeg 2011, <<http://vimeo.com/43221279>>, September 2012.

112 Lawrence Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World*, New York: Random House, 2001, p. 35.

113 Lev Manovich, *The Language of New Media*, p. 39.

measure the common consensus about generally subjective perceptions, such as aesthetic qualities: the collected data consists of an inclusion of many “opinions” – or, rather, reactions – on a specific case, while the average calculation represents the optimal “truth” about the matter in question. This suggests “the truth” can now be measured quantitatively, and data is calculated by programs into patterns, which in return regulate the user’s interactions.

This logic is absolutely in conflict with the conception of a “free and creative” information society, which is the production of (new) information. Let me explain why. According to information theory, the more probable an event is to occur, the less information it carries.¹¹⁴ Since the “democratization” of information production (or mass information production), popular software and hardware has been tailored to the needs of the average user, and programs therefore only include the options which are more likely to be selected by a large number of users. By definition, all of the options ascribed to such programs are therefore highly probable and will carry low amounts of information when realized. As Warren Weaver pointed out more than half a century ago: “This word *information*, in communication theory, relates not so much to what you *do* say, as to what you *could* say. That is, information is a measure of one’s freedom of choice when one selects a message.”¹¹⁵ If the amount of information is measured by one’s freedom of choice, automation is the basic principle of reducing the user’s freedom of choice by inducing pre-calculated patterns and eliminating improbable combinations from the program’s capacity.

Lev Manovich considers “the automation of the mind” one of the basic characteristics of the computerized culture which has been dominating post-industrial society ever since the end of World War II, and promoting the logic of “production on demand” and “just in time” delivery which themselves were made possible by the use of computers and computer networks in all stages of manufacturing and distribution.¹¹⁶ As opposed to the automation of the body (functions), previously dealt with in the industrial society, the abundance of information impossible to be processed and stored by our brains is now submitted to automatized computer programs, which are “programmed to replace the functions of human organs of observation, effort, and decision.”¹¹⁷

In the current circumstances, the automation of the mind, as was the case with the mechanical automation of the body in industrial society, is mostly relayed to the optimization of the production, manufacture and distribution of “goods,” far exceeding the demand and therefore creating it, mostly in order to increase control and enhance consumption. The most widespread computer network, the Internet, is therefore not – as it is often illustrated in cartoonish analogies – a free undefined space with limitless possibilities, even though it is definitely the perfect medium to lead to such beliefs, as various corporations are working hard on obtaining the interaction of the common user with technology at the surface of “the medium”, while most of its processes are in fact executed

114 Robert Audi (ed.), *The Cambridge Dictionary of Philosophy*, p. 436.

115 Warren Weaver, ‘Recent Contributions to the Mathematical Theory of Communication’, 1949, p. 5.

116 Lev Manovich, ‘Automation of Sight: From Photography to Computer Vision’, <manovich.net/DOCS/automation.doc>, November 2012, p. 9.

117 *Ibid.*, p. 2.

on the level of computer engineering under corporate ownership and protocol providers pursuing monopoly over communication channels, not to mention the increasing interest in the trade of online user data for commercial, political and ideological purposes.

The so-called “open source” databases such as Wikipedia are apparently free of copyright and can be limitlessly used and reused by anyone, however, it has to be taken into account that every medium has multiple operative layers, from “immaterial” electromagnetic waves to heavy physical infrastructure, and talking about the Internet as a free medium is like claiming anybody can build a house out of stones lying around. Indeed, someone has to sell us some land first, and the same goes for the Internet, except that in this case most of us have no idea of the ownership complexity behind it all. Regardless of how free the Internet appears to us, we should not forget all those boxes we tick under the scrolls of long and tedious small prints we never read (a.k.a. terms and conditions), which often come around as the *Faustian bargain* in the sense of ownership and disposition of user information. I cannot go into great detail at this point, but it is necessary to stress the fact that the notable downside of popularizing new media technology is the corporative and political interest in the generalization and automation of knowledge, which can lead (and is doing so, in my opinion) to the decline of inventiveness and creativity, on the account of reduced intentionality in the production of new information.

From a phenomenological point of view, due to the new code, as we have found a way to translate every single level of our “reality” to numbers (algorithms), the appearance of the world has changed in such a way that it no longer supports the idea of objective knowledge consisting of *solid* facts. We can speak of the *fluidization* of the world, as sustainability is replaced by constant modifications in *the flow* of information, which are far too heterogeneous and elusive to be adequately processable by the human brain and are therefore subjected to automated programs that are able to immediately respond to all new in-field information (as long as this is in their capacity), while the given phenomena change our perception models, as we now perceive the world as a *constant change*.

The misconception of new media as “creative technologies” comes precisely from trading every such change for *novelty*, and almost every user’s contribution to new media contents for a creative act.

3. The Death of the Author – Again!

The trend of calculating the human experience into patterns, which are projected back to the user as models of behavior, raises the question of the status of creativity in the new media environment in relation to the author as a creative individual, for it seems that creativity, which used to be considered mostly in terms of originality and distinctiveness, has shifted into the generalization of the creative process. It has to be stressed, again, that the “end to end argument”, as the original idea of free knowledge exchange via computer networks, follows the principle of the individual’s ability to exchange info via networks, while creativity and intelligence are in his hands from the

outset, and cannot be acquired, stored or interfered with “online”.¹¹⁸ Placing the action (production, creation, evaluation) *within* the network opens space for the democratization of these processes and renders authorship partly insignificant, as more and more individuals are included in the “creative participation” of the production of information. However, as pointed out in the previous chapter, it also creates space for automation. From the technical viewpoint, automation is a principle congruous with the numerical coding and modular structure of a media object, as those characteristics enable the automation of many operations in the information process. As a repercussion of automation, Manovich points out, “human intention can be removed from the creative process, at least in part.”¹¹⁹

At this point, after we touched upon the intrinsic technical properties of new media, I would like to turn to the “first death of the author” as contemplated by Roland Barthes in his notorious essay *The Death of the Author* (1967), for I claim that he was ultimately pointing to a conclusion comparable to mine, actually *stressing* the importance of the author in exceeding the structural and operative rigidity of language.

The problem with authorship, as far as Barthes understands it in relation to modern literature and its paradigm of literary criticism, has to do with pinpointing the author’s personal history as a source of the interpretation of his work. Of course, what Barthes detected was not a question of authorship, but a problem of historical thinking, which was, according to McLuhan and Flusser, initially caused by the *operational rules* inherent in the medium of writing. The linear, causal nature of the medium is consequent to the historical understanding of time and the causal juxtaposing of events. It was only natural for such a mode of perception to comprehend literary work as an event on a timeline and as a formal consequence of the preceding events, often related to the personal history of its author and other historical events. McLuhan argued that the sensory mode inflicted by a certain medium had the power to obscure the operational laws of that same medium.¹²⁰ Simply put, the more we know how to write, the less we are aware of the process unfolding in the act of writing. The susceptibility to manipulation increases, as a vast majority of users know how to use the medium but have no knowledge of how the medium uses them – incidentally, today that knowledge is in the hands of computer programmers, who are rarely independent creators in our capitalist society.

The bottom line is that the modernists mentioned by Barthes (and I believe McLuhan was very much aware of this) managed to annihilate the historical, narrative quality of language through its *structural* subversion. In terms of information theory – they increased the amount of information by realizing an improbable event according to the given conditions (given medium), and therefore expanded the possibilities of expression concerning the medium of writing. In order to express creativity through the medium, without it being programmed by its operational rules, they had

118 Lawrence Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World*, New York: Random House, 2001, p. 35.

119 Lev Manovich, *The Language of New Media*, p. 53.

120 Marshall McLuhan, ‘The Gadget Lover: Narcissus as Narcosis’, in *Understanding Media: The Extensions of Man*, London and New York: Routledge, 2010.

to *abuse* the medium and, from that point of view, the author as a creative individual certainly underlined their responsibility to expand (and exceed) the boundaries of the given medium.

The question we should ask is whether something similar is possible today in the world of new media. Can the new media technologies be *abused*? The *using* and *abusing*¹²¹ has to do with a difference in the utilization of media tools, or, in terms of information theory, with different levels of the production of information. In his interview in München (1991), Vilém Flusser commented on this distinction when he spoke of the difference in operating on the functional level of the medium as opposed to the structural level of the medium. Flusser claims that technical media, along with the systems developed in computer science, are *structurally* complex, but whether they will be submitted to *functionally* complex use depends on the (education of the) users. So far, those complex systems have mostly been used for functionally simple uses, which is not challenging for creative thought, as such usage does not realize the potentials of structurally complex technology, instead, it merely follows its program.¹²²

4. New Media (and) Creativity: Toward the Aesthetics of Information

Creativity is one of the intrinsic human activities considered to effectively reflect (latent) changes in a given culture and its communication structures. If we were to define and measure the creativity input in the “new media object” using traditional aesthetic terms, the matter would soon become confusing, or, as Flusser noted, the “traditional measurement standards: the epistemological (“true-false”), the ethical (“good-bad”), and the aesthetic (“beautiful-ugly”)”¹²³ are not operative in such context. One of the side-effects of new media is the democratization of aesthetic evaluation – the judgment of which has been ascribed to subjective experience, while competent experts are now (since “postmodernity”) being ruled out by a multiplicity of opinions. As the relative nature of the subjective aesthetic experience suggests that the accuracy of an opinion cannot be measured objectively, could it be possible to calculate the probability of its accuracy with the help of information theory if we treat opinions simply as (objective) bits of information, as Kittler might suggest? In principle, it could not, since information is only ever objective outside its representation, at its source, while an opinion is a message *about* the information.¹²⁴ Unless, of course, we treat the *reaction* as information, as an independent event instead of a resultant opinion, or, in other words, unless we treat reactions as independent statistical data, which can be repurposed according to the context.

121 I have adopted the distinction between using and abusing the medium from a short essay by Julian Oliver, ‘The Game is Not the Medium or How to Ignore a Shiny Box’, which I strongly recommend. <http://julianoliver.com/output/static/papers/The-Game-is-not-the-Medium_Oliver-2006.pdf>

122 Vilém Flusser, ‘On Writing, Complexity and Technical Revolutions’, Interview by Miklós Peternák in Osnabrück, European Media Art Festival, September 1988 (10’30”).

123 Vilém Flusser, ‘Criteria–Crisis–Criticism’, in *Writings*, ed. Andreas Ströhl, University of Minnesota Press, 2002, p. 44.

124 Robert Audi (ed.), *The Cambridge Dictionary of Philosophy*, p. 435.

Information theory was initially developed to present information as quantitatively measurable and to utilize this measure in designing efficient and reliable devices for processing information. The information is always measured at the information source (event) and it is measured in accordance with the probability of its occurrence. The less probable an event the more information it carries, and if an event's probability of occurrence in certain conditions is one hundred percent, then such an event carries zero information.¹²⁵

Pattern processing, however, tends to increase the ability to predict events, which in turn models our behavior, and we tend to (even nowadays) understand improbable events as something threatening and (aesthetically) displeasing. It is, as Flusser would say, the law of novelty, and it is for this reason that “true” art is always regarded as something horrific at its occurrence.¹²⁶

In his unpublished essay *To See Oneself Die*, Flusser pointed out that “art”, as an epistemological and ontological method of self-observation, has always reflected what was new in our society. Therefore, Flusser concluded, “there is only one basic criterion to judge “art”: namely the “newness” of what it shows us.”¹²⁷

To put this observation within the context of information theory, we do not consider the message of an “artwork” as reflecting the general opinion, but we consider a creation as an independent situation in which there are “various probabilities involved – those of getting to certain stages in the process of forming messages, and the probabilities that, when in those stages, certain symbols can be chosen next,”¹²⁸ for only then can we objectively measure its newness or improbability. In this context, the most informative creations are those that have the highest degree of improbability in the given conditions. However, if art is such an improbable event, how do we recognize it as art at all? The answer is simple: we recognize art by no other aesthetic criteria but its newness, since, by realizing highly improbable events and expanding possibilities, art always informs us on what is new in our society.

There is nothing revolutionary about the fact that the degree of creative input should be measured by the originality of ideas, however, the mere idea of originality in the vast universe of possibilities happens to be too vague. Therefore, we should measure the degree of creativity in proportion to the improbability of an event (product, artwork) in the given circumstances.

There is no need to point out the fact that highly improbable information, and hence the most creative (new) information, is generally ruled out when it comes to commercial programming, for it is impossible to write a program with no limits, hence including highly improbable combinations as the options in the program. Interesting things happen for this reason: in digitalization, we have a (mathematical) code, which in fact offers many more free choices than any other media (like the alphabet, for instance) and inherits much greater potential in the production of new (improbable,

¹²⁵ Ibid., p. 436.

¹²⁶ Vilém Flusser, ‘Habit: The True Aesthetic Criterion’ in *Writings*, p. 51–57.

¹²⁷ Vilém Flusser, ‘To See Oneself Die’, *Vilém Flusser Archive Berlin*.

¹²⁸ Warren Weaver, ‘Recent Contributions to the Mathematical Theory of Communication’, 1949, p. 7.

creative) information. But since only a limited number of people have learned to use *the actual code*, much fewer than the number of people who have learned to use its products, we now find ourselves in a situation where automation actually limits free choice and thus has a rebound effect on intention.

Most of the users of new media are thus submitted to the automated intention calculated within the capacity of the computer program. How can such a practice increase creativity? In my opinion, it certainly cannot. If we initially believed the death of the author had to do with the problem of overall creativity, it now turns out that next to no one can express ultimate creativity in new media, unless they have learned the code and subverted the program – in other words, unless they are a programmer.

Does it follow that programmers are the new artists? It would be more accurate to say that the new (*ideal of*) an artist is a programmer. Although programmers know how to use the code, they do not necessarily have the intention of *abusing* it, which is the ultimate act of keeping media alive.¹²⁹ Therefore, I believe that the question of creativity in the new media world is related to its *modus operandi*, rather than the capabilities and prevalence of technology. It is a matter of the difference in the utilization of media tools, or, so to speak, between *using* and *abusing* the media.

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Konačna smrt autora: Kreativnost u doba informacijskog društva

Sažetak

Pretpostavimo da je kreativnost rezultat unutarnjeg dijaloga kreativnog pojedinca (autora) iz kojega nastaje nova informacija. No kako onda razumjeti kreativnost danas, kada je naša individualna svijest proširena elektronskim medijima i telemetrijski uključena u "globalni mozak"? Sveprisutnost informacijske i komunikacijske tehnologije omogućuje nam da stvaramo nove informacije brže negoli ikad prije i pohranjujemo ih u forme umjetne memorije, u koje može svatko ući. S obzirom na to čini se da je pojam autorstva prevladan, a unutarnji dijalog zamijenjen intersubjektivnim dijalogom. Držeći se teorije medija Viléma Flussera i Marshalla McLuhana, problematiziram novu paradigmatu kreativnosti kakva se razvija u dobu informacijske tehnologije.

Ključne riječi: *povećanje komunikacijskih procesa, digitalni materijalizam, demokratizacija proizvodnje informacija, estetika informacija.*