# TECHNOLOGICAL AND ECONOMIC DEVELOPMENT OF ECONOMY ISSN 2029-4913 / eISSN 2029-4921











2015 Volume 21(6): 855–868 doi:10.3846/20294913.2015.1036325

# TECHNOLOGIES IN CREATIVE ECONOMY AND CREATIVE SOCIETY

#### Tomas KAČERAUSKAS

Department of Philosophy and Communication, Vilnius Gediminas Technical University, Saulėtekio al. 11, LT-10223 Vilnius, Lithuania

Received 13 November 2014; accepted 14 March 2015

**Abstract.** The article deals with issues of technologies in the environment of creative economy and creative society, mostly focusing on the following topics: 1) invasion of technologies, which is accompanied by technical illiteracy or simplification of intellection presupposed by a certain technique (e.g. computers); 2) new technologies emerge in the environment dominated by consumption in order to boost consumption; 3) political, media and communication technologies are intertwined to the extent that allows us to speak about the technologized society; 4) technologies are inseparable from creative activities: on the one hand, development of technologies needs creativity, on the other hand, every branch of creative industries needs certain technologies; 5) technologic development is conditioned by their syncretism, i.e. their ability to serve the art (technē) of life and creative intentions; 6) in the creative society, happiness does not depend on constantly upgraded (i.e. consumed) technologies but is rather possible in spite of them; 7) unlimitedness is the greatest limitation of global technologies: unconnected with any existential region, they billow in the wind of ever newer technologies.

**Keywords:** technologies, creative economy, creative society, media, communication, creative industries.

JEL Classification: O10, O30.

#### Introduction

Areas of technologies, creation and economy intersect (see Fig. 1): technologic and economic development is only possible because of creative outcomes in engineering or economics; meanwhile, economy and creation use certain technologies; and, finally, creation develops because of certain economic relations.

Corresponding E-mail: tomas.kacerauskas@vgtu.lt



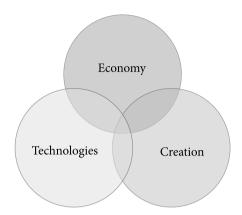


Fig. 1. Intersection of technologies, creation and economy

As all of the areas – economy, creation and technologies – overlay each other only partially, there is no need to explore the completely unaffected areas as well as those in which only two of the areas intersect (i.e., neither the areas with a single nor with a double layer). The paper focuses on the central zone, in which all of the three areas intersect (triple-layer zone).

Table 1 shows the possible compound concepts as combinations of the terms "technology", "creation", and "economy" and their environments.

Table 1. Possible combinations and environments of the terms "technology", "creation", and "economy"

Environment of technologies	Environment of economy	Environment of the arts
Technological creation	Technologies of economy	Creative technologies
Economy of technologies	Economic creation	Creative economy

Environment of technologies presupposes technological creation or technological innovations and economy of technologies that ensures a "balance" of technological development. Environment of economy presupposes economic creation and technologies of economy, which are specific yet still associated with technologies of other spheres (e.g. information). Environment of the arts allows speaking about creative technologies that also partly overlay technologies of other spheres; consequently, we can say that creative economy is a certain base of creation. Figure 2 shows possible interpretations of technology by using different scientific approaches.

Technology could be interpreted from different perspectives. Tautological (procedural) interpretation arises from the very technological sciences; and that is the reason I refer to it as tautological<sup>1</sup>. This perspective has been supported by many authors published in technological journals<sup>2</sup> (Amini *et al.* 2014; González-Sánchez 2013; Kildienė *et al.* 2014; Klovas *et al.* 2013; Kracka, Zavadskas 2013; Jakimavičius, Burinskienė 2013; Samuelson, Björk 2013).

<sup>&</sup>lt;sup>1</sup> In no way has this interpretation been degraded or treated as faulty in a logical sense.

<sup>&</sup>lt;sup>2</sup> Including the journal *Technological and Economic Development of Economy*.

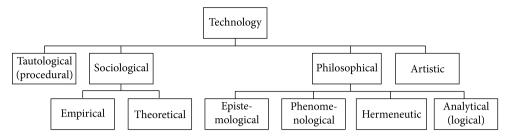


Fig. 2. Interpretations of "technologies"

However, it is not uniform: every branch of technological sciences presupposes a peculiar interpretation that differs from that of parallel branches, which gives rise to incommensurable discourses. Nevertheless, technologies as a phenomenon could be reflected upon only from a more distanced perspective, such as sociological, philosophical or artistic. The most outstanding representatives of technological sciences engage in this process as philosophers rather than technologists (Skibniewski, Zavadskas 2013; Magruk 2011). The sociological perspective, which also covers the economic one, has a twofold approach, namely, empirical and theoretical. For example, we can explore innovative technologies of entrepreneurship as an economic phenomenon both empirically (Huber 2012; Mudambi, Swift 2012; Cai *et al.* 2014) and theoretically (Rutkauskas *et al.* 2013); or we can focus on solely theoretical analysis of the importance of the cohesion phenomenon in the economic development (Melnikas 2013) as well as economic strategies from the point of view of technologies (Melnikas 2012).

Philosophical interpretation is also heterogeneous. It depends on a philosophical tradition or the branch, to which it refers: epistemological (context of cognitive theory), phenomenological (school of bracketed phenomena of consciousness), hermeneutical (context of the theory of understanding), analytical (school of logical positivism or etc.). Besides, a philosophical interpretation could also be of a different kind, including existential, cultural, ethical etc. Artistic interpretation presupposes the point of view of an artist toward technologies, on the extent to which they interfere with or help to create objects of art. In no way does Figure 2 exhaust all possible interpretations: apart from the ones already mentioned, they could be pedagogical, political<sup>3</sup>, philological, therapeutic, futurological<sup>4</sup> etc.

My thesis emerges from the concept of creative society: technologies are not to be separated and excepted from creative activities. In other words, syncretism of technologies is a condition of their development, i.e. their ability to serve our life art  $(techn\bar{e})$  and creative intentions rather than the other way around.

As a result, the paper deals with technologies from the perspective of creative economy and creative society. Different aspects of creative society and creative economy have been analysed by J. Barevičiūtė (2014), S. Kanišauskas (2012), J. Lavrinec (2014), Zabielavičienė (2013), Černevičiūtė and Strazdas (2014a, 2014b), Skorupa (2014), Juzefovič (2015), Rimkus

<sup>&</sup>lt;sup>3</sup> I will also speak about political technologies in this paper.

<sup>&</sup>lt;sup>4</sup> Comp. Sessa and Ricci (2014).

(2015) and others. First, I analyse technologies in the context of politics and the media (1. *Technologies, politics and the media*); next, I analyse the etymology of the term "technology" by referring to the art of life (2. *Etymology of technology and the techniques of life and arts*); and finally – the industries of technologies and their ecology (3. *Technological industries, ecology of technologies and the subclass of technologists*).

# 1. Technologies, politics, and the media

Technologies are a very important aspect of the creative, post-industrial, mediated, postmodern, and democratic society. There are very important elective and political technologies that are inseparable from political power struggle in a democratic society. Political power struggle could be treated as a creative contradiction, which is characteristic to a creative society: an idea develops creatively in an environment saturated with tension and spiritual warfare. Neither democratic nor creative society is ideal in this sense. Authority of the crowd can barely reconcile with the creative society, the distinctive characteristics of which are lost in the generalised "picture" of the majority, whilst elected politicians are ingratiating with the crowd and the majority chooses to vote inert decisions, which rather means a regress instead of progress. The vicious circle of democratic politics intersects with the vicious circle of cultural consumption: politics becomes an object of consumption; besides, politics becomes a gearwheel (technology) of cultural industries, which expedites the consumption of culture in the media.

Politics, technologies, and the media move around in one circle exchanging their roles. Speaking in terms of (creative) economy, this liquidity<sup>5</sup> or exchangeability prevents the outstanding phenomena that purportedly disturb and detune the system. Nevertheless, it is not the disconcerted exchange that is responsible for disruption of the system the most, but rather the exchange monotony that has no disconcerting factors, which the system does not tolerate yet requires for driving its renewal. The interconnections between technologies and the media are disputed the least: every new media requires certain technologies. Mediated and technologized society are two aspects of the same phenomenon. Nevertheless, the technologized society does not mean that its members are smart in the technological sense. Invasion of technologies is usually accompanied by technical illiteracy or simplification of intellection (e.g. limited to the categories "yes" and "no"6) presupposed by a certain technique (computers). The consumption of technologies forces us to follow elementary instructions that get transferred into the sphere of human relationships or the consumption of life. According to Z. Bauman (2007), life partners can be chosen or removed by one push of a button. People no longer tend to make choices, leaving this task to smart machines or "experts" who liberate us from related responsibility. In case of failure, experts too can hide behind "technical mistakes". As a matter of fact, their mistakes or failures become evident only if consumption suffers damages or disturbance. New technologies emerge as accelerators of consumption and this is their social purpose.

<sup>&</sup>lt;sup>5</sup> According to Z. Bauman (2007).

Once transfused into existential and social spheres, this double structure of computer programming embodies the decay of the third component (middle way, synthesis, and dialectics) in the face of developing technologies.

All forms of media (be it old or new) - books, radio, television, telegraph, tape-recorder, Internet - depend on technical development of culture. We can say that the media is a by-product of technical development. On the other hand, the very media dictates orders to technicians, while every technical invention is dictated by a social need that emerges in a certain social environment. In antiquity, many technical inventions failed to deploy due to cheap slave labour. Inventions are often made blindly, without any consideration of social need. Having no connection with particular social needs, technical inventions and technological discoveries remain empty and voiceless. Nevertheless, most technical inventions and discoveries (differently than those of "pure" science) have been made once society concentrated attention and resources on a solution to a certain social problem. That is why a technique can be treated as a social technology. Even the development of "pure" science (e.g. philosophy and physics) is determined by expectations of scientific communities and their ideas, which circulate within as if they were commodities<sup>7</sup>. What are mobile phones without the social need to communicate in spite of distance or without a wire? Wired media (phone, TV or Internet) literally tied us down to technologies: we could break free only for a brief moment and did not go very far. Nevertheless, wireless communication actually strengthened our ties with technologies as we no longer separate from them under any circumstances. This thesis could be reversed: means of wireless communication are perfect technologies for tying us to the system.

Being inseparable from the creative society, the post-industrial society is also a hostage of technologies. If the industrial society is a product of technologies, even more so is the post-industrial. The industrial society with its corresponding social relationships and configurations of identity<sup>8</sup> emerged only after technical achievements allowed to replace manual labour with machines, which resulted in social explosion of urban development. On the other hand, global urban society necessitated the development of technologies that transformed social relationships and attitudes toward identity. In other words, technologies liberated the society from conveyors and offices, however, tied it down to mediated system of consumption, within which they must ensure the ease of commodity exchange. Certain communication (publicity) technologies allow instantaneous popularity in mediated environment but tolerate no disturbance in exchange be it for individual creativity or existential aspirations. Although certain technologies allow communication and creative working from home, mountains or forest, they make us work without counting working hours. In other words, although technologies emptied offices, they turned our homes, places of retreat in mountains or forests into places of exhaustive work.

# 2. Etymology of technology and the techniques of life and arts

Figure 3 shows etymology of the term "technology" and its semantic development.

"Technology" is the word of Greek origin, which consists of two Greek words: *technē* and *logos*. Both of them have undergone a semantic evolution. In ancient Greece, *technē* 

<sup>7</sup> Creative economy covers circulation of both creative ideas and commodities. The ideas can circulate also as saleable-buyable commodities.

<sup>&</sup>lt;sup>8</sup> An individual in industrial society connects his (her) identity with company, where he (she) works.

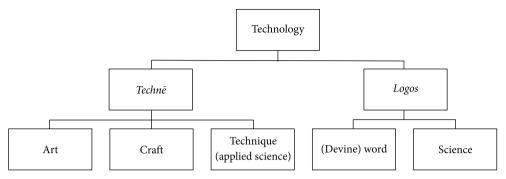


Fig. 3. Etymology of "technology"

(Latin translation *ars*, comp. *ars vitae* – art of life) was used in the sense of art and craft: until Renaissance, an artist could be attributed to craftsmen. Only in the new age, the word gained a meaning in applied sciences (techniques). The term *logos* also has a long history: it meant Devine Order in antiquity (as in *logos* by Heracleitus) and Devine Word (as in the beginning of the Gospel of John: "In the beginning was *Logos* (the Word)"9). Already in Antiquity, *logos* became used in compound words to describe scientific approaches of a subject. Nevertheless, we have "astrology" that has nothing to do with science, unless in the sense of certain hermetic teaching.

The meaning of the word technē as art has been long forgotten; later, it has assumed a new semantic charge and new correlations: being distinct from art, technique presupposes a repeated, unexceptional, collective activity, i.e. something contrary to art, which is connected to outstanding individual activity. The expression "technique of life" is just as contradictory as a "round square": technique presupposes a predictive and countable activity, life – a universe of activities full of contingencies and unexpected turns, which is conveyed as a gripping narration involving the vicissitudes of fate<sup>10</sup>. Contrarily, technique means an instructed monotonous fragment, which is used to connect an individual to a transparent system that does not tolerate unpredictable elements, which attempt its destruction. The words "technique" and "art" are a good example of semantic polarization that requires dialectic conciliation. Although technique means something contrary to art, we use the expression "art technique". In ancient Greece, "art technique" would have meant a tautology; yet now it has a contrary meaning as it characterizes an individual path of the artist, and at the same time – his (her) success formula and his (her) own method for mining of "nuggets" that helps him (her) to rise above others; in spite of the fact that art is done does (poiesis) using a method, which is common to the artists, i.e. exploiting the independently found art technique. From this point of view, creation is something that emerges while doing something unusual in a usual way. While those acting backwards and trying to create in unusual ways – waiting for inspiration, looking for impressions or traveling to distant countries – are doomed to misfortune. Inspiration is not something that comes to those who simply wait; while running after impressions

<sup>&</sup>lt;sup>9</sup> Jhn 1.

<sup>&</sup>lt;sup>10</sup> Similar contradiction is also characteristic to the term "creative economy".

makes us pass them unnoticed; and travelling is the fastest route to escaping our creative identity, which inseparable from the social environment. Creation emerges from a work routine and usual agenda, i.e. once a technique is mastered. Therefore, true technicians are creative workers who are masters of their work. Therefore, creative economy may inspire both creation and economy.

Let's return to the expression "life art" and consider how technologies alter our lives being inseparable from the way of life (technē tou biou). As much as we would like to oppose to this fact, technologies have altered everybody's life to the extent that we no longer imagine ourselves without a phone, TV or Internet. Technologies impose a certain way of life. By avoiding technologies, people avoid their social environment transfused with technologies. In this sense, a misan-technician is equal to a misanthrope. Finally, those avoiding technologies actually avoid themselves as our identity is created in and nourished by the social environment, despite the efforts to rise above it. Outstanding-ness in our environment as a certain strategy for avoiding it is nothing else but a technique for its creation.

Nevertheless, the best way to resist technologies<sup>11</sup> (for those, who want to do it) is to master them and use them for our own benefit: we should do (poiesis) it by making sure that it is them that serve us rather than us serving them. In other words, technologies can be propitiated by their consumption but not while they consume us. Nevertheless, even if we understand technologies, we can hardly be sure that we consume them and not the other way around. The key to consumption of technologies lies beyond consumption and beyond technologies: as much as we are able to rise above technologies and consumption while consuming technologies, to this extent we able to do our work, create our environment and our identity. This creative technique applies in the case and, more precisely, especially in the case of technology creation. And then we can speak about a technique for creation of our identity by doing (poiesis) technological work in a technological environment. This tautology of technique and technology is an inseparable aspect pertaining to the creative society in the process of creation, the edge of which is the creative economy. Tautology is a poetic technique applied to nurture a happy life in the creative society. Hence, there is a condition of happiness, i.e. rising above the techniques of consumption. Tautologically speaking, the technique of happiness is the aboveness in relation to techniques of technologies.

In the post-industrial society, technologies are inseparable from both life art and development of creative society. It seems that the poetical approach contradicts the very concept of development: everything of poetic nature is above, exceptional, and convivial. If this is true, it cannot be mass and common, i.e. the subject of creative economy, speaking of both individual and social phenomena. This is one of the biggest contradictions in creative society: if all are creators, creative class is no more; if creation is everywhere, it has no regions and, consequently, there is no creation.

The statement that the speed of social development depends on the development of technologies seems trivial. The same could be said about the development of creative economy that uses management technologies. Nevertheless, it still unclear what is the relationship between the development of technologies and the development of the creative society. It is

<sup>&</sup>lt;sup>11</sup> In other words, a technique of resistance to technologies.

not enough to say that technologies are a very important aspect of the creative society. The creative society could be influenced by the development of technologies both in a direct and in an indirect manner. As already mentioned, technologies are also a kind of creative output. Additionally, industries (including creative industries), the media, politics and economy are all influenced by technologies. In general, all these cultural areas could be treated as a technological gearwheel or the environment of technological values. Technologists are specialists or experts, the amount of power of which grows in the less controlled democratic society. As if distanced from the zone of political risk, technologists employ mysterious communication channels to not only hoover mistakes and gibberish of politicians that were released to windmills of the media, but also their political power while the re-elected representatives of the public fail to take action in the democratic society. *Technologies of politics, the media and communication are so intertwined that we can speak of technologized society as a kind of contemporary social environment*. As in the case with the creative society, it does not mean that this society consists of technologies alone<sup>12</sup>. It only means certain social priorities and distribution of the powers within it.

Although cases of idea exchange between technologists and artists are possible<sup>13</sup>, their activities are usually perceived as incommensurable. Nevertheless, certain arts, such as cinematography with special effects and especially computer animation, were developed in close collaboration between artists and technologists, unless these both embodied in one person. New species of art emerge under the influence of technologies and new media to become new contributors to creative economy; for example, virtual art, which requires technological knowledge, strangling the traditional species of art or at least reducing their region (as in case with telegraph, which was strangled by Internet). Certainly, this art is influenced by new technologies and new media. Even an artist has an alternative for directing his (her) creative powers, which are inseparable from mastering of a certain technique, namely, towards traditional art forms or newly emerged (electronic).

Not only technologies force their way into our activities that require continuously more specific preparedness, they also enter lives of individuals and the society as the whole, the "fullness" of which depends on the amount of life content usurped by technologies. Just as the very media is the content of the media (McLuhan 1994), consumption technologies that ensure life consumption become the content of life art (*technē*) in the consumer society.

# 3. Technological industries, ecology of technologies and the subclass of technologists

Technologies have been treated as a branch of creative industries. J. Howkins (2007) speaks of scientific research and technologies as a separate branch of creative industries. R. Florida (2012) mentions the race between regions and societies for technologists and the creation of environment favourable for the development of technologies. As creative industries, technologies influence and are influenced by other affiliated branches: they require impetuous

<sup>12</sup> In this case, it would be unclear, in respect of whom the technologists define their identity.

<sup>&</sup>lt;sup>13</sup> This is the basis for the conception of creative economy.

creative thinking while contributing to economic growth of the society as well as stimulate other creative industries. All of this could be referred to as technological industries that need financing, education, and certain political attention. Technologies require a national or regional policy, i.e. a plan for investments. This stimulates the rise of a new technology – assimilation of funds. This new technology illustrates how a technology turns into the content of public life (politics).

This brings us to multi-staged technologies, including meta-technologies: technologies as an autonomous branch of creative industries, technologies of public life, and technologies for assimilation of funds for technologies. The problem is not in the lack of attention from politicians 14 or the policy for the development of certain technologies and technology-intensive creative industries, the absence of which - in the opinion of R. Florida (2012) - supposedly suggests the lost race for technologies between societies. Actually, the problem rests on the fact that technologies are inseparable from creative activities as on the one hand, the development of technologies requires creativity, while on the other hand, any branch of creative industries requires certain technologies. Rephrasing L. Wittgenstein (1990), they are the ladders that we kick away after reaching the upland of happy life. That is why the technology of happiness does not reduce pain: since pain emerges from the fragility of personal relationships, the technology of pain reduction could eliminate such relationships altogether. It is not by accident that while bringing two individuals closer together through the extension of their senses, the media distances these two away from one another by putting them into the public mediated and technologized space. The two are in need a fragile third party, the anti-technology of communication instead of public communication technology. In other words, disturbance, silence and pain<sup>15</sup> could be the authentic technique of life through communication. Different treatment of technology compared to the creative technique of life is incompatible with the conception of the creative society.

Back to technological industries. The question arises whether we can compare them with the traditional industry, from which they are hardly distinguished: even touching upon the most usual (e.g. heavy) industry we encounter a certain technology. The statement that technological industries are more ecological is also full of contradictions. Ecology of technologies has certain peculiarities. First, we can speak about both – technologies that pollute (the natural or social environment) and technologies that prevent pollution. Second, the products of innovative technologies are intense polluters of nature and our thinking. In other words, innovative technologies ensure consumption and exchangeability in the society in general and, specifically, in the creative economy, and become a disturbance in the chain of production, consumption and disposal. Creating an illusion of unlimited extensions and endless happiness, innovative technologies strengthen promises made by cultural industries and the media. This way they become a disturbance on the way to happiness grounded on human rather than on surrogated (extended by technologies) relationships. *In the creative society, happiness does not depend on constantly upgraded (i.e. consumed) technologies but is rather possible in spite of them*.

<sup>&</sup>lt;sup>14</sup> Ignorance of technologies is also a certain technology of public life.

<sup>&</sup>lt;sup>15</sup> Let's remember Peters (1999): silence is also a communication.

Technologized society reminds of a museum of technologies, stuffed full with equipment bearing forgotten names (a telegraph, a tape-recorder), leaving no passage ways. With incredible speed technologies change names of equipment leaving behind bulky items that inevitably constrict our ability to move around this museum and, especially, the attempts of two visitors to approach one another. In this sense, technologies also educate us in resistance to them. As an aspect of individual relationships between individuals, this resistance is a condition of happiness, the fragility of which is comparable to the hardness of "iron" used in technologies as hardness is barely compatible with creative flexibility. This is the reason behind the closeness of individuals, which is realised in spite of rather than because of technologies. Against the background of rapid obsolescence of technologies, we almost feel forever young. While promising to overcome death, technologies depart before us. On the other hand, the technologized society measures the age of an individual by the ability to adapt to new technologies: a person who does not use the Internet is not only regarded to be old, but a "living fossil" from past millenniums or a relic of the dinosaur age, of interest only to anthropologists.

Ecology of technologies is primarily connected with the ability to leave empty the passage ways in the museum of technologies called technologized society. In other words, *technologies should work silently enough so we could still hear voices of surrounding people.* Even if voices come from the past, technologies used for retrieval of the past – photography, videos, voice recordings – are more of a disturbance than an aid. In truth, technologies that allegedly help to "overcome time" only capture certain time fragments that flutter as if cobwebs on trees in autumn. Voices from the past make sense only once they echo from the horizon of our concerns, gaining new consonances of togetherness with our significant others: fragments unconnected to our present concerns and expectations, are doomed to disappear. Generally speaking, the face of technologies is always turned toward the future rather than the past. Sometimes they cast a glimpse so far that they fall victim to this action.

As a result, ecology of technologies is related with their limits. As already mentioned, technologies need enormous investments, attention of the politicians, creative thinking, and education of the society. Despite being limited or because of it, they create an immense added value and impact on the development of other branches (not only creative industries) as well as transformation of environments (not only creative economy), thinking and creation as a whole. Technologies stimulate the increase of both local and global economic regions. A region arises from the development of certain technologies that emerge from the interaction between cultural peculiarities of a region and global demand. The global dimension manifests in the case of an outstanding technology, which dwarfs its rivals. Nevertheless, just as in other cases, the interaction between the global dimension and localities is necessary: global technologies not only feed on local regions but also on local peculiarities as otherwise they would be unattractive and, consequently, achieve no aboveness in the global plane. The global dimension presupposes limitation. *However, unlimitedness is the greatest limitation of global technologies: unconnected with any existential region, they billow in the wind of ever newer technologies.* 

We can speak about a certain subclass of the creative class, namely, the class of technologists. Peculiarities of this subclass become apparent by contrasting it to the other flank of the

creative class, i.e. the artists – creative workers in a narrow sense or bohemia that also uses technologies. For example, to create a photo compositions or make a drawing using a computer, one needs knowledge of computer technologies. Not only does this involve knowledge of certain computer programmes (*Corell, Photoshop*), but also computer literacy in general and overcoming the fear of computers. Additionally, an artist can contribute by developing complicated programmes, including animation software. As a result, knowledge and skills of the artists and the technologists become increasingly interlaced and even grow more similar. Despite this or exactly because of this, the identity regions of both groups undergo frequent artificial demarcation by way of fuelling miscommunication. And even though the artists employ certain (computer) technologies, a vast region remains unclaimed in this continent of technologies. This is the reason behind the fear of technologies that manifests in the form of neuroses and psychoses of the artists faced with anxiety about shrinking identity region.

Certain communication and hermeneutic disturbances between the flanks of technologists and artists in the same creative class also arise due to the competition for influence in the society or income. However, this only points to their similarity, denominator of which is the consumer attitude toward resources. The latter are limited to the extent they are consumed: the creative attitude toward resources is inconsistent with the consumer attitude. Rather than creation of resources, in this respect the creative attitude means that the outcome of other creation becomes the resource: the outcomes of technological creation become the resources for artistic creation and vice versa. If so, in the creative society resources depend only on creative communication between different social groups that feed each other<sup>16</sup>. Nevertheless, certain disturbances, conflicts and contradictions are necessary for creative communication that does not develop gradually but rather makes leaps. Even if implication of the conflicts is the consumer attitude or the competition for identity regions, it could serve the creative development in both a narrow (conditions of creative economy to be created) and broad (creative society to be formed) senses.

### **Conclusions**

Technologies are inseparable from cultural, political and economic environments. On the one hand, we are faced with technologies of creative economy; and on the other hand, technologies are considered to be a catalyst of the creative economy. This role of technologies emerges in the consumer society, which consumes products of culture as well as technologies. Although technologies – in terms of creation and consumption – need special skills, their invasion is usually accompanied by certain technical illiteracy or simplification of intellection imposed by certain (e.g. computer) techniques. New technologies emerge as a result of a certain consumer need, which is stimulated by technologies. Most of technical inventions or discoveries were created once the society focused its attention and finances on the solution of a certain problem. That is why a technique can be treated as social technology. Means of wireless

<sup>16</sup> Here, the law of information conservation applies: the amount of disseminated information increases instead of decreasing.

communication are perfect technologies that tie us down to the system. An "art technique" characterises and individual path of the artist, and at the same time - his (her) success formula and his (her) own method for mining of "nuggets" that helps him (her) to rise above others. Technologies enforce a certain way of life. The mix of political, media and communication technologies presupposes the technologized society. Technologies are inseparable from creative activities: on the one hand, development of technologies needs creativity, on the other hand, any branch of creative industries needs certain technologies. Technologies are not to be separated and excepted from creative activities. In other words, technologic development is conditioned by their syncretism, i.e. their ability to serve the art of life and creative intentions. Although silence and pain have been considered as communicative disturbances, they could be treated as an authentic technique of life through communication. In the creative society, happiness does not depend on constantly upgraded (i.e. consumed) technologies but is rather possible in spite of them. Against the background of rapid obsolescence of technologies, we almost feel forever young. While promising to overcome death, technologies depart before us. Technologies should work silently enough so we could still hear voices of surrounding people. Unlimitedness is the greatest limitation of global technologies: unconnected with any existential region, they billow in the wind of ever newer technologies.

### References

Amini, M.; Mahdavinejad, M.; Bemanian, M. R.; Varzaneh, E. H. 2014. Developing a new paradigm for performance of educating city theory in advanced technology megacities, case: Tehran, Iran, *Journal of Architecture and Urbanism* 38(2): 130–141. http://dx.doi.org/10.3846/20297955.2014.925629

Barevičiūtė, J. 2014. Pagrindiniai kūrybiškumo ir kūrybingumo aspektai šiuolaikiniuose humanitariniuose bei socialiniuose moksluose [The aspects of creativity and creativeness in contemporary humanities and social sciences], *Filosofija. Sociologija* 25(1): 19–28.

Bauman, Z. 2007. Consuming life. Cambridge: Polity Press.

Cai, L.; Liu, Q.; Deng, Sh.; Cao, D. 2014. Entrepreneurial orientation and external technology acquisition: an empirical test on performance of technology-based new ventures, *Journal of Business Economics* and Management 15(3): 544–561. http://dx.doi.org/10.3846/16111699.2013.770786

Černevičiūtė, J.; Strazdas, R. 2014a. Kūrybingumo sampratų raida: nuo genijaus į kūrybines sistemas [Creativity understandings, evolution: from genius to creative systems], Santalka: filosofija, komunikacija 22(2): 113–125. http://dx.doi.org/10.3846/cpc.2014.10

Černevičiūtė, J.; Strazdas, R. 2014b. Meno inkubatorių vaidmuo, plėtojant sistemų inovacijas [The arts incubators, influence on the development of system innovations], *Santalka: filosofija, komunikacija* 22(2): 126–136. http://dx.doi.org/10.3846/cpc.2014.11

Florida, R. 2012. The rise of creative class. New York: Basic Books.

González-Sánchez, V. M. 2013. "Information and Communication Technologies" and entrepreneurial activity: drivers of economic growth in Europe, *The Service Industries Journal* 33(7–8): 683–693. http://dx.doi.org/10.1080/02642069.2013.740466

Howkins, J. 2007. The creative economy. London: Penguin.

Huber, F. 2012. Do clusters really matter for innovation practices in information technology? Questioning the significance of technological knowledge spillovers, *Journal of Economic Geography* 12(1): 107–126. http://dx.doi.org/10.1093/jeg/lbq058

- Jakimavičius, M.; Burinskienė, M. 2013. Multiple criteria assessment of a new tram line development scenario in Vilnius City public transport system, *Transport* 28(4): 431–437. http://dx.doi.org/10.3846/16484142.2013.869253
- Juzefovič, A. 2015. Creativity and aesthetic applied to ecological education, Creativity Studies 8(1): 12-24.
- Kanišauskas, S. 2012. Kūrybos komunikacija: introspektyvi analizė ir vertybės [The communication of creation: introspective analysis and values], *Santalka: filosofija, komunikacija* 20(2): 83–91. http://dx.doi.org/10.3846/cpc.2012.10
- Kildienė, S.; Zavadskas, E. K.; Tamošaitienė, J. 2014. Complex assessment model for advanced technology deployment, *Journal of Civil Engineering and Management* 20(2): 280–290. http://dx.doi.org/10.3846/13923730.2014.904813
- Klovas, A.; Daukšys, M.; Brazas, G. 2013. Influence of mineral aggregate concentration on the technological properties of fresh concrete mixture, *Engineering Structures and Technologies* 5(2): 54–60. http://dx.doi.org/10.3846/2029882X.2013.811782
- Kracka, M.; Zavadskas, E. K. 2013. Panel building refurbishment elements effective selection by applying multiple-criteria methods, *International Journal of Strategic Property Management* 17(2): 210–219. http://dx.doi.org/10.3846/1648715X.2013.808283
- Lavrinec, J. 2014. Community art initiatives as a form of participatory research, *Creativity Studies* 7(1): 55–68. http://dx.doi.org/10.3846/20297475.2014.933365
- Magruk, A. 2011. Innovative classification of technology foresight methods, *Technological and Economic Development of Economy* 17(4): 700–715. http://dx.doi.org/10.3846/20294913.2011.649912
- McLuhan, M. 1994. Understand media: the extensions of man. Cambridge: MIT Press.
- Melnikas, B. 2013. Cohesion processes in internal and external spaces of the European Union: the new priorities, *Inzinerinė Ekonomika Engineering Economics* 24(5): 456–467.
- Melnikas, B. 2012. Development strategies for the European Union: internationalization processes, innovation potential, knowledge economy, high technology sector, networking, in *7th International Scientific Conference "Business and Management"*, 10–11 May 2012, Vilnius, Lithuania. Vilnius: Technika, 416–425. http://dx.doi.org/10.3846/bm.2012.055
- Mudambi, R.; Swift, T. 2012. Multinational enterprises and the geographical clustering of innovation, *Industry & Innovation* 19(1): 1–42. http://dx.doi.org/10.1080/13662716.2012.649058
- Peters, J. D. 1999. *Speking into the air. A history of the idea of communication*. Chicago: The University of Chicago Press. http://dx.doi.org/10.7208/chicago/9780226922638.001.0001
- Rimkus, E. 2015. Kultūriniai žemėlapiai: filosofinės ir sociologinės perspektyvos [Cultural maps: philosophical and sociological perspectives], *Filosofija*. *Sociologija* 26(1): 72–80.
- Rutkauskas, A. V.; Račinskaja, I.; Kvietkauskienė, A. 2013. Integrated knowledge, innovation and technology cluster as a self-regulating complex system, *Business, Management and Education* 11(2): 294–314. http://dx.doi.org/10.3846/bme.2013.17
- Samuelson, O.; Björk, B.-Ch. 2013. Adoption processes for EDM, EDI and BIM technologies in the construction industry, *Journal of Civil Engineering and Management* 19(sup1): 172–187. http://dx.doi.org/10.3846/13923730.2013.801888
- Sessa, C.; Ricci, A. 2014. The world in 2050 and the new welfare scenario, Futures 58(SI): 77-90.
- Skibniewski, J.; Zavadskas, E. K. 2013. Technology development in construction: a continuum from distant past into the future, *Journal of Civil Engineering and Management* 19(1): 136–147. http://dx.doi.org/10.3846/13923730.2012.756060
- Skorupa, P. 2014. Shocking contents in social and commercial advertising, *Creativity Studies* 7(2): 69–81. http://dx.doi.org/10.3846/23450479.2014.997317

Wittgenstein, L. 1990. Philosophische Untersuchungen, in Wittgenstein's Werkausgabe, Bd. 1. Frankfurt am Main: Suhrkamp.

Zabielavičienė, I. 2013. Inovacijos ir kūrybingumas pramonės įmonėje [Innovation and Creativity in an Industrial Enterprise], *Business: Theory and Practice* 14(3): 240–248. http://dx.doi.org/10.3846/btp.2013.25

Tomas KAČERAUSKAS. Doctor, Professor, Head of the Department of Philosophy and Communication at Vilnius Gediminas Technical University. Chair of Lithuanian Communication Society. Author of 5 books and more than 100 scientific articles in English, German, Russian, Polish, Slovakian, Ukrainian, and Lithuanian. Research interests: creativity studies, creative and culture industries, communication studies, and borderland studies.