# Art Experience (AX): Scientific, Technological and Economic Fields of Experience of Contemporary Art

# Krzysztof Lang

Interdisciplinary Doctoral School at SWPS University of Social Sciences and Humanities in Warsaw

The paper reviews and attempts to define artistic practices implemented in the areas of science, technology and business – perceived as research tools and used as a medium in communicating the results of scientific research. In order to achieve the assumed goal, the examples of selected artistic practices conducted by scientists and curators working for scientific, research and cultural heritage institutions as well as artists operating on the verge of art and science have been presented. The aspect related to the impact of contemporary arts in the public space has also been discussed. The preliminary analysis of these examples helped formulate the thesis about the growing role of artistic practices as research tools and the medium of communication in many fields of science, institutional and non-institutional practices not directly related to the area of art.

Keywords: science, research, technology, business, arts, artist, performance

#### Introduction

In the process of expanding the knowledge barriers of the modern world and creating new competences, the increasing number of artistic practices find application in many areas of science, acting as research tools actively communicating study results. They also take part in shaping creative attitudes in business as a cultural and social medium.

The article is an attempt to analyse these phenomena on examples of selected artistic practices carried out by scientists and curators for scientific and research institutions, as well as artists themselves operating on the verge of art and science.

## The importance of performative turn in modern science

Within the context of the subject matter, it is worth analysing the phenomena that have been shaped by today's post-technological society. One of them is the performative turn evident at many levels, in the vanguard against language and textuality (Domańska, 2007). The increasing interest in the subject of performativity has led to the emergence of a new academic field responding to the challenges of the present day – *performance studies*. This process was based on the conviction that performance is a pivotal aspect of human condition and an indispensable substance for building today's societies (Domańska, 2007).

In recent decades, the shift of the emphasis from reflection and pondering over the condition of the world towards the value of change and rebellion against the existing reality can be observed in the social sciences. Due to the exhaustion of the so-called linguistic turn and current discussions on the relationship between language and reality, the aspects of performativity begin to dominate in the humanities in opposition to the existing ones, focusing on the analysis and interpretation of the world perceived as a text. An important element of the study carried out in the performance movement is its multi-disciplinarity applied simultaneously in cultural, social and material areas. It translates into the continuous crossing of disciplinary boundaries in trans or inter-disciplinary nature (Domańska, 2007).

What is important, "(...) the post-humanist expression of the performative turn has the causative nature attributed to both human and non-human beings, and the changes induced by the subject are seen as a result of cooperation between humans and non-humans" (Domańska, 2007). This is particularly important considering the scientific and technological progress aiming at excluding the human factor from causative influence, especially the material one manifested by the increasing technological influence, with artificial intelligence being a state- of-the-art trend. According to the philosopher of science A. Pickering "(...) the performative idiom associated with human agency is our greatest hope to understand who we are and what world we live in" (Domańska, 2007).

An interesting analysis of the performative turn on museological and sociological grounds is proposed by A. Ziębińska-Witek, who examines this phenomenon from the socio-pedagogics perspective. Following a historian D. Chakrabarty, she analyses two models of democracy: pedagogic and performative (Ziębińska-Witek, 2014). "Pedagogical model of democracy shaped in the nineteenth century is still present in culture (...), but since the sixties of the twentieth century it has been challenged by the performative model (...).

Performative democracy is shaped by cultural relativism, the desire to search for one's own identity, post-colonial criticism, multiculturalism, etc. The performative model is based on embodied and sensual, rather than rational, knowledge. In the performative model, sensuality becomes a key factor" (Ziębińska-Witek, 2014).

#### Artistic strategies in the process of cultural communication

One of the most interesting theories regarding the aspects of art communication was developed by a school of thought functioning under the name 'The Toronto School of Communication Theory', which was formed in the sixties of the twentieth century. It gathered researchers related mainly to the *Centre for Culture and Technology* scientific unit, led by M. McLuhan at the University of Toronto and scientists cooperating with the magazine *Explorations*. *Studies in Culture and Communication* (Sitkowska, 2012).

The theory, announced by the American theoretician M. McLuhan, assumes that contemporary civilization creates a network of connections, inducing the 'global village' syndrome. The society begins "to function in the previously unknown environment managed by its own autonomic reality" (Kukiełko, 2009). Simultaneously, the artificially-created environment causes the loss of the reference point and makes it impossible to realize its existence. To detect this imperceptible environment, it should be juxtaposed with the other one. According to M. McLuhan, "(...) this principle is the starting point of all areas of art, and all artistic activity relies on the fact that the artist processes the ubiquitous environment in order to make it visible to people who live in it" (Kukiełko, 2009), enabling the community to notice laws, structures and systems governing the environment in which they live. Despite the passage of time and a fairly visionary character, this theory still seems to be valid. Along with the advancement of civilization, the gap between natural perceptual abilities and technology is constantly growing. As M. McLuhan claims: "Only the language of art can fill this gap by adapting our sensory apparatus to the pace of the developing environment" (Sitkowska, 2012).

Progressive changes in cultural communication have been reflected in the new challenges that modern art faces. In this trend, the American philosopher A. Berleant proposed the concept of an 'aesthetic field', representing the general 'field of art experience' instead of an artist, work and art recipient categories. In 2007, while reviewing the current state of artistic practices, A. Berleant developed such postulates as: "The perception of artistic creativity as linked with science and technology, examined the position of the recipient as united with the work

and other components of the aesthetic experience within the category of aesthetic field, the vision of temporalization of art rejecting the ideals of unity and harmony and the proposal of replacing contemplation as the role of a model of aesthetic experience through participation" (Kluszczyński, 2009).

This postulated system is part of the concept of 'Performing Arts' by M. de Certeau, a French historian associated with the Annales School.

'Performing Arts' refer to the spheres of everyday life, they show consumer practices aiming at recovering the area occupied by socio-cultural production techniques (Kluszczyński, 2009). It is a vision of the society "(...) in which consumers' interaction with products of cultural industries and products of market-based systems acquire creative nature and transform consumption into (...) creation" (Kluszczyński, 2009). M. de Certeau in creative types of behaviour sees the big role of unpredictable factors, where in particular "the sphere of everyday consumption events is full of behaviours, whose subordination to the entities other than operating persons does not exclude their creative nature" (Kluszczyński, 2009). In the context of cultural communication itself, according to E. Panofsky's theory, art is a kind of meta-language of culture (Śliwowska, 2008).

"Working within the complex social processes generating cultural transmission on many levels (art – author's footnote), it uses a multi-code message, which not only strengthens its ability to code meanings, but also their denotation. The multi-code character leads to the emergence of redundancy and, simultaneously, to the occurrence of interference of individual semantic layers and the enrichment of the semantic message" (Śliwowska, 2008). On the basis of this, the theory of a new visual-verbal rhetoric currently used in marketing communication is implemented. Thanks to different channels of sensory perception, the multi-channel message strengthens communication and persuasive functions, and through the involvement of verbal, logical, image or emotional memory it positively affects the ability to remember (Śliwowska, 2008).

It is worth mentioning that theories accepting art perceived as a set of cultural codes referring to all social, political or related to scientific aspects are criticized, for example, by deconstructivism. This is a direction of philosophy and literary research, which stands for the counterbalance to structuralism, which was inspired by the French philosopher J. Derrida, and developed in the second half of the twentieth century. "In this concept, the communication process, which aims at passing information consistent with the sender's intention, and understanding the message based on the code and context knowledge, has been completely questioned" (Śliwowska, 2008).

#### Artistic practices in socio-political areas and sciences

What can be observed currently in the field of scientific research, is the distinct tendency of many scientists to turn to art as an alternative form of presenting, analyzing, understanding science and changing the world. For non-artists art is becoming more important than science in itself as a way to acquire, present and communicate knowledge (Domańska, 2007). Thanks to this "(...) increasingly interesting hybrids, combining professional disciplinary knowledge with art understood as a knowledge communication medium, are emerging" (Domańska, 2007).

A manifestation of anti-disciplinary approach is the form of resistance to restrictions arising from disciplinarity that impose conventions on researchers, which are related both to the rigor of conducting research and the presentation of their results. Researchers representing specific scientific disciplines are more frequently affiliated with research institutes dealing with art. Treating art as a subject of research, they often take on the role of artists (Domańska, 2007). Domańska quotes such examples:

"(...) Svetlana Boym (Harvard University), a historian and literary scholar, the author of the well-known book *The Future of Nostalgia* (2001), who along with writing science books started studies on the art of media, and an archaeologist Michael Shanks (Stanford University), who started research on Greek tools and interests in the theory of archeology, currently deals with theatre, photography and the art of media. Shanks together with the performer Mike Pearson wrote the book *Theatre Archaeology* (2001), for several years has been engaged in digital archaeology (*Digital archaeology*), not to mention his lectures which are classic performances" (Domańska, 2007).

In the 20th century, also at the tangent point between design and visual arts, along with the development of art in the public space, artistic projects with practical functions were implemented. One of them was the arrangement of the lobby of the building *Wiesner Arts and Media Massachusetts Institute of Technology* – the cooperation result of architects *I.M. Pei & Partners* and artists S. Burton, K. Noland and R. Fleischner (Urwanowicz-Rojecka, 2015).

The current visualization of scientific research conducted through contemporary art strategies is the M. Bal's installation implemented in the form of an exhibition accompanying the international conference "Image, history and memory. Genealogies of memory in Central and Eastern Europe" (Bal, 2017). The author of such publications in the field of cultural studies as Wandering concepts in the humanities (Bal, 2012) or Narratology. Introduction to the theory of narration

(Bal, 2012) realized the installation devoted to the negative forms of memory. The Dutch artist and cultural expert in her works challenges the collective responsibility for memory in the context of psychoanalysis and rationality. The exhibition directly corresponds with the presented scientific views and the results of her research.

A local example of the planned cultural studies combined with research based on artistic strategies is the project by Zbigniew Maleszewski's studio – re: START. The model of socio-cultural revitalization of a historic artistic studio", developed for the needs of the application to the grant programme of the National Centre for Culture, Culture-Interventions 2018, prepared by the Hereditas Foundation in cooperation with the Foundation for the Polish Sculpture of the name of Zbigniew Maleszewski in Warsaw. As part of the revitalization project for the studio which belonged to the late artist Z. Maleszewski, cultural and social studies have been planned, especially in the local environment, as well as visual studies based on the paradigm of art, including aspects of visual sociology.

The institutional activities implemented by specialised agencies of the European Union play a significant role in research on the transfer of art to other fields of science, technology or education. The European Union Council has established the so-called OMC groups dealing with cultural participation and artists' mobility. According to the definition from the field of economic sciences, the phenomena referred to as artistic interventions "(...) allow the transfer of creativity from the cultural sector to others - including education, science and public institutions" (Lewandowska, 2014). These areas are analyzed by the Creative Partnerships Report by A. Laaksonen within the IFACCA programme (International Federation of Arts Councils and Culture Agencies) (Lewandowska, 2014). According to A. Laaksonen, the transfer of creative thinking takes place first between artistic organisations and those of an educational nature, in the long term it is transferred to enterprises. One example is the Creative Partnerships programme devoted to the cooperation of artists, architects and scientists as part of practical educational activities. A. Laaksonen also points to other initiatives such as participation of artists in ecological projects, health care institutions, social campaigns, as well as in the area of science. An example of this is the Australian Synapse programme based on the co-operation of scientists and artists (Lewandowska, 2014).

#### Technologies in art, the art of new technologies

Problems related to strategies of art vs. new technologies were the subject of the conference *Towards a third culture*. *Co-existence of art, science and technology* 

organised in 2011 by the Łaźnia Centre for Contemporary Art in Gdańsk. One of the discussed topics was the concept of 'two cultures' postulated by C.P. Snow, a British writer, author of the essay *The Two Cultures and the Scientific Revolution* (1957) and the later one, referring to the trend of the 'third culture', intellectual movement initiated in the late 1980s in American scientific environments, formed on the basis of intercultural dialogue, where artistic practices played an essential role, becoming increasingly existent in projects based on the idea of building relationships between art and science. There we could observe the activities of such artists in this trend as G. Kepes, F. Malina, N. Schöffer, and E. Ihnatowicz, B. Lacey and T. Shannon in the next decade (Kulazińska, 2012).

The works of F. Malina were based on the use of technology as a tool or artistic material. The artist clearly differentiated the goals of science and art. "In his view, they start at a similar point, and while exploring the unknown, they strive to broaden the knowledge about the world, but their goals are different. The final criterion for science is the usefulness of art – human emotion. Artists can invite specialists of other fields, but it is their voice that is heard ultimately. The scientist is limited by the laws of nature, the creator tries to visualize a new kind of experiencing the world" (Kulazińska, 2012). Frank Malina, apart from his artistic activity, worked at UNESCO and ran the *Leonardo* journal publishing research on connections between art and science (Kulazińska, 2012).

G. Kepes, whose work originated from the principles of Bauhaus, performing works based on new technologies, conducted experiments and visual studies related to the relations of shadow and light. This is how his projects were created based on activities in the public space such as the kinetic neon on the facade of the *Radio Shack* store in Boston and the lighting project for the headquarters of *Rohm & Haas* in Philadelphia (Kulazińska, 2012). G. Kepes also conducted scientific and research activities at the Center for Advanced Visual Studies and the Massachusetts Institute of Technology, teaching at the New Bauhaus (Kulazińska, 2012).

The artists who had roots in the second half of the 20th century while still being creative in this trend until now are M. Fleischmann and W. Strauss. According to Kulazińska, "(...) with their artistic works and theoretical concepts, they built or are building a vision of art which in its development reaches the most advanced tools of its time, enters areas that shape the face of modern times to the greatest extent, becoming at the same time a specific introduction to it. (...) The latest works of M. Fleischmann and W. Strauss introduce their recipients into the life in a real-virtual, hybrid world, teach us how to combine aesthetic and cognitive experiences, artistic and scientific creations; it helps wisely and creatively live between reality and virtuality, in the hybrid world of modern reality" (Kluszczyński, 2009).

It should be emphasized that art produced in terms of the subject matter and structure has often been much ahead of the current theoretical scientific constructs. The works of artists belonging to various trends, such as robotic, transgressive or bio-art, are becoming an important voice in discourses on the current issues, they are often projections of the future as well. "With their complex shape they imitate the complexity of the modern world, at the same time becoming instruments with which this world is analysed and subjected to problematization" (Kluszczyński, 2009).

An example of such activities was the interactive installation of the artist V. Vesna – *Blue Morph*, whose main theme "(...) was a butterfly known for its unique blue colour of wings. Its colour is the result of iridescence and interference of white light. The work was created with the help of an outstanding specialist in the field of nanotechnology J. Gimzewski – she penetrated the world at the level of individual particles, atoms (...). *Blue Morph* installation did not evoke questions about art, technology or eliminating borders. It created a situation open to interpretation, the spiritual experience" (Kulazińska, 2012).

Another example of a similar subject and character referring to the dialogue between art and science was J. Gimzewski's installation carried out in an active church. The leitmotif was also the butterfly iconographically associated with Christian symbols of resurrection. James Gimzewski, describing his observations of butterfly metamorphosis sounds, compared them to a statistical physics formula called 'self-organized criticality'. "Thanks to it, almost every phenomenon from various fields of science can be described. They are destructive and at the same time creative events, the self-organizing inner chaos. The association here is the Pythagorean music of spheres being the universal principle organising the universe" (Kulazińska, 2012).

Other examples of V. Vesna's actions are installations dealing with the issue of genetics (*Hox Zodiac*, 2009) or quantum mechanics (*Quantum Tunneling*, 2008), as well as projects in the nano-art movement (*Nanomandala*, 2004). "Nano-art, combining a new cognitive perspective with a digital art programme, is becoming in this way a kind of initiation, an introduction to a new order of the world representation, which Pierre Lévy calls *cosmopedia*." This world "(...) is driven by trends that lead to transmutational integration, which takes place on the foundation of a new communication order" (Kluszczyński, 2009).

The phenomenon integrating the latest achievements of science into artistic strategies and practices is the art of Virtual Reality (VR). The examples are projects presented on the *Acute Art's* platform. The subjects of climate change and the affirmation of life and nature in the virtual world were taken up by artists

M. Abramović (the *Rising* project), J. Koons (the *Phryne* project) and O. Eliasson (the *Rainbow* project) (Olszewska, 2017).

# Between disciplines: Polish art in the face of contemporary challenges

In the context of art as a medium, it is worth mentioning local artistic practices crossing the boundaries of their disciplines, entering into a wide interaction. This is particularly the case due to the expansion of art into other areas of creative activity manifested through successive 'turns' such as performative, sound or cinematographic turns (Cichocki, Ronduda 2014).

Projects implemented in these trends are thoroughly interdisciplinary. Well-recognized visual artists – R. Rumas, A. Zaradny, W. Puś, A. Wasilkowska, M. Grospierre and O. Mokrzycka, taking the role of set designers began working with theatre directors, becoming an integral part of the theatre environment. Visual artists such as B. Rolando, N. Leto, and W. Bąkowski, successfully realise their visions in the fields of literature, poetry and music. New artistic productions of artists such as Z. Wollny, W. Ziemilski and Wojciech Kosma enter into a connection with theatre, contemporary dance and fashion. One of the results of such artistic attitudes was *The Artists* festival organized in 2013 by Zachęta National Gallery of Art. In the cinematographic movement (the so-called Cinema Art) represented by such artists as W. Sasnal or Z. Libera, full-length feature films by visual artists are created, intended for distribution in a professional cinema cycle (Cichocki, Ronduda, 2014).

"It is worth emphasizing that the criterion for success of such interdisciplinary projects is not their affiliation to the visual arts sphere, but the impact of individual projects (a feature film, a volume of poetry, a comic book, a theatre play) is verified by non-artistic audience" (Cichocki, Ronduda, 2014).

What also needs to be mentioned are the activities of curators implementing concepts related to current trends in contemporary art. S. Cichocki and K. Szreder prepared an exhibition of post-artistic spirit *Making Use: Life in Post-artistic Times* (MSN, Warsaw, 2015). In the introduction to the exhibition, the curators referred to the words of a Canadian theoretician S. Wright: "Art is visible in many areas of reality (...) life is influenced by sensitivity characteristic for art, conceptual surplus, way of thinking dominated by form or endless games with political and economic imagination: political, economic or scientific" (Wójtowicz, 2016).

The dominant attitude presented at the exhibition was 'action' (*make*), popular outside the art field, which is becoming increasingly similar to various spheres

of everyday life (e.g. creative recycling, ecological self-sufficiency). The artists from the Center for Land Use Interpretation were watching the changes of the urban landscape, carrying out 'reports' within the framework of intentional or speculative architecture.

The project of the group Forensic Architecture of the SITU Research – Liquid Traces: The Left-to-Die Boat Case (2012) – has been included in the trend of current political and social problems, including tracing the route of the boat with refugees from Africa in the Mediterranean Sea in 2011. Commenting on the artists' works and artistic panels chosen for the exhibition, the curators said that "the effects of activism and the language that not only artists use in their initiatives are equally important, the essential principle of 'utilitarian' action is its openness, transparency and potential of shareability" (Wójtowicz, 2016).

## Artistic strategies in shaping creative attitudes in business

Apart from socio-political areas, communication and educational strategies are designed and implemented, which involve the use of artistic practices to shape attitudes and creative thinking in the business sector. They promote creative thinking, encourage the use of artistic strategies or break down patterns in everyday work. The report *Artistic interventions in organizations: Finding evidence of values-added* analysed 268 publications related to these issues. The report points to positive effects such as: increased productivity and efficiency, employee engagement and raising the company's reputation. According to the report, managers successfully introduce innovations by means of the use of art strategies (Lewandowska, 2014).

An example of the search for art and business relations was a guest lecture at the Kordegarda Gallery in Warsaw, delivered by G. Schiuma, a director of the Innovation Insights Hub (IIH) at the University of the Arts in London and a lecturer in the area of management and innovation, among others at *Cambridge University*. The studio managed by Schiuma (IIH) deals with the study of the relationship between creativity and innovative management. G. Schiuma claimed that the creative force of arts as a specific medium in relation to non-artistic fields is its participation in the cultural communication taking place in the relational process (Lewandowska, 2014).

#### Conclusion

The proposed reflection on *Art Experience (AX)*, practices realised on the border between science, technology and art, fits both current theoretical concepts and practical activities in the broadly understood art strategies implemented in fields not directly related to its areas.

An initial analysis of the *case study* is a contribution to formulating the thesis about the growing role of artistic practices as research tools in many fields of science, as well as broadly understood entrepreneurship. Simultaneously it opens the space for further research on the use contemporary art potential as a modern medium of scientific, cultural and social communication.

#### References

- Bal, M. (2018, February 5). Dis-Remembered and MisRemembered: A Confrontation with Failures of Cultural Memory. Retrieved from: https://asp.waw.pl/2017/11/16/7-miedzynarodowa-konferencja-naukowa-genealogie-pamieci-w-europie-srodkowo-wschodniej/
- Bal, M. (2012). Narratologia. Wprowadzenie do teorii narracji. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- Bal, M. (2012). Wędrujące pojęcia w naukach humanistycznych: krótki przewodnik. Bucholc, M. (translation). Warszawa: Biblioteka Kultury Współczesnej Narodowe Centrum Kultury.
- Cichocki, S., Ronduda, Ł. (2018, February 6). *Co widać polska sztuka dzisiaj. Wstęp do wystawy*. Retrieved from: http://cowidac.artmuseum.pl/pl/introduction.
- Domańska, E. (2007). Zwrot performatywny we współczesnej humanistyce. *Teksty Drugie. Teoria literatury, krytyka, interpretacja. Instytut Badań Literackich PAN*, 5, 48–65.
- Kluszczyński, R. (2009). Teoretyczno-kulturowe i filozoficzne konteksty sztuki interaktywnej. In: A. Popczyk (Ed.), *Interaktywne media sztuki*. Kraków: Intermedia, 7–55.
- Kukiełko, K. (2009). Sztuka w teorii mediów Marshalla McLuhana. *Media, Kultura, Społeczeństwo*, 1(4), 7–21.
- Kulazińska, A. (2012). Między sztuką, nauką a technologią. *Przegląd Kulturoznawczy*, 1(9), 161–164.
- Lewandowska, K. (2018, February 4). *Interwencje artystyczne przyszłość relacji kultury i biznesu*? Retrieved from: http://nck.pl/szkolenia-i-rozwoj/projekty/kultura-sie-liczy-/blog/interwencje-artystyczne-przyszlosc-relacji-kultury-i-biz nesu-

- Olszewska, M. (2018, February 6). *Wirtualna rzeczywistość w sztuce*. Retrieved from: http://wzoryprzyszlosci.pl/2017/08/22/wirtualna-rzeczywistosc-w-sztuce/
- Rachwał, T. Sławek, T. (1992). Maszyna do pisania. O dekonstruktywistycznej teorii literatury Jacquesa Derridy. Warszawa: Oficyna Literatów Rój.
- Sitkowska, K. (2012). Kulturowy wymiar ewolucji mediów w ujęciu przedstawicieli "Szkoły Toronto". *Kultura Media Teologia, 4*(11), 42–54.
- Śliwowska, A. (2008). Sztuka w procesie komunikacji kulturowej. In: B. Bączkowski, P. Gałkowski (Eds), *Komunikacja* przez *sztukę*, *komunikacja* przez *język*. Poznań: ZTiFK Instytutu Filozofii UAM, 52–54.
- Urwanowicz-Rojecka, E. (2015). Od sztuki site-specific po sztukę partycypacyjną: sztuka zaangażowana wybrane współczesne teorie i praktyki artystyczne. *Pogranicze. Studia Społeczne*, *36*, 31–47.
- Wójtowicz, E. (2018, February 6). *Sztuka w obronie świata*. Retrieved from: http://magazyn.o.pl/2016/ewa-wojtowicz-sztuka-w-obronie-swiata/#/
- Ziębińska-Witek, A. (2014). Zwrot performatywny w muzeach między teorią a praktyką. *Centrum Humanistyki Cyfrowej, Teksty drugie*, 1, 293–308.

#### Krzysztof Lang

Is an expert in the field of exhibition, curator, works of art conservator (Nicolaus Copernicus University, UMK, in Toruń), who completed post-graduate studies in the stage design faculty (Academy of Fine Arts in Warsaw) and curatorial faculty (Jagiellonian University, UJ, in Kraków). He has substantive experience in design and implementation project work in the fields of preservation of architectural monuments and arts, interior design, organization of museum exhibitions and stage design projects. He has been the author and co-author of installations of an exhibition nature carried out in public space. A winner of awards, among others in the field of museology (Sybilla 2007), European contemporary architecture (Mies van der Rohe Award 2017). A PhD student at Interdisciplinary Doctoral School at SWPS University of Social Sciences and Humanities in Warsaw. For more information, see: www.chrislang.eu.