

Technology in creative practice and the performances of Polish contemporary dance artists

In the global space of technoculture, cultural and technological layers interpenetrate and mutually condition each other. During the last century, intense technological development has acted as a catalyst for cultural change, but there is also the opposite relation: new needs and cultural practices have determined the direction of development in new communications technologies. Therefore, according to Debra Benita Shaw, we can “describe the study of technoculture as an enquiry into the relationship between technology and culture and the expression of that relationship in patterns of social life, economic structures, politics, art, literature and popular culture.”¹

Artists are particularly active participants of culture, and hence of technoculture. One has to agree with Marshall McLuhan, the leading theoretician of media communication, when he states that artists have special competence in analysing and understanding contemporary cultural change.² They not only give their opinions on the subject, but make their art a space for practical testing of the latest models of functioning in culture. Contemporary artists discuss and examine models of cooperation of human and non-human (e.g. technological) agents. This relation is particularly discernible in the art of dance. The body in motion – a person equipped with senses that let him or her locate him or herself in the world – is the medium of dance art. Communications technologies constantly shape one’s ways of using the body and one’s perceptual-cognitive habits. The art of dance allows us to inspect how the body and technology co-mingle, to try out new connections, and to elaborate on the borders of cultural approval of change.

Involving technologies in creative practice and in performances is becoming a more and more common practice. Contemporary dance artists not only use electronic and digital tools, but also take over some mechanisms that allow them to transform the audience’s experiences developed in the area of new communications technologies.

¹ Debra Benita Shaw, *Technoculture: The Key Concepts*, Oxford–New York 2008, p. 4.

² Marshall McLuhan, *Understanding Media: The Extensions of Man*, New York 1964.

Parallel history

Along with the political and economic changes that took place after 1989, Poland joined the economic and cultural global system, and, as a consequence, Polish art underwent far-reaching transformations.

One should remember that all the way to the beginning of the 1990s the history of Polish contemporary dance was a kind of "parallel history." In the West, the cultural revolution of the 1960s, obviously correlated with the specific political and economic situation, was for Western societies a source of new paradigms of creativity and dance aesthetics. Poland landed in the Eastern area of influence, which indicated a peculiar situating of dance on the map of art disciplines. Joanna Leśniewska states as follows: "Soviet classical ballet became the only form of dance approved by communist authorities, and contemporary dance – the expression of the individuality and one of the most democratic arts – had no *raison d'être*."³

Dance critic Anna Królica, in her book titled *Sztuka do odkrycia*⁴ (*Art to be discovered*), tries to periodise the development of contemporary dance in Poland after World War II. She points out that there are only some single "islands of creative freedom" on the post-war map of dance art: The Polish Dance Theatre of Conrad Drzewiecki, The Laboratory Theatre of Jerzy Grotowski and The Wojciech Misiuro Expression Theatre developed the activities we would nowadays call the physical theatre. According to the author, the most popular dance form in the 1990s was dance theatre, precisely the specific Polish variant of this form. A narrative character, spectacular nature, emotionalism and versatility of the subject are its characteristics; the move reflects the musical phrase and the dance technique is of special importance. The course of the development of dance theatre and more widely contemporary dance in Poland was critically judged by Joanna Leśniewska, critic and the Old Brewery New Dance programme's curator:

... the majority of teams are calling their art the dance theatre, quoting the already classical formula of Pina Bausch's theatre. But what we can see on the stage most often is an effect of a hazy idea about the stage form of *Tanztheater* ... It remains strongly emotional, kind of insensitive to the reality, eternally penetrating private feelings, talking continuously and with no distance about private, often infantile, trivial and naive experiences.⁵

Furthermore, the author compares the attitude of Polish contemporary dance artists to the one of young Europeans.

Chafing pathos, annoying seriousness, incomprehensible lack of a sense of humour – that's what drastically distinguishes our performances and the ones of foreign peers from the West. ...

³ Joanna Leśniewska, "Teatr tańca w Polsce," in *Słownik wiedzy o teatrze. Od tragedii antycznej do happeningu*, Bielsko-Biała 2007, p. 328.

⁴ Anna Królica, *Sztuka do odkrycia. Szkice o polskim tańcu*, Tarnów 2011.

⁵ Joanna Leśniewska, "Czekając na Małyszka," *Didaskalia*, no. 75, 2006, p. 17.

European artists aren't afraid to take the risk of facing up to the present; they uncompromisingly push their visions through, without any complexes take the risk of seeking their own, original language; they don't remain indifferent to the surrounding reality and dare to comment, protest and take a stance.⁶

Those words were written eight years ago, and since then things have changed quite a great deal.

The first decade of the 21st century brought a new way of thinking about the language of dance. Choreographers walked away from the language of the dance theatre that was popular in the 1990s and adopted brand-new creative strategies. They sought new forms of expression and tried to renegotiate the stage situation. And, above all, they started commenting on the deep cultural change of everyday practices.

Artists performing solo, playing the role of choreographers and dancers at the same time, as well as artistic collectives carrying out interdisciplinary projects, are the main initiators of experimental actions. In the majority of cases they belong to the young and the youngest generations of artists; they acquired dance and choreographic experience at foreign artistic colleges and during the coaching sessions of the Alternative Dance Academy project by Old Brewery New Dance. The new idiom is being described by dance critics (A. Króliczka, W. Mrozek, J. Majewska) as "the new dance," and artists as "the solo generation"⁷ – young independent artists are usually ex-residents of the Solo Project, or their peers.

In the last quarter of the 20th century, Polish contemporary dance has "caught up with fifty-year-old arrears,"⁸ stated Leśnierowska. The younger generation has to acquire in a nutshell all the paradigms of creation that have appeared on the European and American scene of dance since the end of World War II: minimal, abstract, postmodern, physical, conceptual and critical dance.⁹ Young artists willingly use the languages of different media: not only of dance and theatre, but also of the visual arts, performance art and, last but not least, of new media arts.

Technologies for dance

In order to situate the activities of Polish contemporary dance artists on the map of global technocultural practice, it is worthwhile to point out some crucial intersections of development of the dancing body and technology moments.

⁶ Ibid.

⁷ E.g. *Pokolenie solo. Choreografowie w rozmowach z Anną Króliczką*, Kraków 2013; *Nowy taniec. Rewolucje ciała*, ed. by W. Mrozek, Warszawa 2012; Jadwiga Majewska, *The Body Revolving the Stage. New Dance in New Poland*, Warszawa 2012.

⁸ Leśnierowska, "Czekając na Małysza," p. 17.

⁹ E.g. Nancy Reynolds, Malcolm McCormick, *No Fixed Points: Dance in the Twentieth Century*, Yale 2003, or in Polish: Wojciech Klimczyk, *Wizjonerzy ciała. Panorama współczesnego teatru tańca*, Kraków 2010.

Since the 1960s the art of dance has become more and more tightly intertwined with technology. In the second half of the 20th century a new artistic-scientific movement was born in the USA: the collectives of artists and engineers examined the possibilities of utilising new technological achievements in the performing arts, and especially in dance pieces. At the same time a new ethos turned up. The creative paradigm embracing participatory and conceptual art as well as the DIY (do-it-yourself) ethic were of significant importance to forming the idea of technologically enriched dance and its practical implementation into the performance.

In 1966, on the initiative of engineers Billy Klüver and Fred Waldhauer and the artists Robert Rauschenberg and Robert Whitman, there came into being a non-profit organisation called Experiments in Art and Technology (EAT). The same year a series of performances entitled *9 Evenings: Theatre and Engineering* were presented. The event united engineers and artists working on the new technologies. Among them were choreographer-dancers representing postmodern dance (Deborah Hay, Lucinda Childs, Yvonne Rainer) who were interested in merging the new technologies with the art of dance. The artists cooperated closely with the engineers planning their actions, and this was based on implementing different appliances and technologies into the stage performance. To give some examples: Childs used the Doppler sonar in her *Vehicle*, "[t]he data were processed in order to generate the desired weave of sounds and to adjust the light sources."¹⁰ Hay utilised eight radio-controlled carts acting as movable podiums in *Solo*,¹¹ and Rainer made use of walkie-talkie devices to generate the choreographic score in real time in *Carriage Discreteness*.¹² All of the artists were using many technologically advanced tools that allowed them to remotely control sound, lighting and the projections.

In 1967 the Portapak camcorder was released by Sony Corporation. From this moment on video art began to develop. In the field of dance, recording cameras were used not only to record and archive dance performances, but also to extend the boundaries of dance and to carry out research on movement dynamics. Later, digital technologies enriched the dance-for-camera field and contributed to the development of a new discipline – the screen-dance. On the other hand, the stage performance itself was being extended with the use of screen projections, projections on stage sets, clothes or the body of the performing artist (e.g. *Telematic Dress* by Susan Kozel).

In the 1990s, artists included into the range of their practice some tools allowing them to track and record movement to convert it into disembodied visualisations. The first experimenters in the field of using motion capture in the art of dance were Merce Cunningham (*LifeForms*; *BIPED*) and Bill T. Jones (*Ghostcatching*). Choreographers involved in establishing cooperation with experimental studios (e.g. Interactive Creed or Riverbed) developed new technologies that allowed them to animate digitally created figures. Although these tools allowed to choreograph physically impossible movements, they did not

¹⁰ <http://www.fondation-langlois.org/html/e/page.php?NumPage=1734> [accessed: 2 December 2014]

¹¹ <http://www.fondation-langlois.org/html/e/page.php?NumPage=1773> [accessed: 2 December 2014]

¹² <http://www.fondation-langlois.org/html/e/page.php?NumPage=626> [accessed: 2 December 2014]

enable real-time interaction of the performing artist with his or her “dancing avatar.” Since the end of the 1980s, many programmes and platforms were created allowing for real-time processing of data derived from the dancer’s movements. The visualisations and sound effects constituted a basis for further interactions held in a feedback loop, and also for performances based on telematic co-presence. Among these tools were Marc Coniglio’s Troika Ranch software (MidiDancer, 1989; Isadora, 2004), and the most popular was Kinect (2010), a device released by Microsoft Corporation as an addition to the Xbox 360 console. It is a laser sensor emitting infrared rays with a built-in camera and microphones.¹³

Interactivity¹⁴ appears to be a turning point for the dramaturgy of a dance performance. The interactive paradigm relates not only to the performers’ actions, but also to the way of involving spectators. Johannes Birringer, a researcher working in the field of digital performance theory, distinguished four types of environments to be met in digital dance stage productions. “(1) interactive environments (based on sensors and motion tracking); (2) derived environments (motion capture-based reanimations of bodily movement or liquid architecture, which can also be networked and reintroduced into live telepresence or telerobotic operations and communications between remote sites); (3) immersive environments (Virtual Reality based, such as the *Cave* or panoramic installations – similar to *T-Garden* – that integrate the body, with stereoscopic devices in front of the eyes, into the polysensual illusion of moving through space); and (4) networked environments (telepresence, videoconferencing, and telerobotics, allowing users to experience a dispersed body and to interact with traces of other remote bodies, avatars, and prostheses).¹⁵ An example of the interactive environment is *Very Nervous System* by Rockyby, of the derived one – *BIPED* and *Ghostcatching*, of the networked one – *Telematic Dreaming* by Paul Sermon, and of the immersive one – *Osmose* by Charlotte Davis or *Virtual Dervish* by Diane Gromala and Yacov Sharir.

In order to place the activities of Polish contemporary dance artists in the space of technoculture, one should consider both the wider context of global cultural change and local historical and economic conditions.

To put the creative concept into practice, artists select specific tools and obtain access to a particular laboratory or stage infrastructure. In many Western academic and artistic institutes and centres there exist the so-called “intelligent stages”¹⁶ and studios equipped with appropriate devices allowing artistic concepts to go through consecutive phases of experiments, rehearsals and, finally, production. And, actually, Birringer describes this age as the age of laboratories. “Artists work in art labs and have residencies

¹³ More on this subject see Michał Krawczak, “Programowanie interakcji: software i sztuki performatywne,” *Didaskalia*, no. 112, 2012, pp. 111–115.

¹⁴ I mean explicit interactivity; this term is explained in: Eric Zimmerman, “Narrative, Interactivity, Play, and Games: Four Naughty Concepts in Need of Discipline,” in *First Person: New Media as Story, Performance, and Game*, ed. by N. Wardrip-Fruin, P. Harrigan, Cambridge 2004, pp. 154–163.

¹⁵ Johannes Birringer, “Dance and Interactivity,” *Dance Research Journal*, vol. 35/36 (2), 2003, p. 96.

¹⁶ “Intelligent Stage” by John D. Mitchell [online], available from: <http://www.intelligentstage.com>; <http://www.ephemeral-efforts.com/istage/index.html> [accessed: 13 March 2014].

in science labs, scientists increasingly join artists in collaborative «Research and Development» projects, and universities desperately try to merge the disciplines or create trans-disciplinary research centres and digital learning environments.”¹⁷ Unfortunately, this tendency is developing very slowly in Poland.

The experimental practices of Western choreographers collaborating with new-media authors are a strong inspiration for Polish dance artists (which they express in their statements¹⁸); however, the selection of artistic tools is influenced by many independent factors, e.g. limitations associated with small budgets allocated to the projects of independent dance artists and the lack of institutional interdisciplinary initiatives carried out at the intersection of art, science and technology. Due to the lack of an adequate infrastructure and financial sources, artists interested in advanced technology designated for stage performances quite often rely on their own funds. Besides, networked and immersive environments are very demanding technologically (broadband Internet, etc.) and require large expenses, therefore, Polish artists are currently at the starting point of experimenting with such spaces.

In spite of the problems recalled here, many choreographers and dance collectives have implemented new tools in their performances. Among artists using new technologies on the stage are Tomasz Bazan (Maat Project), Bretoncafe Theatre Barbara Bujakowska, Izabela Chlewińska, Joanna Czajkowska, Rafał Dziemidok, Good Girl Killer, Harakiri Farmers (Dominika Knapik and Wojciech Klimczyk), Wojciech Kaproń, Kaya Kołodziejczyk (U/LOI), Joanna Leśniewska, Patryk Lichota, Irena Lipińska, Kacper Lipiński, Mikołaj Mikołajczyk, Ramona Nagabczyńska, Anna Nowicka, Iwona Olszowska, Janusz Orlik, Aleksandra Osowicz, Renata Piotrowska, Magdalena Przybysz, Iza Szostak, Teatr Dada von Bzdulow, Rafał Urbacki, Anita Wach and Marta Ziółek.

When analysing the artistic practices of the authors listed above one may indicate a few basic models of using the technology in the space of the dance performance.¹⁹ On account of the diagnosed obstacles of an institutional and financial nature, the advanced interactive environments analysed by Birringer are not common in the practice of Polish dance artists. That is why the most popular technology to be used in Polish dance performances are audio-visual projections.

Artists have adopted several strategies. Some of them use artistic films as digital stage design. The visual or audiovisual projection does not influence the dancer's performance, and implicates neither a body-technology splice nor play with the new perceptual-cognitive habits of the audience associated with the development of communications technologies. Dance and visual artists usually create the performance together, working at the same time on the choreography and the visuals. The projections might be prepared beforehand, and the

¹⁷ Johannes H. Birringer, *Performance, Technology & Science*, New York 2008, p. XXIV.

¹⁸ *Pokolenie solo. Choreografowie w rozmowach z Anną Królicą*, ed. A. Królicą, Kraków 2013.

¹⁹ Research grant *Multimedialność: strategie wykorzystywania nowych mediów (elektronicznych, cyfrowych) w polskim nowym tańcu* [Multimediality: strategies for using the new media (electronic, digital) in Polish new dance] (Institute of Music and Dance, Warsaw, 1 October 2013 – 30 June 2014).

movement score might already be choreographed (e.g. *Cosmos* by Kaproń; *I WANNA BE SOMEONE GREAT* by Harakiri Farmers). Although performances of this kind have a bi-linear narration (of the body and of the visuals), they give the audience a feeling of multimedia, of cohesive narration. Sometimes, choreographers prepare both the movement score and the visuals. In *Tralfamadoria* by Chlewińska, screen-projected graphics and texts are created in the course of the performance and act as a partner of the dialogue; her performance is based on the aesthetic potential of the moving body and the real-time interactions of the body and the image. The audio-visual projection may also play an important role in the performance's dramaturgy. In *3D-ance* by Bujakowska it helps to de- and re-construct the process of the choreographic score creation by letting the dancer interact with herself in various phases of the creative process; for example, in *Whatever* by Tomasz Bazan, the projection builds up the meta-discursive context for a bodily-based performance.

The majority of research projects in the field of dance&technology are dedicated to an analysis of their visual aspect. However, in many contemporary dance pieces choreographers and dancers collaborate with composers interested in computer-based sound, usually musicians creating minimal, electro-acoustic and generative music whose instruments are computers equipped with the appropriate software (e.g. *Dance For The Birds, They Watching Us* by Przybysz&Maingardt). The musician and multimedia artist Patryk Lichota in the *AUDFIT* performance attempts to generate sound out of the dancer's (Marta Romaszkan) moves. The numerical value of the move's vector is measured in three axes, and the received data are converted into sound. Audience members listen to the music by using headphones equipped with buttons. They get the chance to choose between three channels playing different music.

There have also been some attempts to experiment with real-time technologies. Choreographers cooperate with new media artists on phases of conception and realisation of performances to find new strategies involving the dancers in bodily and technological performances. Artists use devices that let them track the moving bodies and to convert in real time all of the collected data into sound and image.

Artists design visual and aural feedback loops. They use popular devices, e.g. Wii Remote controllers (*IGROT!* by Lipińska/Janicki/Zamorska) or the Kinect motion controller (*frictionmakesfrictionmakers* by Osowicz/Parlato/K.-H. /Makarov), but also home-made technical equipment consisting of digital cameras and microphones mounted on the body (*Strange Lóóp* by Lichota/Romaszkan/Przybysz). In these cases the technology "choreographs" the movement of the dancers, so one may attribute to it the choreographic agency.

Dance as the meta-discourse of technoculture

To analyse and interpret contemporary dance in the context of cultural change, the researcher should use categories developed in the field of media studies. Of course, transcription of the language of new media into the language of new dance must be meta-

phorical in many respects. The art of dance is multi-layered and surely cannot be represented numerically; it does not exist as data. But other principles formulated by Lev Manovich in his book *The Language of New Media*²⁰ might easily be referred to in the art projects of contemporary dance artists; for example, modularity appears in contemporary dance performances in the form of repetitions, transformations and iterations that have become one of the most important choreographic strategies since postmodern dance. The theme of a modular structure is being explored by Bujakowska&Janus in their performances *Movement Modular Synthesis and 3D-ance*. Modularity is associated with automation; the choreographic scores are sometimes built out of many modules (e.g. the choreographic structures of Merce Cunningham) and the interrelation of the parts is being modified automatically as a consequence of an accidental impulse that triggers the process of structure organising. Made Inc group (Edyta Kozak and Mirek Kowalczyk) in *Plik 01* experimented with automation: the audience used a computer to choose the visual, aural and movement modules and the software automatically mixed them into a coherent intermedia dance piece. The notion of variability refers to the fact of the existence of media objects in various versions. Similarly, contemporary dance pieces obtain a few different versions depending on the space (theatre, art gallery or public space). And, finally, transcoding refers to the assumption that because culture and technology function in constant feedback, culture is suffused with the ubiquitous logic of the computer. This is what we are observing in the contemporary art of dance! In his later works Manovich proposed the idea of post-media aesthetics. Its characteristics are the specific manner of data ordering and adopting the "new concepts, metaphors and operations of a computer and network era." Its categories "should not be tied to any particular storage or communication media."²¹

Contemporary dance exists in technoculture. When analysing the issue we have to consider not only how artists apply new technologies, but also how they refer to – on levels of structure, form, dramaturgy and narration of the dance performance – the presence of technology in everyday life. The art of dance functions in a technocultural reality and, in the process, reflects the trajectory of cultural transformations. Artists comment on the transfigurations of the body-technology relation with their practice: they create the multimedia and interactive performances, refer to the matter at the level of narrative and composition, and adopt some audience engagement strategies from the mass-media, video games, and the Internet. New techniques of the body and new perceptual-cognitive competences of the spectators using communications technologies in everyday life are being reflected in the concept, structure and dramaturgy of dance performances. Meta-discursiveness in the contemporary art of dance is not limited to the art of dance, but embraces the culture as a whole.

In contemporary dance performances, the paradigm of interactivity plays a huge role. Its sources are open and participatory, just like the art of the 1960s and 1970s. Perfor-

²⁰ Lev Manovich, *The Language of New Media*, Cambridge, Mass., 2001.

²¹ Lev Manovich, "Post-media Aesthetics" [online], 2001, available from: http://manovich.net/content/04-projects/030-post-media-aesthetics/29_article_2001.pdf [accessed: 8 December 2014].

mance art, happenings and conceptual art have dematerialised a work of art. In the same period the concept of the "open text" as proposed by Umberto Eco gained popularity, especially his ideas of shared authorship and the agency of the recipient/audience. At the turn of the 20th and 21st centuries, interactivity became the standard for the computer and for mobile devices with a tactile screen or another interactive interface. Navigation replaced narration. The spectator stopped being the spectator, i.e. the one who "is watching," instead, he or she gained the possibility of actively contributing to the artistic event. Contemporary artists let spectators choose the path to follow while creating their own version of the event they were participating in. This strategy has also been adopted by Polish artists. In the already mentioned *AUDFIT* performance, the soundtrack arises in real time, i.e. the movement of the dancer is read by the tracking system (nine sensors and the broadcasting station), then converted into sound and sent to receivers with a switch. The spectator chooses one of the three channels – the sound space suiting him or her the most with the preferred kind of affective excitement.

Immersive penetration into an artificially designed space replaces the former relation of distance. Also, dance performances become a space of the co-presence of authors (or designers) and spectators (or users). This model is used, for example, in *Unknown #1, #2* and *#3* by Towarzystwo Prze-Twórcze. Spectators, with their eyes covered, are led into the space of the performance. The deprivation of eyesight and activation of the other senses such as touch and proprioception let the spectators, so accustomed to perceiving the performance from a distance, "become" the dancers. In the second phase the audience "gets" their eyesight back and becomes a part of the multimedia performance, which is based on bodily performance and projection mapping.

Another consequence of popularising communications technologies is the appearance of a new formula of the creative process, i.e. collaborative, interdisciplinary creation, also called "devising." The computer and telematic art have developed since the 1960s.²² The strong ethos of self-sufficiency and self-reliance accompanied the creative process and presented a social move initiated by the idea of "the third culture" (1995).²³ The platform for a cross-disciplinary exchange of thoughts was created and all the processes based on a synergy effect gained great support. Digital art developed very quickly with the help of scientists and engineers.

Polish contemporary dance performances are these days more and more often created by collectives working on one-time art projects, drawing on shared, dispersed authorship. In interdisciplinary teams (choreographers, dancers, new media artists, composers of generative or electro-acoustic music, dramaturgists as well as engineers or scientists, etc.), artists share their competences in different fields, collaborating above the concept of the entire dance event. We observe the disappearance of the hierarchisation that is char-

²² Ewa Wójtowicz, *Net art*, Kraków 2008, pp. 165–178.

²³ John Brockman, *The Third Culture: Beyond the Scientific Revolution*, New York 1995.

acteristic of the dance theatre, in which the choreographer played the leading role, the dancers were the contractors, and the designers of light or sound were the technical assistants.

Contemporary dance productions adopt new strategies, such as transmedia storytelling, remix, and postproduction.²⁴ The first of the terms, defined by Henry Jenkins²⁵, denotes a single story told across many platforms, where each of them contributes in a different way to its creation. The multiple narration format is also being exploited by contemporary dance artists. Performance is no longer an autonomous stage event, but instead becomes an element of a more widely comprehended "project." It becomes the element of the larger whole. Websites of events containing films, trailers, teasers, GIFs, and other elements are often as important as the stage performance (e.g. *Strange Lóóp*, strangeloop.pl; *!GROT!*, grotproject.pl).

Remix is another term essential for understanding contemporary art. Manovich, who introduced the notion of deep remixability, claims that designers "remix not only the content of different media, but also their fundamental techniques, working methods, and ways of representation and expression."²⁶ In our times not only artists, but also the curators of performing arts are interested in remixability of the arts. For example, the Polish artistic group Komuna//Warszawa produced the *RE//MIX* cycle "which resulted in the creation of over 30 premieres that reference classic works of avant-garde in theatre and dance, as well as music, literature and film."²⁷ The majority of the invited artists were Polish contemporary dance artists. Curators decided to use the expression "remix" rather than other terms that more often turn up in this context, such as re-enactment or reconstruction. Remix:

... stands for a piece created as a result of transformation of another piece. It is not simply an "interpretation", which reproduces the original through other means or in another arrangement. Although it may retain from the original some fragments (samples), they are merely quotations. A remix is a new piece, referencing in its content or form the original. The authors of the remixes enter into dialogue with their masters, present nostalgic recollections or new readings of their work.²⁸

This term, perfectly describing some of the contemporary choreographic practices, was also adopted by Anna Królica, the curator of the *Archive of the Body* project.²⁹

²⁴ Ewa Wójtowicz, "Twórca jako postproducent – między postmedialnym remiksem a reprogramowaniem kultury," in *Remiks. Teorie i praktyki*, ed. by M. Gulik, P. Kaucz, L. Onak, Kraków 2011, pp. 14–28.

²⁵ Henry Jenkins, *Convergence Culture: Where Old and New Media Collide*, New York 2006.

²⁶ Lev Manovich, "Software Takes Command," version 20 November 2008, p. 25.

²⁷ Komuna//Warszawa homepage, <http://komuna.warszawa.pl/komunawarszawa-communewarsaw/> [accessed: 7 December 2014].

²⁸ *RE//MIX* cycle at Komuna//Warszawa homepage, <http://komuna.warszawa.pl/1998/12/12/re-mix-cycle-20102011/> [accessed: 7 December 2014].

²⁹ Zamek Culture Centre in Poznań, September–December 2013, <http://www.zamek.poznan.pl/sub,en,343,archive-of-the-body.html> [accessed: 7 December 2014].

Another important point of reference is the category of postproduction applied by Nicholas Bourriaud.³⁰ According to this critic and curator of contemporary art, most participants of mediated culture create and produce contents of a different kind; the artist plays the exceptional role of postproducer. This kind of task division is also quite common in contemporary dance. Artists commit themselves to community-based projects. Its participants are the creators of the dance performance (i.e. the artists), and the choreographers as postproducers care about the ultimate shape of the event. In Poland in the last decade there were many projects of this kind involving persons with an alternative motoricity, ruled out on account of their economic situation or age, or simply in a specific or peculiar social situation (e.g. *W przechłapanem* by Rafał Urbacki, *MaMa Perform* by Maria Stokłosa or *Teraz jest czas* by Mikołaj Mikołajczyk).

Polish contemporary dance artists examine the couplings of humans with the technologies of everyday life. Artists test new tools and allow the technology to determine the course of the dance performance. Creative application of computer technologies to dance art is currently being examined and widely discussed. Many theoreticians have dedicated their studies to dance-media performance, have augmented dance, digital dance and cyberdance;³¹ but the body-technology relation in contemporary dance is a much wider issue, and the use of electronic and digital tools in the performance is only one of its aspects. Technological development influences the techniques of the body and perceptual-cognitive habits, and at the same time shapes new creative paradigms and artistic currents. Interest in communications technologies becomes apparent not only in ways of using the new technologies, in engaging the audience, but also in the phase of creative practice. In Poland, we are still lacking research projects devoted to the subject. The issues discussed in this chapter require a wider debate in the field of Polish art theory.

³⁰ Nicolas Bourriaud, *Postproduction: Culture as Screenplay: How Art Reprograms the World*, transl. by J. Hermann, New York 2002.

³¹ E.g. Verena Anker, *Digital Dance. The Effects of Interaction between New Technologies and Dance Performance*, Saarbrücken 2010; Steve Dixon, Barry Smith, *Digital performance. A history of new media in theater, dance, performance art, and installation*, Cambridge 2007; Zeynep Gündüz, *Digital Dance: (Dis)entangling Human and Technology*, Amsterdam 2012; S. Portanova, *Moving without a body. Digital philosophy and choreographic thoughts*, Cambridge 2013.