

Introduction

Relations between art, science and technology in Poland have their long and complicated tradition that goes back to the experiments of the first avant-garde and the rejuvenation of local art after World War II. During the years of the political “thaw,” when the climate around the activities taking place at the intersection of art, design and technology was more favourable, new creative initiatives and practices sprung up which have, to date, inspired many artists and scientists. Suffice it to mention here the works of the Experimental Studio of the Polish Radio, the art practices arising from seminars by Mieczysław Porębski and later ones, works of the Film Form Studio, as well as actually independent work by such outstanding Polish artists as Krzysztof Wodiczko, Zbigniew Rybczyński and Grzegorz Kowalski (during the first stage of his artistic career). After the “thaw,” and due to the political situation, a crisis in this thinking ensued; many artists left Poland and many others entirely changed their approach to such experiments. In fact, it was only in the 1990s that the above practices were resumed. Because of the long absence of contacts with Western technological and scientific developments of the latter half of the 20th century, Poles had to quickly make up for time lost and had to learn how to apply new tools. First and foremost, however, they had to understand their specificity and impact on new definitions of the human being and their environment. Plugging into the global network of data exchange, Poles simultaneously plugged into a new model of knowledge management. The 1990s in the global system is no doubt the era of an IT revolution. The Internet, acquiring ever new users, not only led to the remediation of many traditional information carriers but also, and more importantly, brought about new strategies of knowledge distribution. Once treated as utopian, the ideas of exchanging experience and knowledge espoused by the first hackers of the 1960s became a fact. As of that moment we have observed how the Internet has rejuvenated virtual communities focused around common interests, beliefs and questions. Hence there has been a return to the idea of creating independent culture venues which are in fact technological workshops, studios and laboratories where people can meet and exchange practical competences. Therefore, Poland’s entry into the global system of information exchange not only meant fast technological progress but also introduced new forms of participation in culture and society. Moreover, it revitalised the definitions of a technology user, locating him or her between two opposing zones of the consumer and conscious and creative artist. Interestingly, by taking

up Western technological culture, not only did we get used to devices increasing the comfort level in our lives, but we also took over ideas inherent in this culture. By making use of specific appliances and operational systems, we agree to participate in models of culture which were embedded even at the level of design. It is those models that in a large measure define contemporary cultural and social practice. It is precisely here that a huge area for new forms of art which are critical of reality opens up; this reality cannot and must not be stripped of technology.

The WRO Art Center appeared in Poland in the late 1980s and early 1990s. Its authors, first in the form of a festival and then as an institution, made pioneering efforts to extend the spectrum of impact of media and technological art in Poland. The economic growth of the 1990s paralleled the fact of adopting new scientific and artistic practices. Polish artists and scholars began to participate in international conferences, festivals and projects which combined art, science and technology. More and more institutions today enter the critical discourse about techno-culture, which confirms that not only have we successfully made up for the time lost, but that we also need this kind of reflection.

This book is a collection of texts dedicated to the changes taking place in many areas of Polish art of the past few decades under the impact of technological tools. It also demonstrates many authors' interests in new scientific research. These transformations take place very fast and are present in all forms of art, such as in literature, music and the visual arts. Importantly, however, and this follows from the studies that were carried out when we were preparing these texts for publication, new artistic practices emerge which to a great extent transcend classical definitions of art and its disciplines. These are often activities taking place at the intersection of artistic and scholarly competences which pose major problems that today's human beings, faced with technological and cultural processes, have to deal with. In most cases the texts published in this book are penned by theoreticians and practitioners, i.e. those culture scholars whose own practice within the different domains of culture is the foundation of scholarship. Another group are artist-scholars who deliberately apply scientific theories not only to inspire, but also to inform about their projects. The texts, then, are a record of the scientific and artistic experience of their authors, who are involved in the dissemination of a new comprehension of the relations between culture, science and technology, and of those who see the need for bridging the gaps in scholarship on contemporary art. Most texts of this kind in Polish discourse still assume a separate position of art vis-à-vis that of science and technology. They are mainly focused on the analysis of aesthetic, formal, historical, cultural and social factors, without entangling artistic practice into the network of relations of translation and mediation (according to Bruno Latour) between strict scientific and laboratory knowledge and social expectations, needs and fears. Still, new important work has sprung up in recent years in the global discourse on *art&science* (e.g. Stephen Wilson, Eduardo Kac, Jill Scott); this work has launched, developed and recomposed research on a more profound analysis of the relations between the newest art and laboratory experiments and technological advancements. Such publications trigger a crucial reconfiguration of the manner of think-

ing about art, science, technology and the tension arising between these and social expectations.

New artistic practice is at the same time one of the consequences of the post-technological turn. Huge progress has been made in this respect over the past 60 years. We have moved away from the definition of a technological society (e.g. in Jacques Ellul's dystopian and portentous approach from the 1950s in his book *The Technological Society*), in which technology was regarded mainly as devices extraneous to culture. Today, technological systems have become a subject of post-technological studies, where they are treated and analysed as an inherent part of social, political and economic processes. This means that technology moved from the position of an external agent to the role of a multipurpose module integrated with major cognitive, evolutionary and cultural processes; this module is additionally meant to generate new supra-local updates and improvements. In other words, we have moved from the definition of technology as a set of devices with a concrete, palpable dimension to technologies which are invisible, as they are tele-information, bio-information or bio-genetic systems. Entering the post-technological social and cultural domain, Polish science and art must re-visit a dialogue on the possible interactions and consequences of actions. The synergy of the multiple aspects of science, such as informatics, biology and physics and their hybridisation, as stressed by many scholars (the three basic revolutions are addressed, e.g. by Michio Kaku), calls also for the incorporation into a new situation of all kinds of mediation activities meeting new social expectations. Due to the highly dynamic nature of the techno-cultural transformations, the set of texts in this book acknowledges and indicates the current creative practices which redefine the very notion of science and point to the need for a profound reflection in many areas of contemporary activities. The texts clearly indicate the fields of artistic and cultural practice where changes and a deliberate approach to new creative tools are the most conspicuous (media art, design, creative coding, video games, music, literature), and where, due to many social and cultural factors, changes are hampered and halting (theatre, painting). Perhaps the new reality, along with its technological instruments, requires forms different than the traditional ones, rather than ordinary attempts at restructuring, which always leave the same old content in the centre and only wrap it up in a new aesthetics. Contemporary creative practices must, moreover, critically analyse their own artistic processes and the networks of their distribution; in this case the tools and competences of their authors are not exclusively a matter of technique but a part of meta-media interactions, translations and social mediation. New forms of participation, expression and comprehension of the techno-cultural reality emerge.