Abstract: In recent years new media have contributed to considerable changes in everyday life of the modern man. The reality created by them has become an integral and inseparable part of the world around us. Obviously, such changes also concern the classroom reality, which can be observed and analysed in various areas. One of them involves employment of the latest technologies in the teaching process. Another is related to issues associated with administrative procedures and communication of the school with the local community and parents. There is also one more area connected with a permanent presence of the cyberspace in the school reality, which is perceived from the perspective of changes in relationships and emergence of completely new, previously unobservable relationships that occur between the subjects of the educational process and new media that are present in the school environment. This last issue seems to be most interesting.

The present article shows how the theory of transactional analysis can be used to examine, describe and evaluate the relationships mentioned above. Additionally, the author indicates the possibility of employing the existing, ready to use research tools and mentions studies that are being conducted at present and which use transactional analysis in empirical initiatives connected with human relationships with the computer.

Keywords: new media, computer-human relationship, transactional analysis, classroom context.
to look at the presented issue from the perspective of relations that exist between a person and a medium. Consequently, it will enable us to examine areas that, so far, have remained beyond the reach of scientists. At the same time it provides clear terminology, ready procedures and research tools.

**NEW MEDIA**

The term “new media” is strongly ambiguous in itself since we can ask ourselves what the word “new” means, how long a given medium can be new and what is the indicator of that novelty. These questions have raised significant doubts during the last few years. The pace of development of new technologies observed during that time is overpowering. The last five years of the twentieth century was a time in which a good computer became a useless relic in just one year. After the year two thousand we can observe the appearance of completely new technologies that have given the user entirely new unprecedented possibilities. Computers have been locked in tiny smartphone bodies. Access to the Internet has become easy, common and independent of the place in which we find ourselves. At the same time, this global network has gained entirely new possibilities and functionality. New social networks have appeared. In addition, due to an increasing network bandwidth, multimedia exchange has become both easy and universal. Furthermore, we work in the “cloud” more frequently.

A much longer list of examples could be created but, since it is not the subject and purpose of the present study, we will again attempt to define the topical “new media” term. Lev Manovich states that “every modern media and telecommunication technology passes through its new media stage”. In other words, at some point photography, telephone, cinema, television each were ›new media. This perspective redirects our research efforts: rather than trying to identity what is unique about digital computers functioning as media creation, media distribution and telecommunication devices, we may instead look for certain aesthetic techniques and ideological tropes which accompany every new modern media and telecommunication technology at the initial stage of its introduction and dissemination. Here are a few examples of such ideological tropes: new technology will allow for ›better democracy‹; it will give us a better access to the ›real‹ (by offering ›more immediacy‹ and/or the possibility ›to represent what before could not be represented‹); it will contribute to ›the erosion of moral values‹; it will destroy the ›natural relationship between humans and the world‹ by ›eliminating the distance‹ between the observer and the observed” (Manovich, 2003, p. 16). It appears that it is correct to treat the concept of new media in this way –it is perceived as a kind of a container, whose contents change with the development of technology. Each era had its new media, which significantly influenced changes in the way and the quality of human life. However, it seems that the manner and context in which the defined term is currently used requires some specifying. We can again refer to the author quoted above who writes: “New media calls for a new stage in media theory, whose beginnings can be traced back to the revolutionary works of Robert Innis and Marshall McLuhan of the 1950s. To understand the logic of new media we need to turn to computer science. It is there that we may expect to find the new terms, categories and operations that characterize media that became programmable. From media studies, we move to something which can be called software studies, from media theory — to software theory” (Manovich, 2013, p. 10).

Therefore we have a new element, the software, which is something that was in fact provided to us only by computers. Owing to software, new media are gaining functions that, subsequently, change our environment to such a great extent. Due to it, one device can help us with our work, ensures entertainment and facilitates contact with other people. A computer or a smartphone can be freely adapted to the user’s needs and may fulfil expected functions and tasks.

Summarising, it seems to be reasonable
to accept Manovich’s view that new media are composed of new technologies that bring a new quality to our lives and give us new opportunities. Furthermore, the possibility to program them constitutes a feature that distinguishes new media currently operating in the human environment from those that were once present in human lives. Consequently, we are provided with a possibility to adapt them to individual needs of each user.

TRANSACTIONAL ANALYSIS

Transactional analysis (TA) was developed by Eric Berne. Initially, its use was restricted mainly to psychotherapy. However, after a short time it turned out that the theory could be used in much broader contexts. Currently, one of the TA mainstreams is constituted by Educational Transactional Analysis, which is focused primarily on resolving various problems that we face in the teaching process and in the school itself.

The basis of transactional analysis involves primarily the so-called structural analysis, which assumes that within our inner personality structure each of us possesses three main ego-states—Parent, Adult and Child. Ian Stewart and Vann Joines describe these states briefly in the following way: “Each of these consisted of a set of behaviours, thoughts and feelings. When I am behaving, thinking and feeling as I did when I was a child, I am said to be in my Child ego-state. When I am behaving, thinking and feeling in ways I copied from parents or parent-figures, I am said to be in my Parent ego-state. And when I am behaving, thinking and feeling in ways which are a direct here-and-now response to events round about me, using all the abilities I have as a grown-up, I am said to be in my Adult ego-state. Often in everyday TA practice, we say simply that I am »in my Child«, »in my Parent«, or »in my Adult«. Putting the three ego-states together, we get the three-part ego-state model of personality which is at the heart of TA theory. It is conventionally pictured as the set of three stacked circles [...]. Because the three ego-states are often labelled with their initial letters, the model is alternatively known as the PAC model” (Stewart, & Joines, 2009, p. 11). Figure 1 presents the personality structure that has been described in the quotation above. Different colours, corresponding to generally known traffic lights, have been used with the purpose of indicating the three ego-states. The colours help to illustrate these states in a better way and, consequently, to understand the specificity of their functioning. Hence, the Parent ego-state is reflected by the red colour since it represents norms, rules, bans and ways of behaviour. The green colour signals the Child ego-state and implies naturalness, spontaneity, intuition, joy as well as rebellion and anger. The yellow between them points towards the Adult ego-state which is connected with attention, analysis and thinking.

**Fig. 1.** First order structural diagram: The ego-state model. Source: Stewart, & Joines, 2009, p. 12.
Obviously, this structure may be treated only as the first-order structural model. It is not difficult to imagine a more complex situation in which such a simple division may turn out to be insufficient. Therefore, TA offers a further analysis, called functional, which provides additional subdivisions. The Parent ego-state is split into the Nurturing Parent and Normative Parent, while the Child ego-state, into the Spontaneous Child and Adapted Child (Stewart, & Joines, 2009, pp. 21-29). In case it still proves to be insufficient, transactional analysis offers the second-order structural model. In its most basic form in each of the major ego-states a subsequent analogous three-stage division is suggested. Consequently, we obtain a Parent in a Parent, an Adult in a Parent and a Child in a Parent, next we have a Parent in an Adult, an Adult in an Adult, etc. (Berne, 2008, pp.191-199). Nonetheless, for the purpose of considerations included in the further part of the present article, it will be sufficient to focus only on the first-order model.

Beside the structural analysis we should also mention the transactions analysis while describing the basic concepts of transactional analysis. Berne describes it in the following way: “The unit of social intercourse is called a transaction. If two or more people encounter each other in a social aggregation, sooner or later one of them will speak, or give some other indication of acknowledging the presence of the others. This is called the transactional stimulus. Another person will then say or do something which is in some way related to this stimulus, and that is called the transactional response. Simple transactional analysis is concerned with diagnosing which ego state implemented the transactional stimulus, and which one executed the transactional response. The simplest transactions are those in which both stimulus and response arise from the Adults of the parties concerned. The agent, estimating from the data before him that a scalpel is now the instrument of choice, holds out his hand. The respondent appraises this gesture correctly, estimates the forces and distances involved, and places the handle of the scalpel exactly where the surgeon expects it. Next in simplicity are Child-Parent transactions. The fevered Child asks for a glass of water, and the nurturing mother brings it” (Berne, 1994, p. 21). The quotation provides examples of complementary transactions which occur every time when the vector showing a transactional reaction is parallel to the one showing the stimulus. “A complementary transaction has a quality of expectedness about it. Asking you for information about the time, I expected you to respond from Adult, and you did. When the manager told off his clerk, he expected a Child apology and he got it. A conversation may consist of a chain of complementary transactions. If so, the whole chain will have this feel of something predictable happening” (Stewart, & Joines, 2009, p. 62).

Apart from complementary transactions, we can differentiate crossed transactions. While in the case of the former we deal with uninterrupted communication which can occupy a long period of time, crossed transactions usually lead to conflict situations. “Formally, a crossed transaction is one in which the transactional vectors are not parallel, or in which the ego-state addressed is not the one which responds” (Stewart, & Joines, 2009, p. 63). An example is an angry reaction from the Child ego-state to an unprejudiced remark addressed from the Adult-Adult level.

Moreover, it is important to introduce briefly hidden transactions. Through our body language, voice intonation, some additional utterances or understatement we frequently send supplementary transaction stimulation at a different level than that on which we say something plainly. A good example of such a transaction might be a seemingly earnest conversation between a boy and a girl which is conducted on the Adult-Adult level, yet a simultaneous non-verbal message “I like you” is transmitted on the Child-Child level.
Obviously, the concepts described so far constitute only a fraction of what transactional analysis can offer. However, a continuation of this discussion would go far beyond the scope of this paper. Additionally, the structural analysis and the transactions analysis presented above provide a sufficient basis for considerations contained in the next part of this article.

NEW MEDIA IN THE CLASSROOM
This subsection deals with the essence of the present article. However, before the concepts that have been described in the previous subsections are discussed in the context of a classroom, it is important to consider how a contemporary classroom functions and what is the place of new media there. We may examine their presence primarily in two areas. The first is formal and mainly concerns issues connected with the use of the latest technologies in the teaching process as well as with administrative and promotional activities and actions leading to the improvement of the contact between the school and the local community and parents. Considering this area we can talk about exercising some control over the use of the new media and their influence on school life. Nevertheless, the wording “some control” has been deliberately used in the previous sentence. It seems that even in the area in which new technologies are used only as advanced tools that help with work or learning, we are not able to fully understand and control all the aspects connected with their influence on the student and the teacher, their mutual relationships and, consequently, on the functioning of the whole institution.

The other area is less formal. According to the results of a survey carried out by TNS on behalf of Orange Poland in cooperation with the Orange Foundation and the Nobody’s Children Foundation, 86% of adolescents used the Internet at school in 2013. 20% of them declared that they used a phone or a tablet for this purpose (Bezpieczeństwo dzieci w internecie, 2013). Moreover, the hypothesis that these percentages tend to increase appears to be easy to confirm. This particularly concerns the use of smartphones, which are owned by almost every junior high school student. Additionally, data packets are getting cheaper and more readily available. At the same time more and more wireless Wi-Fi network is within each student’s reach. It should be noted that the quoted survey results refer only to the Internet, while students at school might use their smart phones for entertainment, playing various games, listening to music or performing other activities that do not require a continuous connection to the network. Therefore, it should be assumed that using new media for purposes not related to education is certainly one of significant aspects of a contemporary classroom reality.

Regardless of the area that we want to analyse, we will have to deal with an extremely important issue concerning relationships. This issue does not only involve human relationships (those between participants of the learning-teaching process), but also those between people and new media. The fact that people instinctively equate the media world with the real world was proved several years ago by Byron Reeves and Clifford Nass. In a series of experiments they showed that in relation to the computer people behave and react exactly in the same way as in relation to other people (Reeves, & Nass, 1996). If this is the case, the mainstream of empirical research should encompass a study of these relationships. Unfortunately, such studies are still infrequent. They could shed new light on problems that are rooted in the contact between people and new media and that are observed not only at school.

Let us start our discussion from the first area. Clifford Stoll describes an experiment in one American school, where traditional teaching materials were replaced by portable computers. The author points to a whole range of problems, which had not been anticipated earlier. Apart from
occasional technical failures, viruses, and the like, it seems that a significant number of them had their causes in relationships. “Teachers commonly catch students surreptitiously playing video games during class. »I play Mortal Combat, Trilogy and Rat Man« said one sixth grader. [...] I’ve just stopped using the computer in class, because kids are so distracted by the computers themselves«, [teacher] concludes” (Stoll, 2000, p. 49). Let us look at this problem from the perspective of transactional analysis. In the teaching process we can observe mainly two kinds of complementary transactions (i.e. such transactions which do not lead to conflict situations and enable conducting lessons without problems). In the case of a rational discussion or communicating information, they will proceed on the Adult-Adult level. However, in the case of giving commands and tasks to perform, they can come from the Parent ego-state of the teacher and be addressed to the Child ego-state of a student. Since during our contact with the computer we react similarly to during our contact with a human being (as has been proved by Reeves and Nass), we are introducing one more subject to the described relationship by putting a laptop on a student’s desk. What is more, while in the teacher-student relationship, it is the teacher who initiates and imposes the nature and quality of this relationship, in the case of student-computer contact, it is the student who decides. Situations described by Stoll seem to show this mechanism very well. Why should I be in a difficult, attention requiring effort relationship on the Adult level or why should I submit to commands given from the Parent level, if I can initiate a transaction with the computer on the Child-Child level – let us enjoy ourselves, let us play a game. In this case it is the student who chooses the game, decides and takes initiative. We should remember that the computer can be programmed because it is a contemporary new medium. Consequently, it can be adjusted to the user’s needs and interests, which enables the user to indulge in his passions and hobbies, match them with forms of entertainment, search information that engages and attracts him, etc. When we view this device from such a perspective, we should not be surprised that “kids are so distracted by the computers themselves” (a teacher cited by Stoll, 2000, p. 49).

Someone might say here that there are few schools which use computers to such a great extent. However, this fact does not change anything. As has already been mentioned, a significant number of young people use smartphones. Modern smartphones are in fact miniature computers, which, apart from many different functions, can also be used to phone. Thus, the situation which was formal has become informal and this constitutes the only change. A student still has at his disposal a new medium which can be programmed and adapted to his needs and interests. He carries on initiating transactions which will continue to be much more attractive than those that come from the teacher. Schools have widely implemented bans on using phones during lessons, but enforcement is extremely difficult. Interviews conducted with students and graduates of secondary schools indicate that possibilities offered by smartphones are widely used in contemporary classrooms.

At this point we can pose a question concerning advantages that result from describing this phenomenon with help of transactional analysis. As it has been mentioned before, there are an insufficient number of empirical studies that would deal with this phenomenon, which may be caused by lack of a consistent idea of how such research could be conducted. This problem may be solved with the help of transactional analysis, which can be easily applied by educators. This method gives the researcher very clear and simple terminology and ready research tools, which is even more important. The structural analysis employs so-called egograms which help to determine the development level of the subject’s ego-states and, consequently, to reveal the tendencies towards
using them. For example, a standardised tool was developed by Anna Pierzchała and Adrianna Sarnat-Ciastko. It allows us to analyse a personality structure from the perspective of the second-order structure of TA (Pierzchała, 2013, pp. 354-358). Properly designed and adjusted egograms could also be employed to determine what kind of personality structure the user assigns to a new medium. It is obvious that technology itself possesses no personality. However, if we establish a relationship with it and if this relationship has characteristics identical to an interpersonal relationship, we must assume that at the given moment some kind of personality structure is assigned to it by us. Most likely it is a variable which depends on the conditions in which we find ourselves, the task that we have to perform and the features of the software itself. If, in a properly arranged situation, firstly we examine the user and then, employing the same research tool, we ask him to specify the computer personality structure, we will get a very interesting picture. Consequently, we will be able to determine the nature and quality of transactions between a human being and a machine. There are numerous benefits that such research could bring. Since this article deals with the classroom, we will limit our discussion to this area. Implementation of research results at school means that it will be possible to design better training software and prepare better lesson plans with help of computers. As a result, teacher-student transactions should prove not to be less attractive than those between a student and the computer. Moreover, the ability to control the phenomenon of uncontrolled smartphone use during the teaching process also does not seem possible without recognising the media that participate in the communication process as subjects of that process and without learning more about the nature of the relationship which exists between them and the user. It is difficult to effectively fight phenomena that we do not know. In order to comprehend and learn about them we need thorough and extensive empirical studies. Transactional analysis may prove to be a key concept in such studies.

**SUMMARY**

Concluding, it should be mentioned that the research initiative suggested in the previous paragraph has already been started. A shortened and modified adjective egogram designed by Jarosław Jagieła (2011, pp. 274-277) has been used as a research instrument. It enables conducting a functional analysis and is suitable both for the assessment of the user’s personality structure as well as of the personality designed by him for the computer. Therefore, most probably, a publication containing the first research results in this area will appear within the next year. It is hoped that this initiative will provide a basis for further studies, which, due to the use of transactional analysis, will allow us to understand better the nature of our relationship with new media and, consequently, to plan more effectively their place in the school and educational reality.

**REFERENCES**


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