EDUCATION SYSTEM OF JOHN AMOS COMENIUS AND ITS IMPLICATIONS IN MODERN DIDACTICS

dr. sc. Mirko Lukaš, assistant professor
dr. sc. Emerik Munjiza, associate professor

Abstract: In this paper the authors study John Amos Comenius’s concepts and their implications in the field of theoretic didactics noticing their permanence and existence in modern didactics.

The authors have particularly been interested in scientific concepts designed and systematized in subject-teaching school system proposed by J. A. Comenius, which are still actively applied in day-to-day school practice. Within the analysed ideas of J. A. Comenius the goal and the task of paper is to present to the pedagogical public the originality and the permanence of certain didactical phenomena which can be found in the beginnings of didactics 365 years ago, as well as to confirm their contemporariness and topicality on a scientific level.

Keywords: didactic principles, great didactics, J. A. Comenius, school system.

Introduction

Didactics, as well as other sciences, was evolving for a very long time. It is as old as human desire to teach members of young generations and on purpose transfer acquired experience. In history, a lot of practical didactic experiences were collected, so that the need for this knowledge to be systematized and made available to everybody appeared. The first attempts occurred already in the period of humanism and renaissance, but they were vivified during the 17th century by John Amos Comenius. Feeling new needs of society and noticing the failings of former school practice, as an ingenious visionary he predicts further social flows as well as its needs. He tried to systematize former positive didactic tradition and enrich it with new self-cognitions. His work „Didactica magna“ – Great Didactic came into existence this way. Although didactic knowledge and experiences existed before Comenius, he got the honour to be the founder of didactics who set scientific foundations and gave it forms and directions of future development, which will shortly be presented in this chapter, by stating parts of his curriculum vitae,
philosophical and pedagogical views on education, as well as his contemporary, i.e. modern implications in didactics.

**Philosophical foundation of J. A. Comenius’s ideas**

"Look at the refugee, who, in serving God, suffered the malice of many conceited passions, 
But since he’s world-known for his knowledge, faith and value, the whole world is his home”

(Klika, 1892, p. 91)

A detailed autobiography of John Amos Comenius was prepared in a thorough way by Josip Klika. Different influences that left trace on his life and work were presented in this paper, as well as his pedagogical activity.

At the Faculty of Theology or Johanneum College in Herbor Comenius taught Biblical sciences, practical theology, religion and languages. Narration and learned speech were cultivated here; they learned music, fencing, horse riding, Jewish, French and Italian. In this school, Comenius found the source of knowledge in the Holy Script, as well as a permanent wish for the return of the Kingdom of Christ.

In 1612 in Herborn for the first time Comenius read the document by the famous Wolfgang Ratke, German pedagogue and reformist, who used the term didactics for the first time. For Ratke, didactics is the art of teaching, learning, a specific practical pedagogical skill. When staying for some time at the academy in the town of Heidelberg, known by its library Palatina, Comenius studied mathematical and astronomical sciences, mostly Copernicus and his discovery where he claimed that the Earth revolves around the Sun, not the other way around. Encouraged by the German work Didactics or instruction on the skill of teaching by Ilija Bodin, Comenius decided to create the famous work in Czech language that would improve youth education, so that the youth could help their homeland to blossom and turn into heaven. His work Didactics or the art of skilful teaching was intended for *a person before he/she grows up in body and begins his/her vocation.*

Every pedagogical concept has a certain philosophical idea in the background that is possible to realize in practice through pedagogy. There is no doubt that Comenius was under the powerful influence of humanist and renaissance ideas on nature, society and humans. It is normal that, by being a priest, he testified the influence of theology and church, but with reformed views and influences of some medieval understandings. By nourishing ideas of materialism and supporting scientific experiments, particularly Francis Bacon’s, he was frequently under influences that were not mutually coherent or
concurrent. Jean Piaget would say that Comenius used the language of Aristotle, but gave it a different meaning and content, i.e. moved between scholasticism inspired by Aristotle and mechanicism of natural sciences of the 17\textsuperscript{th} century (Comenius, 1957).

Among all of these things Comenius also possessed a great humanist and optimistic spirit that emerged under the influences and was inspired by utopian ideas of T. Campanello. In his works Comenius frequently repeats the known sensualistic attitude – \textit{there is nothing in the reason that has not been in the sense before.}

Besides being enthusiastic about natural sciences and their success, he was looking for a place for humans in the nature. He was impressed by the fact that order and harmony govern the nature, all natural things and occurrences. He writes about creativity of nature, about its ability to self-create, about materialism and existentialism of nature (Komensky, 1954, p.172).

He does not find the final confirmation and justification in nature itself and its material existence, but in God and religion. He was trying, in naturalist understandings of nature, as well as in materialist-sensualist understandings and views of Bacon, to find the answers in theological and church dogmas, e.g. science and piety, scientific method and religious dogma, internal laws of nature with those working outside nature, renaissance joy and enthusiasm with humans and life on earth with the desire to bring this human as close to God as possible and prepare him/her for the life that is to come (Potkonjak, 1970).

Universal laws of nature are valid also in the society for him. As a representative of Czech people, robbed and oppressed by German feudal lords, but also as a supporter of social understanding in his concepts of society, he expresses democraticity and humanism, free from each type of nationalism and chauvinism. Comenius thinks that all the knowledge and all the scientific achievements belong to all people and all nations, and that everybody should be enabled to get to know them, and in this way, by possessing knowledge, have the power.

A human is a part of nature subordinated to general laws of nature. All the people were born good in their nature and all of them can and should become good, i.e. they must be equal. There should not be difference among the people regarding place of birth, social level or gender they belong to. Every human has the same right to education, and education is the means by which all people will be happy. A human is a micro-cosmos and there lies the principle of law universality. The idea of paideia becomes a pedagogical concept of Comenius where all the people are equally capable of being educated, which is not a privilege of certain classes, or certain nations. Every person has external and internal senses, mind, the centre of feelings that desires for the greatest good, has similar language for mutual communication about all
things, has hands for similar activities with all the similar things, has time to
grow and achieve all things (Comenius, 1957).

Therefore all the people should be brought up in the way that the same
upbringing activities are available to all of them regardless of their wealth,
social status, birth and similar. „God created man as a Child of God, in his
own image, and gave all the people a chance to become similar to him, i.e.
perfect as their Father in heavens“.

Comenius proclaims the idea that a person should be brought up as a
whole, not just in some parts. Three things are important in every person: ratio
– oratio – operatio (thinking – speaking – activity) and all three should be
nourished equally. If all people would be taught the same things they would
become wise and the world would be in order, in other words, all people would
be pansophists.

Pansophism was supposed to be an encyclopaedia of the complete
knowledge ordered into an organic system that would serve all the life needs
and answer all the possible questions asked in human life – all the knowledge
about God, nature, human society and internal life of people, everything that
represents the contents of general education. Pansophistic concept of Comenius
was coherently democratic and based on the demands of absolute equality of
education for all people. For years he advocated scientific results to be
available to each person. This idea connects Comenius with democratic views
of human society where educational work has to be extended to all the children
of all the scientific categories. “Schools should not only exist for the children
of the rich and famous, but for all... rich and poor children of both sexes... in
all the towns, little places, villages and granges... everybody should learn
everything in schools.... not in the sense that we would demand of all the
knowledge of all sciences and arts. “, (Komensky, 1954).

Since all the people possess reason and desire for knowledge they must
have unlimited access to knowledge and science which is the basic principle of
pansophism overthrowing a former many centuries old understanding that
knowledge is the privilege of the chosen. The idea of pansophism is connected
to democratic views of its author in the narrowest way. Deep transformation of
human society is only possible by means of well-organized education
(Vukasović, 1992).

Wanting to vivify the philosophy of pansophism and point at the new
epoch in the life of humanity, Comenius goes to Hungary where in Sarospatak,
in 1651, he opens pansophic school. He himself created principles for this
school, as well as curriculum, timetable and also wrote the first illustrated
textbook in the history of humanity for visualised instruction, a small
encyclopaedia of basic knowledge Sensory world in images or Orbis
sensualium pictus (Klika, 1892).
Pedagogical work

Although in his long religious, philosophical and pedagogical theory and practice he became author of numerous published and unpublished works of different contents, wanting to raise national awareness by promoting patriotism, as well as virtuous moral in the history of world pedagogy, Comenius remained permanently recognizable by suggesting a new school system based on four seasons in the nature and four stages humans go through. The suggested school system following the principle of graduality had the following structure: 1. School of infancy – in each home that was blessed by children where external senses are exercised; 2. Maternal school – (general school) – found in each municipality and encourages internal senses, imagination and memory; 3. Latin school (grammar school) – in bigger towns, develops understanding and reasoning and 4. Academy – raises the will, each country has one.

For each of the suggested grades within the school system, intended to last for six years, Comenius wanted to write required textbooks. He succeeded in writing course books for three school systems, but he did not have time to create the assumed fourth book. For School of infancy he wrote “The School of Infancy” – “A valid and understandable instruction, so that reasonable parents themselves and their maids can lead and practice their dearest treasures, their darling children in their first and initial age, reasonably and morally to the glory of God, to their own joy and salvation of children” in 1628., (Klika, 1892).

For the general public school Comenius wrote a course book for each grade under the following names: 1. Christian youth lilies, 2. Christian youth roses, 3. Flower garden of knowledge and wisdom, 4. Labyrinth of student’s knowledge and wisdom, 5. Spiritual balm of Christian youth and 6. The heaven of soul (Klika, 1892, p. 65).

Comenius became best known by writing books in Leszno for the Latin school, which made him a reformer in teaching Latin. His reform introduced learning Latin words a student should simultaneously acquire the object and the belonging word, and consequently, in 1631, he wrote the book The Gate of Languages Unlocked. This book consisted of 8 thousand words in one thousand sayings divided into one hundred columns. The contents it encompassed were: science, learning of humans, learning of crafts, the place and the way of home and civil life, education, science and arts, learning of moral, games, discussion on death and funeral, on God’s providence, angels and introduction. Already in 1633, thinking of Czech youth and mother tongue learning, Comenius writes an explanation under the name The Golden Gate of Language.
Soon after publishing, *The Golden Gate of Language* was translated into German, Polish, French, Italian, Spanish and Greek. Jesuits claimed that the work “*Gate*” by Comenius, next to the Bible and the book *Christ’s Footpaths*, was printed so many times as no other book before. The work was translated for African and Asian peoples, and also into Arabian, Turkish, Mongolian and Persian languages. In order to make this demanding book available to as many readers as possible, two handbooks were published with it *The Vestibule of Latin Language* and *Latin Grammar*. These three course books for Latin schools made Comenius famous as a good teacher and didactics researcher, but he acquired world fame by the following work.

In Amsterdam in 1957 the work *Great Didactic or the art of teaching everything by showing confident and excellent way how to organize schools in all municipalities, towns and places of a country, how to shortly, pleasantly and firmly educate all the youth of both sexes in literature, not excluding anybody, to enrich them morally, to strengthen their piety so that, in this way, when they mature, they are capable of anything that contemporary and future life demands*. This Didactic was written in Latin, but was several times translated by Germans, Croatians, the Polish, the French and the English, although it was written for the learning demands in Czech. With this work Comenius started the discussion on youth education in scientific, detailed and in writing the clearest way. In this time the boys were struggling with education in Latin, which was for most of them a hard, useless and boring task. It was therefore necessary to change the method of knowledge transfer into a more pleasant and confident one. In *Great Didactic*, in chapters 1 to 7, Comenius speaks of virtues and education of people, in order to encourage an average reader to read, to deduce the purpose of education from the definition of humans itself and search for the appropriate means for it (Klika, 1892).

Comenius did not only want to contribute to science by this work, but also to give instructions for the whole human life. This book had a twofold purpose, a person could prepare for life in this world and it also served for gaining eternal life, therefore it was named Great. In chapters 8 and 9 it was explained how to change school and make it public. In chapters 12 to 19, a detailed and exact order in the complete transformation of the school is given, with new principles of learning from the nature itself, not acting against human nature but in harmony with it and without violating it. Further chapters, up to 24, present special instructions for science, languages, moral and piety. Chapter 25 is about removing pagan books from Christian schools that should only be governed by Christ’s wisdom and testament.

In chapter 26 Comenius shortly explained his school system based on four stages, while in chapter 27 he describes school discipline. In the following chapters, maternal school, public school, academy and printing offices in
schools are discussed. In the conclusion he invites the responsible to change and improve schools following his instructions.

Great Didactic is only imaginarily an instruction for school practice. It is a collection of the complete pedagogical science and all the educational knowledge of the time it was written in. In introductory chapters it contains the philosophy of pedagogy that brings comprehensive foundations of pedagogy, or its teleology, i.e. the reasons for education. There are also anthropological attitudes on who to educate, and methodological ones that give instructions which means to use in education. Of course, there are concrete examples from practical pedagogy here, as well as their practical solutions. In his work Great Didactic Comenius frequently invokes previous historical experiences, therefore this work also contains parts of the history of pedagogy up to its time.

Comenius completed his didactical work with *The Newest Language Teaching* printed in 1648. In 30 chapters the author gives general methods for language teaching, but also for every other subject. Language instruction must be based on naming things, using words and sentences. In the following chapters he sets principles or foundations of teaching differentiated according to: 1. type: accidental and scientific, 2. means – general and specific, 3. method – science, cautiousness, work and language, 4 person maturity – children and grown-ups and 5. certainty of the results requiring learning - quickly, easily, pleasantly and safely.

In order to facilitate students’ understanding of learning according to the book *The Newest Method of Language* Comenius again created three handbooks for mastering Latin language, identification of things, a dictionary and a spelling book. These works are named *The Vestibule of Things and Words*, *The Gates of Things and Words* with *The Dictionary and Spelling Book* and *The Auditorium of Things and Words*, that were sent due to the contemporary political situation to Swedish scientists in Elbing to be checked. These works were illustrated by drawings of famous German and Czech painters, but also by Comenius himself, who drew many objects as a contribution to the improvement of the first similar already published works.

The idea of life-long learning is found in Comenius’ work *Pampedia* written in 1669, where human life is described through seven levels of education (school): 1. Prenatal school, 2. Infancy school, 3. The school of boyhood, 4. Adolescence school, 5. School of youth, 6. School of adulthood, 7. School of old age, and towards the end he adds the school of death. These schools for him do not represent only institutional, but also experiential education, while the young from 7 to 25 years of age get education in the school, but education should end with a journey.
The modernity of pedagogical-didactical ideas of J. A. Comenius

Civil pedagogy that emerged by industrial revolution has a matrix of transition, i.e. listening and processing of contents without student’s significant engagement. As the society developed, and during different reformation movements and alternative forms of education, this model of civil pedagogy aspired to change by using new paradigm, whose centres of interest are terms activity, spontaneity, freedom, self-education and creativity of students. Post-industrial civilization today requires innovation, creativity and creative thinking from school. The processes of detection, research, comparing and deduction are therefore appropriate for this school. Student’s activity should be a basis and a task in the pedagogical process and have a more complex function and character than in the traditional school. The position of teachers in the contemporary school, in the process of education, is different today. Interpersonal relations of teachers and students are in focus, as well as relations among students, aspiring for dynamics, creativity and more humane school.

Basic characteristics of new didactics were given to Comenius by his contemporary Wolfgang Ratke that will later introduce successful teaching greater number of students in state schools. "If we want the church, the state and the household to be well arranged and to flourish, we should above all, introduce schools and let them flourish; let them be real and alive workshops of human education and seminaries of the church, state and household. This is the way to achieve our goals, not any other way." (Comenius, 1961).

Based on the analysis of available historical literature on pedagogy, as well as by observing practical pedagogical work in modern school, we can conclude that the modernity of pedagogical ideas of John Amos Comenius, the creator of school bell and 45-minute lessons, has been permanently present in the life of school for 355 years. His organization of class-subject-lesson school system defined subjects, a special book as a source of knowledge for each subject, and precisely determined the beginning and the plan of work for annual, monthly and daily teaching (and these complicated innovations of that time have not changed up to the present). He also envisioned school year, timetable, didactical principles, teacher-fronted instruction, as well as ideas of life-long learning in the organizational sense that are still alive today (Comenius, 1871).

Although the history and modernity have frequently criticized him and tended to set free of his ideas, the school has remained an educational institution providing educational content, developing abilities and enriching youth with moral and esthetical values, creating in this way humanised people. It is still today “the workshop of humanity” based on the humanist theory that must enable the creation of new spiritual unity of the world (Munjiza, 1992).
General principles of pedagogy Comenius defined are the foundation of pedagogical science. His categorization of education system into maternal school (public), Latin (grammar school) and academy is today the only difference is in the years of duration and subjects and contents they encompass. The school of infancy was not realized in the spirit and ideas of Comenius, but the contents, principles of work have been transferred to social institutions for pre-school education.

We cannot imagine modern teaching in a different way but in mother tongue, but since the time when Comenius promoted it, to its realization, almost two and a half centuries passed, at least in Croatia. In this spirit we have to appreciate and value the first steps and ideas that teaching is in students’ own mother tongue.

Although school overcame the ideas of its humanist initiator in some details, there are some Comenius’ ideals that have not yet been reached. Modern teaching activity surpasses the ideas of Comenius in its rational psychological foundations; effective, professional and educated workers, who plan and articulate teaching led by principles of economy and practicality, work within it (Poljak, 1966).

The thing that is an ideological trend set by Comenius, and is developing in modern pedagogy, is the principle of naturalness in education, where pedagogy is a part of complete anthropology, based on human nature (Dvorniković, 1892).

Although visualisation in teaching has been a strong educational principle since the time of Comenius, it has never completely begun to live in the education system, but it has been replaced by illustrated books, magazines, TV-shows or nowadays the Internet. But, the principle of visualisation was not only supposed to have material value in teaching, but also experiential, esthetical, working and spiritual aspect of teaching, where a student would, not only by sight, but by all other senses, experience the world he/she lives in. "What the eye can see, the heart believes,... to see and hear in the right way is the first step to wisdom." (Comenius, 1871). This principle is considered the top of his didactical cognitions by many pedagogues.

Beside the mentioned principle, the modernity of didactical cognitions of Comenius is also reflected in the discovery of formalism in students’ knowledge, and his statement that it is necessary to acquire objects and words simultaneously. "Humans are reasonable beings and they should not be led by somebody else’s, but own reason, and they should not be led only by contents read in books or sentences and other people’s opinions, but they have to find the root of things on his/her own and acquire their true meaning.“, (Comenius 1954, p. 75).

Raising against feudal dogmatism and against learning via mechanical dogma acquisition without checking, this fight for knowledge requires an
active participant in education who has a first-class social role, whereby students or participants have the possibility of changing the environment they live in (Šimleša, 1980, p. 221). In his didactics, he starts with a child, so already in his/her learning pseudo centrism was noticed, even before the discovery of psychology of the specific path of the development of the psyche of a young human. In his reform he requires the choice of school contents in teaching, the order of their processing as well as applied methods to be appropriate to the inborn child’s abilities (Šimleša, 1980, p. 223).

Along with all the stated, modern school is still determined by its history. Human society wants to establish modern school dominated by self-organization with the purpose of self-recovery, but it still greatly depends on its traditional concept. Besides many changed rules of behaviour, forms and ways of work, school is still strictly organized on institutional level. We could almost say that in the majority of schools a uniform way and character of work prevails, although many of them try to be recognizable compared to others.

**Conclusion**

The time when John Amos Comenius lived was not inclined to him. With frequent moving places and personal family tragedies he could hardly find space to broaden and realize his ideas in practice. Wars, ideological struggles, religious exiles, economical inequalities and poverty, we dare say that some of the conditions resemble modern time, prevented spreading his ideas, but also publishing papers, so that some of them were printed many years after their real coming to existence.

But, the idea about general primary school and education available to everybody since that time till today has been completely realized in the European area. After the occurrence of his ideas, democracy and education become a part of political programmes in many advanced countries supported by their sovereigns. His school system in the 19th century was fully accepted as well as many didactical principles he developed (visuality, systematicity, democraticism, appropriateness...).

By seeing the significance of this Czech visionary of public school available to everybody, a special branch of history of pedagogy appeared, named comeniology. His works, as well as practical instructions for working in school and everyday life, have become a constituent of advanced pedagogical tradition, but also of the culture of complete humanity.

Although didactics rooted its foundations during history in psychology, many Comenius’s ideas still live within teaching. Expecting every new period to bring radical changes both in social and pedagogical areas, we still have not moved far from the initial ideas of the founder of school system we still
participate in. Although every day we search for new and innovative solutions that would change the image of modern school that is still spiritual and moral strength of each society, as well as a tenderer of its tradition and history, in this continuous quest for new and better future we still have not found complete answers.

References:

Obrazovni sustav Jana Amosa Komenskog
i njegove implikacije u suvremenoj didaktici

Sažetak: U ovom radu autori istražuju spoznaje Jana Amosa Komenskog i njihove implikacije na području teorijske didaktike uočavajući njihovu neprolaznost i postojanje u suvremenoj didaktici. Autore su posebice zanimale znanstvene spoznaje uobičene i osuđivane u predmetno-satnom školskom sustavu koji je predlagao J. A. Komensky i koje danas imaju svoju aktivnu primjenu u svakodnevnoj školskoj praksi.

Unutar analiziranih ideja J. A. Komenskog cilj i zadaća ovoga rada bili su pedagoškoj javnosti prikazati originalnost, ali i neprolaznost određenih didaktičkih fenomena koji se nalaze u začetcima didaktike od prije 365 godina kao i potvrditi njihovu suvremenost i aktualnost na znanstvenoj razini.

Uz iznesene rezultate analitičkog pristupa tekstovima obrazloženo je i načelo sklađa misli, riječi i djela, kao i didaktičkih pravila i zornost nastave kojom se stječu trajna za život potrebna znanja. Opredjeljenje Komenskog za pansofijski pristup u poučavanju svih o svemu pokazuje dugovječnost ove implikacije kao načela rada u budućem životu škole. Iako je proistekao iz crkvenoga obrazovnog i kulturološkog miljea, u poglavlju su prikazani i njegovi vizionarski pogledi na život i svijet lišeni crkvenih dogma. On želi mijenjati postojeće ma koliko ono bilo dobro. U svom humanističkom duhu potiče i druge na razmišljanje, kreativnost i stvaralaštvo kao i potrebu uvođenja promjena, reformiranje i mijenjanje, a ne mirenje s postojećim.

Zaključci ovoga rada imaju implikaciju da podsjetite i ukažu mladim generacijama na zasluge utemeljitelja didaktike Jana Amosa Komenskog i njegov teorijski rad na osustavljanju do tada postojećih didaktičkih spoznaja, ali i uvođenju svojih originalnih humanističkih ideja u pedagogiju, čime on zaslužuje mjesto pedagoškog klasika u svjetskoj povijesti pedagogije. Iako prpada češkom narodu, svojim učenjem zadužio je cjelokupno čovječanstvo koje već više od trista godina ne pronalazi originalnije ideje od njegovih kojima bi izmijenilo dosadašnje lice škole. To je podsjetnik da se poviješću mora koristiti kao temeljnim istraživalačkim polazištem i u njoj pronalaziti poticaj za otkrivanje novih do sada nepoznatih iskustava.

Ključne riječi: J. A. Komensky, koopernikanski obrat, školski sustav, teorijska didaktika, suvremenost.

Das Bildungssystem des Jan Amos Comenius und seine Implikationen
in der zeitgenössischen Didaktik

Innerhalb der analysierten Ideen von Comenius waren die Ziele und die Aufgaben dieser Studie das Aufzeigen der Originalität, wie auch der Kontinuität der bestimmten didaktischen Phänomene, die in der Anfangsphase der Didaktik vor über 365 Jahren zu finden sind, wie auch ihre Aktualität und Relevanz auf wissenschaftlicher Ebene zu bestätigen.


Die Schlussfolgerungen aus dieser Studie sollten die jüngeren Generationen an die Verdienste des Gründers der Didaktik Jan Amos Comenius erinnern und auf seine theoretischen Arbeiten zur Systematisierung der bisherigen didaktischen Erkenntnisse hinweisen, aber auch auf die Einführung seiner originellen humanistischen Ideen in die Pädagogik, womit er einen Platz als pädagogischer Klassiker in der Weltgeschichte der Pädagogik verdient. Obwohl er zum tschechischen Volk gehört, ist ihm dank seiner Lehren die gesamte Menschheit zu Dank verpflichtet, die bereits seit mehr als 300 Jahren keine originelleren Ideen findet, die die aktuelle Erscheinung der Schule verändern könnten. Es ist eine Erinnerung daran, dass die Geschichte als grundlegender Ausgangspunkt für die Erforschung genutzt werden muss, und dass man in ihr eine Ermutigung für die Entdeckung von neuen, bisher unbekannten Erfahrungen finden soll.

**Schlüsselbegriffe:** J. A. Comenius, kopernikanische Wende, Schulsystem, theoretische Didaktik, Gegenwart.