Smyrnov O.Yu.
Student;
Novodvorska M.Ye.
Lecturer of Cyclic Commission of Social-Humanitarian Disciplines,
Odesa College of Finance and Economics
Kyiv National University of Trade and Economics

THE ECO-CITY PROJECT

From the Middle Age a population of the Earth started to grow up exponentially with each new century. The first billion was reached in 19th century, the second billion – in the first part of the 20th century. In 1987 the population was 5 billion, in 1999 – 6 billion, in 2011 – 7 billion. So our modern time has complicated distinctive feature – the overcrowding. With the population increasing, the development of the science, art and technologies and also opening more and more transnational links between societies of different countries, cities got the main role in the life of the contemporary planet. It gave rise to rapid urbanization.

The urbanization is the process of development of the infrastructure and the size of the cities. Downtowns tend to grow up to the sky: more buildings, more floors, more roads and bridges, more glass and concrete, more industry. The population of the downtowns increases because of the migration: each year more and more people move from the countryside to the industry centre. With the process of the urbanization the residential neighborhoods of the cities are used to grow too. It's so-called 'suburbanization'. Often the industry society – the main native population of the city – moves to the uptown looking for a quiet life in green, clean districts. But people, living in the uptown, often become the 'slave of a car', because the uptown is too far from the city center or other official districts for the municipal transportation connection as metro or buses, and too close for the railway connection. Thus each family, living on the edge of the city, is used to have at least one automobile. All of this factors destruct ecology.

The cities are the dark points and even spots on the map of the air pollution, water pollution and waste landfills. The temperature of the air is higher in the city than in the less crowded country areas because of the warmth of the people and traffic fumes. Also the line of sight gets closer because of the smog is created by cars and factories. Every morning the citizens of Shanghai have to ware special protective masks to breath through this poisonous industrial mist. It gives us a reason for the reviewing the question of planning the city with the environmental point of view.

Ecological city (eco-city) has as important canons as an elimination all carbon waste, production energy entirely through renewable resources, recycling, provoking health way of life and has less influence on environment [3].

The first big problem is carbon waste. Because of the using benzene, poisonous gases fall into the air. Every family, with the middle financial income, needs to have the car in our world. Now we have almost 1 billion automobiles (registered in 2010) creating smog above the city. The right decision is an electric car. The electric car is an automobile that is propelled by one or more electric motors, using electrical energy stored in rechargeable batteries or another energy storage device. But totally changing automobiles is not just an idea. A newspaper 'Dagens Naeringsliv' in Norway says that the Government of Norway wants to pass a bill which will forbid using automobiles with diesel and benzene engines in 2025 [8]. The owners of electric cars don't have to

pay taxes for buying and registering, they can use free charge stations (for charging the electric cars) and drive on the special lanes. The purpose of this bill is to make an atmosphere as in the countryside as in the big cities cleaner and to reduce the air pollution. It seems an impossible task but even now almost 24% of sold automobiles in Norway are electric cars.

The second problem of the cities is waste. Every year the amount of garbage increases by 3%. Without chemical pollution, the countries of post-Soviet territory produce about 100 million tons of waste per year. Almost 230 million tons of garbage is produced every year in USA [5]. Every citizen must think about it because waste of city is transported behind the city line. This way is the recycling. The recycling is the process of converting waste materials into new materials and objects. It is an alternative to «conventional» waste disposal that can save material and help lower greenhouse gas emissions (compared to plastic production, for example). The recycling can prevent the waste of potentially useful materials and reduce the consumption of fresh raw materials, thereby reducing: energy usage, air pollution (from incineration), and water pollution (from landfilling).

The recyclable materials include a lot of kinds of glass, paper, and cardboard, metal, plastic, tires, textiles, and electronics. The composting or other reusing of biodegradable waste – such as food or garden waste – is also considered recycling. Materials are brought to a collection center or picked up from the curbside, and then they are sorted, cleaned, and reprocessed into new materials destined for manufacturing.

The third problem is the city planning. Every year the cities of the world grow up extremely and consolidate into one big city – an agglomeration. The irrational using of the natural space makes the impossible conditionals in the agglomerations. The territories of cities (more in post-Soviet countries) are growing up (the private houses and factories), but the territories of cultivation are decreasing. Less food – more people. It provokes traffics, decreasing of green zone and destructing sources of oxygen. The agglomerations break eco-systems of animals and plants. China is one of the largest countries in the world, but 98% of the population lives on the 1% of the Chinese territory. This irrational spacing makes influence at the nature. Eco-cities must be located far from each other, because they have less influence on the environment.

The Eco-city has to use the energy, but the modern energy stations use coal, gas, gasoline and other damaging resources. So the main sources of power in the eco-city must be renewable resources such as sunlight, wind, rain, tides, waves and geothermal heat [6]. Some places and at least two countries, Iceland and Norway generate all their electricity already using renewable energy, and a lot of other countries have the set a goal to reach 100% renewable energy in the future. For example, in Denmark the government decided to switch the total energy supply (electricity, mobility and heating/cooling) to 100% renewable energy by 2050.

The cities can produce energy by themselves (about it later) or the energy can be provided by only one big energy station like as the Gemasolar in Spain. The Gemasolar is the first commercial solar plant with central tower receiver and molten salt heat storage technology. It consists of 30.5 hectares (75 acres) solar heliostat aperture area with a power island and 2,650 heliostats, each with 120 square metres (1,300 sq ft) aperture area and distributed in concentric rings around the 140-metre-high (460 ft) tower receiver. The total land using of the Heliostats is 195 hectares (480 acres). The most innovative aspects of the plant, which belong to the company Torresol Energy, are its molten salt receiver, its heliostats aiming system and its control system. In addition, its storage system allows producing electricity for 15 hours without sunlight (at night or on cloudy days). This storage capacity makes its solar power manageable so it can be in demand. The plant has already been able

to supply a full day of uninterrupted power supply to the grid, using thermal transfer technology developed by SENER [7].

But these aspects must be provided by the government and often we don't have permission to change the form of our cities. So the European society has taken care about it and created passive and energy-plus houses. Passive house is the type of house construction with the minimum of using power. Passive house is a rigorous, voluntary standard for energy efficiency in a building, reducing its ecological footprint [1].

But the science and art of house building don't wait and now we have an energy-plus house. An energy-plus house produces more energy from renewable energy sources, over the course of a year, than it imports from external sources [2]. This is achieved using a combination of microgeneration technology and low-energy building techniques, such as: passive solar building design, insulation and careful site selection and placement. A reduction of modern conveniences can also contribute to energy savings, however many energy-plus houses are almost indistinguishable from a traditional home, preferring instead to use highly energy-efficient appliances, fixtures, etc., throughout the house.

The eco-city project is the idea for the future constructing and present reconstructing. And now the world has the model of such city – Masdar City. It's a planned city project in Abu Dhabi, in the United Arab Emirates. It was designed by the British architectural firm «Foster and Partners»; the city relies on solar energy and other renewable energy sources [4]. Masdar City is being constructed 17 kilometers. The original master plan envisioned a city functioning on its own grid with full carbon neutrality. However, the development was later hooked into the public system, and by 2016 its managers determined that the city would never reach net-zero carbon levels. Masdar is powered by a 22-hectare (54-acre) field of 87,777 solar panels with additional panels on roofs.

The Eco-city project is the way for a new free life, for the renaissance all of eco-systems. People will be able to live in the houses that can produce energy and be a new source of income. The eco-city project is the future and the main aspects of this city are:

– Zero-carbon atmosphere;
– Recycle;
– Energy of renewable resources;
– New vision in way of constructing.

Also all people must know that our ecology depends on us, not only on government, and if we do something by ourselves, we will be able to change the world.

References:

1. Zeller Jr., Tom. Beyond Fossil Fuels: Can We Build in a Brighter Shade of Green, New York Times, September 26, 2010.

2. Voss Karsten and Musall Eike: Net zero energy buildings – International projects of carbon neutrality in buildings 2nd edition, November 2012.

3. Register Richard (1987). Ecocity Berkeley: Building Cities for a Healthy Future. North Atlantic Books.

4. «Masdar plan». The Economist. 4 December 2008. Archived from the original on 28 July 2012.

5. «PM's advisor hails recycling as climate change action». Letsrecycle.com. November 8, 2006.

6. Ellabban Omar; Abu-Rub Haitham; Blaabjerg, Frede (2014). «Renewable energy resources: Current status, future prospects and their enabling technology». Renewable and Sustainable Energy Reviews.

7. «Torresol's landmark Gemasolar CSP solar plant is officially commissioned». International Resource Journal. 24 May 2011.

8. Сайт журналу Dagens Naeringsliv Journal [Електронний ресурс] – Режим доступу до сайту: http://www.dn.no/nyheter/politikkSamfunn/2016/06/02/2144/Motor/frp-vil-fjerne-bensinbilene?_l – Dagens Naeringsliv Journal.

Смутченко О.С.
аспірант,
Херсонський державний університет

СУБКУЛЬТУРА СТУДЕНТІВ МОВНИХ ВНЗ ЯК ПСИХОЛОГО-ПЕДАГОГІЧНА ПРОБЛЕМА

В останні роки великою популярністю користуються різноманітні молодіжні субкультури, що мають різне походження, традиції, смислові конфігурації текстів. Тому виникає потреба в дослідженні впливу різних факторів на формування субкультури особистості студентів.

Поняття «субкультура» набуло широкого значення й увійшло в обіг досить недавно, але швидко стало популярним не лише серед науковців, але й в буденному спілкуванні. Установленої системи поглядів щодо визначення поняття «субкультура» немає, але кожна наука трактує це поняття з позицій своїх предмета та методології.

Дослідниця сучасних проблем молоді Т. Щепанська так характеризує це поняття: «Спочатку на перший план виступає префікс «sub» (тобто «під-»), позначаючи приховані, неофіційні культурні пласти, що є підкладкою «денної поверхні» пануючої культури. Це поняття використовувалося поруч з такими, як subterranean culture (підземна культура) і underground (підпілля). Простежується і звичне сприйняття не інституціональних культурних явищ як низових – на противагу «високій» офіційній культурі. У тому ж контексті (ідеології і практики молодіжного протесту проти цінностей суспільства споживання, трудової етики і технократичної цивілізації) використовувалося й поняття «контркультура», що визначало ідеологію молоді як таку, що руйнує будь яку культуру взагалі і протистоїть їй [4].

О. Божок наголошує: «субкультура – це перш за все групове світобачення та своєрідний тип особистості, яким відповідно до сформованої системи цінностей відрізняє себе з-поміж інших індивідів. Сутність феномену субкультури не обмежується розумінням змісту, значення і ролі соціальної групи. Субкультура є частиною певного культурного шару, фундаментом якого виступають соціальні групи, а не суспільства в цілому. Під субкультурою слід розуміти систему пануючих норм та цінностей, що не претендує на заміщення, протистояння домінуючій культурі в суспільстві, а реформує культурні засади в суспільстві» [2].

Одним із видів субкультури є молодіжна субкультура, яка до кінця 80-х років XX століття сприймалась досить негативно і докладно не розглядалась.

Науковець О. Білецька характеризує молодіжну субкультуру як «явище тимчасове, форму життєвого пошуку, основи якої пов'язані її «життєвим стартом» – отриманням освіти, початком трудової діяльності, формуванням сім'ї, професійним просуванням тощо. Зміст молодіжної субкультури завжди залежить від культурних процесів і навпаки. Тобто на неї впливають як