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A QUALITY OF CIVILIZATIONS

Abstract: *Based on G.G. Hegel's idea about a „World Spirit“ and A. Toynbee's definition of civilization as a group of nation-states whose ideas and ways of doing things come to dominate „the known world“ and quality science autors were encourage to develop thema „quality of civilizations“.*

In the paper are in first part defined basic views related to civilization, as definitions, impact on human development structure, types of civilizations, future etc., but without relation to quality. The last evidence is motive for our research which first results is presented in the paper. In second part of the paper is presented our reflection on civilization, esspeciali past and present civilizations and their futures. In the third part of the paper is presented base model of quality of civilization based on quality science and civilization dimensions and civilization carracteristics..

Keywords: *civilization, quality, model, quality of civilizatopns*

1. Introduction

The world is changing including civilizations. Through hystory civilizations evolving from the first civilizations before Crist and the newest civilizations. Tach kind of civilization has own cycle and interaction with others. So Western civilization has relationships with Eastern, Islamic, japanese, Hindy, African, Budichist, and Chinese an other civilizations. These relationships include modernisation and Westernization (Targowski A., 2011). This author recognized periods: (1) Early Ages, (2) Middle Ages, (3) Civilizations in Europa, (4) Civilization in Imperial Russia, (5) Civilization in USA, etc. He definided Death Triangle of Civilization with three „bomb“, i.e. : (1) population Bomb, (2) Ecological Bomb and (3) Resources Bomb for further period of life on Each. A model of civilization contains thre sub-systems: (1) cultural system with power, wealth vs poverty, communication and religion, (2) large society with rulers, religios,solders, workers, and (3) infrastructural System with agriculture, industry, information infrastructure.

Acording Arnold Toynbee we agree that the cyclical unit history was the „Civilization“ as a group of nation-States whese ideas and ways of doing things come to dominate the known world. The cycle of civilizations consists from stages: (1) beginning of the Civilization when a „creative minority“ in nation-state develops new ways of duing things, (2) further development and stagnation. The human civilizations are very close with Science and Technology development (Zhang J., 2024).

Smil V. (1997) analized Cycles of Life according civilization and the biosphere analized impact of civilization growth on biosphere and future scenarios about it.

Taagepera R. and Colby B. (1979) analized Western civilization related to creativity and find that creativity point arised until year 1910, ad otther that fail.

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Galantai E.L. (2004) defined IV tupes of civilizations i.e.: (I) civilization would use all the energy of a whole planet, (II) can tap the power sources of a planetary system, (III) civilization would be an owner of a galaxy's all resourches, and (IV) with cosmic activities.

Hanson A. (2019) emphasized nine planetary bounderies: (1) climate change, (2) ocean acidifaction, (3) stratospheree ozone depletion, (4) atmosphere aerosol loading, (5) biochemical cycles (nitroden and phospheres inputs in the Biosphere are Oceans), (6) global freshs watter use, (7) land system change, (8) biodiversity loss, and (9) chemical pollutants novel entitics as plastics. He suggested the new need for transformatic actions on global, national and local levels.

Cox R. (2000) emphasized culture and identity as key carracteristics of civilization and world order for civilization development.

Giddings F. (1912) introduced term „the quality of civilization" and emphasized level of meeting human needs and specific request as dignity, beauty, power, life conditions.

Veenhoven R. (2014) emphasized a quality of life as benefit of civilization quality. He find correlation between aspects of civilization and happines of people.

Halal W. (2004) made matrix with stage of evolution (dominant tehnology, beginning era, historic outcome and higher challenge) and kind of era (biological, nomadic, agrarian, industrial, service, knowledge and existential).

In IGI Global book is analized Civilization Life Cycle based on Toynbec approach. A development of civilization as process evalued into another. So Western civilization is result of mesophotamian (4000-150 BC), Egiptian (3100-300 BC), Minoan (2700-1450 BC), Mycean (1500-11-11000 BC), Hellenic (1100-323 BC), Helenistic (323-31 BC), Roman (31 BC – 600 AD), Canainite (1100 BC -700 AD), Transitional Mix of Roman – Barbarian – Cristian in Middle Century.

Before that were old and „forgoten" civilizations as Maya in Middle America and Innks in Sout America, Vincha, Starčevo in teritory of Balcan etc

2. The new view of civilizations

The new view of civilization is related to: (1) social roles and laws and political institutions with power and responsibility in society, (2) ways to express peoples thinks, feeling and knowledge needed for translate tradition, believes and customs, (3) level of sustainable food producting and supplyng for all people, (4) thinks for leasure and culture, media, spert, arts, etc., (5) religion and spirituality to find sense and purpose of life, and (6) technology for achieving better life with new equipment and infrastructure (telecomunication, energy infrastructure, ICT, robotics, traffic, etc.). Based on this view are defined:

(1) Civilization dimensions and
(2) Carracteristics of civilization.

Authors add quality as third part of civilization.

The civilization dimensions are:

- life conditions,
- Quality of Life (QoL),
- culture,
- demography,
- knowledge and technology,
- knowledge and technology,
- economy/tupe and development,
- spirituality,
- value systems,
- wars,
- illnesses and pandemics,
- potential for further development,
- resilience (ability to survive),
- level of development of society/societies.

The carracteristics of civilizations are:

- government,
- literacy and language,
- religion,

- art,
- food supply,
- technology, and
- social structure.

The quality gives internal and external view of quality dimensions and carracteristics of civilizations. It express internal and external achieving of request of civilization stakeholders related to quality dimension and civilization carracteristics. Also, quality add new entities as inputs (needs and requests of stakeholders, present life condition, environmental condition, food supply, etc.), resources (technology, knowledge, natural resources, infrastructure, natural resources, infrastructure, communication, resources from Universum) and quality indicators (civilization cycle duration, impact on society goals, impact on next civilizations, level of producted heritages, level of innovation, level of civilization duration, level of interactions with other civilizations, level of sustainability, level of agility, level of maturity at civilization, level of prosperity, level of achieving eco-goals, level of peace, etc.).

2.1. Demography as civilization dimension

Ahmed S.A. et al**.** (2016) analysed relationship between development and demographic change. Effects of demographic change on development outcomes has positive inpact on GDP was 1.5 percentage points and share of GDP by 0.8 percentage points. Thei fond total fertility rate has negative efect on life expectation. Serbia was negative percent change in working population share in period 2015-2030 in amount - 4.38.

Lee R. (2006) analyzed the development population history in Great Britian trough: (1) marriage and nuptiality, (2) mortality and morbiality, (3) migration and find that these trend are generaly negative.

Shennan S. (2015) developed model related to relation between demography and cultural evolution based on previos models: (1) macroscale innovation - transmission models, (2) models of specific innovation – transmission process, (3) alternative models of links between cultural complexity and population fidelity and the contrast between human and nonhuman cultures.

Neustupny E. (2004) analyzed the structure of prehistoric populations and reproduction of prehistoric people. In Bronze Age village with 16 house was analyzed and find that average number of houses at the site an any moment was 4. Average family had less then 4 persons, average hansehold less then 5 and vilage between 12 to 30, with 3 to 6 families.

Original population multipied with 3% growth rate and for 300 years with growing rate 3% from original population of 100 person for 300 years be over 800.000.

Lutz W. and Samir K.C. (2014) analyzed population projections and share of educational people. Until year 2050 share of tertiary and securdary with be dominant.

Richardson P., Boyd R. and Bettinger R. (2009) analized inpact of cultural innovations on demographic change. They find that arise of population follows price and real wage, but with less increase related to begining period. Generaly, Index of GDP per capita arised with Index of male population ages 15 to 64 util 1920. and declined male life expecta nee at birt with increasing stress index level foran 12-23.

2.2. Social structure of civilization

The second dimension of civilization is social structure. The concept of social structure consists from: (1) relations with social organizations, (2) relation with social groups, (3) concept of social groups.

According Raymond Firth (1956) a social organization concerned with the choices and decisions involved in actual social relation, while the concept of social structure deals with more fundamental relation. Radelife-Brown A.R. (1952) emphasized relation between groups and social structure, because living were in groups in old societes.

There are three major views of social structure, i.e.: (1) the structural Functionalist Point of View according Herbert Spenser and Darkheim based on social orders as moral order, (2) structurlist point of view baced on work o Claude Levi-Strauss („social structure has noting to do with empirical reality but it should deal with models which are built after it".

Social structure could based on:

- essencial elements of social structure, and
- theoretical development of the concept.

Elements coneerning social structure are:

- status and role,
- social network group and organizational, and
- social institutions.

Theoretical perspectives of social structure are based on structural logic that organize complex patterns and its relationships based on formal laws and transfers.

In social structures exist social division between different classes, from ordinary peoples at bottom to emperor on top of hierarchy.

Linklater A. (2004) cited Elias N. about aggressive or violent behaviour of Western societies and clamed that „modern civilization process has had little influence on interstate relations" and „A sociology of global civilizing processes should address at least the following seven forms of harm:

- deliberate harm to the members of another political community,
- deliberate harm where a government harms own citizens through torture, arests etc.,
- deliberate harm caused by nonstate actors as terrorist groups, transnational corporations etc.,
- unitended harm caused by enterprises impact on environment,
- negligence where a state of or private organizations transfer risks to society,
- harm through benefits of society members related to global vulnerability of foringn producers, and
- harm related to suffering of others because is no or litle cost to itself.

Dant. T. (2006) analized relationships between modernity and nemateriality based on work of Brandel F. (1992), esspecialy health, quality of communal services food and water supply etc. He also distingnish great changes in the process of material civilization in late modernity:

- volume of goods,
- functional complexity and loss of control of material flows, and
- material specifity and arising a number and design of material things.

2.3. Culture dimension in civilization

Culture is complex whole which includes belief, morals, law, custom, knowledge, and other capabilities and habits by human being as a member of society. In culture we could recognise explicit and implicit paterns and simbols for understanding world.

The key characteristics of culture are:

1. Culture is manifested on different levels of depth, and
2. Culture is connected to acts behavior and it is intepreted based on behavior (figure 1).
3. Culture is created from both universal nature and unique individuality (figure 2).
4. Culture depends on biological process,
5. Culture is both an individual and social construct,
6. Culture is socially and psychologicalli distributed in a group,
7. Culture is universal on individual elements,
8. Culture based on knowledge and it is learned,

9. Culture is in changing process,
10. The varions parts of culture are interreleted, and
11. Culture is related to material and inmaterial heritage of civilization.

Material heritage is produced by appropriate knowledge and techiques.

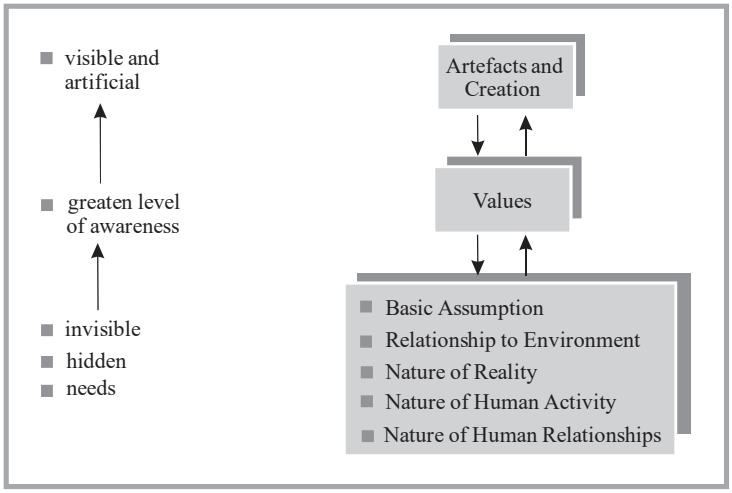

Figure 1. Levels of culture

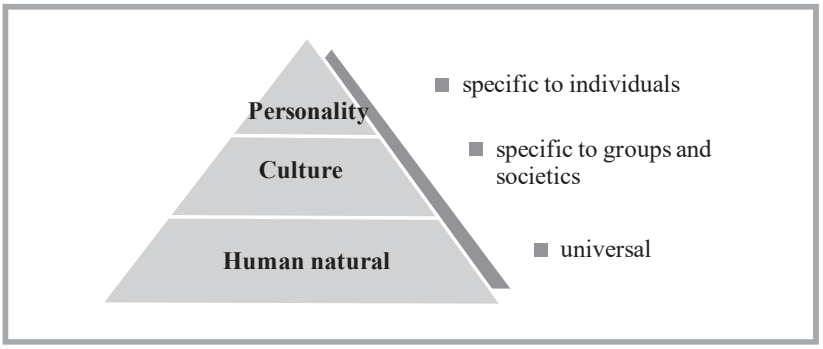

Figure 2. Three levels of uniquess human culture

Dhaher Y.T., Muhammad M.J. and Musa M.D.A. (2024) analized the impact of civilization and culture on Civilization dialogue and building a new middle Eastern order. They argued that „cultural and civilizational dialogue in the religious concept must start from a true belief that identity of religions principles with the moral awareness of public discourse, no true cultural dialogue can be achieved".

Fraticin L., Mihaescu D. and Andanut M. (2015) emphasized organizational culture as link between civilization and culture because in meny areas of business international corporation are dominant and have inpact on civilization.

Xhemailli A. (2014) analized the clash of different cultures, but among that are mutual impacts.

One concrete view on culture is in Indian culture. There are different religions and philosophs (hinduism, tainism, buddhism, islam, christianity, zoroastrianism, judaism) with active roles in organizing festivals and fairs. Also, different are concepts of family, mariage, education, status of women, music, painting, architecture and sculpture, cinemas,

languages, ancient history, clothing, rules of economic area, building. The human factor of industralization is also different, but each culture has own impact on Indian growth and civilization as whole Wei R. (2011) analized relationship between civilization and culture. For it he descripted new definition of civilization as way of thinking, a set of beliefs and way of life. Also, he pointed out overapping of civilization and culture.

In analizing relationships among culture, civilization and human society has to include cultural histories, language and education, time, mythology, politics, culture concepts, civilizations as forms of organizing cultures, theories and history of culture, fondations and charracteristics of culture, culture as a manifestations of human activity, cultural heritage, nature, human actions and culture, biodiversity and unity in the cultural heritage of people, states and humanity, traditions, innovations and discontinua ting in the development of culture, protection of cultural heritage as, social, political and economic Issues, cultural identity, modern and traditional cultures, imperialism, resistance and culture, structure of culture and communication forms (touch, sound, text, digital data, mass & digital media, aestetics objects, verbal games, knowledge, monuments, meetings, education, TV, images, cultural exchange, cultural dialog development communication, telecommunication in cultural, social integration through culture, cultural integration and differentiation, culture and the material processes of production, culture and the loss of stability and centainty, culture and sustainable development ecology of culture, culture and the environment, culture change, etc.).

Fuentes L.C.L. (2017) see culture in cities and regions and emphasized the need for recomended suitable actions.

2.4. Spirituality of civilization

According Van der Veer P. (2009) the origin of moderm spirituality was in XIX century in the West. In this time spiritual and secular are developed simultaneously as alternatives to instituionalized religion in Euro-American modernity. In this period Casanova J. (1994) argued that spirituality and secularity had deep hystorics as need for the Great Transformation. There are three propositions of the secularisation thesis, i.e.: (1) the decline of religious beliefs, (2) the privatization of religion, and (3) the differentiation of secular spheres and there dividing from religion.

In this period science and scientific tought are depended from the secularization of the mond. Also, an important view is the need and emergamce of spirituality as alternative to religion. Spirituality origins were in East civilizations in China, India and other ancient civilizations. The spirituality of India had high inpact on West civilization.

Banerji S. and Prasad R. (2019) see spirituality as synonimous with service to mankind. „It is way of life upholding truth, moral, ethical and human values. Authors discovered barriers to sustainable development an individual, national and transnational spirituality and science combine energy to realization of the Millenium Goals because. Spirituality is also a science and it is valid kind of knowledge that cannot ignored.

According Indian philosophy every person has three dimension of existence: (1) psihical, (2) intellectual and (3) spiritual, as is presented in figure 3.

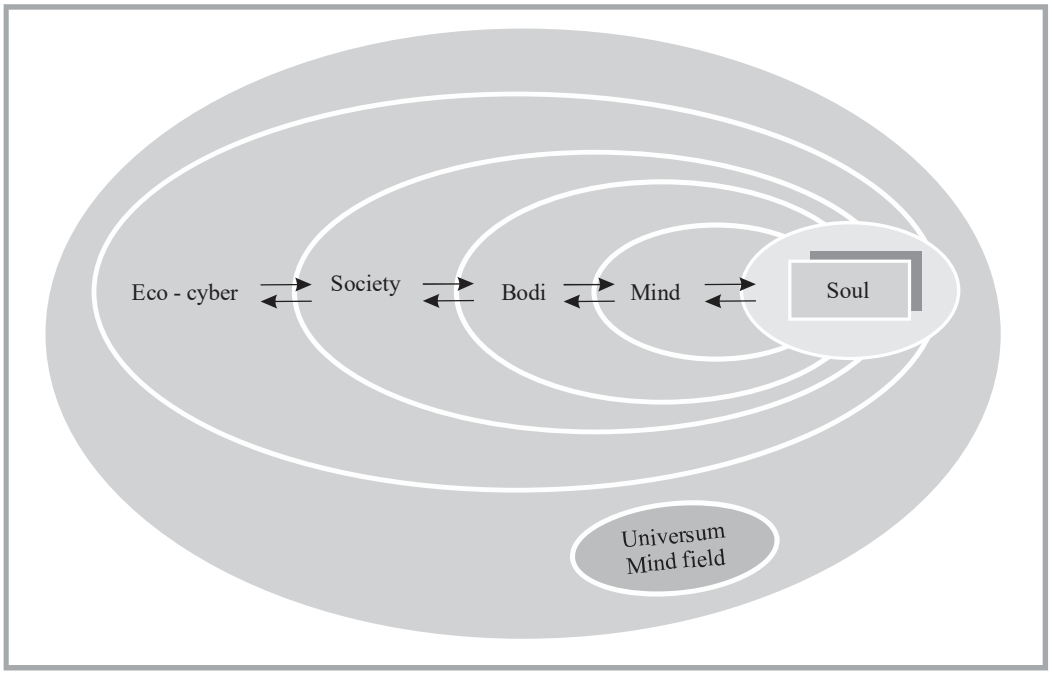

Figure 3. Spi0ritual Model of Existence

For broader incorporating of spirituality in Sustainable Development of Civilization education is crutial and changing existing views to: „holistic development of manthrough a sustainable lifestyle produces happiness“.

Bernard Russell, famous phylosopher defined spirituality as „the strangeness and wonder lying just below the surface even in the commonest things of daily life“. On the other side there are lot of definition related to: (1) moral development, (2) cultural development, (3) social development. In all of them is emphasized education aspect, specially smart, intelligent and spiritual views.

Platovnjak I. (2018) analized relationships between spirituality, religion, and culture.

Mc Lean G. (1999) analized hermeneutics as interpretation and interchanding of cultures from aspects of cultural tradition and discavery hermeneutics and culture, as well as globalization as relations between cultures. In part three he analized religion and cooperation between peoples and cultures with emphasizing on conflicts or cooperation using dialogue among civilization.

In last years is developed concept of Spiritual and Ecological Civilization (Ivanov A., Fotieva I., Shishin M., 2019). Author starded from main Characteristics and problems of technological and consumer civilization. In the second part threy developed structure of spiritual and ecological civilization as syntesis of science, philosophy and religion with impact of Culture. They stated culture and art as criteria of autenticity and smart economy for the next century.

Beyers J. (2021) argned that religion can be used as base for political and economic conflict and also can play a role in transformation. According Durkeim E. (2001) purpose of religia is to unite society and could be identity marker.

Transformation of society is connected with „social responsibility“ and ideal society.

A transformation of society is connected with „social responsibility“ and ideal

society. Positive inpact of religion on society is in following areas:

- religion give values such as honesly, integrity, oppeness and tolerance in society,
- religion insist on moral direction in society,
- religion is base for hope and optimism in society,
- religion creates awareness of social processes,
- religion contributes to social capital to resolve problem and
- religion is uniting factor.

The same arguments have spirituality, but with emphasizing personal freedom and using scientific approach and spiritual leadership.

2.5. Economy and civilization

A relationship between economy and civilization is based on society and history (Hope H.H., 2021). In this approach are analized: (1) nature of man and the human condition related to language, property and production, (2) extension and intensification of the devision of labor, (3) money and monetary integration related to growth of cities and globalization of trade, (4) time preference, capital technology and economic growth, (5) the wealth of nations: ideology, religion, biology and environment, (6) production of law and order, natural order, feudalism and federalism, (7) parasitism and the origion of state, (8) way from monarchy to democracy, (9) state, war, and imperialism, (10) strategy, secession, privatization, and the prospects.

These relatioships are presented in figure 4.

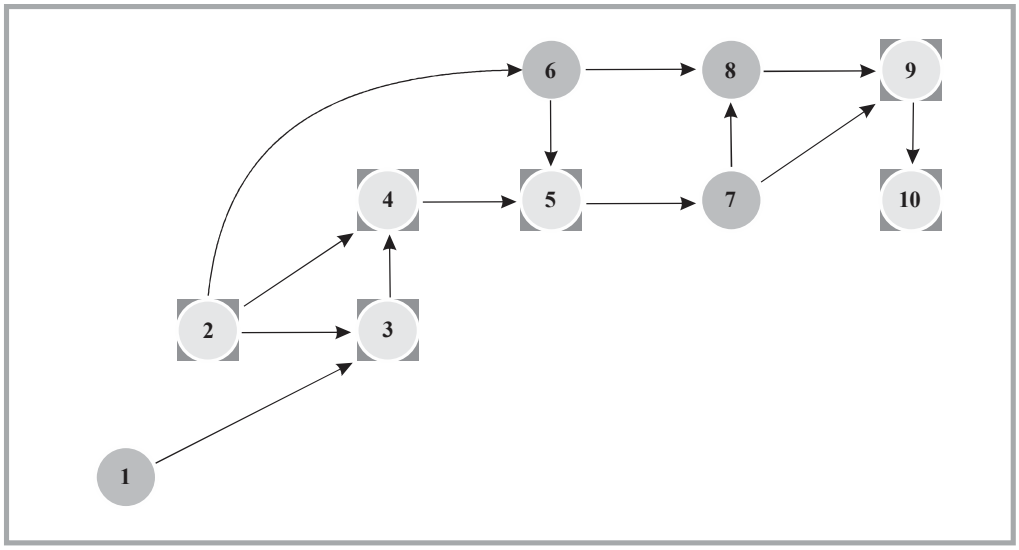

Figure 4. Relationships inside economy and civilizations

In this model is emhasized entities No. 2,3,4,5,9 and 10 from economics of view.

Svedberg R. (2010) analized views of famous scientist related to economy and civilization: (1) religion, (2) economy (money, commerce, tools, techniques), (3) language, (4) art and (5) science. In most researches is emphasized that economic growth is an essential input of civilization.

The World economy is closely connected to population change because people are key factor of development and production and generally of economy.

2.6 Quality of life of civilization

According Alber J. et al. (2004) the EU approach to measuring Quality of Life (QoL) is based on analisis:

1. economic situation,
2. hausing and local environment,
3. employment, education, and skills,
4. household structure and family relations,
5. work-life balance,
6. health and healt care,
7. subjective well-being, and
8. perceived quality of society.

Perceived quality of society is closely related to quality of civilization. It consists from folloving indicators:

1. perception of tensions in society,
2. quality of education and pension system,
3. confidence in the pension and social benefit systems,
4. inter-generation conflict, and
5. social capital.

Hošek V. (2022) analized aspects of QoL in modern civilization and pointed out the lifestyle, health and two dilemmas:

1. acceptance of discomfort with reduction energy, increasing reasing of the energy expanditure, adaptation to termoregelative outside civilization , increasing mental effort, especiality in senior age, and
2. acceptance of digital surveilance.

Veehoven R. (2013) pointed out expression that QoL is related to level of individuals and their inpact on society through:

1. apparent quality of life in the civilized society with: (1) healthy life years over societal evolution, (2) happiness in modern society and (3) happiness in the most „decent“ societies, and
2. apparent quality of life of civilized people.

He find correlation between individual happiness and aspects of civilization in modern nations as observed in varios research (Table 1).

Table 1. Correlation between civilization and happiness

Aspect civilization	Correlation with happiness
Cultural development (building)	
Education	+
Intelligence	∘
Cultural consumption	+
High.brow cultural taste	∘
Reading	+
Personality	
Consientions	+
Empatic	+
Kind, cooperative	++
Self controlled	+
Social behavior	
Aggression	–
Helping	+
Voluntering	+
Values	
Self development	+
Knowledge	+/–
Sociability	+

Michalos A. (2015) analized ancient views on the quality of life. He find that in ancient Grece a lot of philosopers had theories related to happiness, satisfaction, live condition, prosperity for complete life, etc.

2.7 War and civilization

Che A. (2019) analized the clash of civilizations based on: (1) identity differences, (2) increased internations and (3) resilience to westernization. In his model dependent variable is armed conflict and independent variables are: (1) identity difference, (2) interstate contlicts, and (3) non state conflicts. Control variables are: (1) geografical contiguity, (2) nation capacity and (3) third pert military support. Using statistical method he calculated relationships between civilization difference and

incidence of armed conflict based on the CIVDIF measure of civilization difference. He also calculated regresion model, but with recognised problems in accuracy of input data.

Garcia F.P. (2017) predicted that until year 2045 future warswill be related to edge technologies in Cyberspace driven by:

- antagonistic attacs,
- profit and
- dissasters, esspecialy telated to water food, energy, controling the logistic flows, etc.

Sokolosky J. (2016) analized the future of war. He stated that in globalization process are evident declination of interstate conflicts, rise of intrastrate conflicts, aristing of effects on transnational terrorism and problems of acceleration of population and metropolization with higher interconnection between different agressive peoples.

Bertels R. (2009) snslized problem of armed conflicts. According 1949 Geneva Convections and the 1977 Additional Protocol he distingnish international and non-international conflicts. He pointed out that before 1648 the high influence on war was religion, and after that wasem ergence of statesoveregnnity. After 1949 are dominant rebeltion and insurgency.

Kent R. (2016) emhasized transformative agents and global implications, challenges to the „state“, plausible tensions and the changing nature of warfore, atomized societies, displacement as a violent continuum, cyberspace, uncertain asymmetries.

Adams D. (2008) analized cultures and wars from prehistory until now. He especialy focused on warfore and the origin of the state, religion and the orign of the state, culture of war as a taboo topic and evolution of the war over past 5.000 years with 15 aspects.

Melko M. (2006) identified problem of relation between war, peace and cicilization. He pointed out impact of political forms, determinism and freedom, war and peace, intercivilizacional conflict and state in present milenium.

Pickett R. (2008) amalized problem of conflicts among civilizations and sugested future directions to New Military History with adding warfare in present and new period.

Rajagopalan R. and Patill S. (2024) analized „hot“ topic „future warfare“ and critical technologies“. They with contributars in in first chapter analized strategic and tactical performances on technologics (drone, augmented reality, computer games, blockchain, biotechnology, generative AI and space and New technology applications in future warfare. In second chapter they analyzed strategic performances as international cyber incidents, nuclear modernization and using AI for distinguish origin of incidents

2.8 Global pandemics and civilization

Between Global Pandemics and societal and Economic Haos are very complex relatioships (O'Keefe T., 2023). In recognising theats and predicting lavel of harm to healt and level of effectiveness of response is long period. A lot of Federal States around the World were not ready for Pandemic Descase. Also, in the article are treated Civil Liberties as a Threat to Order.

According Kuhs O. (2020) is approinted that in history microorganismus causing disease. A lot of people died during pandemies milions of peoples from colera, influence etc.

Effects of Global Epidemic Diseases on Society Life are:

- political effects and results,
- sychological and social effects,
- effects on economy,
- effects on settzlement, immigration and population,
- effects on religion and religions life,

- effects on science, culture, art, and civilization.

In practice there were religionous practices/practices/superstitions.

Rutherford W. Q., Mao A. and Cxhu C. (2021) analizued pandemic as widerspread epidemic in whole country or more continents at the same time. Features of apandemie are; (1) wide geographical extension, (2) disease movement, (3) novelty, (4) severity, (5) high attack rates and explosiveness, (6) minimal population immunity and (7) intectiousness and contagiosness.

Dominant pandemie impacts are on: economy, society, and security.

In work of Vogele J. et al. (2021) emphasized pandemic of the 20th/21st centuries (Table 2).

Table 2. Number of Death because Pandemies

Period	Pandemic	Number of Death
1918/19	Spanish-Flu	40 M
1957/58	Asian Flu	4 M
1968/69	Hongkong Flu	1-2 M
Science the 1980s	Hiv/AIDS	> 37 M
1991	Cholera/Sout America	12.000
2002/03	SARS	800
2003	Avian Flu HSN1	250-500.000 every year x 3years = 2.000,00
2020/oct. 2021	COVID-19	5 M
TOTAL		**cca 60M**

Khorram-Nanesh A. et al. (2024) analized (1) the social and psychological impacts on pandemics, (2) climate and environmental changes, (3) technology , innovation and pandemic prevention, and (4) ethical aspects of pandemics. They analized also major pandemics through history in periods:

- 165 – 180 AD (Antonive Plague),
- 541 – 542 AD (Justinian Plague),
- 1347 – 1351 (the Black Death),
- 1852 – 1860 (Third Cholera pandemic),
- 1918 – 1919 (Spanish flu),
- 1957 – 1958 (Asian flu),
- 1984 – present (HIV/AIDS),
- 2009 – 2010 (H1N1),
- 2019 ’present (COVID – 19).

In last period they emhasized: (1) socioeconomic challenges, (2) healtcare providers, (3) management of pandemics, (4) globalization and pandemics, (5) political and legal influences and the impact of leadership.

3. Quality of civilization

According basic quality approach which is publishede in lot of researches and standards based on organizations, technological sistems, education, risks, safety, security, ICT, etc., authors have intention to define term „quality of civilization“. This model starting from inputs, process (es) and outputs, with needed resources and control activities. Each element of quality structure has different structure mutualy interconnected and different for diferent topics.

Based on our previos research (Arsovski S., 2017; Arsovski S., 2021) is posible to develop original model of „quality of civilization“. In this model are included 13 processes, including processes of inputs, resources, controls, and outputs. In figure 5 is presented map of processes related to „quality of civilization“ and in figure 5.

In figure 6 is presented connception among civilization dimensions, carracteristics of civilization and process of civilization development.

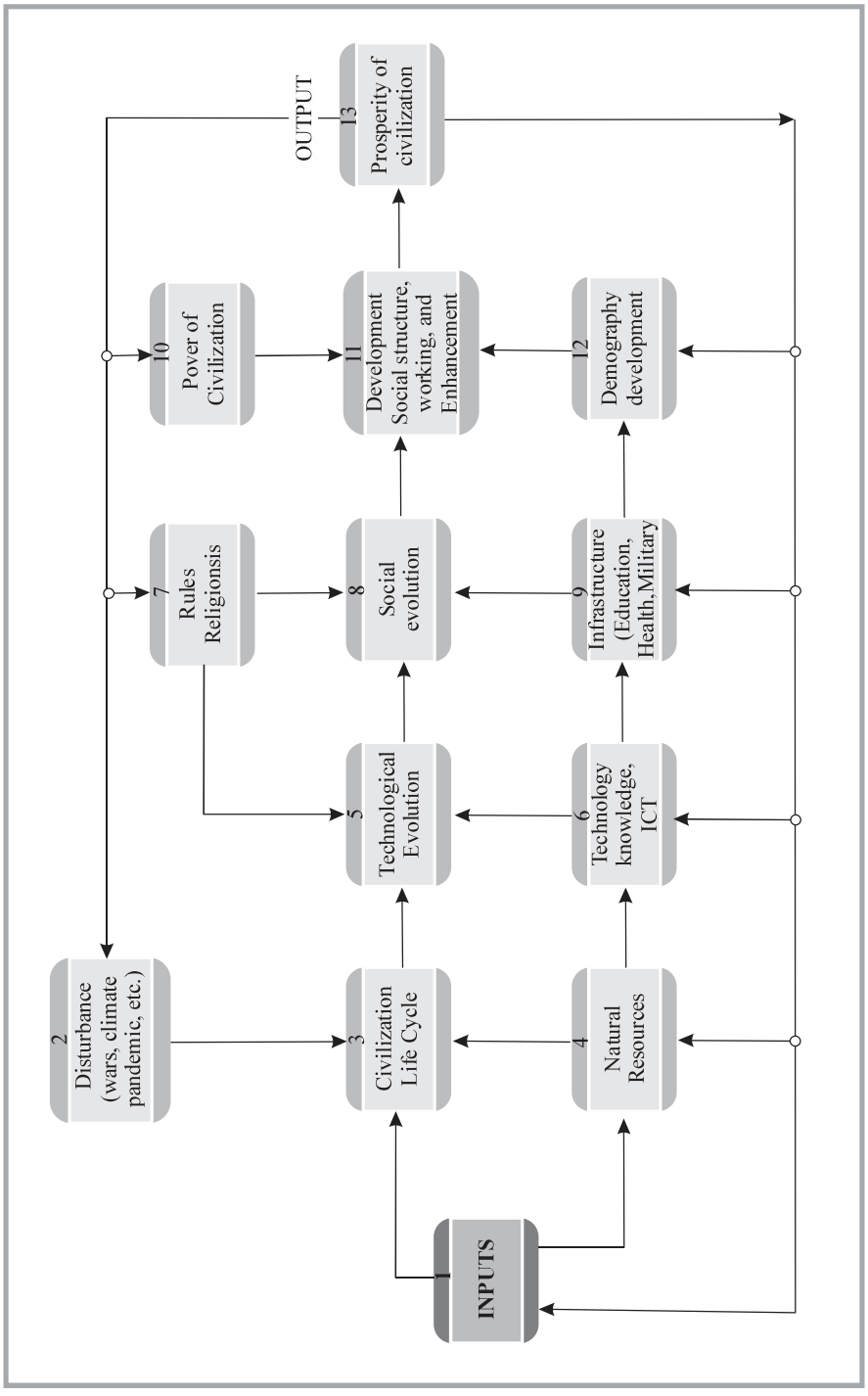

Figure 5. Map of civilization process

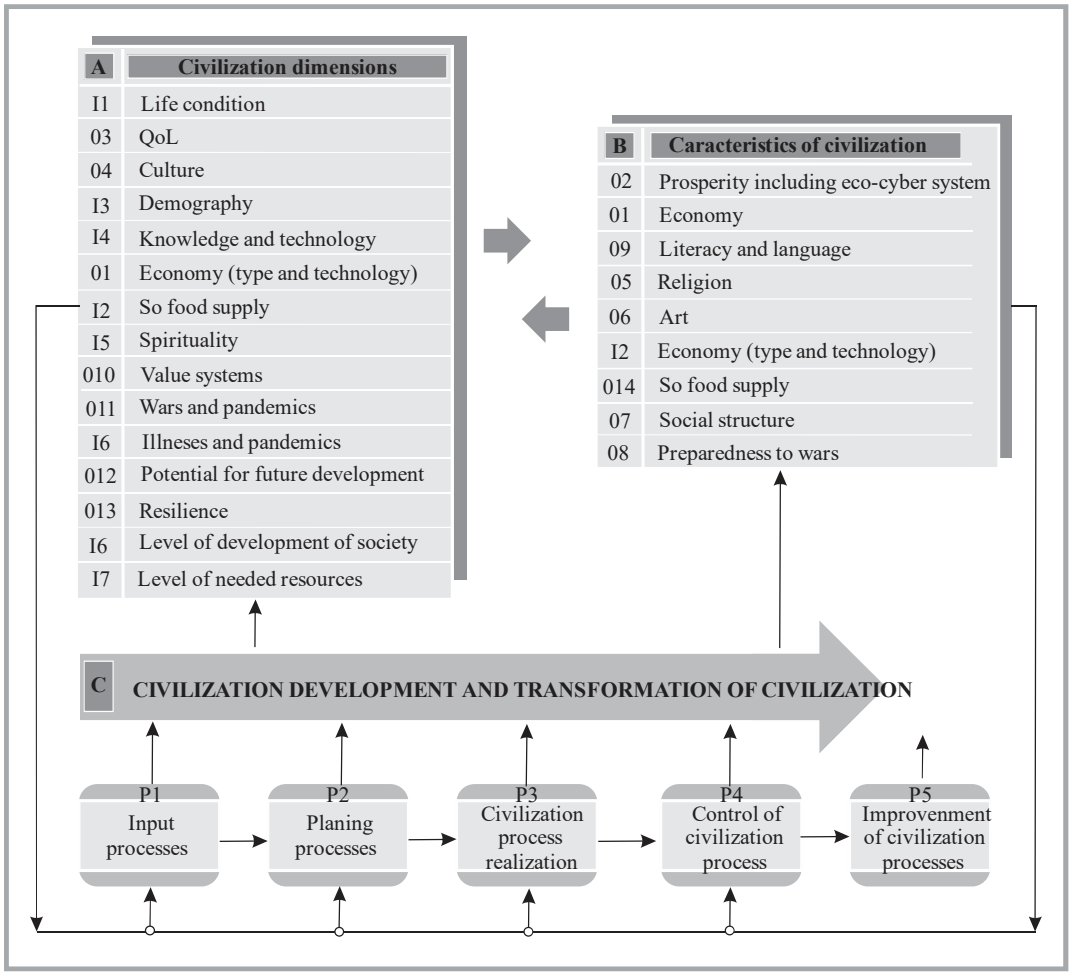

Figure 6. Connection of civilization dimmensions (A) carrasteristics, of civilizations (B) and civilization development of transformation of civilization

Inputs are: I1-government, I2-food supply, I3-demography, I4-life endition.Outputs consist from:

01 economy
02 prosperity of civilization, including eco-cyber system
03 QoL
04 culture
05 Demography frends
05 religion
06 art
07 social structure
08 preparedness to wars
09 literacy and language
010 value systems
011 wars and conflicts
012 potential for future
013 resilience
013 sustainabily
014 technology

The proposed model has to improre using analysis each of entities and including variables. Using different methods and tools is further posible to assess level of „quality of civilization“ and predict ways of its paths in the future. The good approach is presented in paper „The Maya Collapse „ from Pacheco R. et all, (2010) using System Dynamic approach.

Based on previos paper is developed first base simulation model for quality of civiliyation in area of agriculture (figure 7).

On the some way is posible to include other inputs and outputs in other areas of living for each civilization using famous system dynamics approach (Sterman J., 2000).

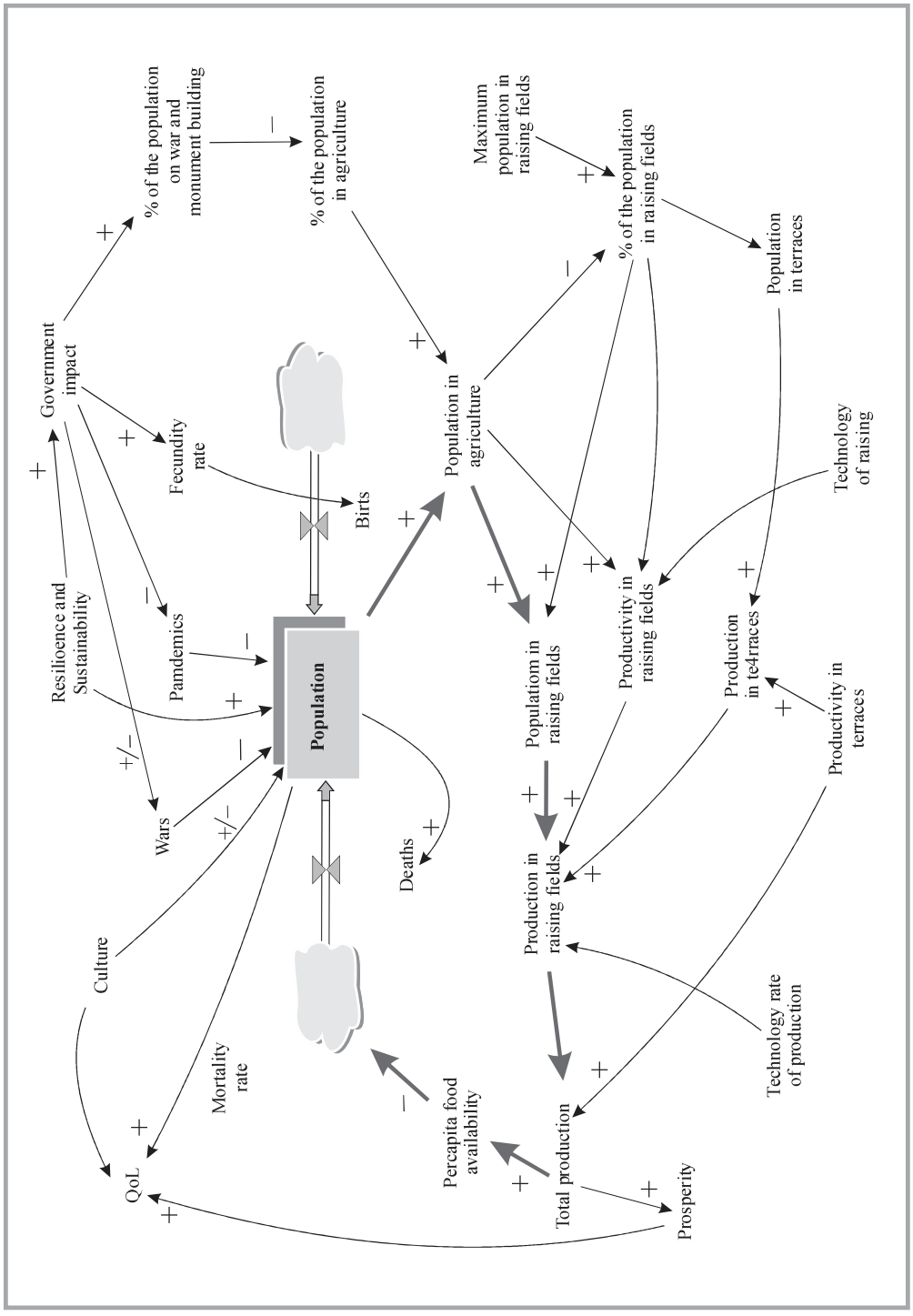

Figure 7. Quality of civilization in area of agriculture

4. Discusion and conclusion

In the paper are presented base approach to solve problem of „quality of civilization“. For it is analyzed a lot of literature about civilization, quality, process modeling, etc. On this way is only stated „the first step“ to solve this problem. It could solved through team work from scientist from different sciences and knowledges, as well as different approaches for improving „quality of civilization“.

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