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Reasons for the changes of the concepts of human nature in the economics exemplified on the contemporary trends[1]

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**Reasons for the changes of the concepts of human nature in the
economics exemplified on the contemporary trends**

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Reasons for the changes of the concepts of human nature in the economics exemplified on the contemporary trends¹

JEL Classification:

Keywords: *concepts of human nature; social trends, economic anthropology, heterodox economics, economic psychology*

Abstract: The main **objective** of this paper is to characterize the **key trends responsible for the changes of the concepts of human nature in the economics**. The **methodology** is both **deductive** (conclusions from theories developed within social sciences and humanities) and **inductive** (observation of current trends, which according to the theory are potentially responsible for those changes). Basing on the insights of psychology, philosophy of science, sociology, and cognitive science **main potential forces** are deduced. From the **observation of actual trends**, the basic contemporary factors responsible for the changes of the concepts of human nature are distinguished. Those can be divided in three groups. The **first** group contains factors focusing on the **advance in knowledge** about the human being, occurring within the general and specific sciences dealing with man (e.g. psychology, sociology, philosophy, cognitive science). The **second** group of factors includes the **increasing complexity** of the social processes. The **third** group refers to those **social trends**, which are responsible for **altering understanding the world**, which in turn results in real changes. Virtualization of life, greater sensitivity to human and environmental issues, increased contacts with other cultures and religions, greater sensitivity to the existing social injustice are some of those factors. Basing on those results, the **reasons for growing criticism of traditional, orthodox image of man** in the economics are discussed and the **postulates of the heterodox economics for modifications in the concept of human nature**, which reflect the changes taking place in society.

Introduction

The concept of human nature (image of man, concept of man) is a topic, which isn't discussed enough in the economic literature comparing to its crucial meaning for the development of the science. Only some of Polish (Stępień & Szarzec, 2007; Horodecka, 2014a; Turek, 2010; Zboron, 2010; Horodecka, 2012c) and foreign (Schechner & Zsok, 2007; Bernd Siebenhüner, 2001; Manstetten, 2000; Woll, 1994; Biervert, 1991; Starbatty, 2000) economic literature is focusing at this topic and stresses its meaning for the development of the science.

Therefore the issue of **changing concepts of human nature** in the economics stays in focus of this paper. The main **objective** is to **differentiate and characterize the main forces responsible for the actual changes of the concepts of human nature**.

In order to achieve this goal at first the concepts of human nature will be **defined**. Then the basic factors responsible for those changes will be evaluated. First of all **the changes of the concepts of human nature** can be perceived as a result of changes occurring in the contemporary society. Living in the society which is considered as a **society based on knowledge** (..), and in the **economy**, called economy based on knowledge the changes in the state and art of knowledge (growing meaning of so called tacit knowledge and who-knowledge Siesfield, p.116-117), which are very prompt, have a crucial effect on the changes of our way of **perceiving human being**. Another essential factor is the **growing complexity** of the social changes, which is characteristic for contemporary global processes. Last but not least there are some changes, which result in changing the image of world, which can be perceived as a part of the concept of human nature, which will be explained later.

¹ Research was financed by the National Science Centre in Poland which were assigned by the decision nr UMO-2011/03/D/HS4/00849)

Methodology of the research

The methodology is in first part a deductive one basing on some conclusions derived from theories developed within social sciences and humanities. In the second section it is basically inductive, focussed on observation of current trends, which according to the theory are potentially responsible for those changes. Basing on the insights of psychology, philosophy of science, sociology, and cognitive science main potential forces are deduced. From the observation of actual forces basic contemporary factors responsible for the changes of the concepts of human nature are described which can be divided in three groups.

General model

The **concept of human nature** is a **form or scheme**, which is applied by human being to deal with the **complexity of the world**. They help the individual to decide, what action has to be conducted (see: psychology), and what signals are considered as important while dealing with the outside world. Those concepts can be compared to glasses put on by individuals and societies to perceive the outside world. In the science they play similar role, but they take more explicit form. The everyday concepts of human nature have more implicit character.

The concepts of human nature are **naïve philosophies, or naive theories** of the individual about human being (Oerter, 1996). They can be referred as well as **subjective theories** created in order to understand the world (Klewin, 2006, p. 10), which have rational and irrational parts (Groeben & Erb, 1997; Groeben, Wahl, Schlee, & Scheele, 1988). Although they are principally **belief systems of the individual** (Oerter, 1991, p. 19), which create personal frames of values and convictions of the individual (Oerter, 2007)², they have as well some **common contents**, which encompass traditions, value orientation, overtaken answers on basic questions of life. Other ways of speaking about those concepts is treating them as **implicit theories, ethno theories, indigene psychology**, in spirit of constructivism According to **constructivism** people aren't perceiving this world but they rather **construct** their world. To be able to understand ones world it's necessary to understand this construct of the people (Kelly, 1955/1991). The psychological explanation of this fact is that person's processes are psychologically channelized by the ways, in which he/she anticipates events (John, Robins, & Pervin, 2010).

The concepts of human nature **change** usually on all their **levels** and in all their **dimensions**. We can differentiate following levels of the concepts of human nature: individual level, social level and worldview, whereby the individual world can be subdivided in following dimensions, which can be referred to as the **body**, the **soul** and the **mind**. They stay for following aspects of human being – his/her behaviour, motivations and meaning respectively (see: Horodecka, 2014c).

Those concepts are a part of a system, in which we can differentiate (such a differentiation is described by Czaja, 2012a, p. 13) **real changes in the environment** (like changing patterns of behaviour, social structures, economic problems or inequalities, environmental problems and so on) and **logical changes**, which result from the changes of information, and knowledge. Those changes impact directly and indirectly on our perception. It is so, because they impact not only on the things we perceive, but the way of perceiving – 'glasses' that we put on to see the world. Those glasses are metaphors, concepts, schemas we use to perceive the world. The different concepts of human nature are in this sense as well such glasses.

There is a lot of psychological and philosophical literature explaining **how the concepts of human are constructed**. It's usually explained in the way the more general concepts – creation of schemas is explained. This occurs in two-ways: top-down, basing on schemas (a concept described by: Neisser, 1976), which impact the process of perceiving or bottom-up, basing on input by senses.

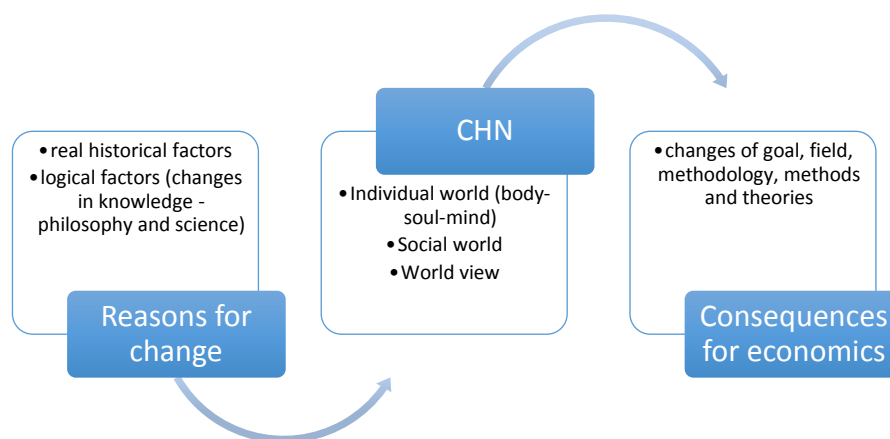
Generally speaking the factors can be subdivided in two groups – one refers to **internal factors** like for instance personality, or more deeply genetic factors, which influence a particular way of perceiving human being. The **second** group, which is far more interesting for economics are environmental

² According to Fahrenberg, 2006, 14: basic beliefs of individual, latent constructs, beliefs about religiosity, belief in God, belief in the hereafter, free will, ethics, responsibility, basic attitudes to meaning, values, goals of life of individuals.

factors, which influence the way of thinking and perceiving the reality. This group entails for instance existing technical inventions, which can provide dominating **metaphors** for perceiving the world. Like for instance perceiving human as a perfect constructed **mechanism** by Descartes [1596–1650], during beginning of Enlightenment or as a **machine** during industrial revolution (since mid of 18th century), or explaining communication processes between people using **metaphor** of a phone call (in Shannon model of communication in the mid of 20th century), or a **computer** for explaining how human mind works (since 80-es of 20th). The **knowledge** bases on such metaphors and uses them in order to explain phenomena. In such a sense concepts of human nature in technics and economics interact (Detzer, 1999). Later this knowledge is as well used in order to make **anthropological presuppositions**, which means that we use as well the existing **psychological knowledge** in creation of our private concepts (Bahrtdt, 1961, p. 2; Behnke & Witte, 2008; Witte, 2008).

The changes in the way of perceiving the world are developed through **interaction between the individual and the environment**. In this sense they have both individual and common parts in the image of man. In this sense the image of man is a communication instrument (see: Rollka & Schultz, 2011). Therefore they change permanently.

Figure 1. The changes of concepts of human nature: reasons and consequences



Source: the differentiation between logical and historical factors is introduced by Czaja..

1. The progress in the knowledge about human being and in other disciplines

How the theory explains the connection between **growing knowledge and changes in the schemas we use (and therefore concepts of human nature)**. Growing knowledge and experience deliver to person new insights about the nature of things and persons. It provides a human being with new explanations, metaphors, and different causal relations so the relation cause-consequence is perceived in the different way, which makes necessary to adjust the concept of human nature. For instance knowledge that human are motivated not only by money or material incentives (A. Maslow, 1943, McGregor McGregor, 2002, 2006 (1960)), that they need to see a meaning to their lives (Frankl, 1997), or that we are influenced by the behaviour of other persons in unexpected high grade (a contribution of the social psychology experiments, like Milgram (Milgram, 1970) or by-stand effect (Latané & Darley, 1970) – makes necessary an replacement of the concept of human nature.

The **knowledge** constitutes the **map** we use to perceive the world more detailed or sometimes replaces some concepts with others, makes some concept disappear (for instance the idea of ether) and is responsible for the emergence of other. Without those maps, we are unable to perceive some things. Without having knowledge, words for something can't discover, as Wittgenstein said ("The **limits of my language mean the limits of my world**"). Our maps impact on that what we are ready to see, and what we won't. Schumacher in the Introduction to his book 'Small is beautiful' refers to such maps, which can limit our way of perceiving not only the world, but as well human being (Schumacher, 1973).

The **progress in the knowledge** of human being leads step by step to the changes in viewing human being. Those changes impacted as well the emergence of new paradigm in the philosophy. This progress can be observed in many fields of knowledge about human being both generally (philosophical discourse) and specific (psychology, sociology, social psychology). These new insights and ideas spread all over the world in the current era of information revolution in a very quick manner. Generally, all subjects taking economic decisions like households, employees and members of other organizations (sportive, cultural) are confronted with this new knowledge.

How is this new knowledge, and new aspects of human nature (like for instance the sense of being embedded in the nature, or perceiving various motives instead of only material egoistic ones) transferred? Many of new concepts of human nature are learned through **everyday interactions** between social groups and individuals, social institutions and individuals (Rollka & Schultz, 2011). Each **social interaction** provides a platform for exchanging concepts of human nature. In this way the concepts are implicit or sometimes explicit exchanged (see: results of the research done Horodecka, Martowska, & Wroclawska-Warchala, 2014, Fahrenberg, 2010, Oerter, 1999). Those concepts are implied in social acts and acts of speech.

As soon as the **number of those interactions grows** (sociology of communication), because we have much more contacts not only in person, but through the introduction of new communication channels by technology like virtual contacts for instance. The number of contacts with persons outside one's cultural background grows as well, because of such social trends like growing mobility for work, social mobility (passing through the borders between social classes and milieus see: script diversity), migration to other countries.

The **organizations** as well play an important function as transmitters of the concepts of human nature. Organizations use particular concepts of human nature in an explicit or implicit way in their visions of organization, which then influences on the managers and employees working at this company (leader-follower mechanism, see: Ehrhart, 2012). Persons having leading positions play a particular role in this influence³. This influence can take a form of preferred leading style. This is the case in non-formal organizations and formal one, oriented on profit and non-profit. Often one particular vision of human being is connected with the activity of such an organization (for instance there is a different approach to the human being in a bank, in education, in medical care, in construction enterprises and religious and volunteer institutions). However an image can be a consequence of some social movements, which encompass different trades. For instance ecological organizations can be lead in different trades (they don't have trade limits). They make their presence in different parts of the economy starting with ecological food, through ecological and green portfolios in banking sectors, green dwellings, religious and social organizations and fair trades⁴.

Other channel of social interaction, other transmitters of the concepts of human nature are the **media, arts** (Hartl, 1999), **politics** (Lenk, 1999), **society** in general (Endruweit, 1999) which usually represents some ideological elements and depicts the power distribution in the society (this was an idea of Frankfurter critical school developed by Adorno, Horkheimer, Marcuse, see: Horkheimer, Adorno, & Noerr, 2002; Hylewski & Burdzik, 2014; Marcuse, 1964; Hylewski & Burdzik, 2014). Therefore it was so easy for long time to spread the image of man as consumer, oriented on maximization of utility, individualistic etc. As a consequence a demand for products grew, which neither met real needs of the individual nor of the society. It loose as well its contact to the real needs, resembling more wants (see: differentiation of needs and want by humanistic and Buddhist economics, M.A. Lutz & Lux, 1979). The entertainment part of media as well delivers a particular concept of human nature, reflecting social changes in the society, and on the same time political correct image, respecting interests of people having power in the society. Film maker present not only the artistic ideas of screenplay writer, but as well are interested in the commercial success of the movie adjusting the play to the expectations of the receiver, so that the movie would reflect humans desires concerning who they want to be, or are. The same concerns contents delivered by the TV, which transmit a particular concept of human nature – a consumer, willing be always young, efficient (see: Funiok & Angerer, 1976; Weis, 1993; Pirner & Rath, 2003)

³ This is because of the authority, a contact with this person, dependent on a particular managing style

⁴ Products supporting trade basing in equal rights, which enable third world countries to participate in profit.

Another transmitter of the concept of human nature is as well the primary, secondary and tertiary and growing meaning education and growing meaning of further **education**, and self-education (Hentig von, 1999). Reading books, watching informative and educative media programs, podcasts, videos, inter-active programs, assisting self-courses online, and other online services are activities, which as well are growing in recent times.

Therefore each **participator of economic processes**, the **economic subject** has his/hers particular idea of that who is the human being and this knowledge can impact on his/her behaviour, or motivation. The kind of this knowledge (for instance scientific, or everyday, transmitted by ads, or news etc.) depends on activity and choices of the person and his/her environment (kind and intensity of contacts, conscious or unconscious choices).

This knowledge about concept of human nature reaches not only economic subjects, but **economists** as well. The growing interdisciplinary character of conferences, courses offered at universities (for instance new forms of delivering a lecture on economic subject, collaboration with specialists coming from different disciplines like psychologist, sociologist, engineers, who accompany economists), intercultural character (the percentage of well-known economists coming from other countries than Great Britain and United States⁵ is growing, this is confirmed by the tendency to give Nobel to people coming outside of those two countries or even outside of the economic discipline, Czaja, 2012c).

Although the **influence of other disciplines on the economics** and on the economists is not something new, the intensity of this dialog and creation of platforms of interchange haven't been so vivid before. The impact of other disciplines is enabled by creating structures of cooperation (interdisciplinary scientific or even didactic projects), which lower obstacles to the research on the borders between disciplines.

First such a discipline, which impacts on the economics and on its concept of human nature is the **psychology**. The progress in the **psychology** changes the perception of a person by the **society** and by **economists**. Especially the **behavioural economics** adopts the psychological research to the economics. To the fathers of this economic school counts a psychologist, who who obtained Nobel-price in the economics – Kahnemann, who worked together with Tversky, see: Tversky & Kahneman, 1982; Kahneman & Tversky, 1979; Kahneman, 2011). **Humanist economics is another economic school, which collaborates strongly with the psychology**. However it bases on different psychologist paradigm. Whereas behavioural economicsc bases on cognitive-behavioural approach to psychology, humanist economics is influenced by thoughts of some humanist psychologists like Maslow and Rogers (A. Maslow, 1943, 1970, 1994; A. H. Maslow et al., 1966). The thought of those psychologists was further developed and adapted to economics by: Beaudreau, 2012; Brockway, 2001; Cook, 2001; Mark A. Lutz, 1999; M.A. Lutz & Lux, 1979; McCain, 1990; Solomon & Collins, 1986)⁶.

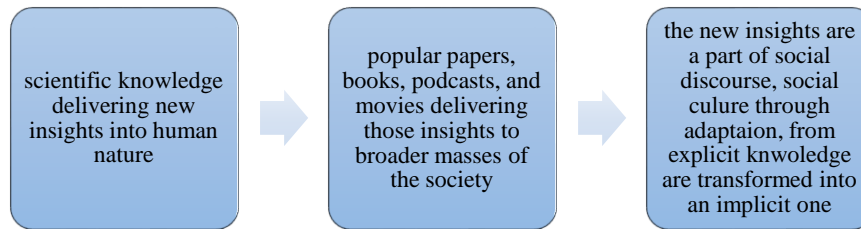
Another economic school, which collaborates with the psychology is **neuroeconomics** (see: Camerer, 2008). The psychological paradigm is in this case the **cognitive psychology** (see: Engelkamp & Zimmer, 2006; Thagard, 2005, Groome, 1999 and Bandura, 1986), which aims to discover how information is processed by the mind. This part of the psychology is working very interdisciplinary with informatics, linguistics, philosophy and neuroscience. The economics basing on the results of cognitive psychology (or cognitive sciences – this term is better adapted, because shows the interdisciplinary character of this science) is practiced not only within neuroeconomics, but as well evolutionary economics and within economic psychology (Tyszka & Przybyszewski, 2006), or evolutionary economic policy (Meier & Haury, 1990; Meier & Slembeck, 1998), see as well: Oetsch, 2007. Due to research done by cognitive science the role of **expectations** in human behaviour could be explained better. Another aspect was the different approach to the **rationality**, which is called here

⁵ See: Financial Times, 21.03.2013 r. the paper written by the Reuter's director about the growing importance of scientists coming outside of traditional scientific centres like Great Britain and United States, France or Germany. The meaning of China, India and other countries when it comes to economics or other disciplines is growing.

⁶ The development of humanistic psychology lead as well to the development of new concepts of man, which based on the critics to two of other prevailing paradigms in psychology – behavioural and psychoanalytical. According to behavioural concept a human being is treated mechanically as a black box, which is subordinated to the law of looking for appraisal and avoiding punishment. The psychoanalytical approach is assuming the human being as a victim of his/hers self, which consists of contradictory forces (ich, es, Ueberich). The humanist paradigm on the contrary stressed an autonomous character of human being, his/her streaming for self-realization, or even transpersonal experience (last paper of Maslow). Moreover they are first attempts in putting the hierarchical character of human needs what took shape in the so called Maslow pyramid of needs A. Maslow, 1943. It was as well first paradigm, which distinguishes altruistic needs of human being

'bounded rationality'. The rationality is bounded because it is often replaced by so called 'fast thinking', which is not different heuristics, which facilitate his/her orientation in the world, taking fast decisions. This on the same time demystified his/her tendency to taking non-rational decisions (compare research done by Kahnemann& Tversky: Kahneman, 2001, 2003, 2011; Kahneman & Tversky, 1979, 1984). All those concepts were pointing to the limitations of the economic man. The economic man with his fixed utility function independent of the influence of other persons, relatively stable in time⁷ didn't match to the real human. Especially psychology of advertisements and media elaborated practical consequences of such new concept of human nature. Those practical consequences were pointing for instance on the possibilities of manipulation of people (through the conditioned reflexes and operative conditioning) and by creating of new needs.

Figure 2. The impact of the altering knowledge about human nature on changes in the concepts of human nature



Source: own

Many psychological discoveries made it possible to **verify the ideas developed earlier by philosophers**. One of such example was the discovery of emotional intelligence, which was an important addition to the rational intelligence (see works and tests developed by Stern, 1912), measuring primary the velocity of transforming the knowledge by human⁸. Emotional intelligence is a form of composite intelligence (other form is for instance a social intelligence), which measures the ability to decode the emotions and use them by solving everyday professional and specific problems. One of its elements is the empathy. The ability to empathy was confirmed by scientific inquires during 90-es of the last century called mirror neurons. Practically it confirms the idea of David Hume (who refers to the sympathy as a primary motive, influencing moral and social behaviour, Hume, 2000, 2007) and Adam Smith (Smith, 2000) that people are influenced by emotions of other people. This inquiry undermines the assumption, which is made about the economic man, when it comes to his way of approaching his/her own goals, not paying attention to others. Therefore behavioural economics and other economic schools (for instance: **feminist economics, or ecological and even evolutionary economics or care economics**) adapted a different concept of human nature. It is here assumed that a human being even if in some aspects may behave egoistically, is shaped as well by altruist motives, which can even ensure the survival of the individual in end effect (like Dawkins maintains in his 'Egoistic gen', Dawkins & Skoneczny, 1996). Further development of **evolutionism** provides new understanding of the egoism. The evolution is not about survival of the strongest, survival of the individual, but about survival of the gen, which implies taking care of own children and relatives. This gives an important argument for explaining the necessity for caring for next generations (to which the gen is passed). Previous understanding hasn't provided any explanation for the care behind own individual interest.

⁷ Within the economic concept of human nature there lacks some cohesion. On the one hand the stability of preferences is assumed and the maximization of the utility. This implies that human being can resist manipulation and creation of false needs, in order to reach the utility in long time (). On the same time it means a kind of independence from the environment in shaping and covering the needs, what is congruent with the assumed perspective of research individualism. On the other hand the economic man is referred to as a behavioural man, reacting to the impulses coming from the environment, and adjusting to this environment his/her decisions. This is one of assumptions for exerting the macroeconomic policy by the state, and explains on the same time reactions on the signals coming from the market. Most of all the focus lies here on such signals as a price and quality. Other signals are often denied which can affect the utility function. Those signals are for instance advertisement or the context. Depending on the context one object can appear to us as more utile than other.

⁸ There are as well variants of the intelligence tests, which don't focus on the velocity, but only the ability to find a solution, regardless time needed.

The **social psychology** as well refers to speaking about group-solidarity, altruistic behaviour rescuing members of the particular social group, even not related to one other, which ensures a survival of the group as a whole. The progress in **sociological knowledge** influences as well the changes in creation of the concept of human nature. Especially the insight, that human being is a social being and is influenced by the society. The social thought was as well helpful in understanding of the role of the society and social institutions in the creation of social roles, interactions, habits and interactions. The progress in knowledge about **social communication** as researched by sociology, social psychology and communication science has had as well a meaning (see as well: Horodecka, 2015; Horodecka et al., 2014). Furthermore the role of **media** was explored. **The concept of human nature can be even as the basis and goal of all communication** (Rollka & Schultz, 2011). The next important discovery influencing way of perceiving the human was discovering the meaning of the gender and the culture and their impact on the communication. This showed how far of the reality lie the assumption of shaping the preferences independently of the environment.

Another psychological discovery concerns therefore **neurotransmitters**. Up to the beginning of the 20th century, it was assumed that the synaptic ‘communication’ in the brain has an electrical nature. The discovery of the synaptic cleft made by Ramon y Cajal (1852–1934) allowed for the formulating of chemical way of communication. In fact Otto Loewi (1873-1961) proved, that this communication is made by releasing of chemical reactions.

The same concerns the progress in the **anthropological knowledge**, which puts a new light on human motives and ways of human behaviour in different cultures. The special meaning has here the development of the **philosophical anthropology**. For its development counted different **philosophical schools**. They were an impulse for the change of the way of looking on the human being. Here some examples:

Existentialism assumes that the human being chooses himself/herself by taking decisions. Human being is not an already shaped being, but gains his/her humanity by choosing him/herself (Kierkegaard, 1946, Heidegger, 2001, Sartre, 2012). By adapting this way of thinking to the needs of economics, we can say that human being chooses more him/herself than objects, and this choice impacts his/her further choices. The further consequences it, that such human doesn’t have any ready list of preferences, but that are shaped within the process of human development and are shaped by each choice made. Although some authors (Lück, 2009, p. 162) don’t agree that, that that existentialism of Heidegger or Sartre has much in common with humanist psychology, the former one is still close to some of existentialist like Camus. Especially the idea of self-development for the society sake.

Phenomenology assumes, that our reception depends not only on what we in fact explore, but on ourselves, our **cognitive structures**. The human is not only a passive receptor of the reality, but the reality is embedded in his conscious processes. Phenomenological method as developed by Edmund Husserl, Theodor Lipps and Ludwig Klages is used by humanist psychology, and humanist economics as well. It can be characterised as a close and judge-free observation and description of phenomena, which include as well the self-observation, as soon as it’s assumed, that the observer impacts on the phenomena. It focuses not so much on the discovery of rules, which in fact mean reducing the reality to some ex-ante assumptions, but values as well a description. Phenomenological school provided useful tools to the analysis of social and political events (Foucault, 2012). This gave motivation to the development of **constructivism** (constructionism), which maintains, that that what we are researching aren’t the facts but constructs of the reality, which depend on our perceiving of them (the concept of human nature is as well such an construct). Constructionism demands from us another way to research the ‘social facts’. Instead of researching ‘objective facts’, which according to constructionism aren’t objective, we should explore the narration (discourse method), which allow us for discover, what image of world and what concept of human nature we base on, as soon as they shape our reception of events. This provides not only a new understanding of the concept of human nature, but as well additional methods practiced within humanist economics for instance.

Close to constructionism stays **the philosophy of mind**, which stresses as well the role of human mind. In order to understand and discover the phenomena outside – like the human and his/her environment, we have to know its role in understanding of the phenomena. The mind creates the world, in which we exist. This philosophy can be reflected by the cognitive psychology and in research of learning processes which are done within cognitive studies (Duch, 2011; Duch, 1999)

Structuralism is another philosophical school, which impacted our way of seeing human nature. The structuralism can be understood as the way of understanding of the social reality and the language by looking for some **meta-structures** in it (De Saussure, 2001). The psychology has adapted this basing on research done by Chomsky (Chomsky & DiNozzi, 1972; Chomsky, 2002). Due to such genetic equipment with those structures, the child is able to learn how to speak. A way of perceiving economic phenomena depends as well on the structure embedded in us. The reality has only a secondary character as soon as it is subordinated to structures we apply by perceiving it.

Another philosophical school is the **evolutionism**, which impacts on the way of perceiving a human being. It perceives the reality as being in the process of development. Other philosophical schools which focus on this changing aspect of the reality is for instance **the philosophy of process** (Whitehead, 1979; Whitehead & Lachmann, 2000). Other is the Lebensphilosophie ('philosophy of life'), developed among others by Bergson (Bergson & Andison, 2007). It can be characterised by the conviction about a **complex nature** of the processes occurring in life. They can't be reduced neither to simple mechanisms nor to perceiving of the reality as a sum of its elements (Horodecka, 2011). The evolutionary way of perceiving the economic actor and his/her work – economy is a basis for other direction in economics – **evolutionary economics**. **Ecological economics** bases as well on the holistic way of perceiving of the reality, and manifests itself in the 'philosophy of life', paying regards as well to the evolutionary processes⁹.

Next philosophical school is a **philosophical personalism**, which focus on the person, on the human subjectivity or self-consciousness, experienced in a person's own acts and inner happenings—in "everything in the human being that is internal, whereby each human being is an eye witness of its own self" (Wojtyła, 1993). One of the compatible direction is the **philosophy of dialogue**, which opens the perspective on the essence of the **interpersonal communication**, within which persons get the possibility to transcend themselves. The focus on communication (an example for this philosophical direction could be 'Ich und Du', 'I and Thou' of Buber, 1995) as a dialogue with one equal person, the acceptance of other as they are without instrumentalizing changes the way of looking at human being. The person discovers him/herself deeper 'I' (for Buber this deeper 'I' is God – the 'Thou) through the dialogue with other person or with the Nature. On the contrary - objectifying of people and nature, the individual departs from him/herself, entering into the world 'Es' = 'It', which compounds from the empty world of objects, which passes, without any meaning. The influence of this philosophy can be seen in the stressing of the meaning of **communication** in understanding of human nature. It is close to the humanist and transpersonal psychology and economics and their way of perceiving a person – making a focus of the economic analysis but still embedded in the society, and self-realizing itself within the society.

Further research, which contributes to the change of understanding of the concept of human nature is the provided by the **communication studies** and **management science**. Within sociology of communication we can observe the growing interest in forms of communication, which go beyond passing of information, but include as well the 'true meeting' (Horodecka, 2015). Within managerial science as well new concepts were developed, which base on the psychological inquires discussed before. As a consequence many diverse concepts of human nature emerged accompanied by the changes within managing styles.

Summing up, the development of knowledge within different disciplines allowed for a more complex and deeper understanding of the human nature. This resulted in the changes of the concept of human nature in those sciences, generally speaking in all social and humanistic sciences and in the economics as well.

2. Growing complexity of all processes and other social trends contributing to the change of the worldview and human nature

Concepts of human nature change not only because of the changes in the knowledge about human being but as well, because of the changes in the human environment. One of the major trends impacting on the changes on the way of perceiving of human being is the **growing complexity of**

⁹ One of the creator of the 'life philosophy' – Bergson is famous from his book „creative evolution”, see: Bergson, 1911.

social processes. This tendency is reflected by some **economic schools** to different extent. Especially the behavioural economics and neuroeconomics are pointing to the growing complexity of the social and economic processes. The person encounters more and more complex problems and have to deal not only with the simple optimization functions, like the rationality of economic man assumes, but has to refer to the emotional rationality as well – build heuristics, some simplifications, which help him/her to take decisions (see: Kahneman, 2001, 2003, 2011; Kahneman & Tversky, 1979, 1984). In the situations of growing number of cultures, contacts, such simplifications allow for a fast understanding of situations. On the same time it leads to the development of many filters, which not always allow for making optimal choices, according to Kahneman Tversky, they aren't likely to be optimal. One of such simplification is the model of man. It allows for sorting people in groups and faster assuming to them some characteristics, and formulating of expectations. Doing so we refer to different concepts of human nature.

Actually more and more goods, and services, which have been 'produced' before outside of the market and outside of what was considered as 'economic system', get a research domain of economics, like for instance the housing, teaching, caring, health, spiritual development. This means a growing meaning of those sectors for the whole economy and for particular companies.

Many scientists and researcher during the last decades stress the growing complexity of the processes occurring in the economy, politics and society. Scientists exploring crucial tendencies, which impact on our environment point to the fact, that the growing complexity is one of major characteristics of the post-industrial epoch, the information era and knowledge. Research on the problem of complexity grew on importance within the social sciences. The growing tendency to discern social and economic phenomena in their set of relations, and on the same time progress in specialization makes different disciplines analyzing the same phenomena out from their scientific perspectives. This is an incentive for the formation of multi-disciplinary teams investigating a phenomenon from many different perspectives. Here count for instance the creators of the system theory like Parsons, 2003 (functionalist approach), Luhmann, 1994 (structuralist approach) as well as theories of the evolutionary nature (as for instance Witt, 2008; Nelson & Winter, 2004; Dopfer, 2001) which base on the idea of the complexity and ways of dealing with it.

How we can characterize best the phenomena of growing complexity?

First of all the number of interaction between individuals grows (number of contacts between persons and their quantity), which is due to the growing number of social roles which we fulfil in the society and growing social mobility, which includes work mobility (changing working place), changing relationships. The measure of those changes may be the average period of employment in one place, number of divorces, number of organizations, we belong to, time spent on virtual platforms (on phone, virtually, on internet). Growing number of interactions enlarges the number of mutual relationships between people.

Secondly the growing complexity can be seen through the observation of the velocity of changes in social and economic relations. This can be observed in the number of contacts per one persons, the diminishing period of life of the company, transformations within the company, which means a change in lives of all engaged persons and the necessity of building relationships within new company for each of employee, entering into contacts again. Moreover the rapid social changes can be seen by the product life, which is getting shorter. This implies the necessity to create new, different one, which have impact on consumers, speeding up the tempo of changes, and rising expectations towards changes.

The **innovations are introduced faster**, which as Schumpeter describes may have an impact on grave changes of all economic systems. Schumpeter refers here as well to the possibility of the fall of the capitalism (Schumpeter & Röpke, 2006)

The complexity of the processes occurring in the environment of the person, structures in which he/she is functioning, roles, which he plays, grows. This all requires a creation of such an image of man, which can match to this role.

One other factor leading to the change of the worldview and concept of human nature is the **confrontation with other cultures**, resulting in the need for accepting them. It requires for instance a change of the prevailing thesis of the superiority of Western culture, and this in turn means changing vision of the world (Sztumski, 2011).

The **growing contact with other religions** as well may cause some changes in the way of perceiving the world and human nature. Living next to other religions, the contact with them, also induces changes in approaching other religions. Some views, which prevailed for centuries putting own religion above all others can't have a stand anymore. Worldviews and concepts of man have to get more tolerant and flexible, more diverse in order to maintain peace. The changes concern as well religions themselves, which get interested one in another (World Parliament of Religions is one of possible examples). Within a catholic religion there are some changes as well. For instance the concentric model, according to which the Catholic Church has the fullness of salvation remedies, whereas other religions are on further concentric lines, far more away from the Truth than the Catholic Church, has been replaced by other solutions. The worldview and human nature concepts have to adapt to such changes, allowing for diversity.

This interest in other cultures and growing interchange with other cultures is reflected as well by the economics. The Anthropological Economics points for instance to the fact, that even the theories we have about the market are relative. Those theories refer primary to the western culture, and don't have necessarily an universal character beyond the culture, as it is often suggested implicit by the IMF. There are some doubts regarding the **superiority of the market economy**, which was developed in the West. It is considered by some economists still as far from being the best, and may even be harmful in a different cultural situation. It is not possible to look through the prism of our assumptions and 'glasses'. For instance assuming the existence of market and looking on economical processes through this assumption, is similar as looking through particular 'glasses' on a problem.

There are two basic approaches to the anthropology – **individualist** (Malinowski, 1944; Malinowski, 1994) and **collectivist**, which perceives the society in a holistic way (for instance communitarists - Etzioni, 1995). Wearing some particular cognitive 'glasses' may change the outcome, especially when they are 'glasses' (cognitive constructs), which match so well the situation of the society and western society.

There are also phenomena in the surrounding world, which essence didn't change much, but their reception did! Thus, for example a poverty, violation of human rights, unequal distribution of wealth has always been existing (even though, for example, the level of relative poverty is deepening, but absolute poverty decreases), but only now people started actively look for global solutions of them. People started to realize the gravity of problems mentioned below. This leads as well to some changes regarding how we think about the world and an individual. In the case of growing sensibility to social problems, the concept of human nature changes as well. It's for instance assumed that a person is not only responsible for his/her own good, but for the good of others, the whole society.

Growing sensibility to ecological issues changes for instance the attitude to so called free resources. They aren't considered any more free. It is as well assumed that they require individual and societal concern about them. Such an engagement for the nature is often contradictory to the self-interest of the individual. It seems therefore necessary to assume that the human being is not responsible for its own interest, but for others as well.

The last two examples make it clear that goals of people are overcoming their own interests (care for people with whom the individual probably doesn't get in contact, and the care for the environment, even when it means larger costs for current generations and profits are most of all be received by the future generations. This again is contradictory to the assumption on which grounds the economics, that people focus only and primary on their own interests. For the protection of environment many people are spending private resources (buying ecological products, consumer goods for instance), as only if they have to fulfil the requirements put by the law. It seems that the will to economize costs is not the only motive, which decides about so called 'green investments', green products, which don't yet pay back to the investors. The engagement can be perceived as the growing importance of the value, which has got accepted by the environment, the estimation for the nature and the responsibility for future generations. In this context we use to say about the growing **ecological consciousness** (Papuziński, 2008). The attitude to animals has changed as well (Leks-Bujak, 2009). People refuse frequently to treat them in the same way as other goods and products, which of course requires a change in a way of looking at not only the agricultural sector, but also for research using animals, and using animals for luxurious products.

The next social trends¹⁰ of our times is the **virtualization of life** in the western culture, which is connected with the informatization process and the growing number of different channels of communication. Some new factors are considered as important, which hasn't been enough regarded before like the body language, emotions and context. The majority of our contacts occur more and more basing on diverse channels, where the communication barriers result among other factors from the lacking common context, and lacking knowledge of the culture.

All of the mentioned social trends may result in the growing **negativity of the concept of human nature**, especially when it comes to the challenges from the environment: growing pollution, growing inequalities in the distribution of income, many different contacts to other cultures, religions and losing of the certainty about the one right way of functioning. This could lead to the growing separation, individualization, and virtualization of the world and human being. But on the other hand many researchers point to the negative outcomes of such tendencies and call for changes in the attitudes. One possibility is to explain those problems by the negative image of man – a destructive and an egoistic one, what doesn't promise much hope for any changes. The other is – by providing an image of man, which is a 'turning back to the sources' – discovering a nature of human being, which when lived according to it, gives a human being a possibility to conduct a happy life, which doesn't harm other. To overcome those difficulties it may be important to create the concept of human nature, which has as well a normative function, as for instance homo sustinens from Bernd Suebenuenner has, which responds to the desires, and wishes of the society (Siebenhüner, 2000; B. Siebenhüner, 2001). The concept of 'homo sustinens' stresses the naturalness of human being and his/her genetic imprint, his/her cooperation and communication skills, his/her ability to learn and creativity as well as its ability to take the responsibility.

The actual changes in the concept of human nature

Changes in the concept of human nature result therefore from factors described above. Those changes reflected by other disciplines and in everyday-life impact as well on the changes of the image of man in the economics.

What are the major changes in understanding the person due to all the above mentioned factors? What are the effects of these major social changes resulting in the change of basic metaphors, growing interdisciplinary character of phenomena, the progress in the knowledge. Due to their activity, the demand for 'new concept' of human nature appears, as soon as the old one doesn't fulfill its functions (Horodecka, 2012a) and the new image emerges. Due to those changes, the 'image of man' is transformed, or replaced by a new one.

The economics as it was mentioned reflects in its concepts of human nature the major tendencies in social science and in the real environment (social trends). It adapts those concepts to the requirements which put on the concepts the economics. Each scientific discipline has its particular attitude to the observed phenomena which as well includes the way of perceiving a human being. What makes this science different from other is the diverse rule, which makes order in all phenomena within a particular science? Within social sciences this is a different concept of human nature, which makes the difference. For instance the psychology treats human being primarily as an individual, as a person whereas sociology is focused more on groups and societies as a primary phenomena. The economics focuses on the economic activity of human being – like working, buying, selling, exchanging. Each of those sciences has its central set of assumptions about human being. One of those sets of assumptions makes the dominating stream, even if there are other streams existing parallel. Psychology, for instance, bases on 4-5 different streams –basic paradigms: psychology of consciousness, phenomenological psychology, psychoanalysis, behaviorism, Gestalt psychology, cognitive science, constructivism. The other schools which differ strongly from the main stream are oft a part of the critics, for they unscientific character, like it is the case in psychoanalytical and humanistic psychology. The same case we have in economics where the central core is basing on the homo oeconomicus, and other especially heterodox concepts are criticized (see: Stępień & Szarzec, 2007) for instance for methodological reasons (inductive and not deductive character).

¹⁰ Trends which played a role for the actual development stage are described in: Horodecka, 2008.

Those **transformations** can be seen either by tracing back the concept of 'homo oeconomicus' or by creating new concepts of man. In the first case we can ask, why concept of human nature, which existed in the economics in the pre-Smithian era changed and why such completely new concept like homo oeconomicus emerged. Especially these changes would be interesting, which mark the change of economic man between classical and neoclassical economics. In the second case we focus on watching the emerging concepts of human nature mainly in the heterodox economics.

Watching the transformation of the concept of human nature in the first case we can discover major factors contributing to the changes and formation of the new image of man. This may help to distinguish major forces of change.

During the life of Adam Smith in the end of 18th century, the economics was perceived as part of other sciences like philosophy. It means that the topics about economics were treated by philosophers, especially political philosophers, and by moral philosophers (Adam Smith was one moral philosopher).

What concept of human nature existed in the pre-Smith time and during his life? Answering this questions helps us to show how those factors described above contributed to the creation of a new concept of human nature – the homo oeconomicus, which origin development marked the beginning of classical economics and the mature state – the neoclassical (Stępień & Szarzec, 2007). During the Smith – era, a dominating concept was the Enlightened concept of human nature. In the debate about the economy there were some views on the role of human nature and his role in economic processes. The view that the world history depends not so much on the effort of individuals, but principally on some governors (the ideal was an absolutist enlightened governor), who is responsible for leading of the economics – trade politics and internal politics. All those insights has resulted in the mercantilist economic policy. The homo economicus as created by Adam Smith was an answer to the scientific explorations of a human nature, a reaction to the changes of worldview. Together with the change of the worldview the person lost his/her central place in the world¹¹. Human being became an element of the new puzzle – the world, a screw in the clock made by craftsmen. The world was like a clock made by the craftsmen God, who made it and after the creation withdrew himself from it. Therefore human being is lost in this great deterministic mechanism, and subordinated to the rules, which don't depend on his will and his action. The science and philosophy started to look for those rules, and other disciplines as well. In the natural science such an example was made by Newton, who created the basic of the physics. This trace was followed by other researches. The demand was as well in the economics. The dominating concept of human nature with the vision of man was requiring a new concept of human being, which would be more adequate to the current changes. In other words an image of man was required which is subordinated to the determinist rules, and deprive of power ruling individuals who became only screw in the world-clock, and subordinated to its rules. It was searched for rules, which could improve the functioning of the world. In order to achieve such an ideal, the role of individual had to be diminished, and deprived of their subject-character. Behavior of individuals was subordinated to the rule of pursuing own interest (or later own utility) and maximizing it with the help of rationality. The meaning of individual was reduced to a role of a part of a system, to which he/she was subordinated in a deterministic way. This was the way of looking on the economy by classic economists and its continuators and his followers (or better said: as classing economists, among them Adam Smith were interpreted by their followers¹²). According to Smith the economy is working, because the effect of the whole depends on the rule, which is embedded into the human nature. The individual is subordinated to this rule. Smith wasn't appealing to norms, to which human being has to approach, because they are good, but he rather was looking for a law, by which he could describe the human behavior. It was a minimal program. But in his time the minimalist philosophy was a dominating stream, taking a distance from the metaphysics. The contemporary philosophy, especially the moral philosophy in those times can be characterized in a following way:

- It was dominated by the utilitarianism, putting away the metaphysical problems, and issues which demand for normative judgment, considering ethical behavior as a behavior, where the effect

¹¹ It meant the lost of the image of a person as created God alike, as microcosmos in a world view of Thomist philosophy.

¹² Klimczak, 2000 maintained that according to Smith such a egoistic motivated behavior is only the worst case, which was only taken into the analysis, to prove that even if all people behave in such a wrong way, the system will work. The average person acts diverse - according to some moral principles, and is lead by moral sentiments and empathy.

of our actions delivers us the maximal utility to us (extreme utilitarianism) or to the majority of people affected by such an action.

- Smith combined such two utilitarian rules in one: the individual pursuing for maximization of its own utility maximizes as well the utility of all the people concerned by the action, and in consequence all society, and other countries as well (if the said country is engaged into trade)
- Smith was very far away of perceiving human being as cold egoist. His concept of man was as well subordinated to other laws (described in the 'Theory of Moral Sentiments', Smith, 2000)
- Those laws base on other rules, dealing with human activity. One of those rules is 'empathy, which says that human being can't be happy, if persons around him aren't. This means that the person would neglect behavior, which can harm others. On the same time the economic concept presented in 'Wealth of Nations...' (Smith, 2005) advised people to engage into those activities which we do best, and to neglect activities which we choose only in order to help others, but they don't count to our strengths. Doing that, what we can best, is according to "Wealth..." the most effective way of helping others because it leads to the welfare of the whole state. This economic rationality was later interpreted regardless considering negative effects of an individual activity harming others. The concept of human being created by Smith was a consequence of following changes:
 - Change of the worldview – the fate of the world doesn't depend any more on famous individuals but far more on the way of functioning of all screws in the system, which all follow a general rule
 - The growth of knowledge about a human being, a discovery that human being is guided by moral sentiments streaming for the maximization of his utility
 - Growing complexity of all economic processes, which contributed to the insight that there is no way of forecast of all factors influencing the economics, and so take the good decisions.
 - Other factors: the scientific embedding of the author (moral philosophy, England, birth of empiricism). Authorities which could influence the development of the idea: David Hume (1711-1776), John Locke (1632- 1704), Jeremy Bentham (1748-1832)
 - Experiences and observations made by the philosopher during birth of the industrial revolution

Those changes happening outside of the economics resulted in the changes in inside of the economics (even if there was no economics as a separate discipline, there were many reflections to the topics concerning economic activities of human science the ancient times). The old concept of human nature could afford the requirements of the capitalist economics, internationalization and industrialization. The separation of the economy of its local forms caused the demand for any theory, which would meet those requirements. Following those changes in the concept of human nature we can come to the conclusion that the factors responsible for the changes play great role in forming of changes in the concept of human nature.

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Actual postulates for the modification of homo economicus have many different reasons, and we can differentiate following:

- The progress in the **knowledge** especially in behavioural psychology led to the discovery that human being is not guided by **rational choices** (see: Kahneman, 2001; Kahneman, 1973), but by some **heuristics**, which simplify the reality. The application of those heuristics leads to other results as those done by rational choices. In this way the assumption about maximization of utility can be modified. The term of suboptimal choice and bounded rationality replace such a typical rational choice. The mechanisms of choice applied in place of optimal choice are described by Kahneman. This is for instance the perspective theory, embedding mechanism (Kahneman, 2008)
- Due to the progress of in **behavioral, cognitive schools of psychology and neuroscience** it was proved that human being doesn't like risk. His/her dislike towards the risk is greater than we could expect by counting the expected value and the probability of achieving a profit (Kahneman & Tversky, 1979). This could be explained by the fact, that the negative and positive changes of income are experienced diversely. The same change in income when it is

negative causes much greater 'pain' than the positive change cause 'happiness'. In other words: The utility loss by negative change of one unit of income is smaller than utility gain caused by positive change

- The development of **evolutionary psychology** (Wright, 2010; Buss, 2009) delivered some explanations towards the human behavior (without the necessity to enter into the subjective experiences of the human being, but remaining only by the sociological observation). This made clear that human motivation is not only oriented on survival or wealth for self, but as well for other **persons related to this person** (having a part of its gen). According to one equation of William the tendency to show altruistic behavior is related proportionally to the level of relationship, the percentage of genetic code. It have been explored that the choices are determined by **institutions**, which gave basis to integration of institutional economics to neoclassical economics. As a consequence the **new institutional economics** emerged (Coase, 1998). Thanks to institutionalism the category of **transactional costs** is introduced, which cause that the individual doesn't choose the optimal choice¹³. However in the new institutional economics, which accepts the homo oeconomicus, the basic motivation of human being for the maximization of utility hasn't changed, only a new category of costs is considered by the individual and social choices. A different use of the discovery of institutions made ecological, evolutionary, and feminist economics. They remained closer to the original thought of old institutionalists.
- The **globalization** influenced not only the change of world but is as well the next factor, which causes changes in the concept of human nature. Considering the cultural differences in the worldview has opened the eyes to the fact, that economic man is strong connected to the western civilization, but it can be totally unfamiliar to other cultures, which may neither accept it, nor understand.

Some changes lead to only slight modifications of the homo oeconomicus (the first group). Other aren't yet adopted by the dominating paradigm or even their acceptance may cause the necessity of changing the paradigm. It's due to the fact, that they may possibly cause the necessity of changing the methodology or weren't compatible at all with major concepts of the orthodox economics (the second group).

The following changes caused a completion or slight modification to the existing concept of human nature, by the following dimensions:

- **Institutional embedding** of a person (institutional economics)
- **Risk avoidance**, tendency to taking rather suboptimal decisions (behavioral economics)
- **Change of needs within time**, considering of pre-and postproductive age in the decisions (a function of labour supply and a function for demand which are distributed through a whole life). This requires an institutional and historical analysis.
- **Altruistic forms of behavior** explained by egoistic motives and the growth of own utility and care in old age, children treated as an investment for old age (evolutionary, ecological, humanist, feminist economics)

To the other group count changes, which may lead to the necessity of changing the whole economics. This is because concepts developed here aren't compatible with the concepts developed within the standard economics.

- Streaming for the wellbeing not only per himself/herself but for other people (for instance: evolutionary economics, Hodgson, 2007; Dopfer, 2001 or humanist economics)
- Gender and cultural setting matters. The motives and behavior of people are perceived as being dependent from gender (feminist economics). The masculine homo oeconomicus is completed by introducing of a female view on human being by considering the 'gender' perspective.
- The assumption that fulfilling of needs doesn't enlarge the wellbeing neither of the individual nor of the society. The individual in order to choose something what is good for him/her needs some insight. This insight is not understood as the full information, but as the knowledge about this, what is good for the individual and what not. This idea is close

¹³ This would be optimal if there haven't been transactional costs, which aren't maintained in the standard analysis

to what we refer to as a character of the person (for Tomer, 2011 it is as well the character). This is the case in the Buddhist and feminist economics, M.A. Lutz & Lux, 1979; M.A. Lutz & Lux, 1988; Schumacher, 1973

- The permanent growth in production isn't possible and required, because it leads to overgrowth of the economic system over the ecological one. The consequence of such a growth is the destruction of the ecological system, and therefore to the person, which depends on this system. The growth in production is often a consequence of enlarging some illusory needs (ecological economics, Daly & Farley, 2010, humanistic and Buddhist economics refers here to wants)

3. The characteristic of the concept of human nature in the contemporary heterodox economics as a result of social real changes and changes in knowledge

The changing environment resulting in changes in the concepts of human nature, is one of reasons for the criticism towards the homo economicus, who doesn't apply anymore to the environment it was meant for (time of the industrial revolution, relative simple social structure etc.). An overview of major critical issues towards homo economicus can be found in Horodecka, 2014a. Those are for instance: (1) methodological issues, (2) lacking congruence with the empirics; (3) omitting some major factors determining human behavior; (5) short-sight of this approach; (6) lacking adequacy to the actual economic problems (crisis); (7) critics of the economics constructed basing on such an image of man.

The reasons discussed in the paper resulted in some changes of the concept of human nature in the contemporary economics, which are presented in the table below (Table 1). The next table (Table 2) presents the changes in the foundations of economics resulting of those changes in the concept of human nature. This stresses the necessity to deal with the changes of the images of man, in order to understand the contemporary and future economics.

Table 1 The concept of human nature in the contemporary heterodox economics as a result of social real changes and changes in knowledge

	Individual world	Social world and worldview
Behavioural	<p>The critics of rationality – bounded rationality</p> <p>Emotional and rational nature of human being</p> <p>Behaviour: depends not on the subject of choice but on external factors as well (framing) and internal (personality, aversion to risk)</p> <p>Motivation: the role of emotions, often they aren't realized</p> <p>Meaning: this dimension is not discussed</p>	<p>The relation between people base on reciprocity</p> <p>There is no separate vision of world discussing relation to the nature and super-nature</p>
Feminist	<p>Two aspect of human being – feminine and masculine</p> <p>Behaviour: different behaviour associated with gender (man-women): rational-emotional, autonomous-dependent, egoistic-altruistic, rational choice – intuitive, preferences – needs</p> <p>Motivation: female and masculine motives – necessity to overcome this bias</p> <p>Sense: Integration of pluralism</p>	<p>The female and male world – complexity</p> <p>The economy should be part of the society and its values</p> <p>Social embedding of the individual</p> <p>The relation to the nature of human being is widely discussed, humans responsibility of the nature, impacting/reflecting the social structure</p>
Humanist	<p>Behavior: realization of higher needs (not: wants), pro-social behavior,</p>	<p>The human is in the centre of the world, the world is a reflection of him/her</p>

	<p>altruistic</p> <p>Motivation: self-interest and social interest, lower and higher needs, non-material, and long-life needs are of importance, the structure of needs</p> <p>Meaning: self-realization transcendence</p>	<p>The environment is changing (evolution of the society and culture), local community, and harmony within society (even if it reduce economic growth), the economics and society shall support human development</p>
Ecological	<p>Behaviour: homo oeconomicus + homo reciprocans + communicus, competition and cooperation, bounded rationality</p> <p>Motivation: happiness, material and nonmaterial elements of wellbeing, procedural utility and not possessive one</p> <p>Meaning: happiness depends as well on the interior factors</p>	<p>Economic system is part of social-cultural and this of ecological system</p> <p>The world system is a closed one, therefore the economic system has to respect the borders put on by the social and ecological system</p> <p>Biophysical foundations of the economics</p>
Evolutionary	<p>Behaviour: rules of behaviour, limits in transforming of impulses, satisfying and not optimizing behaviour, unlimited knowledge contra limited needs</p> <p>Motivation: adjusting to the environment, knowledge, altruistic and egoistic</p> <p>Meaning: surviving, which makes possible the growth of knowledge in the society</p>	<p>The knowledge and its transfer with the help of institutions, technology and products is a key to understanding of the world</p> <p>The process of learning and selection of less effective subjects leads to the multiplying of the knowledge</p>
Neuroeconomics	<p>Man as a black-box –a machine which transforms the signals coming from outside, role of a mind</p> <p>Behaviour: a consequence of neuronal stimulation</p> <p>Motivation: discovered during experiments (for instance: fairness)</p> <p>Meaning: is not discussed</p>	<p>Reductionist world view</p> <p>Determinism biological-physical</p> <p>The world is shaped by the human</p>

Source: own

Table 2 The consequences of the changes in the concept of the human nature to the economics (goal, field and methods)

	Goal	Field	Methods
Evolutionary economics	Discovering of rules of adapting to the changing conditions and processes of emerging of the most effective rules	Researching on the developing processes , of knowledge and processes of passing it by subjects and institutions	The analysis of dynamic and historical changes and genesis of institutions
Humanist economics	Covering of human needs, bettering of the conditions of economic activity	Human rights, the sustainability of the economy, protection of the environment, ethics, social relations	Descriptive, observation, the normative ideal concept of human nature and of world, organic, social, institutional
Behavioral economics	improvement of the neoclassical model to ensure compliance of the grounds or human model with empirical data	decision-making process + consequences for the individual and society , heuristics , framing , imperfection	Experimental observation and questionnaires
Ecological economics	Improve of the wellbeing by development, institutions and sustainable ecosystem	interdependence and co-evolution of economics and natural ecosystems	transdisciplinary , social, physical and biological (thermodynamics , biological
Feminist economics	address specific problems in the economy and the economy , not just abstract	decisions in the market and beyond, the values of gender and understanding the economy	"Science -with -wonder " relational thinking , rather than subject- object , the impact of gender on the methods.

Source: own

Conclusion

Actual changes in the society based on knowledge, exposed to the globalization processes accompanied by the changes in the knowledge and in philosophical views, which are answer to those trends leads to the necessity of changes in the concept of human nature. The paper discussed various reasons of the factors contributing to the changes of those models of man and effects they have on thinking about man in the economics.

The concept of man as it is in the neoclassical economics was developed in other context and doesn't apply to the actual changes. The critics of homo economicus relies on such aspects as: not regarding of actual empirical knowledge when it comes to human behaviour and motives, role and character of knowledge and information in the human life, character of the society, which is not a simple sum of individuals, but rather a net of processes, which are connected one with each other.

Therefore as result of all those social change, the concept of human nature in the contemporary most of all heterodox economics like evolutionary, ecological, humanistic, feminist and behavioural is a concept which is in relations to other people, in whose life play role not only egoistic motives but altruistic as well, and respecting the role of education and knowledge in the life of individual (especially when it comes to evolutionary economics), and cultural embedding of human being (in all mentioned heterodox direction in economics). The change of the **goal** of the economics, which is not more a positive one, but descriptive and normative as well, and connected to the environment. The focus lied on explaining the reasons and consequences of human economic behaviour, and solving of actual problems, by impacting as well on the institutions and change of attitudes. The enlarging of the **field** of the economics: not only the market counts, but as well those outside of the market. The behaviour is not so much oriented on optimization but far more on satisfying. The new motives in the behaviour are considered (altruistic for instance) and the category of sense introduced. The economic system is considered as correlated with the natural, cultural, ethical one, and with religion and values. The methodology and methods changed their focus from orientation on models and prognosis, to description, explanations, understanding, experiments, discourse observation, historical, metaphors from other disciplines (like biological ones, evolutionistic).

Do those diverse factors contributing to changes of human nature result in one particular or diverse concepts of human nature. Probably the second answer is closer to the reality, although its not the scope of this paper to provide answer to this question. However many concepts of human nature share an ethical dimension. Therefore ethical concept of human nature or mentioned homo sustinens may be one possible answer to the requirements of our times. Such a concept corresponds with the requirement of the complexity and refers to all dimensions of human being. Ethical concept is not so narrow as religious one, and could be a common platform for many religions, it is a source of values and goals. The ethical approach is one which bases of virtues, self-control, orientation. The chance of adaptation of such a concept of human nature is growing, as soon as moral values and sensibility to questions of justice and responsibility for other and nature find more and more their way into the contemporary discourse¹⁴.

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¹⁴ According to Wilber (Wilber, 2000a, 2000c) the share of population, which are open for the spiritual level of development is growing

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