




Article

Demoethical Model of Sustainable Development of Society: A Roadmap towards Digital Transformation

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Abstract: This study aims to explore a demoethical model for sustainable development in modern society. It proposes an approach that focuses on organizing activities to improve sustainable development. Specifically, it presents a demoethical model relevant to Society 5.0 and Industry 5.0 organizations. The objective is to identify demoethical values that can drive sustainable development in the era of digitalization. Through a literature review and analysis, this study identifies key components of the demoethical model and provides practical recommendations for stakeholders involved in digital transformation. The analysis of demoethical norms and phenomena, such as education, nurturing, mind, knowledge, science, and honest work, has enabled the identification of values that align with sustainable development in society. The results of the study demonstrate that the notion of a demoethical foundation for sustainability is rooted in the concept of spirituality as the basis for a new societal development scenario and its relationship with nature. The study shows that ideas about the demoethical basis of sustainability are based on the priority of spirituality as the basis of a new scenario for the development of society, as well as the integration of demographic, socio-economical, and ecological components in system-wide modeling.

Keywords: Society 5.0; Industry 5.0; demos; demoethics; sustainability; sustainable development of society; dignity; honest work; craft; virtuous person



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1. Introduction

Today, the entire scientific community is faced with changes in the functioning of socio-economic systems, the essence of which, and even more so their impact on the economic component, requires special attention and study. The ongoing societal changes are global and are reflected at all levels of social structure. The emergence of Society 5.0 and Industry 5.0 reflects the fundamental shift of societies and economies [1–3]. Society 5.0 and Industry 5.0 are based on the development of human-centered social solutions and innovations [1,4,5]. Industry 5.0 is determined not only by the competitiveness and productivity of industries. Current challenges require balanced economic development and

solutions to social and environmental problems. In the concept of Society 5.0, innovation has a social focus and is interdisciplinary and intersectoral. In this regard, creating social well-being and improving the population's level and quality of life becomes a priority for public-private partnerships [4] (p. 3). In this regard, Mazzucato's idea that openness and cooperation are critical success factors is significant [6] (p. 5). In modern society, the role of citizens is the role of active participants in the innovation process. This article fills a gap in the discussion of the demoethical foundations for ensuring economically successful social innovations that contribute to the reasonable, sustainable development of Society 5.0. Social innovations involve interdisciplinary research in which ideas about social values (ethics), types of organizations (institutional theory), and stakeholders (traditions, ideologies) are interconnected.

This article is focused on the study of demoethical issues and ethical phenomena that allow the identification of the demoethical phenomena of society. In interpreting the meaning of demoethics, we proceed from the notion of δῆμος, which from ancient Greek means demos, "the people". This position is because in Ancient Greece the term "demos" denoted free citizens with civil rights [7]. This concept correlates with the concept of democracy and is one of the most significant in matters of sustainable development of society.

The concept of "demoethics" emphasizes the social nature of ethical norms that are significant and are carried out by free citizens who have rights and obligations to society. In modern science, there is no comprehensive study in the field of the sustainable development of society considering the component of "demoethics". "Demos" and "Ethics" are the terms we use to combine applied ethics and social innovation that contribute to the sustainable development of society. On this basis, we have developed a new model for organizing the activities of the sustainable development of society as an increase in the population's competitiveness and quality of life.

The need to find sustainable foundations for the development of modern society is associated with the crisis of modernity, which is multifaceted [8–10]. Modern crises do not manifest themselves purely as economic ones. Understanding them requires a more comprehensive theory about values in society. Crises are global and, thus, complicate the social order system of norms and rules, among which there is a particular need to clarify the interpretation of "ethical". In this regard, this article is devoted to the study of the demoethical phenomena of society, since the institution of democracy is one of the most significant in the paradigm of sustainable development.

The development of humankind has led to an imbalance of various components, which can be expressed as a system of "nature-people-society". The interaction of society and nature has become today one of the most pressing problems of our time. Therefore, the issues related to the development of an adequate ecological consciousness [11–14], based on the scientific and philosophical understanding of the unity of people and nature, are especially acute.

Forming an environmentally oriented consciousness guarantees sustainable development, since it is aimed at shaping people's behavior in a way that does not deprive future generations of the opportunity to live in a state of well-being. This means that ecological creation recognizes the priority of the ethical norms of the demos, which contribute to the survival of society and nature.

Identifying new demoethical phenomena of society contributes to the development of a new model for organizing the activities of the sustainable development of society as an increase in the population's competitiveness and quality of life. Therefore, within the framework of this article, it is proposed to reveal the main components of "demoethics".

The culture and identity of society ensure the sustainable development of society and the possibility of effective social innovations. A.K. Verbos et al. put forward the view that "an ethical identity exists in an organization, and how genuine leadership, coherent processes, and ethical culture interact to promote this" [15] (p. 28). A. C. da Rocha and I. Calzada defined and substantiated the leading research tool ("Demos-Ethos Framework")

as a blueprint that can be adapted to similar conditions [16]. A. C. da Rocha and I. Calzada developed an ethical approach by creating a framework for defining the ethical aspects of social innovation and testing it in a specific context, such as the crisis experienced in the past few years in Iceland.

Over the past few decades, ethics has become more and more applied, which makes it necessary to use normative-philosophical analysis to interpret phenomena related to the medical field [17–19], education [20–22], the existence of information in the media space [23–25], the political field [26–28], and environmental protection [29–32]. Therefore, ensuring the sustainability of society is impossible without ethical foundations and principles. Identifying the basic principles of demoethics contributes to forming a worldview to ensure the sustainable development of the modern world. The practical implementation of the research is provided by demoethics as a new model of sustainable development of society for the new time, based on the mechanisms for the implementation of demoethics, and transforming sustainable development [33].

The idea of the demoethical basis of sustainability is based on the idea of spirituality as the basis of a new scenario for the development of society and its relationship with nature [34,35], and on the integration of demographic and economic components in system-wide modeling [36–38]. The demoethical conditionality of social relations is based on the relationship between what should be and what is.

The main focus of this article is to propose a demoethical model that aims to enhance sustainable development by organizing activities more efficiently and effectively. The model is designed to improve the overall sustainability of developmental initiatives.

The demoethical model presented in the article is highly relevant to the discussion of Society 5.0 and Industry 5.0 organizations. The model's primary objective is to organize activities for sustainable development, which aligns with the goals of both Society 5.0 and Industry 5.0. Society 5.0 emphasizes the need to create a human-centered society that leverages digital technologies for the betterment of individuals and communities. The demoethical model, with its focus on improving population competitiveness and quality of life, aligns perfectly with this vision. It recognizes the importance of organizing activities in a way that empowers individuals and enhances their well-being, thus, contributing to the achievement of a human-centered society.

Likewise, Industry 5.0 emphasizes the integration of humans and advanced technologies in manufacturing and innovation processes. The demoethical model, which prioritizes education, knowledge, and ethical norms, supports this integration by placing humans at the center of development. By valuing education and nurturing, the model promotes the development of a skilled workforce capable of effectively collaborating with advanced technologies.

Moreover, the demoethical model acknowledges the significance of sustainable development, which is a key aspect of both Society 5.0 and Industry 5.0 organizations. The model contributes to the long-term well-being of individuals, communities, and the environment by organizing activities that promote sustainable development.

The demoethical model discussed in the article is in line with the principles and goals of sustainable development. It aims to arrange sustainable development activities while prioritizing population competitiveness and quality of life. This model helps achieve a society that places humans at the center and integrates advanced technologies successfully in Industry 5.0.

It is essential to establish demoethical guidelines for Society 5.0 and Industry 5.0. These advancements require a thorough understanding and integration of demoethical principles to maximize their benefits while minimizing potential risks [39–41]. As these concepts reshape human relationships, it is crucial to address demoethical issues proactively to ensure responsible and sustainable development. Society 5.0 and Industry 5.0 represent significant leaps in human–computer interaction and the integration of digital technologies across society. These ideas, including smart cities, the Internet of Things (IoT), advanced automation, and artificial intelligence (AI), aim to create harmony between humans, society,

and technology [42–44]. However, as these innovations become more prominent in our lives, ethical concerns emerge, highlighting the need for robust demoethical frameworks, as follows:

1. **Balancing innovation and human well-being.** The development and implementation of Society 5.0 and Industry 5.0 must prioritize harmonious coexistence between technological progress and safeguarding human well-being [45–48]. Balancing innovation with demoethical considerations becomes crucial to prevent unintended negative consequences, such as privacy breaches, job displacements, discrimination, or social inequalities. Demoethical frameworks can guide policymakers, industry leaders, and researchers to proactively address emerging challenges, ensuring technology's alignment with societal welfare.

2. **Human-centered design and personal autonomy.** Society 5.0 and Industry 5.0 aim to empower individuals and enhance their quality of life [49–51]. However, demoethical dilemmas may arise concerning the potential erosion of personal autonomy, privacy, and the potential for technology to influence or manipulate individuals. Developing demoethical guidelines that promote human-centered design principles becomes paramount to maintaining personal agency, empowering users to retain control over their lives and decisions when interacting with technological ecosystems.

3. **Allocating responsibility and accountability.** As machines and AI systems become increasingly autonomous and influential, issues surrounding responsibility and accountability emerge [52–54]. Demoethical frameworks must address the challenges of assigning liability when incidents occur involving intelligent systems. Ensuring transparent decision-making processes, clear lines of responsibility, and allowing for redress can help protect individuals and uphold justice within the Society 5.0 and Industry 5.0 landscape.

4. **Demoethical considerations in data and privacy.** The widespread adoption of Society 5.0 and Industry 5.0 generates vast amounts of data, raising ethical questions regarding its collection, storage, and utilization [55–57]. Protections against data misuse, unauthorized access, and breaches of privacy are vital to maintain public trust and ensure individual rights. Demoethical frameworks should establish guidelines that prioritize data privacy, informed consent, and transparency, and provide individuals with greater control over their personal information.

5. **Equity and social inclusion.** The societal transformations brought about by Society 5.0 and Industry 5.0 can exacerbate existing inequalities if not managed ethically [58–60]. Demoethical frameworks must address the potential for digital divides, discrimination, and the exclusion of marginalized populations. By ensuring equal access to technology, promoting digital literacy, and addressing biases in algorithms and data collection processes, demoethical guidelines can foster a more inclusive and equitable technological future.

6. **Sustainability and environmental responsibility.** The demoethical implications of Society 5.0 and Industry 5.0 extend to their impact on the environment [61–63]. Sustainable development principles should guide the design and deployment of technologies, minimizing energy consumption, reducing waste, and mitigating the carbon footprint associated with these advancements. Demoethical frameworks should emphasize long-term environmental considerations and ensure the responsible use of resources in pursuit of societal progress.

2. Materials and Methods

A systematic approach was used as a general methodological approach, within which logical, statistical analysis and synthesis methods, goal setting, and decomposition of goals are provided. We proceed from the fact that demoethics affects the effective implementation of economic, scientific, technical, and social innovations [33,64]. Based on the analysis, the foundations of demoethics as a methodological approach to the concept of sustainable development of society are revealed.

This article presents a demoethical model for facilitating sustainable development in society and improving the quality of life and competitiveness of its population. The model

is based on the concept of “demoethics,” which focuses on three key aspects: (1) defining fundamental values, (2) addressing institutional relationships, and (3) shaping social order.

The research objectives are split into three stages. In the first stage, we will analyze theoretical and methodological approaches to interpreting demoethical norms and identifying values that contribute to sustainable societal development. We will also conduct a comprehensive literature review to identify and analyze existing theoretical and methodological approaches to the interpretation of demoethical norms and phenomena. Additionally, we will study the relevant literature on sustainable development, focusing on the relationship between demoethical values and societal well-being.

Moving on to the second stage, our study will focus on identifying the fundamental demoethical phenomena that are embodied in a virtuous person, ruler, and city.

Finally, in the third stage of the study, we will describe the demoethical model of organizing a sustainable development society.

Our study suggests that the implementation of the demoethical model and organizing sustainable development activities can contribute to a new worldview that ensures the modern world’s sustainable development. This model is particularly relevant when discussing Society 5.0 and Industry 5.0 organizations. Society 5.0 envisions a future where digital technologies and artificial intelligence are used to create a human-centered society that balances economic development with social progress. Industry 5.0, on the other hand, focuses on a collaborative and integrated approach to manufacturing, where humans and advanced technologies work together to create innovative products and services.

The demoethical model proposed in this study aligns with the principles of Society 5.0 and Industry 5.0 by emphasizing the importance of values, such as education, knowledge, science, and honest work. These values are integral to the sustainable development of society and the successful functioning of Industry 5.0 organizations.

By prioritizing the population’s competitiveness and quality of life, the demoethical model promotes a human-centered approach to development, which is a key aspect of Society 5.0. It recognizes the need to empower individuals through education and nurturing and to leverage the power of knowledge and science to drive progress. Furthermore, the demoethical model acknowledges the significance of ethical norms in social relations. It highlights the relationship between what is due and what exists, emphasizing free citizens’ ethical obligations and responsibilities to society. This demoethical foundation is crucial when striving for a sustainable future, both in Society 5.0 and in the operations of Industry 5.0 organizations.

The demoethical model of sustainable development is in line with the values and objectives of Society 5.0 and Industry 5.0 organizations. The model prioritizes human-centered approaches, ethics, knowledge, and collaborative development.

Limitations

The literature review concentrates on a specific range of sources that are relevant to the research objectives, but it may not cover all of the existing literature on the topic or include every possible theoretical and methodological approach. The demoethical norms and phenomena identified, along with the proposed demoethical model, may have limitations regarding generalizability to different cultural or societal contexts. The research findings are context-specific, and further studies are necessary to validate and adapt the proposed model in various contexts. The research is primarily based on theoretical and conceptual analysis and lacks significant empirical evidence. While theoretical studies offer valuable insights, additional empirical research is required to validate and refine the proposed demoethical model.

3. Results

The issues of sustainable development of modern society, leading to social and economic well-being, have a philosophical aspect. In this regard, demoethics is considered a fundamental factor in the functioning of the proposed social development model. De-

moethics can be defined as the ethical framework that governs the application of ethical principles in society, particularly concerning open interdisciplinary problems. It serves as a bridge between the aspirations of individuals and the norms and values of society. Figure 1 presents a set of indicators, grouped by implementation tools, rounding out the relationship “Demos-Ethics”.

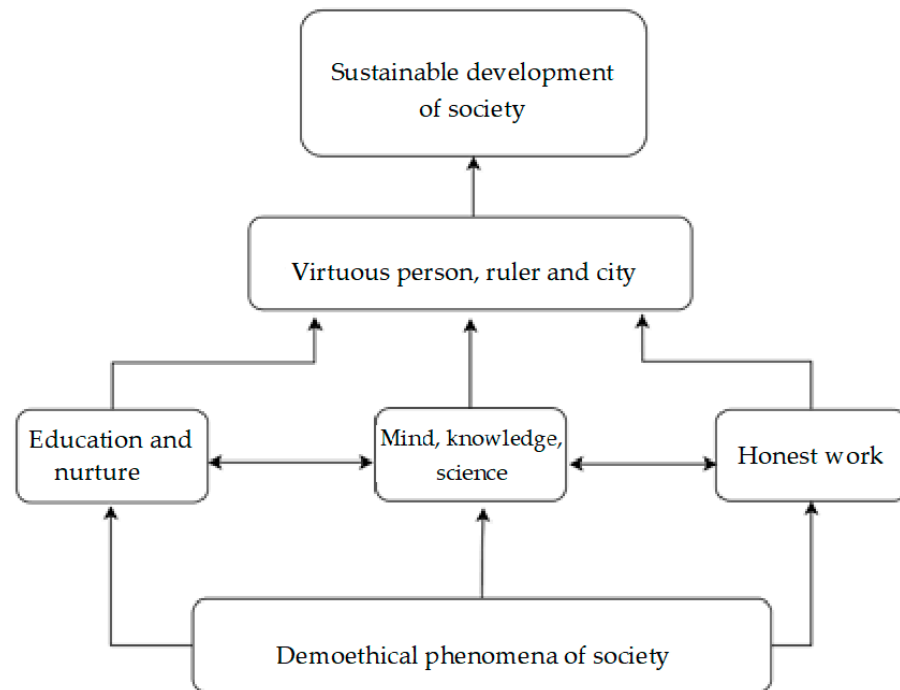


Figure 1. Demoethical model of the organization of a sustainable development society. Note: Developed by the authors.

The aspirations of the individual can be realized in the presence of social and ethical norms, that is, with the harmonious co-development of society and the individual. In this case, demoethics is applied ethics, the subject field of open problems of an inter-disciplinary nature, which are considered in the social space.

The demoethical component becomes significant in the worldview of a person of the 21st century. Today, society is called upon to solve such complex and intense ethical problems as orphanhood, poverty, need, assistance to the needy, the problems of the elderly, and the disabled. These problems are present to varying degrees in every modern society, depending on the will of this society, and require institutional control.

Society 5.0 is a concept that envisions the convergence of digital transformation and the well-being of individuals and society. It emphasizes the pursuit of a sustainable and human-centered society. Industry 5.0 complements this vision by integrating advanced technologies with compassionate decision-making.

In the context of Society 5.0 and Industry 5.0, a virtuous person achieves a harmonious balance between technological advancements and ethical considerations. A virtuous person embodies qualities, such as integrity, empathy, and respect for others. They are conscious of the impact of their actions, both on the environment and society. A virtuous person is committed to sustainable development, demonstrating responsible behavior, and promoting the well-being of others.

Ethical governance plays a crucial role in achieving sustainable development within the framework of Society 5.0 and Industry 5.0. The ruler, as a key figure in governance, is responsible for shaping policies that prioritize sustainability, social justice, and the well-being of citizens. The ruler’s decisions should be guided by ethical principles, considering the long-term consequences and impacts on society and the environment. Ethical governance

fosters trust, transparency, and accountability, ensuring that decisions align with the goals of Society 5.0 and Industry 5.0.

The sustainable city is a fundamental component of Society 5.0 and Industry 5.0. It incorporates advanced technologies, innovative infrastructure, and sustainable practices to enhance the quality of life while minimizing environmental impact. Sustainable cities prioritize efficient resource management, renewable energy, resilient urban planning, and equitable access to services. They promote social cohesion, citizen well-being, and sustainable economic development. By leveraging digital technologies, sustainable cities optimize resource utilization, reduce carbon emissions, and enhance connectivity and communication.

Technological advancements are integral to the realization of Society 5.0 and Industry 5.0 goals. Artificial intelligence, robotics, the Internet of Things, and big data analytics empower individuals, cities, and governance systems to make informed decisions, optimize resource allocation, and create sustainable solutions. These advancements offer opportunities to address societal challenges, such as climate change, poverty, and inequality. However, it is essential to ensure that ethical considerations, privacy protection, and inclusivity are prioritized in the application of these technologies.

In the context of Society 5.0 and Industry 5.0, sustainable development can be achieved by fostering the virtuous person, promoting ethical governance, and creating sustainable cities driven by technological advancements. A virtuous person recognizes the importance of sustainable practices and acts as a responsible citizen, driving positive change. Ethical governance ensures that policies promote sustainable development aligned with societal needs. Sustainable cities leverage technology to optimize resource utilization and enhance citizen well-being.

The paradigm of sustainability is a very significant survival factor, namely the spread of environmental imperatives. In modern times, ecology is becoming a vulnerable area of human life, affecting the possibility of the survival of humanity itself. Education for the pro-ecological development of a person creates a culture of broad development in society and nature, and in social and biological spheres [33,65]. Education for environmental sustainability aims to address the contemporary challenge of culture versus nature.

Demoethics is implemented as a philosophical doctrine of the social goals and values of modern society and implies the presence of the cultural identity of each society in solving complex issues. Sustainable development aims to create a balance between economic growth, social progress, and environmental protection. To improve the competitiveness and quality of life of the population, several tools can be employed. Therefore, demoethics includes components, which are indicated in Figure 1, and tools for implementing the organization of the sustainable development of society as an increase in the competitiveness and quality of life of the population (Table 1).

The realization of individual aspirations is intrinsically linked to the presence of social and ethical norms. Demoethics, as an applied ethical framework, facilitate the harmonious co-development of society and the individual by addressing open interdisciplinary problems within the social sphere. By recognizing the interconnectedness between individual aspirations and societal norms, demoethics provides a valuable platform for promoting responsible behavior and sustainable development. It fosters collaboration among different fields, enabling a comprehensive understanding and resolution of challenges faced by society. Ultimately, by embracing demoethics, societies can strive towards balanced co-development, ensuring the well-being and fulfillment of both the individual and the collective.

The collaborative efforts between science, education, and production play a crucial role in sustainable development. Mobilization interaction involves fostering partnerships and knowledge exchange between these sectors. By promoting research and innovation, disseminating scientific knowledge, and enabling the transfer of technology, this tool drives economic growth, enhances productivity, and improves the quality of goods and services

available to the population. Moreover, investment in education and skill development ensures a competent workforce capable of meeting the demands of a dynamic society.

Table 1. Tools for organizing the sustainable development of society to increase the population's competitiveness and quality of life.

N	Tools of the Mechanism	Content	Main Participants
1	Mobilization interaction, and development of science, education, and production	For mobilizing the authorities, it is necessary to develop programs that contain references, which provide for the possibility of involving universities as significant participants in this process	Scientists, teachers, the business community and quasi-public companies, and the government
2	Development of crafts and business in society	A set of actions aimed at implementing favorable conditions for effective development that meet the needs of society and business	The craft of residents, the business community and quasi-public companies, and the government
3	Cooperation	Development of joint projects of stakeholders and businesses on the so-called "information mediation"	The craft of residents, the business community and quasi-public companies, and the government
4	Clustering	Development of joint development programs within the framework of the creation of industry groups	The craft of residents, the business community and quasi-public companies, and the government

Note: Developed by the authors.

Developing crafts and fostering a thriving business environment are essential for sustainable development. By supporting entrepreneurial ventures and small-scale industries, societies can harness local talents and resources, creating jobs, increasing income levels, and stimulating economic growth. Encouraging craftsmanship preserves traditional knowledge and cultural heritage, while also promoting sustainable production practices. Incorporating sustainable principles, such as responsible resource management, waste reduction, and ethical supply chains, ensures that these businesses contribute to the long-term well-being of society.

Cooperation is a foundational tool for sustainable development. It involves fostering partnerships and collaboration among various stakeholders, including governments, civil society, businesses, and communities. Cooperation enables the sharing of resources, knowledge, and expertise, facilitating the development and implementation of sustainable policies and practices. It encourages transparency, inclusivity, and participatory decision-making processes, ensuring that the diverse needs and perspectives of the population are considered. By working together, societies can address complex challenges, promote social cohesion, and create resilient communities.

Clustering refers to the concentration of related industries, businesses, and organizations in a specific geographical area. This tool promotes collaboration, enhances knowledge exchange, and facilitates innovation through proximity and networking. Clusters allow for the sharing of infrastructure, resources, and services, enabling businesses to reduce costs, increase efficiency, and gain a competitive advantage. Moreover, clustering fosters specialization, leading to the development of unique expertise and promoting economic diversification. By encouraging clustering, sustainable development can be achieved by leveraging collective strengths, promoting regional development, and stimulating economic growth.

By using these tools, societies can sustainably organize their development efforts, leading to improved competitiveness and quality of life for the population. These approaches foster collaboration, innovation, and responsible practices, enabling societies to meet present needs without compromising the ability of future generations to meet their own needs.

These tools for organizing sustainable development are closely related to the concepts of Society 5.0 and Industry 5.0. Society 5.0 is a future vision of society that aims to harmonize economic development with the resolution of social challenges by leveraging advancements

in technology. It emphasizes the integration of digital technologies, such as artificial intelligence, big data, and the Internet of Things, to create a human-centered society. The tools mentioned align with the principles of Society 5.0 by promoting collaboration, innovation, and sustainable practices, as follows:

- In Society 5.0, mobilization interaction highlights the importance of collaborative efforts between science, education, and production. It recognizes that combining expertise from these sectors leads to technological advancements, innovations, and sustainable solutions. By leveraging scientific research and knowledge exchange, Society 5.0 aims to improve the quality of goods and services while addressing societal challenges.
- The development of crafts and fostering a thriving business environment are also relevant to Society 5.0. This concept emphasizes the importance of entrepreneurship and the role of businesses in driving societal progress. Supporting small-scale industries and entrepreneurial ventures not only promotes economic growth but also encourages innovation and creativity. Society 5.0 seeks to create an environment where businesses provide solutions to social challenges through sustainable and ethical practices.
- Cooperation is a fundamental component of Society 5.0. This concept emphasizes the need for collaboration among different stakeholders, including governments, businesses, academia, and communities. Cooperative efforts enable the pooling of resources, knowledge sharing, and joint problem solving. Society 5.0 aims to foster a culture of collaboration, ensuring that decision-making processes are inclusive and that societal challenges are addressed collectively.
- Clustering plays a crucial role in Industry 5.0, which focuses on the integration of advanced technologies, such as robotics, automation, and artificial intelligence, in industrial processes. Clustering involves the concentration of related industries, businesses, and organizations in a specific geographic area. This approach promotes collaboration, knowledge exchange, and innovation. It enhances productivity, enables the sharing of resources and infrastructure, and stimulates economic growth. Clustering aligns with the goals of Industry 5.0 by fostering specialization, promoting regional development, and driving advanced manufacturing processes.

These tools for organizing sustainable development relate to Society 5.0 and Industry 5.0 by emphasizing collaboration, innovation, sustainable practices, and the integration of technology to create a human-centered and technologically advanced society.

4. Discussion

The demoethical model of organizing the activities of sustainable development of society as an increase in competitiveness and the quality of life of the population includes several components that require clarification.

4.1. Education and Nurture

Education and nurture are components of the demoethical model in organizing activities for the sustainable development of society. The pursuit of sustainable development in society requires a comprehensive and multi-faceted approach that includes education and nurture as integral components. The demoethical model of organizing activities offers a framework that emphasizes the importance of shaping individuals' values, knowledge, and skills to foster a sustainable future.

Sustainable development necessitates the harmonious coexistence of social, economic, and environmental aspects. To achieve this harmony, the demoethical model recognizes the vital role of education and nurture. Education provides individuals with the knowledge, skills, and values necessary to understand and address the challenges of sustainability. Nurture, on the other hand, emphasizes the importance of instilling ethical and responsible behavior in individuals from a young age. Together, education and nurture form a powerful combination that can drive the transformation of society toward sustainability.

Education plays a fundamental role in the demoethical model by facilitating the acquisition of knowledge and skills related to sustainability. It fosters a deep understanding of the interconnectedness between human actions and the environment, promoting a sense of environmental responsibility. Education also equips individuals with critical thinking and problem-solving skills necessary to tackle complex sustainability issues.

Firstly, environmental education is essential in promoting sustainable development. It enhances individuals' understanding of ecological systems, biodiversity, climate change, and natural resource management. By cultivating awareness and knowledge about environmental issues, education empowers individuals to make informed decisions, adopt sustainable practices, and support policies that promote ecological balance.

Secondly, education can contribute to sustainable economic development. It equips individuals with the necessary skills and competencies to navigate a rapidly changing labor market. By incorporating sustainability-focused topics into curricula, education systems can produce professionals capable of addressing the challenges posed by the transition to a green economy. These professionals can develop and implement sustainable production and consumption practices, foster innovation, and contribute to the sustainable growth of industries.

Thirdly, education enhances social sustainability by promoting inclusive societies. It cultivates values, such as empathy, respect, and tolerance, fostering social cohesion in diverse communities. Education also plays a crucial role in eradicating poverty and reducing social inequalities by providing equal opportunities and access to quality education for all individuals, regardless of socioeconomic background.

Nurture complements education by emphasizing the importance of ethical and responsible behavior. It recognizes that sustainable development is not solely dependent on knowledge and skills, but also on fostering a sense of environmental and social responsibility in individuals. Nurture begins in early childhood and encompasses the upbringing, socialization, and moral development of individuals.

In the context of sustainable development, nurture encourages individuals to develop an ethical framework centered around social and environmental consciousness. It emphasizes values, such as compassion, solidarity, and intergenerational equity. By nurturing these values, individuals are more likely to adopt sustainable lifestyles, make ethical choices, and actively contribute to sustainable development through their behaviors and actions.

Education today is less and less a private matter. Education by the will of society becomes a grandiose and adequate response to the challenges to challenges that have arisen in the environmental and social spheres [1]. Table 2 shows that education is a mechanism for implementing demoethics. The objects and institutions of education are changing in the conception of Society 5.0 in terms of their composition, content, and significance for the educational process. An important role in this process is beginning to be played by virtual means of influence, namely mass media and the Internet [66–68]. But, still, human factors themselves retain considerable educational power, including self-education and the influence of peer groups. It is essential for the theory of education that in the conditions of globalization, the influence of hierarchical social structures traditional for society decreases, and a significant part of human activity passes into a network society [69,70].

It is unthinkable to restrict access to information sources. In connection with this circumstance, there is a need to develop a moral absolute that could perform the functions of a guiding imperative. In this regard, the most important aspect should be the principle of correct intellectual discrimination. In this regard, the consideration of the heritage of philosophers who tried to find the image of an ideal person, the best option for social relations, regulating the political situation, and creating harmony in the whole world today looks the most relevant.

Table 2. Education as a mechanism for implementing demoethics.

N	Mechanism Tools	Content
1	The process of nurturing and educating children in kindergarten and school	Definition of a comprehensive goal that corresponds to the goals of sustainable development, including both internal and external principles of cooperation, to form in children and adolescents a reverent attitude towards the environment, because people and nature are a single whole, that is, interdependent units.
2	Obtaining knowledge and skills within the framework of interaction between the university and production, as well as science	The establishment of specific end states of the interaction model or the desired result. Regional industry and business should be included in the management structure at universities. This process will allow for the transfer of knowledge and technology in practice, as it operates in the countries of Western Europe, the USA, and Canada.
3	SWOT analysis	Analysis of the strengths and weaknesses of the socio-economic development of the region, as well as potential opportunities and threats.

Al-Farabi's idea of a virtuous society (a person, a ruler, and a city) is used in the new model of demoethics. In the treatises of al-Farabi, specific methods of educating virtue using knowledge are proposed [71–74]. He divided them into “soft” and “hard”. If the students themselves show a desire to master the sciences, a desire for work and good deeds, then in this case soft methods of education are appropriate, helping to strengthen these aspirations. If the students are malicious, self-willed, and lazy, it is possible to apply “hard methods” to them, i.e., coercion.

Al-Farabi's concept of the soft and hard methods of education continues to be relevant in modernity. By recognizing the importance of moral virtues and intellectual training, contemporary educational practices can foster well-rounded individuals equipped with empathy, critical thinking abilities, and ethical values. Integrating the soft and hard methods in education enables societies to address the complex challenges of the modern world and prepare individuals to become responsible global citizens. Al-Farabi's insights remain valuable in shaping modern educational strategies centered on the holistic development of individuals and their capacity to contribute meaningfully to a rapidly evolving society.

Education in modern times aims to equip individuals with the skills, knowledge, and values necessary for personal growth, societal progress, and global challenges. Al-Farabi, an esteemed philosopher and scholar from the medieval Islamic world, proposed the concept of soft and hard methods of education that continue to hold significance in contemporary educational discourse.

Al-Farabi's soft method, which emphasizes the cultivation of moral virtues, aligns well with the growing emphasis on character development in modern education. The globalized world faces numerous challenges, requiring individuals to possess certain qualities, such as empathy, collaboration, and ethical decision-making. Soft methods, as advocated by al-Farabi, provide a holistic approach to education by focusing on the development of virtues, such as honesty, compassion, and justice. Incorporating moral and ethical education in modern curricula is essential to nurture responsible citizens capable of handling moral dilemmas and contributing positively to society.

Modern pedagogical theories recognize the importance of moral education, as evidenced by the increasing attention given to social–emotional learning (SEL). SEL programs aim to develop students' emotional intelligence, empathy, and social skills, aligning with the soft method of education. By teaching virtues and encouraging moral refinement, modern educational practices can help individuals become more empathetic, understanding, and morally upright.

The hard method of education, focusing on intellectual training, remains highly relevant in contemporary society, where critical thinking, problem-solving, and analytical skills are crucial for success. In an era characterized by rapid technological advancements

and information overload, individuals need intellectual resilience, adaptability, and analytical capabilities to navigate complex issues. Al-Farabi's emphasis on subjects, such as mathematics, logic, and metaphysics, aligns well with the modern demand for a strong foundation in STEM (science, technology, engineering, and mathematics) education.

Al-Farabi's concept of integrating soft and hard methods offers a balanced approach that addresses the multifaceted needs of individuals in modern society. Modern education should strive to combine both methods to develop well-rounded individuals who possess not only the intelligence and skills to excel academically and professionally but also the moral compass and emotional intelligence to contribute positively to their communities.

Educational practices integrating the soft and hard methods can be realized through interdisciplinary education, project-based learning, and a holistic approach to curriculum design. By leveraging the insights from al-Farabi's concept, educators can create learning environments that foster critical thinking, compassion, and virtuous behavior. Moreover, the integration of technology in education can facilitate the implementation of both methods, providing adaptive learning platforms that cater to individual needs while promoting moral growth and intellectual stimulation.

At the same time, the use of such methods should be determined by the level of morality of the educator himself. Many philosophers, including sociologist Herbert Spencer, believe that the purpose of education is to form a being capable of controlling himself, and not one that can only be controlled by others [75]. The return of the subject of education to the scientific discourse and the practice of modern educational institutions led to the educator again looking for an opportunity to rely on the proportionality of a person to nature, and now educators have an arsenal design technologies that allow implementing high, large-scale ideas in a small but well-planned business, to form moral guidelines for the pupil [76–78].

4.2. *Mind, Knowledge, Science*

The demoethical model thrives on the integration and synergy between the mind, knowledge, and science. The mind, through critical thinking and ethical decision-making, engages with sustainability challenges. Knowledge provides individuals with the necessary understanding of sustainability concepts, while science provides the tools for analyzing and addressing these challenges effectively.

The integration of these components promotes a holistic approach to organizing activities for sustainable development. By combining the cognitive faculties of the mind, the acquisition of knowledge, and the systematic approach of science, individuals, and societies can develop solutions that tackle the complex and interconnected nature of sustainability issues.

The demoethical model, which strives to promote sustainable development in society, encompasses several critical components, including the mind, knowledge, and science. The mind enables individuals to understand and engage with sustainability challenges, while knowledge empowers them to make informed decisions. Science, as a systematic and evidence-based approach, provides the tools necessary for analyzing complex sustainability issues and developing effective solutions.

The mind plays a vital role in the demoethical model by allowing individuals to perceive, comprehend, and engage with sustainability challenges. It encompasses cognitive faculties, such as perception, reasoning, judgment, and ethical decision-making. Through the mind, individuals develop an awareness of the interconnectedness of human actions and their impact on the environment and society.

Firstly, the mind enables individuals to understand the need for sustainable development by comprehending the consequences of unsustainable practices. It fosters an appreciation of the finite nature of resources, the fragility of ecosystems, and the urgency of ensuring a livable future for generations to come.

Secondly, the mind facilitates critical thinking and ethical decision-making. It encourages individuals to question prevailing norms and practices, evaluate their environmental

and social implications, and make choices that align with sustainable development principles. By engaging their minds and adopting an analytical approach, individuals can overcome cognitive biases and embrace a mindset that supports sustainability.

Knowledge forms another crucial component of the demoethical model as it equips individuals with a comprehensive understanding of sustainability challenges and solutions. It encompasses information, theories, principles, and concepts related to the environment, society, and economy.

Firstly, knowledge enables individuals to understand the interconnected nature of sustainability issues. It provides a holistic perspective on ecological systems, climate change, natural resource management, renewable energy, and social justice. By acquiring this knowledge, individuals can appreciate the complex interdependencies and dynamics of these issues, informing their decisions and actions.

Secondly, knowledge empowers individuals to make informed decisions toward sustainable development. It equips them with the necessary knowledge about sustainable practices, eco-friendly technologies, and responsible consumption. With this knowledge, individuals can make choices that minimize their environmental footprint, promote social equity, and support sustainable economic growth.

Knowledge has an experiential character; people are not born wise but become wise. In this regard, the distinction between such types of knowledge as “knowing how” and “knowing that” is of great theoretical and practical importance: “ “Knowing how” is a type of knowledge that consists of the possession of certain skills and abilities, that is, its “Knowing that” is a profound statement that the philosopher finds intriguing because it paves the way for understanding how people can reach the truth about the human world” [79] (p. 49).

Wisdom is the ability to put into practice the information obtained as a result of the search for knowledge, which necessitates the combination of “knowing how” and “knowing what”. It is wisdom that makes the transformation of reality possible: “Wisdom in its holistic creative expression is also associated with intellectual humility or recognition of the limits of one’s knowledge, as well as with an understanding of the object being studied in the context of general relationships with objects and processes” [79] (p. 49).

Science, as a systematic and evidence-based approach, plays a crucial role in the demoethical model. It provides the tools and methodologies necessary for understanding, analyzing, and addressing complex sustainability challenges.

Firstly, science promotes an evidence-based understanding of sustainability issues. Through scientific research, data collection, analysis, and interpretation, it enables the identification of environmental trends, social inequalities, and economic patterns. This empirical evidence informs policy formulation, decision-making, and the development of sustainable solutions.

Secondly, science fosters innovation and technological advancements aimed at sustainable development. It drives the development of renewable energy sources, eco-friendly materials, and efficient resource management systems. By employing scientific methods, societies can develop and implement technological solutions that mitigate environmental degradation, reduce carbon emissions, and promote sustainable economic growth.

The world is known by the forces of the person himself. The main property of a person is his rationality. What exists in the world is in motion and development, and they are dialectically interconnected [80–82]. Knowledge is the fundamental philosophical problem of cognition. The main problem of the theory of knowledge is the question of the knowability of the world, and, hence, the boundaries of knowledge. The formulation of this problem relates to the question of a person’s ability to create a picture of things that coincides with objective, true knowledge about the world and reality.

Dialectics is the doctrine of the most general regular connections, the formation and development of being and cognition, and the method of creatively cognizing thinking based on this doctrine. Dialectical knowledge considers all objects and phenomena in terms of general connection and development [83–85]. Socrates was the first to use the

term “dialectics” to refer to the art of conducting an effective dispute, a dialogue aimed at a mutually interesting discussion of a problem to achieve the truth by confronting opinions [86]. Plato, following his teacher Socrates, used dialectics as a logical operation of dividing and linking concepts, which was carried out by asking questions and searching for answers leading to the true definition of concepts [87]. The teachings of metaphysics delve into a still and unchanged view of the universe, where the individual parts are independent and can be examined separately. This dialectical method has fundamentally developed the theory of a dynamic, developing picture of the world, the parts of which are interconnected and interdependent. Cognition is an activity aimed at obtaining knowledge, which determines the allocation in the structure of cognition of the object and the subject of cognition, goals, and results of cognition, means, and levels of cognition, criteria of truth, and process interaction of the subject and object of knowledge.

The result of cognition is knowledge as linguistic, symbolic constructions that reflect the objective characteristics and laws of processes and phenomena. Knowledge is a cognitive result, confirmed both by the practical experience of cognition and by logical activity [87]. Knowledge is divided into objective, revealing the structure of the object, and existential, corresponding to the issues and problems of human existence.

Scientific knowledge involves research practice and subsequent explanation of the facts based on their understanding in the context of the system of concepts of this science [88–90]. Science is a highly organized form of knowledge and research activity, the main task of which is to discover the laws of the world. The law reflects the established stable and regular links between phenomena. The law is a necessary element of science since the description, explanation, and prediction of the phenomena and processes of objective reality take place based on the formulated laws.

The demoethical aspect of knowledge and science is related to Al-Farabi’s belief in the importance of science, virtue, and ethical excellence through the implementation of specific scientific, educational, and innovative projects. Over time, Al-Farabi’s teachings on the virtuous city, Al-Madina al-fadila, have remained relevant and sought after in modern society. Al-Farabi emphasizes the importance of spiritual and moral values, or virtues, as the key solution to all of humanity’s vices. These values must be widely disseminated as a new worldview that is demanded by society.

Demoethics is a form of interaction between science and education, business, and the state based on the justified need for mobilization and sustainable development of science. The article “The triple helix model in the formation of the conceptual mechanism of interaction between higher education and business: a regional aspect” [64] substantiated the need to develop a mechanism by which the problems of single-industry towns (including regions) can be solved, based on an adapted triple helix model, which provides for the diffusion of innovations within the framework of the interaction of partners (business, government, education, and science). According to the study, the developed models and mechanisms were tested on the example of a university in Zhezkazgan Monotown.

The economic well-being of the region is possible based on a knowledge-intensive, competitive, socially- and ecological-oriented economy [33,34,64]. The universality of the model and the proposed mechanism lies in the fact that it solves problems and satisfies the needs of all participants (business, government, education, and science). Universities have the opportunity to focus their educational programs on the needs of employers while combining educational and scientific activities. This process will be reflected in the indicators of the quality of training specialists for the industry of the single-industry town, and their purposeful training for production [64,91]. A significant impetus and motivational effect are given to regional business, which immediately acquires an innovative character since it is tied into a single system of relationships with science based on a local university and a city-forming enterprise. The proposed model makes it possible to involve all its participants in the process of joint research and ensure the process of technology transfer to business.

4.3. Honest Work

In recent decades, there have been significant value transformations in society, which led to a change in the axiological sign of many traditional concepts. One of the main concepts related to the field of social and moral virtues is the concept of “diligence”. It is in this area that, from our point of view, the most significant changes have taken place. Now we can say with full confidence that the attitude to work has lost the high moral status that took place in previous eras.

We agree with the opinion of Abai Kunanbayev, who considered this problem and believes that acquiring mastery, studying, working, and being educated are indicative of a person who knows their worth. He cared about the fate of the people, believed that it was necessary to work in the name of humanity, and called for loving a person as a native [92,93]. A characteristic feature of the thinker’s views is the close linking of social problems with ethical ones. Abai Kunanbayev praised the work of a peasant cattle breeder, the work of a craftsman, and any honest individual work, which, according to him, not only creates new values but also ennobles the human soul. He put simple work above the origin, wealth, and high ranks, but also believed that you can become rich if you work hard and spend your accumulated money sparingly, and laziness and waste are the cause of poverty and misery.

Pragmatic dominance becomes decisive both concerning life and work. As R.N. Ziyatdinov notes in his research: “Today, society is dominated by an “economically rational” person, for whom work is not a meaningful human activity in itself but a means to receive monetary remuneration” [94]. The work emphasizes the active existence of a person, which has a positive moral significance. Destructive activity, even though it also requires “labor” efforts, is not commonly called labor.

In the dictionary of V. I. Dahl, work is generally defined as a positive activity: “work, occupation, exercise, business; everything that requires effort, effort and care” [95]. Work is, thus, characterized as a positive activity, which contains a positive moral property. The attitude to work often acts as a criterion of morality. This idea is true since “effort, diligence and care” are aimed at overcoming the present situation (from “existing” to “due”). Thus, the moral impulse is contained in the very basis of the labor act. Craft is one of the main tools of development in a person for hard work.

The demoethical model seeks to promote sustainable social development by incorporating honesty as a fundamental component of organizing activities. Sustainable development entails the harmonious coexistence of economic, environmental, and social dimensions while ensuring equity and fairness. The demoethical model recognizes the significance of honest work as a crucial component in organizing activities for sustainable development. Honesty fosters trust, integrity, and cooperation within organizations, leading to responsible decision-making and fair distribution of resources.

Honest work discourages discrimination, favoritism, and corruption within organizations. By fostering a culture of fairness and equal treatment, it empowers individuals to voice their concerns, participate in decision-making processes, and contribute to sustainable development initiatives. This integration of fairness and equity within the demoethical model promotes social cohesion and inclusivity, ensuring that the benefits of sustainable development are accessible to all members of society.

Honest work also encompasses ethical decision-making practices within organizations. Ethical decision-making involves considering the long-term consequences of actions, evaluating their environmental and social impacts, and making choices that align with sustainability principles. It involves considering ethical frameworks, such as environmental ethics and social justice, when making decisions that impact sustainable development.

Ethical decision-making within the demoethical model is rooted in a commitment to honesty, integrity, and seeking the greater good for society. It encourages individuals to consider the values and principles of sustainability when making choices, beyond short-term profits or personal gains. By incorporating ethical decision-making, honest work

ensures that organizations actively contribute to sustainable development by prioritizing the well-being of people and the planet.

The integration of honest work within the demoethical model yields several benefits for sustainable development. Firstly, it strengthens stakeholder relationships by fostering trust, cooperation, and engagement. Trust enables effective collaboration and knowledge-sharing, enhancing collective efforts toward sustainability.

Secondly, honest work promotes innovation and creativity within organizations. When individuals feel empowered, valued, and trusted, they are more likely to contribute innovative ideas and solutions to sustainability challenges. Honest work creates an environment that encourages experimentation, learning, and continuous improvement.

Finally, honest work drives the accountability of organizations toward sustainable development goals. By aligning their actions and decisions with ethical principles, organizations become more conscious of their impact on the environment and society. This accountability promotes responsible resource management, environmental conservation, and social well-being.

Handicraft skills and the development of entrepreneurship in society are considered tools for developing competitiveness and strengthening the resilience of local communities in the region to environmental and economic vulnerabilities, as well as public health issues. Crafting is a reliable source of independence and human well-being, as it is above wealth and ranks. According to the Turkic philosopher, riches and ranks can be lost one day, but a craft or a profession is both wealth and a pledge of a person's dignity, and respect for him by others, wherever fate throws him. Al-Farabi believed that every person should do the same thing all his life to achieve the greatest perfection in it. He wrote that everyone in a virtuous city should be assigned one craft that he would only do, and one job that he would do either at the level of service or the level of leadership, beyond which he should not cross [73].

The UNESCO definition describes crafting more accurately: "Handicraft products are products produced by an artisan either entirely by hand, or with the help of hand tools, or also with the help of mechanical means, whenever the direct manual labor of an artisan is still the most important component of the finished product. In terms of quantity, there are no restrictions on the production and raw materials used, supplied from sustainable resources. The special character of artistic crafts is based on their distinctive characteristics, which can be utilitarian, aesthetic, artistic, creative, culturally related, decorative, functional, traditional, symbolic, and significant religiously and socially" [96].

In addition, according to the common terminology of the EU, WTO, and the UN, handicraft activity is a type of professional activity to produce goods, works, and services mainly for consumer purposes in small batches, piece by piece, including individual orders, using special knowledge, special technologies, skills, skills, traditions, and secrets. In France, a craftsman is someone who organizes an enterprise at their own expense, has a professional qualification, provides management of the enterprise, and takes a personal part in its work. The number of employees in such an enterprise should not exceed 10 people, including the owner, family members helping him, employees, and students [97].

Other distinctive features of this sector are the following:

- Unlike industrial products, handicrafts produce individual goods or only a small series of goods;
- Artisans are both local suppliers and subcontractors of large enterprises with their goods and services;
- Handicraft enterprises are located not only in cities but are mainly located in rural areas.

According to the Russian Chamber of Crafts, today about 4–5 million people are engaged in handicraft activities (mainly in the shadow sector). In the future, the 2020 legislative support for handicrafts will allow 3–4 million more people to be trained and retrained in handicraft professions, and up to 7–8 million high-performance jobs will be created [98].

Unlike industry, crafts in Germany are an older sector of the economy. There are 94 professions in the field of crafts, about 600 thousand independent enterprises, and over 6 million employees. The German Government provides support to handicraft enterprises through information support, professional development measures, consultations on entrepreneurship, and the provision of preferential loans and subsidies for vocational education and retraining.

An enterprise is considered handicraft when it has a craft orientation and is engaged in full or to a certain extent in activities that relate to handicraft. The Law “On Handicraft Activity” contains a list of handicraft professions, which the Federal Ministry of Economy approves with the consent of the Bundesrat. The list of craft professions contains 125 names and is divided into the following groups:

Construction activities and finishing works (17 names, for example, bricklayer, carpenter, roofer, tiler, stone sculptor);

Electrical engineering and metalworking (34 names, for example, auto mechanic, auto electrician, tinsmith, watchmaker, engraver, a specialist in the manufacture of artistic products made of gold);

Woodworking (13 names, for example, carpenter, parquet, wood sculptor, cooper, basket maker);

Tailoring, textile, and leather production (18 names, for example, men’s and ladies’ tailor, embroiderer, knitter, shoemaker, tanner, a specialist in the manufacture of handbags, interior design specialist);

Food production (six items, for example, baker, pastry chef, butcher, winemaker, etc.);

Health care, hygiene, dry cleaning, and cleaning (11 names, for example, optician, dental technician, hairdresser);

Glass, paper, ceramic production, and other types of work (26 names, for example, glass and porcelain artist, bookbinder, photographer, ceramics specialist, violin maker) [95].

Thus, the legitimization of handicrafts will become a catalyst for the self-development of small industrial and social entrepreneurship, filling the market with domestic goods and services, expanding the space for the professional self-realization of the younger generation, and addressing issues of the country’s personnel security, including issues of employment and self-employment of the population in small towns and single-industry towns, increasing the stability of public and state institutions. All this lays the foundation for the formation of a society whose economy is based on demoethical principles, including mind and reason, science and knowledge, diligence, and crafts.

These aspects of the craft bring us to the concept of a society of sustainable development, socio-economic stability, and satisfaction with the standard of living. It is well known that this requires a developed consumer market and the sphere of domestic services, and they, in turn, are inextricably linked with folk crafts.

However, today all the previous conditions of such a society are practically obsolete. Vocational schools are long gone, giving way to secondary and higher vocational education institutions. Folk crafts now exist as an ethnic exotic and do not claim a significant share in the economy. Their social role has changed dramatically. But, according to our concept, the potential for resilience to crisis conditions is based on material benefits and conveniences created thanks to personal qualities, creative initiative, and healthy competition. A sustainable development society is impossible without productive labor and social infrastructure. This process will reduce social tension.

At this stage, one of the components of demoethics should fulfill its roles, such as the need for training and education. The transfer of an artisan’s skills, technologies, and knowledge occurs in joint work at the facilities of the city, district, and professional institution. By engaging in activities of this kind, students see the effectiveness of professional cooperation, exchange of experience, personal support, and the possibility of mastering new technologies and improving the quality of goods and services. In addition, the involvement of students in the spiritual and moral experiences of previous generations has excellent potential for social adaptation and education.

Sustainable development of handicrafts allows attracting members of society to actively participate in the socio-economic life of the region, is one of the important factors in improving the well-being of the local population, and also contributes to the expansion of opportunities for sustainable development of members of society and their rights. The sustainable development of this sphere is ensured by a new generation of highly qualified specialists with high moral, ethical, and civic positions who can determine the guidelines in the value system of modern society as a key factor of sustainable development. The craft and the presence of diligence are not purely an economic concept, as it has a certain ethical aspect, without which, as we interpret it, there can be no material development.

4.4. *Virtuous Person, Ruler, City*

The demoethical model promotes sustainable development in society by incorporating the concepts of the virtuous person, ruler, and city as essential components. The virtuous person embodies ethical values and principles, while the ruler provides effective governance. The city represents a collective entity that engages in sustainable practices.

The core of the demoethical model is a virtuous person. This concept refers to individuals who embody ethical values, principles, and virtues that align with sustainable development. Virtuous people possess qualities, such as honesty, integrity, compassion, and a deep sense of responsibility towards the environment and society.

By integrating virtuous individuals into the fabric of society, the demoethical model promotes ethical decision-making and responsible behavior. Virtuous people prioritize the long-term well-being of people and the planet, making choices that go beyond personal gain and immediate gratification. They serve as role models, inspiring others to lead lives aligned with sustainability principles.

The ruler, in the context of the demoethical model, represents effective governance and leadership. Rulers are accountable for organizing and overseeing activities that lead to sustainable development. They bear the responsibility of making decisions that balance economic progress, environmental protection, and social justice.

Rulers within the demoethical model are expected to demonstrate ethical leadership, empathy, and a commitment to sustainability. They promote transparency, accountability, and inclusivity in decision-making processes, ensuring that the interests of diverse stakeholders are considered. Rulers foster a culture of collaboration, where different perspectives are valued, and sustainable solutions are sought.

The city, as a collective entity within the demoethical model, represents communities, organizations, and institutions that engage in sustainable practices. Cities are microcosms of society, where the principles of sustainable development can be applied at various levels. This includes urban planning, resource management, infrastructure development, and social policies aimed at achieving sustainability.

Cities within the demoethical model strive to create environments that prioritize sustainable transportation, renewable energy, waste reduction, and green spaces. They foster social inclusivity and equity, ensuring that all members of society have access to essential services, education, and healthcare. Sustainable cities actively engage citizens, businesses, and policymakers toward the common goal of sustainable development.

The integration of virtuous persons, rulers, and cities within the demoethical model creates a synergetic relationship that drives sustainable development. Virtuous individuals inspire and drive positive change within organizations and communities, influencing governance structures and city-level policies. Rulers uphold ethical principles and create an enabling environment for virtuous behavior, encouraging cities to pursue sustainable practices.

Cities serve as the tangible embodiment of the demoethical model's principles, implementing sustainable initiatives that impact individuals and communities. They provide platforms for virtuous people to contribute their expertise and influence decision-making processes. Rulers, in turn, ensure that the needs and aspirations of cities and virtuous people are addressed through effective governance and policy interventions.

The interconnection of these components within the demoethical model leads to several contributions towards sustainable development. It fosters a culture of sustainability at both individual and collective levels, promoting responsible behavior, resource efficiency, and environmental conservation. It encourages collaboration, innovation, and knowledge-sharing among virtuous persons, rulers, and cities, driving the implementation of sustainable initiatives.

The demoethical model recognizes the importance of the virtuous person, ruler, and city as integral components in organizing activities for sustainable development. Virtuous people embody ethical values and principles, while rulers provide effective governance and leadership.

Yu. Balasaguni lists the qualities of a ruler that lead to the happiness of citizens [99]. Stating this idea in the introductory part of a poem, the poet subsequently reveals these virtues in detail using the examples of the heroes of his work. Thus, the wisdom of government lies in trusting the affairs of the state to worthy and glorious citizens, those who have reason and wisdom. This is justice towards those who are not endowed with wealth but are endowed with intelligence. And this idea has a direct connection with the fair distribution of income as one of the postulates of a sustainable development society. As such, demoethics should introduce norms and rules based on ethical principles into economic processes.

Y. Balasaguni, revealing the content of his thoughts, references four benefactors: the first is justice, the second is happiness, the third is reason, and the fourth is unpretentiousness. It should be noted that the ancient philosophers also distinguished four similar virtues: wisdom, courage, prudence, and justice. In Y. Balasaguni's works [99], among the four virtues, justice is placed in the most important place. Today it seems necessary to have spiritual, moral, and political teaching about the "virtuous city" in light of modernity, with the aim of the most correct development of future projects.

Al-Farabi singled out the virtue of a person (individual) as the highest wisdom. By perfection, Abu Nasr also understood the continuous transformation of the foundations of his own life and thoughts.

Considering various ethical aspects, Al-Farabi warned a person about choosing and contrasting good and evil, that is, "happiness is a goal that a person strives for because it is a kind of perfection". Performing beautiful actions coincides with goodwill and a wonderful choice [100] (p. 7). The dignity of a ruler is not in strength but in the presence of virtue, through which he points the way for people to achieve perfection.

Socio-ethical issues occupy a significant place in the work "A Treatise on the View of the Inhabitants of a virtuous city", along with the study of the principles of ontology. In the treatise "Pointing the Way to Happiness" al-Farabi reveals the possibilities that lie before a person and issue from one person to society. "There is a relationship between an individual and society that an individual, achieving happiness, contributes to the ennobling of the city in which he lives, and the city, in turn, should help a person achieve happiness" [100] (p. 9). If we turn to "Civil Politics", we can trace how al-Farabi compared a "virtuous" city with various types of "ignorant" cities. The thinker's ideals did not coincide with the reality surrounding him. That is why, against the background of the ideal construction of the "virtuous" city, he pursued his views, the embodiment of which he would like to see in real life.

The "virtuous" city reflects order and harmony, which resemble a hierarchical model of the universe. Al-Farabi wrote: "Virtuous is a city in which residents help each other to achieve the most excellent things, which are associated with the true existence of a person, his existence, sustenance, and preservation of his life" [101] (p. 195). The description of an "ignorant" city is a veiled form of protest against the social mores of that time. In various types of "ignorant" cities, the thinker condemned the vices inherent in the society of his time: greed, unbridled passions, love of power, and belittling the weak.

When dividing society into "virtuous" and "ignorant", al-Farabi took as a basis the goals pursued by these societies. The correctness of the goal contributes to the achieve-

ment of happiness, which means, in the thinker's understanding, the triumph of virtue and reason.

Since the goals of "ignorant" societies are reduced to satisfying urgent needs, the inhabitants who are eager to have them to inhabit the cities of necessity, deception, baseness, power, and ambition. In addition to "ignorant" cities, the "virtuous" is also opposed to "immoral" and "lost" cities. In an "immoral" city, people's actions do not agree with their concepts, which, being correct, are not realized in life. The inhabitants of the "lost" cities falsely represent the principles that underlie the world. Analyzing the various types of "cities", al-Farabi also considered those who are at the head of them. This is the first head, or ruler, to whom their inhabitants are subject. The moral image of the ruler is interconnected with the moral image of the city. Naturally, in a "virtuous" city, the head also possesses the virtues that the city is involved in and directs its inhabitants to acquire and develop the virtues necessary for the city to retain the name of "virtuous". The thinker compared the "virtuous" ruler with the First Being since he brings the same order and harmony to the management of the city that the First Being brings to world harmony.

According to al-Farabi, the dignity of a ruler is determined by the presence of virtues, not by the power of power. The thinker is convinced that the ruler should show by his example the way to achieve perfection and show a person worthy of imitation by his way of life.

The treatise "Aphorisms of a Statesman" was written in the last years of al-Farabi's life at the time of his scientific maturity, which clearly expresses the idea of the division of labor, one of the most important elements of the economy at present. He divided the "virtuous city" into five parts, as follows:

- (1) The worthiest individuals;
- (2) Speakers;
- (3) Meters;
- (4) Warriors;
- (5) The rich.

Al-Farabi assigned each estate an appropriate role in the life of the city. The thinker believed that every person should do the same thing all his life to achieve the greatest perfection in it [101] (pp. 12, 27, 32).

The dissemination of Al-Farabi's key ideas is the basis for national revival and contributes to the formation of new universal values that ensure the sustainable development of human civilization. This contributes to forming a new worldview to ensure the sustainable development of the modern world. Al-Farabi argued that a virtuous society is a community of people who have an accurate knowledge of true happiness and the ways to achieve it and act on this knowledge. This idea is valuable from the point of view of the demoethical model of the organization of a sustainable society.

Abu Nasr al-Farabi dealt with the philosophical issues of uniting people—the "virtuous city", which we would now attribute to the ethical problem of the relationship of society following established norms and rules. Al-Farabi noted that harmony lies in the unity of intellectual and moral perfection in human interaction with the outside world. These issues are relevant at the present stage of development in the light of the sustainable development of society.

5. Conclusions

The development and transformation of society rely heavily on demoethics, which is an instrument of social change. This correlates with the conception of Society 5.0 and Industry 5.0. We have identified values that correspond to the sustainable development of society through the analysis of theoretical and methodological approaches to the interpretation of demoethical norms and phenomena. The demoethical conditionality of social relations is based on the relationship between what is due and what is, which emphasizes the social nature of ethical norms that are significant and carried out by free citizens with rights and obligations to society and nature.

Social values play a significant role in determining the types of organizations in the institutional sphere of society. Such phenomena as education and nurture, reason, knowledge, science, and honest work in society help people adapt to a wide range of behaviors and conditions in a rapidly changing global world. The application of the demoethics model increases the competitiveness and quality of life of the population.

The realization of Society 5.0 and Industry 5.0 requires the alignment of the virtuous person, ethical governance, sustainable cities, and technological advancements. By cultivating virtuous individuals who demonstrate ethical behavior, sustainable development can be achieved while harnessing the potential of advanced technologies. Demoethical governance shapes policies that prioritize sustainable practices, social well-being, and environmental conservation. Sustainable cities integrate advanced technologies, promote efficient resource utilization, and enhance citizen well-being. By synergizing these elements, Society 5.0 and Industry 5.0 can contribute to a flourishing society based on the principles of sustainability, human well-being, and ethical rational decision-making.

Education and nurture refer to the holistic development of individuals by cultivating the mind, acquiring knowledge, and applying scientific principles. Honest work plays a pivotal role in identifying and embodying values that correspond to the virtuous person, ruler, city, and sustainable development. The integration of education and nurture, a well-developed mind, knowledge acquisition, scientific principles, and honest work leads to several contributions toward sustainable development.

Values form the way that a person exists. Despite the existence of various forms of differentiation of values and their relative nature, the highest and most absolute value is of the people themselves and their lives. Following the paradigm of sustainability of Society 5.0 and Industry 5.0, the value of a person should be perceived only as a value end but never as a value means.

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References

1. Carayannis, E.G.; Morawska-Jancelewicz, J. The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. *J. Knowl. Econ.* **2022**, *13*, 3445–3471. [CrossRef]
2. Saniuk, S.; Grabowska, S.; Straka, M. Identification of Social and Economic Expectations: Contextual Reasons for the Transformation Process of Industry 4.0 into the Industry 5.0 Concept. *Sustainability* **2022**, *14*, 1391. [CrossRef]
3. Akundi, A.; Euresti, D.; Luna, S.; Ankobiah, W.; Lopes, A.; Edinbarough, I. State of Industry 5.0—Analysis and Identification of Current Research Trends. *Appl. Syst. Innov.* **2022**, *5*, 27. [CrossRef]
4. Morawska-Jancelewicz, J. The Role of Universities in Social Innovation Within Quadruple/Quintuple Helix Model: Practical Implications from Polish Experience. *J. Knowl. Econ.* **2021**, *13*, 2230–2271. [CrossRef]
5. Rada, M. *Industry 5.0—from Virtual to Physical*; LinkedIn: Sunnyvale, CA, USA, 2018. Available online: <https://www.linkedin.com/pulse/industry-50-from-virtual-physical-michael-rada> (accessed on 23 February 2023).
6. Mazzucato, M. *Mission-Oriented Research & Innovation in the European Union, a Problem-Solving Approach to Fuel Innovation-Led Growth*; European Commission: Brussels, Belgium, 2018. Available online: <https://op.europa.eu/pl/publication-detail/-/publication/5b2811d1-16be-11e8-9253-01aa75ed71a1/language-en> (accessed on 23 February 2023).
7. Gray, B. Exile, Refuge, and the Greek Polis: Between Justice and Humanity. *J. Refug. Stud.* **2017**, *30*, 190–219. [CrossRef]

8. Hatem, M. Revolutions, Crises of Modernities, and the Production of Gender Subjectivities in Egypt. *Rev. Middle East Stud.* **2016**, *50*, 48–54. [CrossRef]
9. Ossewaarde, M. 'Crises of Modernity' Discourses and the Rise of Financial Technologies in a Contested Mechanized World. *Philos. Technol.* **2018**, *31*, 59–76. [CrossRef]
10. Loginov, A.V.; Rudenkin, D.V. Neither conflict, no concord: Performing ideology in contemporary Russia. *Vestn. St. Petersburg Univ. Philos. Confl. Stud.* **2020**, *36*, 341–355. [CrossRef]
11. Charina, A.; Kurnia, G.; Mulyana, A.; Mizuno, K. Sustainable Education and Open Innovation for Small Industry Sustainability Post COVID-19 Pandemic in Indonesia. *J. Open Innov. Technol. Mark. Complex.* **2022**, *8*, 215. [CrossRef]
12. Ahmat Zainuri, N.; Abd-Rahman, N.; Halim, L.; Chan, M.Y.; Mohd Bazari, N.N. Measuring Pro-Environmental Behavior Triggered by Environmental Values. *Int. J. Environ. Res. Public Health* **2022**, *19*, 16013. [CrossRef]
13. Orlović-Lovren, V. Environmental education, and education for sustainable development: Conceptual solutions and dilemmas. *Nastava Vasp.* **2021**, *70*, 7–23. [CrossRef]
14. Hume, T.; Barry, J. Environmental Education and Education for Sustainable Development. In *International Encyclopedia of the Social & Behavioral Sciences*, 2nd ed.; Elsevier Health Sciences: London, UK, 2015; pp. 733–739.
15. Verbos, A.K.; Gerard, J.A.; Forshey, P.R.; Harding, C.S.; Miller, J.S. The Positive Ethical Organization: Enacting a Living Code of Ethics and Ethical Organizational Identity. *J. Bus. Ethics* **2007**, *76*, 17–33. [CrossRef]
16. da Rocha, A.C.; Calzada, I. Demos-Ethos: A framework to study the Icelandic and Basque cases through Critical Social Innovation and Applied Ethics. *Innov. Eur. J. Soc. Sci. Res.* **2015**, *28*, 425–442. [CrossRef]
17. Salloch, S.; Vollmann, J.; Schildmann, J. Ethics by opinion poll? The functions of attitudes research for normative deliberations in medical ethics. *J. Med. Ethics* **2013**, *40*, 597–602. [CrossRef]
18. Fengqing, Z. Patients' Responsibilities in Medical Ethics. *Philos. Study* **2016**, *6*, 528–533. [CrossRef]
19. Plöckinger, U.; Auga, U. The "Four Principles" of Western Medical Bioethics and the Bioethics of Shī'ī Islam in Iran—Is the Claim of Universality by Both Justified? *Religions* **2022**, *13*, 1118. [CrossRef]
20. Shutaleva, A.V.; Golysheva, M.V.; Tsiplakova, Y.V.; Dudchik, A.Y. Media education and the formation of the legal culture of society. *Perspekt. Nauk. Obraz.* **2020**, *45*, 10–22. [CrossRef]
21. Gilyazova, O.S.; Zamoschansky, I.I. Specific features of universal competences of higher education in Russia in the context of competence-based education: Conceptual analysis. *Perspekt. Nauk. Obraz.* **2022**, *56*, 77–94. [CrossRef]
22. Nicolaou, C. Media Trends and Prospects in Educational Activities and Techniques for Online Learning and Teaching through Television Content: Technological and Digital Socio-Cultural Environment, Generations, and Audiovisual Media Communications in Education. *Educ. Sci.* **2021**, *11*, 685. [CrossRef]
23. Podara, A.; Matsiola, M.; Nicolaou, C.; Maniou, T.A.; Kalliris, G. Transformation of television-viewing practices in Greece: Generation Z and audiovisual content. *J. Digit. Media Policy* **2022**, *13*, 157–179. [CrossRef]
24. Wang, C.C. Fake News and Related Concepts: Definitions and Recent Research Development. *Contemp. Manag. Res.* **2020**, *16*, 145–174. [CrossRef]
25. Baptista, J.P.; Gradim, A. Understanding Fake News Consumption: A Review. *Soc. Sci.* **2020**, *9*, 185. [CrossRef]
26. Nicholson, R.J. Ethics and politics. *Br. Med. J. (Clin. Res. Ed.)* **1985**, *291*, 557. [CrossRef]
27. Ingram, J.D. Radical Cosmopolitics: The Ethics and Politics of Democratic Universalism. Columbia Scholarship Online. 2013. Available online: <https://doi.org/10.7312/columbia/9780231161107.001.0001> (accessed on 2 December 2022).
28. Loginov, A.V. Second-Order Arguments, or Do We Still Need Tolerance in the Public Sphere? *Chang. Soc. Personal.* **2019**, *3*, 319–332. [CrossRef]
29. Xu, C.; Chen, X.; Dai, W. Effects of Digital Transformation on Environmental Governance of Mining Enterprises: Evidence from China. *Int. J. Environ. Res. Public Health* **2022**, *19*, 16474. [CrossRef] [PubMed]
30. Li, Y.; Huang, N.; Zhao, Y. The Impact of Green Innovation on Enterprise Green Economic Efficiency. *Int. J. Environ. Res. Public Health* **2022**, *19*, 16464. [CrossRef]
31. Kahia, M.; Jarraya, B.; Kahouli, B.; Omri, A. The Role of Environmental Innovation and Green Energy Deployment in Environmental Protection: Evidence from Saudi Arabia. *J. Knowl. Econ.* **2022**. [CrossRef]
32. Mughal, N.; Arif, A.; Jain, V.; Chupradit, S.; Shabbir, M.S.; Ramos-Meza, C.S.; Zhanbayev, R. The role of technological innovation in environmental pollution, energy consumption and sustainable economic growth: Evidence from South Asian economies. *Energy Strategy Rev.* **2022**, *39*, 100745. [CrossRef]
33. Zhanbayev, R.; Irfan, M. Industrial-Innovative Paradigm of Social Sustainability: Modeling the Assessment of Demoethical, Demographic, Democratic, and Demoeconomic Factors. *Sustainability* **2022**, *14*, 7280. [CrossRef]
34. Samonis, V. How Human Psychology Drives the Economy and Why It Matters for Global Capitalism. *Transnatl. Corp. Rev.* **2011**, *3*, 164. [CrossRef]
35. MacIver, R.M. *Community, a Sociological Study: Being an Attempt to Set out the Nature and Fundamental Laws of Social Life*; Macmillan: London, UK, 1924.
36. Batey, P.W.J.; Hewings, G.J.D. Demo-economic Modeling: Review and Prospects. *Int. Reg. Sci. Rev.* **2021**, *44*, 328–362. [CrossRef]
37. Batey, P.W.J. Input-output Models for Regional Demographic-economic Analysis: Some Structural Comparisons. *Environ. Plan. A* **1985**, *17*, 73–99. [CrossRef]

38. Oosterhaven, J.; Dewhurst, J.H.L. A Prototype Demo-economic Model with an Application to Queensland. *Int. Reg. Sci. Rev.* **1990**, *13*, 51–64. [[CrossRef](#)]
39. Sarfraz, Z.; Sarfraz, A.; Iftikar, H.M.; Akhund, R. Is COVID-19 pushing us to the Fifth Industrial Revolution (Society 5.0)? *Pak. J. Med. Sci.* **2021**, *37*, 591–594. [[CrossRef](#)]
40. Nikiforova, A. Smarter Open Government Data for Society 5.0: Are Your Open Data Smart Enough? *Sensors* **2021**, *21*, 5204. [[CrossRef](#)] [[PubMed](#)]
41. Alimohammadlou, M.; Khoshsepehr, Z. The role of Society 5.0 in achieving sustainable development: A spherical fuzzy set approach. *Environ. Sci. Pollut. Res. Int.* **2023**, *30*, 47630–47654. [[CrossRef](#)]
42. Muslikhin, M.; Horng, J.R.; Yang, S.Y.; Wang, M.S.; Awaluddin, B.A. An Artificial Intelligence of Things-Based Picking Algorithm for Online Shop in the Society 5.0's Context. *Sensors* **2021**, *21*, 2813. [[CrossRef](#)] [[PubMed](#)]
43. Tyagi, A.K.; Dananjayan, S.; Agarwal, D.; Thariq Ahmed, H.F. Blockchain-Internet of Things Applications: Opportunities and Challenges for Industry 4.0 and Society 5.0. *Sensors* **2023**, *23*, 947. [[CrossRef](#)] [[PubMed](#)]
44. Özdemir, V.; Hekim, N. Birth of Industry 5.0: Making Sense of Big Data with Artificial Intelligence, “The Internet of Things” and Next-Generation Technology Policy. *Omics J. Integr. Biol.* **2018**, *22*, 65–76. [[CrossRef](#)]
45. Grech, A.; Mehnen, J.; Wodehouse, A. An Extended AI-Experience: Industry 5.0 in Creative Product Innovation. *Sensors* **2023**, *23*, 3009. [[CrossRef](#)] [[PubMed](#)]
46. Nota, L.; Santilli, S.; Zucchini, D. Inclusion, Sustainability, and Equity at the Heart of a 5.0 Society. *Stud. Health Technol. Inform.* **2023**, *303*, 59–67. [[CrossRef](#)]
47. Guruswamy, S.; Pojić, M.; Subramanian, J.; Mastilović, J.; Sarang, S.; Subbanagounder, A.; Stojanović, G.; Jeoti, V. Toward Better Food Security Using Concepts from Industry 5.0. *Sensors* **2022**, *22*, 8377. [[CrossRef](#)]
48. Alvarez-Aros, E.L.; Bernal-Torres, C.A. Technological competitiveness and emerging technologies in Industry 4.0 and Industry 5.0. *An. Acad. Bras. Cienc.* **2021**, *93*, e20191290. [[CrossRef](#)]
49. Bui, T.D.; Tseng, M.L. Understanding the barriers to sustainable solid waste management in society 5.0 under uncertainties: A novelty of social and technical perspectives on performance driving. *Environ. Sci. Pollut. Res. Int.* **2022**, *29*, 16265–16293. [[CrossRef](#)]
50. Kishi, T. Benefit of wearable blood pressure monitoring device in Society 5.0. *Hypertens. Res. Off. J. Jpn. Soc. Hypertens.* **2022**, *45*, 546–547. [[CrossRef](#)] [[PubMed](#)]
51. Elareshi, M.; Habes, M.; Safori, A.; Attar, R.W.; Noor Al adwan, M.; Al-Rahmi, W.M. Understanding the Effects of Social Media Marketing on Customers' Bank Loyalty: A SEM Approach. *Electronics* **2023**, *12*, 1822. [[CrossRef](#)]
52. Peyvandi, A.; Majidi, B.; Peyvandi, S.; Patra, J.C. Privacy-preserving federated learning for scalable and high data quality computational-intelligence-as-a-service in Society 5.0. *Multimed. Tools Appl.* **2022**, *81*, 25029–25050. [[CrossRef](#)] [[PubMed](#)]
53. Özdemir, V. Digital Transformation, Omics and Society: Industry 4.0 and Industry 5.0. *Omics J. Integr. Biol.* **2023**, *27*, 245–246. [[CrossRef](#)]
54. Fraga-Lamas, P.; Barros, D.; Lopes, S.I.; Fernández-Caramés, T.M. Mist and Edge Computing Cyber-Physical Human-Centered Systems for Industry 5.0: A Cost-Effective IoT Thermal Imaging Safety System. *Sensors* **2022**, *22*, 8500. [[CrossRef](#)]
55. Massaro, A. Advanced Control Systems in Industry 5.0 Enabling Process Mining. *Sensors* **2022**, *22*, 8677. [[CrossRef](#)] [[PubMed](#)]
56. Modoni, G.E.; Sacco, M. A Human Digital-Twin-Based Framework Driving Human Centricity towards Industry 5.0. *Sensors* **2023**, *23*, 6054. [[CrossRef](#)] [[PubMed](#)]
57. Mincă, E.; Filipescu, A.; Cernega, D.; Şolea, R.; Filipescu, A.; Ionescu, D.; Simion, G. Digital Twin for a Multifunctional Technology of Flexible Assembly on a Mechatronics Line with Integrated Robotic Systems and Mobile Visual Sensor-Challenges towards Industry 5.0. *Sensors* **2022**, *22*, 8153. [[CrossRef](#)] [[PubMed](#)]
58. Adel, A. Future of industry 5.0 in society: Human-centric solutions, challenges and prospective research areas. *J. Cloud Comput.* **2022**, *11*, 40. [[CrossRef](#)] [[PubMed](#)]
59. Ioppolo, G.; Vazquez, F.; Hennerici, M.G.; Andrès, E. Medicine 4.0: New Technologies as Tools for a Society 5.0. *J. Clin. Med.* **2020**, *9*, 2198. [[CrossRef](#)]
60. Natakusumah, K.; Maulina, E.; Muftiadi, A.; Purnomo, M. Digital transformation of health quality services in the healthcare industry during disruption and society 5.0 era. *Front. Public Health* **2022**, *10*, 971486. [[CrossRef](#)]
61. Rodrigues Dias, R.; Deprá, M.C.; Ragagnin de Menezes, C.; Queiroz Zepka, L.; Jacob-Lopes, E. The High-Value Product, Bio-Waste, and Eco-Friendly Energy as the Tripod of the Microalgae Biorefinery: Connecting the Dots. *Sustainability* **2023**, *15*, 11494. [[CrossRef](#)]
62. Brigida, V.S.; Mishulina, S.I.; Stas, G.V. Perspective Directions of “Ecologisation” of Structural Elements of a Tourist Product of Krasnodar Region (Case Study of Transportation Component). *Sustain. Dev. Mt. Territ.* **2020**, *12*, 18–25. [[CrossRef](#)]
63. Malyukova, L.S.; Martyushev, N.V.; Tynchenko, V.V.; Kondratiev, V.V.; Bukhtoyarov, V.V.; Konyukhov, V.Y.; Bashmur, K.A.; Panfilova, T.A.; Brigida, V. Circular Mining Wastes Management for Sustainable Production of *Camellia sinensis* (L.) O. Kuntze. *Sustainability* **2023**, *15*, 11671. [[CrossRef](#)]
64. Baimuratov, U.B.; Zhanbayev, R.A.; Sagintayeva, S.S. The Triple Helix Model for the Conceptual Mechanism of Cooperation between Higher Education and Business: The Regional Aspect. *Econ. Reg.* **2020**, *16*, 1046–1060. [[CrossRef](#)]
65. Shutaleva, A.; Martyushev, N.; Nikonova, Z.; Savchenko, I.; Abramova, S.; Lubimova, V.; Novgorodtseva, A. Environmental behavior of youth and sustainable development. *Sustainability* **2022**, *14*, 250. [[CrossRef](#)]

66. Matsiola, M.; Spiliopoulos, P.; Kotsakis, R.; Nicolaou, C.; Podara, A. Technology-Enhanced Learning in Audiovisual Education: The Case of Radio Journalism Course Design. *Educ. Sci.* **2019**, *9*, 62. [CrossRef]
67. Sezgül, İ. Mass Media and Education. In *Enriching Teaching and Learning Environments with Contemporary Technologies*; Durnali, M., Limon, İ., Eds.; IGI Global: Hershey, PA, USA, 2020; pp. 1–17. [CrossRef]
68. Tomyuk, O.N.; Diachkova, A.V.; Kiseleva, N.A.; Kamka, S.V.; Nikolenko, O.I. Global trends in the education system of high-ranking countries according to PISA-2018. *Perspekt. Nauk. Obraz.* **2022**, *55*, 10–24. [CrossRef]
69. Castells, M. *75. Networks of Outrage and Hope: Social Movements in the Internet Age*; Columbia University Press: New York, NY, USA; Chichester, UK, 2016; pp. 433–435. [CrossRef]
70. Gonzalez-Perez, A.M. Global Civil Society and International Business: A Review. In *International Business, Sustainability and Corporate Social Responsibility*; Alejandra Gonzalez-perez, M., Leonard, L., Eds.; Advances in Sustainability and Environmental Justice; Emerald Group Publishing Limited: Bingley, UK, 2013; Volume 11, pp. 37–63. [CrossRef]
71. *Al-Farabi's Commentary and Short Treatise on Aristotle's De Interpretatione*; Oxford University Press: Oxford, UK, 1981.
72. Al-Farabi, A.N. *Short Commentary on Aristotle's Prior Analytics*; University of Pittsburgh Press: Pittsburgh, PA, USA, 1963.
73. Al-Farabi, A.N. *On the Perfect State*; Clarendon Press: Oxford, UK, 1985.
74. Al-Farabi, A.N. *The Political Writings*; Selected Aphorisms and Other Texts; Cornell University Press: Ithaca, NY, USA, 2001.
75. Spencer, H. *Education: Intellectual, Moral and Physical*; Williams and Norgate: London, UK, 1861.
76. Dyachkova, M.A.; Novgorodtseva, A.N.; Tomyuk, O.N. Humanization of technical university education: Effective strategies and practices. *Perspekt. Nauk. Obraz.* **2020**, *47*, 75–87. [CrossRef]
77. Dijck, J.; Poell, T.; de Waal, M. *The Platform Society: Public Values in a Connective World*; Oxford University Press: Oxford, UK, 2018.
78. Jenkins, H.; Purushotma, R.; Weigel, M.; Clinton, K.; Robison, A.J. *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*; MIT Press: Cambridge, MA, USA, 2009.
79. Baruwa, I.; Shutaleva, A. Nature of Knowledge in Philosophy. *J. Educ. Soc. Behav. Sci.* **2022**, *35*, 47–59. [CrossRef]
80. Kahneman, D. Maps of Bounded Rationality: Psychology for Behavioral Economics. *Am. Econ. Rev.* **2003**, *93*, 1449–1475. [CrossRef]
81. Slovic, P.; Finucane, M.L.; Peters, E.; MacGregor, D.G. Risk as Analysis and Risk as Feelings: Some Thoughts about Affect, Reason, Risk, and Rationality. *Risk Anal.* **2004**, *24*, 311–322. [CrossRef] [PubMed]
82. Simon, H.A. Bounded rationality and organizational learning. *Organ. Sci.* **1991**, *2*, 125–134. [CrossRef]
83. Erhardt, N.; Gibbs, J.L. The Dialectical Nature of Impression Management in Knowledge Work. *Management Communication Quarterly* **2014**, *28*, 155–186. [CrossRef]
84. Strass, H. Instantiating Knowledge Bases in Abstract Dialectical Frameworks. In *Computational Logic in Multi-Agent Systems*; Leite, J., Son, T.C., Torroni, P., van der Torre, L., Woltran, S., Eds.; CLIMA 2013. Lecture Notes in Computer Science; Springer: Berlin/Heidelberg, Germany, 2013; Volume 8143. [CrossRef]
85. Baruwa, I.; Meroyi, S.I. “What is Knowledge that I Should Acquire It”: Towards an I-Thou. *Asian J. Educ. Social. Stud.* **2022**, *31*, 22–29. [CrossRef]
86. Pechnikov, G.; Nazarov, S.; Smolyakov, P. The Trial of Socrates Like the Struggle of Sophistry and Dialectics. *Logos Prax.* **2021**, *20*, 177–183. [CrossRef]
87. Terezis, C. Investigating the terms of transition from a dialogue to dialectics in Plato's Charmides. *Philotheos* **2019**, *19*, 149–165. [CrossRef]
88. Horsthemke, K. Scientific knowledge and higher education in the 21st century: The case against ‘indigenous science’. *S. Afr. J. High. Educ.* **2008**, *22*, 333–347. [CrossRef]
89. Lang, D.J.; Wiek, A.; Bergmann, M.; Stauffacher, M.; Martens, P.; Moll, P.; Swilling, M.; Thomas, C.J. Transdisciplinary research in sustainability science: Practice, principles, and challenges. *Sustain. Sci.* **2012**, *7* (Suppl. S1), 25–43. [CrossRef]
90. Maxwell, N. *From Knowledge to Wisdom: A Revolution in the Aims and Methods of Science*; Blackwell: Oxford, UK, 1987.
91. Narbaev, T.; Amirbekova, D. Research Productivity in Emerging Economies: Empirical Evidence from Kazakhstan. *Publications* **2021**, *9*, 51. [CrossRef]
92. Kunanbaev, A. *Абай Кунанбайұлы толық жинақ*; Kyzyl-Orda Book Publishing House: Kyzyl-Orda, Kazakhstan, 1933.
93. Shakizada, S.B.; Kurmanbaev, K.; Akimkhanov, A.B. Significance of the creed of the Maturidi school in the works of Abay Kunanbayev and Shakarim Kudayberdiev. *J. Orient. Stud.* **2019**, *89*. [CrossRef]
94. Ziyatdinov, R.N. *Attitude to Work as a Value: Abstract of the Thesis of a Candidate of Philosophical Sciences*; Permian State Pedagogical University: Perm, Russia, 2004.
95. Dal, V.I. *Explanatory Dictionary of the Living Great Russian Language*; Reprint from the Edition of 1914; Citadel: Moscow, Russia, 1998; Volume 4.
96. *UNESCO/ITC Symposium on Crafts and the International Market: Trade and Customs Codification Held in Manila*; International Trade Centre UNCTAD/WTO: Manila, Philippines, 1997. Available online: http://unesdoc.unesco.org/images/0011/001114/111488_eo.pdf (accessed on 5 December 2022).
97. European Handicraft Situation Report “CR@FTSMAN Project; REPORT ON THE SITUATION OF CRAFTSMANSHIP IN EUROPE” CR@FTSMAN PROJECT ES/09/LLP-LdV/TOI/149072. Available online: <http://projects.ifes.es/pdfs/craft/craft1.pdf> (accessed on 15 April 2023).

98. Kalinovsky, I. Craftsmen Will Be Lured out of the Shadows. *Expert*. Available online: <http://expert.ru/2014/11/14/remeslennikov-vyimanyat-iz-teni/> (accessed on 15 April 2023).
99. Malikov, G.R. Continuity of ideas about virtues in ancient philosophical thought and Turkic medieval utopian humanism. *New Technol.* **2011**, *3*, 195–198.
100. Kharenko, E.D. *Socio-Ethical Views of Al-Farabi*; Nauka Publishing House: Moscow, Russia, 1975; pp. 3–12.
101. Al-Farabi, A.N. *Socio-Ethical Treatises*; Science: Alma-Ata, Kazakhstan, 1973.

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