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JULIUS NYERERE'S SOCIAL THOUGHT ON HUMAN WORK IN THE AGE OF AUTOMATION TECHNOLOGIES

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ABSTRACT: This article examines the relevance of Julius Nyerere's social thought in protecting work as an economic human right in the age of automation technology. The application of automation technologies in various sectors such as industry, agriculture, health and construction has increasingly replaced human work and thus making workers redundant and jobless resulting in the creation and widening of socio-economic inequalities. Nyereres' social thought advocates for the centrality of the human person in all sectors. Nyerere argued that authentic development means people (*maendeleo bora niwatu*) and work is the measure of dignity (*Kazinikipimo cha utu*).[1] Nyerere's social thought is based on the principles of human dignity and equality, the common good, preferential option for the marginalized, and democratic participation of each and everyone in socio-economic and political issues. In defence of these social principles, Nyerere proposed and argued for a work ethic that interprets work as the measure of human dignity, respect and self-reliance.

KEYWORDS – *automation, technology, ujamaa, social thought, and traditional technology*

I.   INTRODUCTION

The article examines Nyerere's social thought on human work in the age of automation technologies. Human work is an expression of a person's innermost being having psychological, spiritual, social and moral repercussions on the subject who engages in it.[2] In order to present systematically Nyerere's social thought on work and its contribution to the age of autonomous technology, the theme of the article is structured into four sections. These include Nyerere's background, Nyerere's social thought, understanding of the automation technological age,and human-centred automation technologies. The final part of this article presents a synthesis of the entire discussion and, accordingly, proposes human-centred automation technologies.

II. BACKGROUND OF NYERERE'S SOCIAL THOUGHT

The social thought of Nyerere can be understood in the context of his brief life background. He was born on 13th April 1922 and died on 14th October 1999. His father was Chief Nyerere Burito and his mother was Mugaya.[3] While at Mwisenge primary school in 1934, Nyerere took his first catechism classes under White Fathers (Missionaries of Africa) which marked his first exposure to Christianity.[4] He was baptized Julius Kambarage Nyerere in Nyegina Catholic Mission by Father Aloysius Junker.[5] Nyerere joined Tabora Government School in 1936-1942 currently known as Tabora Boys Secondary School.

Nyerere joined Makerere College in Uganda in January 1943-1945 and graduated with a Teacher's Diploma.[6] Meanwhile, at the college, Nyerere continued deepening his faith through reading Church documents, particularly Papal Encyclicals.[7] He also studied Greek and Latin.[8] He was confirmed on 30th May 1944 at

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[1] Physical structures like buildings and infrastructures are referred to as tools of development. Cf. Julius K. Nyerere, *Man and Development* (Dar-es-Salaam: Oxford University Press, 1974), 26.
[2] Anton Stres, "Laborem execs and Human Work," in *Work as Key to the Social Question: The Great Social and Economic Transformations and the Subjective Dimension of Work*, Pontifical Council for Justice and Peace (Vatican City: LibreriaEditriceVaticana, 2002), 23-29, 24.
[3] Thomas Molony, *Nyerere: Early Years* (Edinburgh: James Currey Press, 2014),35.
[4] *Ibid*.,48-49.
[5] Arthur H. Wille, "Recollections on President Julius Kambarage Nyerere" (Musoma-Tanzania: February 1, 2005), 4. Retrieved from https://www.jamiiforums.com/data/attachment-files/2012/12/1181078_kumbukumbu-nyerere.pdf (accessed 18.05.2020).
[6] *Ibid*.
[7] Juvenalis Paul BaituRwelamira, *Mwalimu Julius Kambarage Nyerere's Vision of Education*, (Dar es Salaam: Inter Press of Tanzania Ltd, 2019), 6.
[8] *Ibid*., 14.

Ruboga Mission in Kampala.[9] While in Makerere College, Nyerere gained a reputation in the debating club. In 1943, Nyerere published an article entitled *African Socialism* in the Tanganyika Standard. The article marked the beginning of his political career[10] and his social thought.

Nyerere joined the University of Edinburgh in the Faculty of Arts, in Scotland to study Master of Arts degree in 1949. He was assisted by Fr. Richard Walsh who organized his scholarship through the Colonial Development and Welfare Scheme.[11] Nyerere chose his courses from two major disciplines which include anthropology and philosophy. The chosen courses were Political Economy, Social Anthropology, History, Moral Philosophy, and English Literature. They were "carefully chosen in view of forming his ability, basic orientation and life view for their future application in the service of the Tanganyikans."[12] Given the choice of the courses, "he obtained a Master of Arts Degree, specialized in History and Political Economy."[13] In this sense, his political philosophy was developed from a wide range of the philosophers whom he studied. He successfully completed his studies and graduated with an Ordinary Degree of Masters of Arts on 4th July 1952.[14] Thereafter, he went back to his home country Tanzania by then Tanganyika.

In 1953 Nyerere started teaching at St. Francis College in Pugu located on the outskirts of Dar es Salaam but continued developing his social thought. While at Pugu, Nyerere got absorbed in the political activities of the Tanganyika African Association (TAA) a political party in which he became its leader. Under his leadership, TAA was rebranded into Tanganyika African National Union (TANU)[15] on 7th July 1954. Through his skilful and proficient leadership,[16] the party led the people of Tanganyika to independence on 9th December 1961.

Nyerere worked tirelessly for the unification[17] of Tanganyika and Zanzibar which came into realization on 26th April 1964. He became the first President of the United Republic of Tanzania. One of the fruits of unification was a Revolution that merged Afro-Shirazi Party (ASP)[18] and TANU into *Chama cha Mapinduzi*(CCM) or The Revolution Party. The Party "had a strong foundation in the anti-colonial nationalist movement."[19] Some of the aims and objectives of CCM stated in its Constitution include;

- ✓ Promoting the building of socialism and self-reliance on the basis of the Arusha Declaration.
- ✓ Ensuring that every able-bodied person in our country works; and work means any lawful activity through which a person earns his [sic] livelihood.
- ✓ Overseeing and protecting the rights and development of the peasants, workers and other people engaged in lawful self-reliance activities; and especially ensuring that every person has the right to receive a fair and just return to his labour.
- ✓ Ensuring that the State is the custodian of the national economy.[20]

Nyerere retired as the President of the United Republic of Tanzania in 1985.[21] However, he remained the Chairperson of CCM until 1990. In spite of the challenges he faced within 24 years of his total dedication to the service, he remained faithful to his principles of non-discrimination.[22]

Nyerere applied his professional skills in various areas of political leadership as an intellectual, scholar, professional teacher and a leader. JuvenalisRwelamira points out that "he was consistent, committed, courageous and persuasive in expressing his views, both in word and actions as his personal contribution to the people-centred development of all Tanzanians and the people of Africa."[23] This presupposition is well reflected in his social thought.

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[9] Arthur H. Wille, "Recollections on President Julius Kambarage Nyerere," (Musoma-Tanzania: February 1, 2005), 4. Retrieved from https://www.jamiiforums.com/data/attachment-files/2012/12/1181078_kumbukumbu-nyerere.pdf (accessed 18.05.2020).
[10]Juvenalis Paul BaituRwelamira, *Mwalimu Julius Kambarage Nyerere's Vision of Education*, 6.
[11]*Ibid.,* 9.
[12]*Ibid*., 23.
[13]Mwalimu Nyerere Foundation, "Biography," (2019), retrieved from https://nyererefoundation.org(accessed 28.06.2022).
[14] Thomas Molony, *Nyerere: Early Years*, 1.
[15]TANU was a political party founded by Nyerere which energised the campaign and mobilised the people of Tanganyika to demand their independence. Cf. Mwalimu Nyerere Foundation, "Biography," (2019), retrieved from https://nyererefoundation.org (accessed 28.06.2022).
[16]For instance, traveling around the country teaching about the fundamental values of hard work, mutual respect, equality in every respect for all people, and non-discrimination on the basis of tribe, race, or religion. His main focus was on a greater task of fighting poverty, ignorance, and disease.
[17]Unification means the union of separate States of Tanganyika and Zanzibar into a Sovereign State of The United Republic of Tanzania.
[18]ASP was founded on 5th February 1957 as an alliance between the African Association on Zanzibar and the Shirazi Association on the Island of Pemba. AbeidKarume became President of Zanzibar and began negotiating a union with mainland Tanganyika. Cf. Gwyeth Williams & Brian Hackland, *The Dictionary of Contemporary Politics of Southern Africa* (London: Routledge, 1988), 11.
[19]CCM Writer, "A History of the Chama cha Mapinduzi Party in Tanzania," (August 16, 2018), retrieved from https://www.ccmtz.org/history-chama-cha-mapinduzi-tanzania/ (accessed 25.05.2020).
[20]The Constitution of Chama cha Mapinduzi (ENG. 2006), ccm.org/Katiba_ya_CCM_ENG_2008_.pdf (accessed 26.05.2020).
[21]Richard Rwiza, *Ethics of Human Rights: The African Contribution* (Nairobi: CUEA Press, 2010), 113.
[22]Juvenalis Paul BaituRwelamira, *Mwalimu Julius Kambarage Nyerere's Vision of Education*, 17.
[23]*Ibid*., 1.

III. NYERERE'S SOCIAL THOUGHT ON WORK

In this article, we describe the social thought of Nyerere as the development of people rather than material production for its own sake. It is a people-centred social thought. The basis of such social thought is in African familyhood principles focusing on human values towards moulding the person into being self-reliant.[24] It is precisely in this context that the foundations of Nyerere's social thought including principles of human dignity and equality, the common good, and equal participation in social issues are rooted. This is what Nyerere refers to as African Socialism which "involves building on the foundation of our past, and [the] building also to our own design."[25]For Nyerere, African Socialism originates from African indigenous people. One of the reasons is that the human person is social by nature. Consequently, there are traces of socialism in each human society in the world. It is in this regard that we have International Socialism[26] as expressed in some countries such as Russia and Cuba. According to Nyerere, a socialist society is defined by "the existence of certain universal values and characteristics."[27] This understanding enables us to know Nyerere's conceptual social thought which aims at building African socialism which is adaptive and sensitive to the signs of time.

Nyerere's social thought on human work is clearly reflected in The Arusha Declaration. The Declaration expresses the willingness of establishing good systems by laying down "a policy of revolution by evolution."[28]The aim of the policy was that through our own growth we become a socialist and self-reliant society.[29] The document points out ten principles as a guide towards practising African Socialism namely:

> That all human beings are equal; That every individual has a right to dignity and respect; That every citizen is an integral part of the nation and has the right to take an equal part in Government at local, regional and national level; That every citizen has the right to freedom of expression, of movement, of religious belief and of association within the context of the law; That every individual has the right to receive from society protection of his life and of property held according to law; That every individual has the right to receive a just return for his labour; That all citizens together possess all the natural resources of the country in trust for their descendants; That in order to ensure economic justice the state must have effective control over the principal means of production; and That it is the responsibility of the state to intervene actively in the economic life of the nation so as to ensure the well-being of all citizens, and so to prevent the exploitation of one person by another or one group by another, and so as to prevent the accumulation of wealth to an extent which is inconsistent with the existence of a classless society.[30]

The aim and objectives of these principles are to create a non-exploitative and democratic African community. Interpreting it from the perspective of social equality and the preferential option for the marginalized people, Nyerere's policy of socialism implies the absence of exploitation as well as taking care of the vulnerable groups in the society particularly small children, the aged, and people with disabilities. Indeed, a socialist society ought to be democratic for the true existence of socialism.[31] Every human person should participate fully given his ability in giving and receiving the returns of labour accordingly. The Arusha Declaration reflects some major thoughts on human work as explained in the following paragraphs.

The aspect of service and personal involvement is the first characteristic of a socially equal society. Such a society offers all people equal opportunity to thrive considering their worthiness rather than equal abilities. Elsewhere, any socialist society ought to value the services provided by the human person together with his integral development. Integral development denotes wholeness, entailing holistic growth in terms of being and having. Such development is inclusive, multi-dimensional, and intercultural. In a socialist society, Nyerere explains that "man is recognized as a human being who desires human dignity, who is a consumer both privately and socially, and who is also a producer."[32] This understanding implies that "every member will contribute, by his work, to the total of wealth and welfare produced by the society, and he will receive a return in proportion to his efforts and his contribution to the well-being of the community."[33] This entails that each member should participate in the activity according to his ability. In this sense, a human person realises his holistic participation in the work at various levels such as physical, social, psychological and spiritual levels. Everyone contributes actively to the development of the community since the essence of socialism is "the

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[24]Julius K. Nyerere, *Freedom and Socialism: A Selection from Writings and Speeches 1965 1967* (Nairobi: Oxford University Press, 1968), 2.
[25]Julius K. Nyerere, *Freedom and Socialism*, 2.
[26] International Socialism reflects ideas and beliefs relating to the human person universally. Socialism is different from communism. Communism refers to political and economic doctrine that aims at replacing private property and profit with public ownership and communal control of at least major means of production such as mines and factories and the natural resources of the society. Cf. Terence Ball & Richard Dagger, "Communism: Ideology," in *Encyclopædia Britannica*, retrieved from https://www.britannica.com/topic/communism (accessed 18.05.2020).
[27]Julius K. Nyerere, *Freedom and Socialism*, 3.
[28]*Ibid*., 325.
[29]*Ibid*.
[30]*Ibid*., 231-232.
[31]*Ibid*., 234.
[32]*Ibid*., 11.
[33]*Ibid*., 5.

practical acceptance of human equality."[34] Such holistic participation brings satisfaction and true joy to the human person.

The right to work is an essential element to every human person in Nyerere's social thought. The ethical dimension of the right to work entails respecting every person as a free moral subject. Nyerere states that every human being has a right to work[35] because authentic development means people, and people means work, and work is the measure of human dignity (*Mtunikazi; nakazinikipimo cha utu*[36]). However, the denial of such rights has dire consequences for society. For instance, society loses useful human talents which could be basic to specific circumstances. For Nyerere, a successful socialist society ought to "respect admiration, and love of his fellow citizens, by his desire to serve, and by the contribution, he has made to the well-being of the community."[37] Indeed, the right to work ought to be for the greater well-being of the human person.

Similarly, the 1967 Arusha Declaration urges workers to be disciplined and non-exploitative in that "all the fruits of labour should be received by the people who work."[38] The purpose of the goods produced is to make human life better. Nyerere explains that in such a society, emphasis on the production of socially advantageous goods should always be the focus.[39] Some of the key areas include better education facilities, medical care, and places of community activities like libraries, community centres and public parks.

Regarding the Policy of self-reliance, Nyerere underlines four prerequisites of development, namely: people, land, good policies and good leadership. According to Nyerere, the condition for authentic development is hard work and intelligence. In this sense, for Nyerere, the development of any country is brought about by people and not money.[40] Money and wealth are the results of people's intelligence and hard work.

Regarding the notion of hard work, he maintains that: "Everybody wants development, but not everybody understands and accepts the basic requirements for development."[41] For him, the root of development is human hard work combined with intelligence. This is the meaning of self-reliance whereby he puts emphasis on land and agriculture, the people, the policy of socialism and self-reliance, and good leadership. However, the doctrine of self-reliance "does not imply isolationism, either politically or economically. It means that we shall depend on ourselves first, not on others."[42] In this sense, we have to focus on what is available at a comparatively small and manageable cost.

The integral growth of indigenous technology was also to be integrated into the social organizations of the society. This is a technology developed from the inborn survival human skills towards mastering their surroundings. Such indigenous technology grows hand in hand with the level of civilization of the people. For Nyerere, the real truth about the relevance of the socialist principles is reflected in "all human society at all stages of technology and social organization."[43] The nature of such a principle is always evolutionary and adaptive according to the prevailing factors and conditions of the time. In this context, Nyerere's social thought on human work takes into consideration contextual aspects of human beings and their activities as reflected in their history and environment.

However, the continuation of Nyerere's social thought is challenged today by the application of automation technologies, including artificial intelligence, humanoid robots and driverless cars which tend to dehumanize work and consequently make man jobless and dependent. Now the obvious question here is: How can Nyerere's social thought be appropriately used in protecting human work in our age of automation technologies?

IV. UNDERSTANDING AUTOMATION TECHNOLOGICAL AGE

The understanding of the autonomation technological age is a core issue toward establishing appropriate means to be used in protecting human work in light of Nyerere's social thought. Etymologically, the term *automation* is derived from two Greek words *auto* which means self and *matos* which means moving. In that context, automation entails a self-moving system of mechanisms. Chanchal Dey and Sunit Kumar Sen point out that automation "is a set of technologies that results in the operation of machines and systems without significant human intervention and achieves the desired performance superior to manual operation."[44] In that regard, automation systems contain multiple functionalities which include computing control systems, monitoring system performance, plant start-up or shutdown, job, and equipment scheduling. Consequently,

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[34]*Ibid*., 324.

[35]*Ibid*., 6.Rwiza describes human rights as basic moral claims that all human beings can assert. They are rights possessed simply by being a person. Cf. Richard Rwiza, *Ethics of Human Rights*, 14.

[36] The literal meaning of the sentence *Mtunikazi; nakazinikipimo cha utu* means a human person is work and work is the measure of dignity.

[37]Julius K. Nyerere, *Freedom and Socialism*, 9.

[38] Julius K. Nyerere, *Man and Development*, 21.

[39]Julius K. Nyerere, *Freedom and Socialism*, 11.

[40]*Ibid*., 243.

[41]*Ibid*., 244.

[42]*Ibid*., 321.

[43]*Ibid*., 19.

[44] Chanchal Dey and Sunit Kumar Sen, *Industrial Automation Technologies* (Boca Raton & London: CRC Press, 2020, 1.

automation technologies are "concerned with performing a process by means of programmed commands combined with automatic feedback control to ensure proper execution of the instructions."[45] As a result, such a system capable of performance that surpasses in many ways the abilities of the humans to accomplish the same activity can operate without human intervention.

Then again, one of the primary intentions of advancement in technology is to improve the quality of human life to a better status than before. Understanding the human person as a consumer and producer then, such technologies argued from the grass-root can be linked with Nyerere's economic concern on small-scale basic industries which are the lifeline of an economy for a country like the United Republic of Tanzania.[46] We should however be cautious of automation technologies that may end up replacing the human person who is the subject of work. In this context, small-scale industrial operations ought to adopt automation technologies aiming at boosting productivity and reducing the cost of labour without replacing the human person.[47] For instance, such advancements in technologies of automation ought to respond to current human needs meanwhile creating new needs which are always in conformity with the integrity of the human person. So, small-scale industries integrated with an economic automation technological system of equality will be created. In connection with that, we argue that authentic technology of automation ought to link us with our environment and its resources improving the quality of our relationships.

Historically, the development of automation technologies has its roots in the various fields of mechanization which replaced human or animal power in some activities leading to the first industrial revolution.[48] In the words of Dey and Sen regarding the manufacturing and process industries, automation technologies "have evolved over the years starting from basic hydraulic and pneumatic systems to today's modern robotic control systems."[49] Currently, automation technologies have matured to a point where a number of other technologies have developed from it and have achieved recognition and status of their own.[50] Some of these technologies include robotics, the internet of things (IoT), sensor technology, and artificial intelligence.

In connection with that automation technologies have an enormous contribution to human society. Some of the contributions include reduction of waste and production costs, time-saving, quality and reliability is highly improved, and sustaining market competition.[51] For example, as part of a reduction of waste and saving production, automation technologies of robotics are so accurate that the quantity of raw materials used is not wasted and produced at low costs. The quality and reliability are precise and repeatable ensuring specifications of the manufactured product are maintained.

V. HUMAN WORK CHALLENGES

The challenges of human work that arise from the advancement of automation technologies in light of Nyerere's social thought are immense. Such challenges include high capital expenditure required for investments, high-level automation requiring higher sophistication in maintenance, a lower degree of product flexibility, and the requirement of manpower decreases substantially leading to higher unemployment and an increase in industrial waste.[52] In this context, a human error in the management of automation technologies may affect a large population endangering their safety.

Furthermore, the challenges arising from technological advancements, particularly automation technologies in relation to human work most often demean the dignity of work. The purpose of human work is "to fulfil man's fundamental vocation, which is in the order of 'being' and not in that of 'having.'"[53] In this sense, the nature of human work entails personal satisfaction, creativity and personal responsibility. Such nature of human work can be injured by the challenges of autonomous technologies. For instance, instead of

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[45] Mikell P. Groover, "Automation," in *Encyclopedia Britannica*, 22 October 2022, retrieved from https://www.britanica.com/technology/automation (accessed 19.05.2022).

[46] Small-scale basic industries refer to those industries in which the process of manufacturing, production, and servicing (marketing) are done on a small scale i.e., with smaller machines and very limited manpower. Such industries were suggested and implemented by Nyerere as a response to the economic inequalities manifested through the enemies of development; namely poverty, ignorance, and disease which is still a big challenge today. This is observed in several five-year development plans from 1964 to 1974 during his reign as the president and more precisely integrated into the Arusha Declaration. However, these understandings ought not to imply Nyerere's social thought ignored large-scale modern factories and modern industries. Cf. Julius K. Nyerere, *Freedom and Socialism*, 99, 107-108, & 321.

[47] Chanchal Dey and Sunit Kumar Sen, *Industrial Automation Technologies* (Boca Raton & London: CRC Press, 2020, 4.

[48] The first industrial revolution began in the 18th century through the use of steam power and mechanization of production. The second industrial revolution began in the 19th century through the discovery of electricity and assembly-line production. The third industrial revolution began in the 20th century supported by advances in the electronics industry. The fourth industrial revolution began with the rapid growth of the internet and communication technology in the 1990s revolutionized the way the exchange of information takes place. It resulted in a paradigm shift in the industrial automation technology used in the manufacturing industry. Cf. Chanchal Dey and Sunit Kumar Sen, *Industrial Automation Technologies* (Boca Raton & London: CRC Press, 2020, 12.

[49] Chanchal Dey and Sunit Kumar Sen, *Industrial Automation Technologies* (Boca Raton & London: CRC Press, 2020, 4.

[50] Mikell P. Groover, "Automation," in *Encyclopedia Britannica*, 22 October 2022, retrieved from https://www.britanica.com/technology/automation (accessed 19.05.2022).

[51] Chanchal Dey and Sunit Kumar Sen, *Industrial Automation Technologies* (Boca Raton & London: CRC Press, 2020, 5.

[52] Chanchal Dey and Sunit Kumar Sen, *Industrial Automation Technologies* (Boca Raton & London: CRC Press, 2020, 11.

[53] Anton Stres, "Laborem exercens and Human Work," 23-29, 23.

technology facilitating our work, perfecting, accelerating and augmenting it, ceases to be our ally and becomes almost our enemy by "taking away our personal satisfaction and the incentive to creativity and responsibility, when it deprives many workers of their previous employment, or when, through exalting the machine, it reduces us to the status of its slave."[54]

More important still, automation technologies most often replace human physical participation. Automation technology alienates the human person from work. This is a challenge for it injures the very nature of work. In terms of human work, we are currently facing the so-called second globalization in which there are various automation technologies which replace the human person from physical participation in terms of production of goods, services, communications and even the labour market. In this sense, we can ask ourselves:how can we think about the future and nature of human work relationships and autonomation technologies while respecting human dignity?

VI. HUMAN-CENTRED AUTOMATION TECHNOLOGIES

The article proposes the adoption of human-centred automation technologies founded on Nyerere's social thought for an effective solution to the challenges of human work in our age of autonomous technology. With this understanding, we can describe human-centred automation technologies like the one that integrates autonomous technologies centred on the human person. Such automation technologies ought to assist the human person in reshaping his attitude towards work. This is in harmony with the purpose of human work which is to fulfil man's fundamental vocation rooted in the order of being rather than that of having.

Through human-centred automation technologies, the nature of human work in the order of being leads to personal satisfaction, creativity and personal responsibility. This is linked with the social thought of Nyerere in the understanding of human work that reflects service to humanity, the right to dignified work, self-reliance, human dignity, and the development of human-centred traditional technologies. Such understanding creates sound human-centred automation development rooted in the order of being.

There is no doubt that human-centred automation technologies promote the integral growth of indigenous technologies. Such technologies refer to the skilful activities performed by the people of a particular geographical area that enable them to explore various resources at their exposure. For the realisation of such technologies, we propose an integration of the social organizations of the society. It is through such integration we adopt the prerequisites for the development of Nyerere including people, good leadership, good policies, and land in the age of automation. In this connection, indigenous technology will grow hand in hand with the level of civilizations of the society. As a result, Nyerere's social thought on human work considers contextual aspects of human beings and their activities as reflected in their history and environment.

Then again, human-centred automation technologies promote precious values in the order of being such as personal satisfaction, creativity and personal responsibility which are threatened by autonomous technologies. The realization of the development of such values is realised through hard work and intelligence. Inspired by the writings of Emmanuel Wabanhu, the dimension of hard work with intelligence falls under the category of normative ethics of being in the perspectives of growth in moral character and virtue.[55] In connection with Nyerere's social thought teaching, the conditions of authentic development (hard work and intelligence) ought to be rooted within the perspectives of growth in moral character and virtue on one hand. On the other hand, technology, money and wealth are the results or products of people's intelligence and hard work.

Against this background, we affirm that for credible authentic development, automation technologies ought to be human-centred through cultivating the virtues of human hard work combined with intelligence. Such precious values when planned moulds the human person into being self-reliant. We should however note that everybody wants development, but not everybody understands and accepts the basic requirements for development. Thus, when we adopt the human-centred automation technology model, we will live and enhance living African family-hood principles focusing on human values as Nyerere thought in his social teaching.

VII. CONCLUSION

The article discusses the challenges of human work in the present era of automation technologies in light of Nyerere's social thought. It affirms that the social thoughts of Nyerere are centred on the human person, meanwhile pointing out four prerequisites of development namely people, land, good policies and good leadership. Similarly, considering the basic requirements for development (people, hard work and intelligence), the policy on self-reliance is key to authentic human development as described in the Arusha Declaration. Furthermore, the article exposes challenges emanating from working conditions brought about by automation technological advancements and their implications. Conclusively, the paper affirms Nyerere's social thought in

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[54]John Paul II, Encyclical Letter *LaboremExercens* (14 September 1981): *AAS* 73 (1981): 577-647, no. 5.
[55] Emmanuel Wabanhu, "The Ecological Crisis and the Normative Ethics of Being," *Hekima Review* 53 (December 2015): 35-48, 35. Wabanhu argues that right or wrong are the manifestations of the character of a person. For him, normative ethics of being, virtue ethics or moral character can be used interchangeably.

the context of human-centred automation technologies as an appropriate response to the challenges of human work in the age of autonomous technologies.

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