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-RESEARCH ARTICLE-

TRACES OF ANTI-TECHNOLOGY (LUDIST) MOVEMENT: BIBLIOMETRIC ANALYSIS[1]

Erdal AYDIN[2]

Abstract

The concept of technological progress; It is used to describe the changing production processes with the effect of industrial revolutions, the effects of individuals on employment structures, and the changes and developments in this field. The increase in productivity with the inclusion of machines in the production processes, the savings in time and the idea that artificial intelligence can replace the human brain in the future have made the changes in employment processes and the effects of technological progress on this process controversial. The view that emerged as machine crushing and focused on the negative effects of technological progress on employment in the literature as a ludist movement suggests that machines in production will replace individuals over time and cause negative effects on human welfare. In addition, with the industrial revolutions and technological advances, the dimensions of the ludist movement have shifted to different points such as the use of artificial intelligence instead of the human brain, the disappearance of professions and the emergence of new professions, the development of skills and abilities. In this study, Ludism was considered as a concept that was the subject of research in different fields and it was aimed to contribute to the researchers in the context of the literature by analyzing it bibliometrically.

Keywords: *Luddism, Industrial revolution, Bibliometric Analysis.*

JEL Codes: *A-13, J-20, O-30*

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[1] The Extended Turkish Summary is located the end of the article.

[2] Doç.Dr.Erdal AYDIN, Çanakkale Onsekiz Mart University, Department of Business Administration, Biga-Çanakkale/ Türkiye; erdalaydin@comu.edu.tr, https://orcid.org/0000-0001-7644-831X

TEKNOLOJİ KARŞITI (LUDİST) HAREKETİN İZLERİ: BİBLİYOMETRİK ANALİZİ

Öz

Teknolojik ilerleme kavramı; sanayi devrimlerinin etkisiyle değişen üretim süreçlerini, bireylerin istihdam yapıları üzerindeki etkilerini ve bu alanda yaşanan değişim ve gelişimleri betimlemekte kullanılmaktadır. Makinelerin üretim süreçlerine dahil edilmesiyle verimlilikte yaşanan artışlar, zamandan sağlanan tasarruf ve ilerleyen süreçte yapay zekanın insan beyninin yerini alabileceği fikri istihdam süreçlerinin değişimi ve teknolojik ilerlemenin bu süreç üzerindeki etkilerini tartışmalı hale getirmiştir. Makine kırıcılığı olarak ortaya çıkan ve ludist hareket olarak literatürde yer alan ve teknolojik ilerlemenin istihdam üzerindeki olumsuz etkileri üzerine odaklanan görüş, üretimde makinelerin zaman içerisinde bireylerin yerini alacağını ve insan refahı üzerinde olumsuz etkilere yol açacağını ileri sürmektedir. Bunun yanında sanayi devrimleri ve teknolojik ilerlemeler ile ludist hareketin boyutları yapay zekanın insan beyni yerine kullanılması, mesleklerin yok olması ve yeni mesleklerin doğması, beceri ve yeteneklerin geliştirilmesi gibi farklı noktalara kaymıştır. Bu çalışmada Ludizm farklı alanlarda araştırmalara konu olan bir kavram olarak ele alınmış ve bibliyometrik olarak analiz edilerek literatür bağlamında araştırmacılara katkı sağlamak amaçlanmıştır.

Anahtar Kelimeler: *Luddizm, Sanayi devrimi, Bibliyometrik Analiz*

JEL Kodları: *A-13, J-20, O-30.*

"Bu çalışma Araştırma ve Yayın Etiğine uygun olarak hazırlanmıştır."

1. INTRODUCTION

Industrial Revolutions have been very important developments in the history of human civilization, pointing to significant changes in technology, economy and social structures. It heralds important advances from mechanized production during the First Industrial Revolution to digitalization and automation today. However, as the Luddite movement of the 19th century showed, such rapid progress often brought resistance. The term "Industrial Revolution" refers to a period of radical socio-economic change that began with the mechanization of the textile industry in England in the late 18th century and eventually spread all over the world. It is often divided into different stages or revolutions, each characterized by different technological innovations and socio-economic impacts.

First Industrial Revolution (1760–1840); First Industrial Revolution (1760–1840); This revolution, which first emerged in the United Kingdom, spread to Western Europe, North America and Japan, and then to the whole world. With the first industrial revolution, machines have replaced human labor, the use of mines and metals has increased, and developments have been made in the field of transportation. The First Industrial Revolution began with the transition from manual production methods to machine- based production, guided by technological innovations such as the steam engine, the spinning machine and the electric loom. This revolution focused primarily on the textile industry and led to the rise of factories and urbanisation(Pereira ve Romero, 2017 :1207).

Second Industrial Revolution (1870–1914); Second Industrial Revolution (1870–1914); This period, also known as the second industrial revolution or Industry 2.0, covers the years between 1850 and 1914. England, which played a leading role in the first industrial revolution, left its place to Germany and the United States of America in the second industrial revolution. The main actors of the industry of this period are; electric motor, telephone telegraph, internal combustion engine etc,. The fact that the steam engine is gradually disappearing from the scene of history and leaving its place to the young and dynamic petroleum energy expresses the importance of Industry 2.0. Second Industrial Revolution not only represents a major advance in technology and productivity improvement, but is also transforming modes of production and the relationships between elements of production processes (Koca,2020:4537).

Third Industrial Revolution (1960s-Present); The Third Industrial Revolution, also known as the Digital Revolution, began in the mid-20th century with the development of digital electronics, computers, and information technology. This revolution is defined by the developments in the development of electronic and communication technologies and their inclusion in production processes. In this period, the use of atomic energy, computer and microelectronic chips are important developments (Kılıç and Alkan, 2018:31).

Fourth Industrial Revolution (Present); The concept of Industry 4.0 was used for the first time at the Hannover Fair in 2011. The Industry 4.0 process is designed as a process created by the continuation of Germany's superiority in the automotive sector (Kagermann et al., 2011: 2). Some of the critical technological elements that make up Industry 4.0 are many technological innovations such as cyber- physical systems, internet of things, big data, cloud storage systems (Kaygın E., Zengin Y. and Topçuoğlu E. 2019: 1069). When these components are evaluated, Industry 4.0 represents a

whole in which artificial intelligence technology is included in production and business processes. In this context, the technological revolutions and the developing electronic and technical systems have brought social and economic transformation, and naturally, the concerns that social transformation has created have revealed the opposite view, Ludism.

This evolution in technological progress has brought with it the evolution of Luddism as the opposite view. Therefore, a social and economic process design that will adapt to the technological progress and transformation processes experienced here gains importance. In this study, the evolution of the Ludist movement in the historical process has been investigated and the perspective of technological progress and development of Ludism has been tried to be revealed as a result of the experiences gained.

The concept of luddism as a machine-breaking movement first emerged in 1758 when English workers smashed the first mechanical wool mowers. In Nottingham, a worker named Ned Ludham destroyed the hosiery loom and with the spread of this movement throughout England, Ludism was born (Beer, 1989:460).

Technological developments undoubtedly change the social and cultural structure. The most important development in which technological change affected the social structure was the emergence of the Ludist movement. The changing structure with the inclusion of technology and machines in the production processes brought about the substitution of machinery and labor. This has led to a re-evaluation of the use of labor in the economy. Machines replacing workers have been the process that brought about Luddism, which is also called anti-technology, that is, machine crushing. Ned Ludd, who gave the name to this trend, came to the fore with the machinery in England breaking down the machinery in a facility on behalf of the unemployed textile workers. After this action, the concept of Luddism was born with its reflection on the whole country. This trend, also called machine crushing, is a reaction to the increase in the use of machinery in production causing unemployment (Arif, 2015:1).

When considered in the context of industrial revolutions, which represent changes in production processes and technological development relations, both the development of mechanical technologies and the development of communication networks have brought a new revolution. Today, developments in information and communication technologies and communication networks are a process that completely excludes production from the labor system, or more accurately, forces the labor factor to be included in this transformation. In this context, it is considered as a natural process that this transformation brings along a resistance movement in its problems in keeping up with the pace. As a matter of fact, we see that Luddism and new Luddism movements have also been shaped within the framework of technological progress and industrial revolutions.

To draw a historical framework from the perspective of industrial revolutions, the first Luddism movement emerged with the emergence of the industrial revolution and the use of mass production processes or, in a simpler words, machines in production. The widespread use of machines in the textile industry, which was the dominant sector of the period, For this reason, being unemployed, which brings along many social and economic problems, has brought along the actions of breaking machines and created a platform for the workers to show their reactions.

Although luddism was a reaction to the new order created by the machines leaving people unemployed, it turned into a movement understanding that covers all the damages caused by technological progress to the world in the course of time. Here, it focuses on the destruction caused by technology in all areas such as the environment, social changes, communication and cultural changes, economy, etc. This process, called New Luddism, is defined as an opposing view to technological progress, which is out of human control and makes world life difficult.

According to Kaczynski, one of the representatives of the new Luddism movement, the industrial revolution has brought about very important results for humanity. The expectations of people living in developed countries have upset the balance of the world and made life in the world meaningless. While it has created psychological and social problems only in third world countries, it will also cause widespread psychological and social problems in developed countries in the future. According to him, if technological progress continues, many more problems await people (Kaczynski, 1996 : 1-2).

Vivarelli Evengalista and Pianta (1996) empirically investigated the effects of technological progress on employment in the Italian manufacturing industry and concluded that the said effect was negative. Piva and Vivarelli found that investments in technological progress for 11 EU member countries in 2017 had positive effects on employment in countries with high and medium technological progress, while there was no significant effect in countries with low technological progress. Bogliacani and Vivarelli in 2012 focused on the industry and service sector for EU countries and found that the impact of technology investments on employment was positive. Blanchflowe and Burgess, in their empirical research for Australia and England in 1998, concluded that there is an increase in employment in businesses that develop new technology and incorporate it into their production processes. Greenan and Guellaec, in their study at the firm level for the French economy in 2000, concluded that the effect of technological progress on employment is

positive. Evangalista and Savano found in 2002 that the labor-saving aspect of technological progress in the Italian economy emerged especially in companies where information communication networks were developed. Hollanders and Weil concluded that there is a positive relationship between technological progress and employment in their study on the manufacturing industry of Finland, France, Germany, Japan, England and the USA. In his study on the banking sector of the US economy in 2006, Fung concluded that technological progress increased employment. Kılıçaslan and Güngör, in their similar studies on the Turkish manufacturing industry, determined that information and communication technologies have an employment-creating effect. Frey and Osborne investigated the sensitivity of jobs to technological progress in their study for the US economy in 2013 and concluded that while technological progress (digitalization) poses a threat to low-skilled jobs, there will be no such threat as the level of education increases. Acemoğlu and Restrepo, in their work for the US economy, have come to the conclusion that digitalization will cause job losses. Hutter and Weber, in their study for Germany, determined that technological progress will increase the need for labor that requires high skill and talent.

When the empirical literature is examined, it is possible to say that different opinions prevail. When evaluated from the optimistic side, the prevailing view is that technological progress will not have a negative impact on employment. The pessimistic point of view is that employment may decrease based on the cost advantage provided by technological progress. The balanced perspective is that individuals can adapt to technological progress in line with their skills and abilities. In this context, it is predicted that individuals with high skills and abilities will carry their welfare level to the top, while individuals with medium skills will be the group most affected by this process, and those who develop their skills and abilities will be able to find a place in the system and those who cannot develop them will be negatively affected.

When the theoretical and applied literature is examined, it is understood that the concept of Ludism is a concept related to many fields such as sociology, psychology, history, economy and technology. In this context, in this study, a bibliometric analysis was made using the concept of "luddism" and it is aimed to contribute to subsequent research by adding depth to the place of the concept in the literature.

2. BIBLIOMETRIC ANALYSIS

2.1 Dataset and Method

The VOS viewer program was used in this study, which focuses on the bibliometric mapping application regarding the place of the concept of "Luddism" in the literature. Bibliometric mapping of studies, authors, countries, institutions, citations, co-authors, co-citations, journals, etc. provides a lot of information and makes it possible to evaluate the place of the examined concepts in the literature together. The data set for bibliometric mapping was obtained from the Web of Science database. The search made by entering the concept of "Luddism" was made with the criteria of all files. In this context, 74 publications were found and the bibliometric mapping application was made on these data. The data sources, application and scope of the study are given in Table 1.

Table 1: Data Sources, Application and Scope

Data Sources	Web of Science n=74
Application Scope and Criteria	Eligibility Criteria: All Files Article:52 Book Chapter: 6 Survey Research: 6 Book Review: 3 Other: 7

52 of the 74 studies obtained by using the Web of Science database are in the category of research articles, 6 of them are book chapters, 6 of them are in the review and 7 of them are in the other studies category.

Table 2. List of Studies Used in the Study

Author Full Names	Article Title	Source Title	DOI
Alonso, Andoni	Luddısm And Neo-Luddısm: A Revıew	Endoxa-Serıes Fılosoficas	
Wu, Qing; Chen, Hongbing	Backgrounds Of Neo-Luddism's Technological Culture	2016 4th Internatıonal Conference On Socıal Scıences Research (Ssr 2016)	
Nordmann, Alfred	Epistemological Luddism	Engagıng Scıence Technology And Socıety	10.17351/ests2021.861
Navickas, Katrina	Luddısm, Incendıarısm And The Defence Of Rural 'Task-Scapes' In 1812	Northern Hıstory	10.1179/174587011X12928631621276
Lachney, Michael; Dotson, Taylor	Epistemological Luddism: Reinvigorating A Concept For Action İn 21st Century Sociotechnical Struggles	Socıal Epıstemology	10.1080/02691728.2018.1476603
Klein, L	Luddism For The Twenty-First Century	Internatıonal Journal Of Human-Computer Studıes	10.1006/ijhc.2001.0487
Garcia, Jose Luis; Jeronimo, Helena Mateus; Carvalho, Tiago Mesquita	Methodological Luddism: A Concept For Tying Degrowth To The Assessment And Regulation Of Technologies	Journal Of Cleaner Productıon	10.1016/j.jclepro.2017.03.184
Randall, A	The 'Lessons' Of Luddism	Endeavour	10.1016/S0160-9327(98)01145-4
Carter, Jonathan S. S.; Yang, Misti	Sophie Vs. The Machine: Neo-Luddism As Response To Technical-Colonial Corruption Of The General Intellect	Rhetorıc Socıety Quarterly	10.1080/02773945.2023.2200699
Roberts, Matthew	Rural Luddism And The Makeshift Economy Of The Nottinghamshire Framework Knitters	Socıal Hıstory	10.1080/03071022.2017.1327644
Navickas, K	The Search For 'General Ludd': The Mythology Of Luddism	Socıal Hıstory	10.1080/03071020500185406
Roberts, Matthew	E.P. Thompson, Shirley, And The Antinomian Tradition İn West Riding Luddism And Popular Protest	Labour Hıstory Revıew	10.3828/lhr.2021.9
Lınton, D	Luddısm Reconsıdered	Et Cetera	
Harrıs, J	Computer Luddısm	Et Cetera	
Kınsley, M	Corporate Luddısm	New Republıc	
King, David	From Radical Science To Luddism: A Post-Bssrs Activist Perspective On The Politics Of Technology	Scıence As Culture	10.1080/09505431.2016.1194061
Pappas, Takis S.; O'malley, Eoin	Civil Compliance And Political Luddism: Explaining Variance İn Social Unrest During Crisis İn Ireland And Greece	Amerıcan Behavıoral Scıentıst	10.1177/0002764214534663
Chapman, G	In Defense Of Luddısm	Byte	
Trıvıson, D	Luddısm Or Darıng Heresy	Lıbrary Journal	
Newhard, Rd	Luddısm Or Darıng Heresy	Lıbrary Journal	

Markasovic, Vlasta	Determınants Of Postmodern Thought In Radaus's Poetry	Anafora	
Edgerton, David	In Praise Of Luddism	Nature	10.1038/471027a
Kohler, Bg	Luddısm Or Darıng Heresy	Lıbrary Journal	
Brown, JS	Educational Luddism, Privacy With Security	Computer	
Cherry, Miriam A.	The Future Encylopedia Of Luddism	Economıc Scıence Fıctıons	
Read, D	Luddısm In Nottınghamshıre - Thomıs,Mı	Englısh Hıstorıcal Revıew	
Albala, Ken	A Plea For Culinary Luddism	Food Fıghts: How Hıstory Matters To Contemporary Food Debates	
Mellor, Andrew; Mobilia, Mauro; Redner, S.; Rucklidge, Alastair M.; Ward, Jonathan A.	Influence Of Luddism On İnnovation Diffusion	Physıcal Revıew E	10.1103/PhysRevE.92.012806
Holmes, N	Educational Luddism, Privacy With Security - Reply	Computer	
Lyon, D	New Technology And The Lımıts Of Luddısm	Scıence As Culture	
Hiltner, Ken	Shirley And The Luddites	Bronte Studıes	10.1179/174582208X298653
Franklin, Sophie	'Ay, Ay, Divil, All's Raight! We've Smashed 'Em!': Translating Violence And 'Yorkshire Roughness' İn Charlotte Bronte's Shirley	Bronte Studıes	10.1080/14748932.2019.1525875
Kinsella, John	Notes On Globalısatıon And Neo-Luddısm	Polysıtuatedness: A Poetıcs Of Dısplacement	
Iannone, A. Pablo	Biotechnology Goes Worldwide: Between Luddism And Transhumanism	Seekıng Balance: Phılosophıcal Issues In Globalızatıon And Polıcy Makıng	
Jones, NL	Scientism Or Luddism: İs İnformed Ethical Dialogue Possible?	Amerıcan Journal Of Bıoethıcs	10.1162/152651604773067262
Hargreaves, Ja	Methodısm And Luddısm In Yorkshıre, 1812-1813	Northern Hıstory	10.1179/007817290790175881
Iannone, A. Pablo	Biotechnology Goes Worldwide: Between Luddism And Transhumanism Dialogue	Seekıng Balance: Phılosophıcal Issues In Globalızatıon And Polıcy Makıng	
Mckusick, James C.	Against Technology: From The Luddites To Neo-Luddism	Wordsworth Cırcle	10.1086/TWC24045317
Sadiq, Kerrie; Mccredie, Bronwyn	The Challenges Of Industrial Revolutions: Luddism And Tax Reform	Australıan Busıness Law Revıew	
Minard, Philippe	The Return Of Ned Ludd. Luddism And İts İnterpretations	Revue D Hıstoıre Moderne Et Contemporaıne	10.3917/rhmc.541.0242
Gaunt, Richard A.	The Pentrich Rebellion - A Nottingham Affair?	Mıdland Hıstory	10.1080/0047729X.2018.1522464
Kassebaum, Dg	Blamıng The Boards - Are We Lapsıng Into Educatıonal Luddısm	Academıc Medıcıne	10.1097/00001888-199109000-00009
Costinot, Arnaud; Werning, Ivan	Robots, Trade, And Luddism: A Sufficient Statistic Approach To Optimal Technology Regulation	Revıew Of Economıc Studıes	10.1093/restud/rdac076

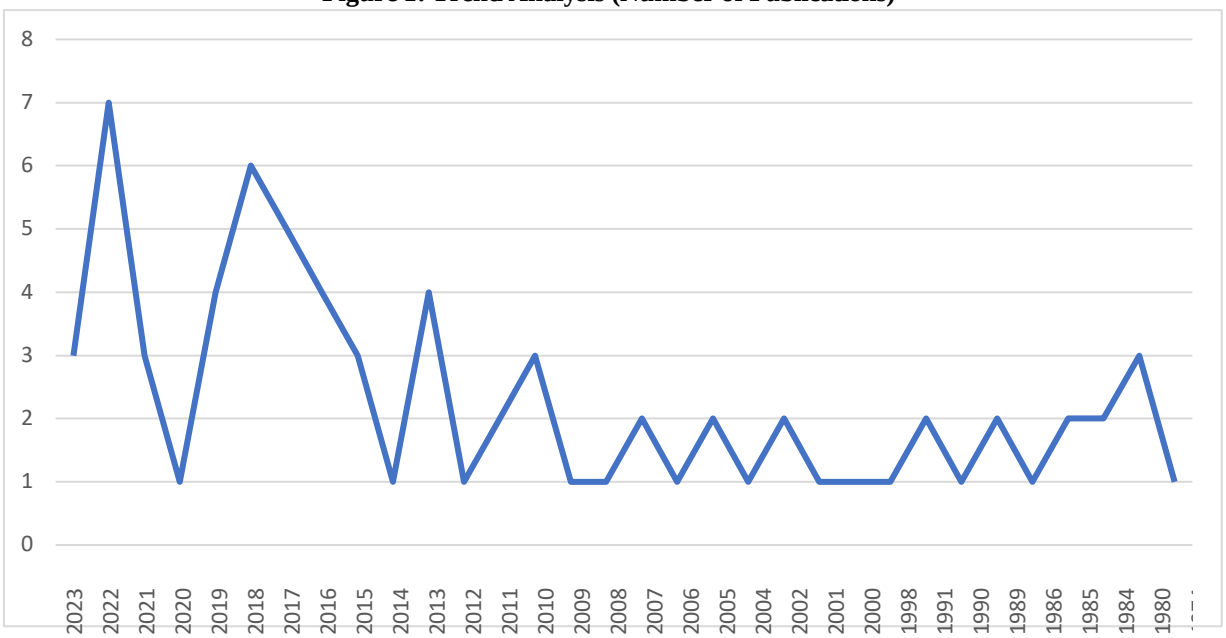
Lubrano, Mauro	Stop The Machines: How Emerging Technologies Are Fomenting The War On Civilization	Terrorısm And Polıtıcal Vıolence	10.1080/09546553.2021.1919097
Zlotnıck, S	Luddısm, Medıevalısm And Womens Hıstory In 'Shırley' - Bronte,Charlotte Revısıonıst Tactıcs	Novel-A Forum On Fıctıon	10.2307/1345939
Dıedrıch, M	Truths And Realıtıes, Bronte,Charlotte Confrontatıon Of Industrıalızatıon And Luddısm	Aaa-Arbeıten Aus Anglıstık Und Amerıkanıstık	
Capuano, Peter J.	Luddism, Needlework, And The Seams Of Domesticity İn Charlotte Bronte's Shirley	Changıng Hands: Industry, Evolutıon, And The Reconfiguratıon Of The Vıctorıan Body	
Vanderbeeken, Robrecht	Virtual Invaders	Foundatıons Of Scıence	10.1007/s10699-011-9255-6
Bowman, Don	Neo-Luddism And The Demonisation Of Technology: Cultural Collision On The Information Superhighway	Acm Sıgcomm Computer Communıcatıon Revıew	10.1145/1568613.1568618
Randall, Aj	The Phılosophy Of Luddısm - The Case Of The West Of England Woolen Workers, Ca 1790-1809	Technology And Culture	10.2307/3104942
Ioakimidis, Vasilios; Maglajlic, Reima Ana	Neither 'Neo-Luddism' Nor 'Neo-Positivism'; Rethinking Social Work's Positioning İn The Context Of Rapid Technological Change	Brıtısh Journal Of Socıal Work	10.1093/bjsw/bcad081
Deseriis, Marco	Is Anonymous A New Form Of Luddism? A Comparative Analysis Of Industrial Machine Breaking, Computer Hacking, And Related Rhetorical Strategies	Radıcal Hıstory Revıew	10.1215/01636545-2210437
Archer, J	Fire Over East Anglia: Rural Luddism And The Lives, Times And Deaths Of George Fortis And Noah Peake Of Bressingham	Agrıcultural Hıstory Revıew	
Marmol Mariduena, Rosa Alexandra	Theater Of Puppets As A Strategy To Power The Attentıon Of Chıldren Of 5 Years Of The Isabel Herrera De Velazquez Basıc Educatıon School	Revısta Conrado	
Barral Martinez, Margarita	How Is Born In Galıcıa Labor Movement (1870-1900)	Revısta General Del Derecho Del Trabajo Y De La Segurıdad Socıal	
Heaton, Herbert	The Economic Background Of Shirley	Bronte Studıes	10.1179/1474893213Z.00000000083
Roberts, Matthew	Women, Late Chartism, And The Land Plan İn Nottinghamshire	Mıdland Hıstory	10.1080/0047729X.2023.2217226
Berressem, Hanjo	Economies Of Greed İn Late Pynchon': America And The Logic Of Capital	Textual Practıce	10.1080/0950236X.2019.1580507
Martinez, Erika	Who Stumbles On The Outsıde? Poetıcs Of The Obstacle And Wanderıng Of Meanıng In Cesar Vallejo Y Berta Garcıa Faet	Monteagudo	
Richards, John	Slippery Bows And Slow Circuits	Musıcologıca Brunensıa	10.5817/MB2017-1-3
Thormahlen, Marianne	The Bronte Novels As Historical Fiction	Bronte Studıes	10.1179/1474893215Z.000000000157

Holowchak, M. Andrew	Technology And Freudian Discontent: Freud's'Muffled' Meliorism And The Problem Of Human Annihilation	Sophıa	10.1007/s11841-009-0160-1
Graham, G	Strange Bedfellows? Information Systems And The Concept Of A Library	Interdıscıplınary Scıence Revıews	10.1179/030801805X25927
Pilarski, Linda M.; Mehta, Michael D.; Caulfield, Timothy; Kaler, Karan V. I. S.; Backhouse, Christopher F.	Microsystems And Nanoscience For Biomedical Applications: A View To The Future	Nanotechnology: Rısk, Ethıcs And Law	
Baggaley, Jon	The Luddite Revolt Continues	Dıstance Educatıon	10.1080/01587919.2010.513957
Holgate, Ivy	The Structure Of Shirley	Bronte Studıes	10.1179/1474893213Z.00000000084
Ganesh, Maya Indira; Moss, Emanuel	Resistance And Refusal To Algorithmic Harms: Varieties Of 'Knowledge Projects'	Medıa Internatıonal Australıa	10.1177/1329878X221076288
Hendrickx, Jan F. A.; De Wolf, Andre M.	The Anesthesia Workstation: Quo Vadis?	Anesthesıa And Analgesıa	10.1213/ANE.0000000000002688
Gaunt, Richard A.	Nottinghamshire And The Great Peace: Reflections On The End Of The Napoleonic Wars, 1814-1815	Mıdland Hıstory	10.1080/0047729X.2016.1159856
Leshkevich, Tatiana G.	The Virtual Person And Transmitting Cultural Values To The Digital Generation	Voprosy Fılosofıı	10.21146/0042-8744-2022-3-53-63
Shifman, Limor; Blondheim, Menahem	The Medium İs The Joke: Online Humor About And By Networked Computers	New Medıa & Socıety	10.1177/1461444810365311
Ahn, Jongseok	Exploring The Negative And Gap-Widening Effects Of Edtech On Young Children's Learning Achievement: Evidence From A Longitudinal Dataset Of Children İn American K-3 Classrooms	Internatıonal Journal Of Envıronmental Research And Publıc Health	10.3390/ijerph19095430
Porkodi, T.; Kogila, N.; Velmurugan, J. M.	An Analytical Study On Managing Human Resources Through Relevant Social Security Measures	Journal Of Statıstıcs And Management Systems	10.1080/09720510.2022.2083830
Sun, Susan I.; Chipperfield, Andrew J.; Kiaee, Mahdi; Wills, Richard G. A.	Effects Of Market Dynamics On The Time-Evolving Price Of Second-Life Electric Vehicle Batteries	Journal Of Energy Storage	10.1016/j.est.2018.06.012

1.1. Analysis Findings

The first finding within the scope of the analysis findings is the trend analysis of the data. The trend analysis findings showing the distribution of studies associated with the concept of "Luddism" by years are shown in Figure 1.

Figure 1: Trend Analysis (Number of Publications)



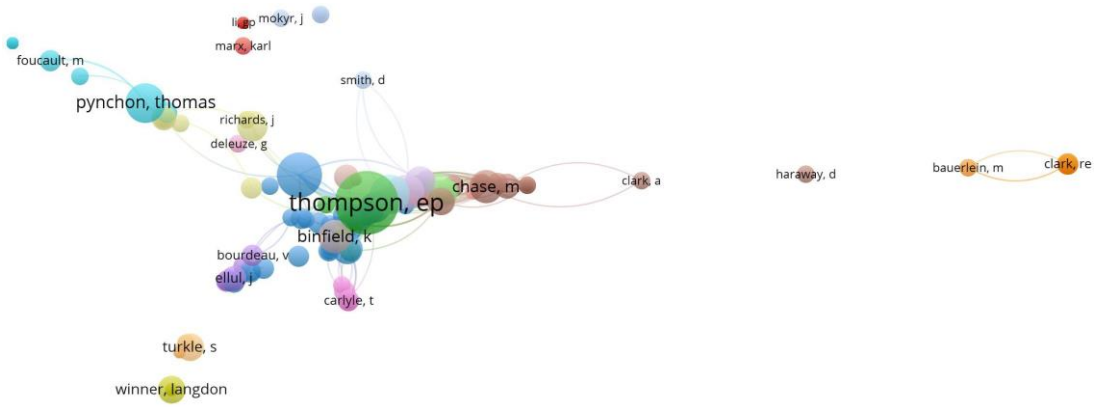
When Figure 1 is examined, it is concluded that the studies on the subject have increased recently. It can be seen from the graph that applied studies on the subject have increased especially as of the 2000s. Another analysis carried out within the scope of the study is co-authorship analysis. Analysis findings are shown in Figure 2.

Figure 2. Co-Authorization Map

The results of the analysis show that the countries with the most cooperation in co-authored studies in the field of Luddism are the United States, England, Belgium, Ireland and Italy. In addition, the three most cited countries in co-authored studies were the UK, USA and Belgium, respectively.

Another analysis made within the scope of the study is the co-citation analysis. In this mapping, which was carried out to identify sources, references and authors of central importance in the field, the unit of analysis was chosen as the author, and an equal value of 10 was determined for the minimum number of citations. The findings of the mapping are given in Figure 3.

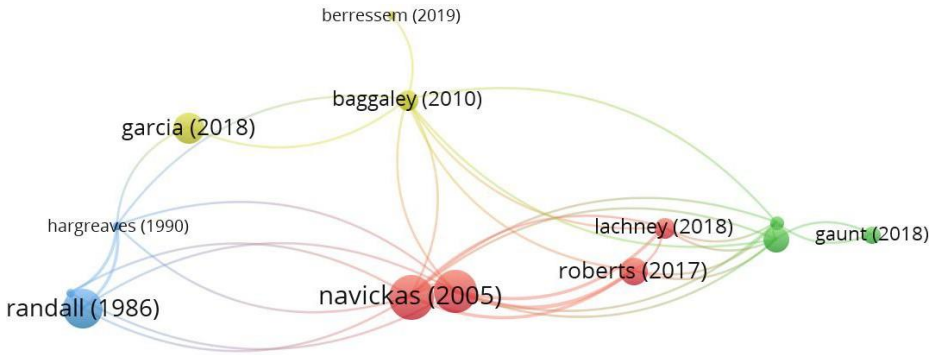
Figure 3. Author Co-Citation Network Map



The total connection strength was found to be 88 for the 4 researchers who met the condition. In this context, the 4 researchers who contributed the most to the field were Tahmpson, EP, Randall, A, Haopsbawn, EJ and Pynchon, Thomas, respectively.

Another mapping made within the scope of the analysis is document co-citation network mapping. In this context, 36 studies with at least 1 citation from 74 documents selected as analysis units were included. The mapping results of the citation network are shown in Figure 4.

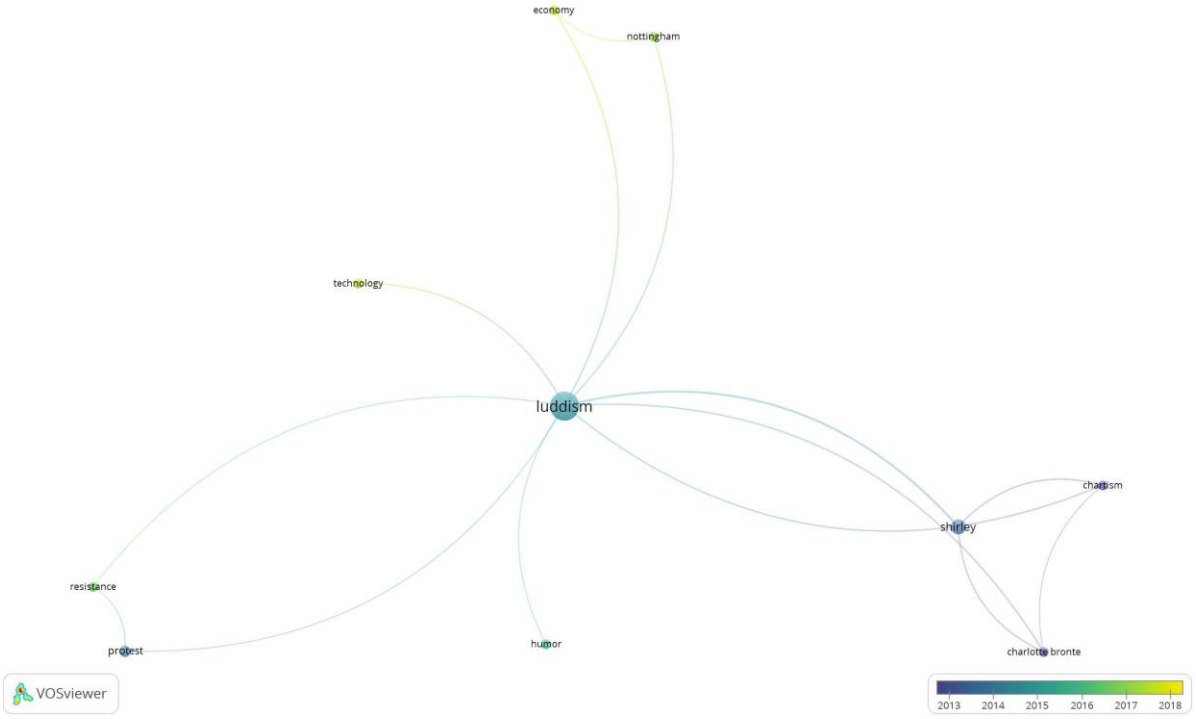
Figure 4. Document Citation Network Map



Here, citation network mapping is discussed as a technique used to identify pioneering studies in the field. Accordingly, the first 2 studies with the highest citation network connection were Navicas (2005), (2011), Roberts (2017).

Finally, the concept association of the studies included in the study was carried out using keyword analysis. The obtained mapping results are given in Figure 5.

Figure 5. Keyword Association



Since a total of 198 keywords were used in the research, a restriction was used in the research and the condition of using them together at least twice was stipulated. When the mapping data of 12 terms is examined within the framework of these constraints, we see that the concept of luddism is in the center with a total of 17 connections, followed by the concepts of shirly, charlotte bronte, chartism, economy, nottingham, protest, resistance, technology, neo-luddism and neo-luddite.

Finally, in the study, the source citation network map was created and the sources with high link strength were mapped. The results obtained are shown in Figure 6.

Figure 6. Source Citation Network Map

The sources with the highest bibliometric matching power of the mapping were determined as social history, northern history, and midland history.

CONCLUSION and EVALUATION

This study is about an application using the VOSviewer bibliometric mapping program with the aim of revealing the emergence of the concept of Luddisim and its place in the literature. The Web of Science database was used to provide resources in the research and studies associated with the term "luddism" were taken into account. In this context, 74 studies were reached in the relevant database and the literature on the subject was tried to be deepened with bibliometric mapping. With the VOSviewer program, mapping was performed using bibliometric matching, co-citation, co-authorship, concept association and citation network modules.

As a result of the analysis, the common citation Navicas (2005), (2011), Roberts (2017) studies, which give the frequency of citing the two documents together by another document, were determined as the most linked studies. Secondly, with co-authorship mapping, the relationship between the two analysis units was calculated over the number of co-authored documents, and Tahmpson, EP, Randall,A, Haopsbawn, EJ, and Pynchon, Thomas were found to be the most associated studies. Third, the source citation network was mapped and the three sources with the highest link strength were determined as social history, northern history, and midland history. In addition, the concept association mapping analysis was made and the most used keywords in the literature were determined as shirly, charlotte bronte, chartism, economy, nottingham, protest, resistance, technology, neo-luddism and neo-luddite.

As a result of the study, the studies associated with the concept of "luddism" were analyzed bibliometrically, and it was aimed to add depth to the next studies at the point of literature review.

TEKNOLOJİ KARŞITI (LUDİST) HAREKETİN İZLERİ: BİBLİYOMETRİK ANALİZİ

1. GİRİŞ

Sanayi Devrimleri, teknoloji, ekonomi ve sosyal yapılarda önemli değişimlere işaret ederek, insanlık uygarlığı tarihinde çok önemli gelişmeler olmuştur. Birinci Sanayi Devrimi sırasındaki mekanize üretimden günümüzdeki dijitalleşme ve otomasyona kadar önemli ilerlemelerin habercisidir. Bununla birlikte, 19. yüzyılın Luddite hareketinin gösterdiği gibi, bu tür hızlı ilerleme genellikle direnişi beraberinde getirmiştir. "Sanayi Devrimi" terimi, 18. yüzyılın sonlarında

İngiltere'de tekstil endüstrisinin makineleşmesiyle başlayan ve sonunda tüm dünyaya yayılan radikal sosyo-ekonomik değişim dönemini ifade etmektedir. Genellikle, her biri farklı teknolojik yenilikler ve sosyo-ekonomik etkilerle karakterize edilen farklı aşamalara veya devrimlere ayrılır.

Ludizm kavramı bir makine kırma hareketi olarak ilk 1758 yılında İngiliz işçileri ilk mekanik yün biçme makinelerini parçalama eylemi ile ortaya çıkmıştır. Notting- ham'da Ned Ludham adında bir işçi, çorap dokuma tezgâhını tahrip etmiş ve bu hareketin tüm İngiltere'ye yayılması ile Ludizm doğmuştur (Beer, 1989.460).

Teknolojik gelişmeler hiç kuşkusuz beraberinde sosyal ve kültürel yapıyı da değiştirmektedir. Teknolojik değişmenin sosyal yapıyı etkilediği en önemli gelişme ludist hareketin ortaya çıkışı olmuştur. Teknoloji ile makinelerin üretim süreçlerine dahil edilmesi ile değişen yapı makine ve emeğin ikame edilmesini gündeme getirmiştir. Bu ise ekonomide işgücü kullanımının yeniden değerlendirilmesine neden olmuştur. İşçilerin yerine geçen makineler burada teknoloji karşıtlığı yani makine kırıcılığı da denilen Ludizmi ortaya çıkaran süreç olmuştur. Bu akıma isim veren Ned Ludd İngiltere'de makinelerin devreye girmesi ile işsiz kalan tekstil işçileri adına bir tesisteki makineleri parçalaması ile gündeme gelmiştir. Bu eylemin ardından tüm ülkeye yansıması ile Luddism kavramı doğmuştur. Makine kırıcılığı olarak da adlandırılan bu akım üretimde makine kullanımındaki artışın işsizliğe neden olması üzerine verilen bir tepki niteliği taşımaktadır (Arif 2015).

Üretim süreçlerindeki değişmeler ile teknolojik gelişme ilişkilerini temsil eden sanayi devrimleri bağlamında da ele alındığında gerek mekanik teknolojilerin geliştirilmesi gerek haberleşme ağlarının gelişmesi yeni bir devrimi beraberinde getirmiştir. Bugün bilgi iletişim teknolojileri ve haberleşme ağlarındaki gelişmeler üretimi tamamen işgücü sistemin dışarıda bırakan daha doğru bir ifade ile emek faktörünü de bu dönüşüme dahil etmeye zorlayan bir süreçtir. Bu bağlamda bakıldığında bu dönüşümün hızına ayak uydurmadaki sorunlarında bir direniş hareketini beraberinde getirmesi doğal bir süreç olarak değerlendirilmektedir. Nitekim Luddizm ve yeni Luddizm hareketleri de teknolojik ilerleme ve sanayi devrimleri çerçevesinde şekillenmiş olduğunu görmekteyiz.

2. BİBLİYOMETRİK ANALİZ

2.1. Veri Seti ve Yöntem

''Luddism'' kavramının literatürdeki yerine ilişkin bibliyometrik haritalama uygulamasına odaklanan bu çalışmada VOSviewer programı kullanılmıştır. Bibliyometrik haritalama çalışmaların, yazarlar, ülkelere, kurumlar, atıflar, ortak

yazarlar, ortak atıflar, dergiler vb. birçok bilginin sağlanmasına olanak sağlamakta ve incelenen kavramlarının literatürdeki yerinin birlikte değerlendirilmesini mümkün kılmaktadır.

Bibliyometrik haritalama için veri seti Web of Science veri tabanından elde edilmiştir. ‘‘Luddism’’ kavramı girilerek yapılan tarama tüm dosyalar kriteri ile yapılmıştır. Bu kapsamda 74 adet yayın bulunmuş ve bibliyometrik haritalama uygulaması bu veriler üzerinden yapılmıştır. Çalışmanın veri kaynakları, uygulama ve kapsamı tablo 1’de yer almaktadır.

Tablo 1: Veri Kaynakları, Uygulama ve Kapsam

Veri Kaynakları	Web of Science n=74
Uygulama Kapsam ve Kriteri	Uygunluk Kriteri: Tüm Dosyalar Makale:52 Kitap Bölümü: 6 İnceleme: 6 Kitap İncelemesi: 3 Diğer: 7

Web of Science veri tabanı kullanılarak elde edilen 74 çalışmanın 52 tanesi araştırma makalesi, 6 tanesi kitap bölümü, 6 tanesi inceleme ve 7 tanesi diğer çalışmalar kategorisinde yer almaktadır.

SONUÇ VE DEĞERLENDİRME

Bu çalışma Luddisim kavramı ortaya çıkışı ve literatürdeki yerinin ortaya konulması amacı ile VOSviewer bibliyometrik haritalama programı kullanılarak bir uygulamayı konu almaktadır. Araştırmada kaynak sağlamak için Web of Science ver tabanı kullanılmış ve ‘‘luddism’’ terimi ile ilişkilendirilen çalışmalar dikkate alınmıştır. Bu bağlamda ilgili veri tabanında 74 adet çalışma çalışmaya ulaşılmış ve bibliyometrik haritalama ile konu ile ilgili literatür derinleştirilmeye çalışılmıştır. VOSviewer programı ile, bibliyometrik eşleşme, ortak atıf, ortak yazarlık, kavram birlikteliği ve atıf ağı modülleri kullanılarak haritalama işlemi yapılmıştır.

Analiz sonucunda, iki dökümanın başka bir doküman tarafından birlikte alıntılanma sıklığını veren ortak atıf Navicas (2005), (2011), Roberts (2017) çalışmaları en çok bağlantı kurulan çalışmalar olarak tespit edilmiştir. İkinci olarak ortak yazarlık haritalaması ile iki analiz birimi ilişkisinin ortak yazılan doküman sayısı üzerinden hesaplanması sağlanmış ve Tahmpson, EP

Randall,A, Haopsbawn, EJ ve Pynchon, Thomas en çok bağlantı kurulan çalışmalar olarak saptanmıştır. Üçüncü olarak kaynak atıf ağı haritalaması yapılmış

ve en yüksek bağlantı gücüne sahip üç kaynak social history, northern history, mıdland history olarak belirlenmiştir. Buna ek olarak yapılan kavram birlikteliği haritalama analizi yapılmış ve literatürde en çok kullanılan anahtar kelimeler shirly, charlotte bronte, chartism, economy, nottingham, protest, resistance, technology, neo-luddism ve neo-luddite olarak belirlenmiştir.

Çalışma sonucunda ‘‘luddism’’ kavramı ile ilişkilendirilen çalışmaların bibliyometrik olarak analiz edilmiş olup, sonraki çalışmalara literatür tarama noktasında derinlik kazandırmak hedeflenmiştir.

References

Acemoglu, D. & Restrepo, P. (2018). *Artificial Intelligence, Automation and Work.* NBER Working Paper Series, Working Paper 24196.

Arif, M. (2015). Ludizm ve Teknoloji Düşmanlığı. Retrieved from 09.19.2020. www.tufeyli.com: http://www.tufeyli.com/ludizm-ve-teknoloji- dusmanligi/.

Blanchflower, D.G., and Burgess, S.M. (1998). New Techonology and Jobs: Comparative Evidence From A Two Country Study. *Economic of Innovation and New Technology.* 5 (2-4), s.109-138.

Beer, M. (1989). *The general history of socialism and social struggles*. New York: Russell & Russell.

Bogliacino, F. & Vivarelli, M. (2012). The Job Creation Effect of R&D Expenditures. Australian Economic Papers.

Clark, G. (2007). A Farewell to Alms: A Brief Economic History of the World. Princeton University Press.

Evangelista, R., & Savona, M. (2002). The Impact Of Innovation On Employment In Services: Evidence From Italy. *International Review of Applied Economics*, 16 (3), s.309–318.

Fung, M. K. (2006). Are Labor-Saving Technologies Lowering Employment in The Banking Industry? *Journal of Banking & Finance*, 30,179-198.

Greenan, N. & D. Guellec (2000). Technological Innovation and Employment Reallocation. Labour, 14, 547-90.

Hollanders, H. & Weel, B. T. (2002). Technology, Knowledge Spillovers and Changes in Employment Structure: Evidence from Six OECD Countries. *Labour Economics*, 9(5), 579-599.

Kaczynski,T.J. (1996). *Sanayi Toplumu ve Geleceği*. İstanbul: Kaos Yayınları.

Kagermann H., Wahlster W. Ve Helbig j. (2013). Recommendations for Implementing the Stratejik Iniative Industrie 4.0, Finan Report of the Industrie 4.0 Working Group , Ed. Anrie Hellinger ve Voranika Stumpf, acatech-National Academy of Science and Engineering, April:13-78SD

Kaygın E., Zengin Y. ve Topçuoğlu E. (2019). Endüstrü 4.0’a Akademik Bakış, *İktisadi ve İdari Bilimler Dergisi*, 33(4), 1065-1081.

Kılıç S. Ve Alkan R.M. (2018). Dördüncü Sanayi Devrimi Endüstri 4.0: Dünya ve Türkiye Değerlendirmeleri, *Girişimcilik İnovasyon ve Pazarlama Araştırmaları Dergisi*. 2(3):29-31.

Kılıçaslan, Y. & Töngür, Ü. (2019). ICT and Employment Generation: Evidence from

Turkish Manufacturing. *Applied Economics Letters*, 26(13), 1053-1057.

Koca D. (2020). Sanayi Devrimlerinin Tarihsel Arka Planı ve İşgücü Becerileri Üzerindeki Yansımaları, *Uluslararası Toplum Bilimleri Dergisi*, Kasım, c.16, s.31,4531-4558.

Mokyr, J. (1990). *The Lever of Riches: Technological Creativity and Economic Progress*. Oxford University Press.

Piva, M. ve Vivarelli, M. (2017b). Technological Change and Employment: Were Ricardo And Marx Right?, *IZA Institute of Labor Economics*, January 2017, s. 1-36.

Pereira, A. C. ve Romero, F. (2017). A review of the meanings and the implications of the Industry 4.0 concept. *Procedia Manufacturing*, 13, 1206-1214.

Vivarelli, M., Evangelista, R.ve Pianta, M. (1996). Innovation and Employment In Italian Manufacturing Industry. *Research Policy*, 25(7), s. 1013–1026.

Yelkikalan, Nazan., Özcan Sedef ve Temel Kemal "Endüstri 4.0 Farkındalığının Belirlenmesi: Çanakkale Onsekiz Mart Üniversitesi Örneği" *Girişimcilik ve Kalkınma Dergisi*, Yaz 2019, Cilt:14 Sayı:1 31-34.