

The Neoliberal Transformation of Universities: A Critical Assessment of Academic Capitalism, Academic Autonomy and the Production of Scientific Knowledge

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Abstract

This article aims to examine the impact of neoliberal policies on universities, focusing particularly on the concepts of academic capitalism and academic autonomy, and to conduct a comprehensive discussion to understand how scientific knowledge production has been affected by this process. Since the Bologna Process, universities have adopted a market-oriented approach, aligning scientific work with capital and market interests. In recent years, it has become clear that market dominance has become a determining factor in scientific research. Academic capitalism shifts universities away from viewing scientific knowledge as a public good, turning them into institutions serving market demands, while threatening academic autonomy and encouraging research driven by market needs rather than societal benefit. The control of academia by market rules intensifies pressure on academics. From this point of view, this study reveals the problems caused by academic capitalism, especially the process of universities turning to a market-oriented approach and how this process leads to the commodification of scientific knowledge and the increasing disregard of the public interest, while also providing important findings on how this process threatens academic autonomy. In this context, this study hopes to contribute to the creation of a wider awareness among policy makers, university administrations and academics in the process of regaining the value universities deserve, removing them from market dominance and thus preserving their

responsibility towards society, ensuring that scientific knowledge production is carried out only for social benefit and regaining academic autonomy. The study is a discussion article in terms of methodology.

Keywords: *heteronomy, neoliberal policy, autonomy, academic freedom, entrepreneurial university, academic capitalism*

Introduction

In today's modern societies, dominated by capitalist economic ideology, work environments have become professionalized, requiring specific expertise, knowledge, and skills. Unlike in previous periods, work has transformed into a structure focused on generating commercial exchange value rather than meeting individual needs or contributing to society. Therefore, work is increasingly shaped by profit motives and market competition, leading to the commodification of labor and the organization of production processes within professional disciplines aligned with market demands (Gorz, 2007; O'Neill, 2001).

This change has highlighted the economic values of employees while also bringing about a continuous necessity for skill development and adaptation to market demands. Employees find themselves in a complex professional landscape, trying to establish a balance between the demands for efficiency, specialization, and ongoing personal development. In this context, a new era has begun in which workers are required to adhere to the rules, norms, and market demands of professional groups. With this transformation, the value, duration, nature, purpose, and direction of work are no longer determined by the workers themselves. Therefore, working life has come under the dominance of heteronomous conditions shaped by the norms of the capitalist system, where workers are unable to determine their own working conditions (O'Neill, 2001).

This heteronomous structure has been observed to necessitate a profound transformation in the field of higher education, extending beyond the labor market defined by market demands.

In contemporary higher education, capitalist principles such as competition, market-driven research, and the commodification of knowledge have become increasingly pronounced. However, these processes are not new; they are rooted in historical foundations that have evolved over time. The current landscape can be understood both as a continuation of longstanding social and economic patterns and as a more intensified manifestation of these trends in today's context (Hill & Maisuria, 2022). What we are witnessing is not entirely unprecedented; instead, it represents an acceleration and deepening of trends that have been unfolding for decades, particularly with the rise of neoliberal policies and the integration of global markets.

Certainly, the emergence of heteronomous working conditions related to the academic profession discussed in this study cannot be viewed in isolation from the marketization process of universities. The marketization of universities broadly refers to the transformation of higher education institutions into market-oriented entities (Wedlin, 2008). In this context, universities are compelled to compete for students and funding, with their research and educational activities increasingly driven by commercial interests. Especially those universities that adopt a more market-oriented approach through applied research and entrepreneurial activities find themselves in profound conflict with fundamental values such as academic freedom and the public good of education. As these institutions evolve into economic actors shaped by market dynamics, their working conditions begin to change according to market rules.

This neoliberal transformation within universities generally encompasses practices that link research and educational processes to market principles, heighten accountability, continuously undermine institutional autonomy, and commodify education. Consequently, education is increasingly viewed as a market commodity throughout this transformation process (Puaca, 2022). This economic perspective treats education as a product generating financial profit rather than as a public service. In line with this approach, universities restructure themselves to meet market demands, shifting their focus from critical thinking to financial gain, thereby becoming instruments to satisfy market needs (Puaca, 2022). As a result, educational institutions begin to operate with a profit-oriented mindset. In this process, the role of universities in serving society weakens, and they transform into organizations primarily catering to market interests.

The economic and technical pressures imposed by financial considerations on scientific research activities create significant strain on academics in conducting their research and intellectual production processes. It can be said that as a result of the gradual disappearance of the autonomy of scientific research activity and intellectual production processes and the resulting pressure, academicians are faced with the obligation to carry out their studies under heteronomous working conditions (Austin, 2002; Enders, 2002; O'Neill, 2001). Under these working conditions, a growing sense of ontological distrust began to emerge for many academics in higher education. This is both a loss of sense of meaning in the job and a loss of what is important in the job (Ball, 2012).

Neoliberal policies not only create a sense of insecurity among academics but also directly affect academic labor and transform universities with the emerging new labor regime. Dafermos (2023), in his study examining the neoliberal transformation of the university by focusing on important changes in the

organization and orientation of academic labor, reveals that academic labor is increasingly integrated with the logic of valuation and accumulation of capital. Dafermos further asserts that, the construction of a neoliberal university involves the segmentation, fragmentation, and acceleration of academic labour, therefore, the dominance of abstract, fragmented and standardized labor is increasing. The results of Daniel's (2007) research, focusing on the effects of neoliberalism in higher education, reveal that universities have more heteronomous working conditions. This study also shows that universities not only lose their autonomy, but also lose their capacity to serve the common good and pursue the search for truth autonomously and may become institutions where independent research and critical science are no longer encouraged.

As a result of this radical transformation, it can be claimed that the autonomy of universities and academics has become a necessity to be reconsidered and questioned, as can be understood from the research results. Based on this, this study aims to investigate the impact of the transformation process occurring in universities as a result of neoliberal policies on the working conditions of academics, and to discuss how this transformation affects the scientific research process.

For this purpose, this research will first conduct a discussion on the transformation from the ideal of *universitas* to an entrepreneurial university. Then, it will address the radical transformation occurring in universities as a result of the Bologna Process, which is viewed as a neoliberal reform aimed at increasing global competition in higher education and making universities more "efficient." Subsequently, the topics of academic freedom and university autonomy, which are closely related to this transformation, will be examined, and finally, the production and commodification of scientific knowledge in universities will be discussed. In this context, Gramsci's concept of cultural

hegemony will be instrumental in understanding how academic knowledge production is shaped by societal norms and values, the role this knowledge plays in reinforcing dominant ideology, and how alternative perspectives are marginalized throughout this process.

The Liquidation of the Universitas Ideal: The Entrepreneurial University

In the historical process, the development stages of the academic and university structures have been very long and full of changes. The Academy takes its origins from the school that Plato founded and called “akademia”. The academy is seen as the first example of western universities in terms of its structure (Rashdall, 2012). It is seen that the structure of the academy, which has continued its existence for a long time in the historical process, has undergone a change, starting with its name with the transition to the Middle Ages. In this age, institutional structures that provide higher education at the academy level have taken the name of university. The word university derives its origin from the Latin word "universitas", which is derived from the medieval Latin word universus," meaning unity (Willinsky, 2018). Medieval universities, as an institution in accordance with the general structure of that period, fulfill the task of serving the spread of Christian teaching in theory. In this context, the effort to obtain information about the existence of God and the integrity of this existence has attributed the meaning of universality to the word “universitas” (Bektaş, 2021). Obtaining, protecting and transferring knowledge came to the fore among the main functions of medieval universities.

The first examples of the modern university structure emerged in the West during the Middle Ages. The establishment of universities in Europe took shape within a context where science and education were closely intertwined with religious institutions (Cobban, 1975). The early examples of Western universities were largely based on scholastic philosophy, and this institutional

structure made significant contributions to the development of the educational system that forms the foundation of modern universities (Verger, 1992).

When the emergence process of universities is examined, it is accepted that the first universities, as we think today, emerged in the socio-cultural conditions of the late feudal period in Europe at the end of the 11th century and throughout the 12th century. Bologna (1088), Paris (ca. 1150), and Oxford (ca. 1167) were among the first to be established. Considering the situation in the period; The limited free thinking environment at that time and the lack of a full-fledged pursuit of science, but rather the dominance of religious beliefs, led to the existence of universities as institutions controlled by the ruling classes and under the influence of religious institutions (church, mosque etc.). In the period when society evolved from feudal order to capitalist order, it can be said that universities developed in a process parallel to this process. In this context, it can be said that universities have been shaped throughout their historical development process by capital accumulation, class relations, struggles, and social movements. Within this framework, they have assumed various functions such as knowledge production and innovation, social stratification, ideological reproduction, labor power production, and being a hub for cultural and social movements (Coşkun, 2008, p. 198).

In the 19th century, with the effect of social changes, the understanding of Humboldt University was among the basic operating principles of universities. A holistic understanding of education takes a central place in Humboldt's educational ideal. It is seen that this holistic education approach is effective in university structures based on Humboldt's views (Anderson, 2000). With this understanding beginning to dominate in universities, it is seen that universities have gained a research-based approach as well as being places that provide education and training. It would not be wrong to say that the fact that research

activities were among the basic functions of the university was a revolutionary development for that period. Humboldt's understanding of universities has quite important differences from today's university understanding (Ash, 2006).

Among the core principles of this approach, the integration of research and education stands out. In the Humboldt model, universities are not merely institutions that transfer knowledge, but rather centers that produce it. Faculty members serve both as teachers and researchers, while students actively participate in these research processes. In this way, research and education are regarded as a unified whole (Paulsen & Perry, 1895). Secondly, academic freedom (*Lehrfreiheit* and *Lernfreiheit*) has been regarded as one of the integral principles of this approach. The freedom of faculty members to choose their own research areas and teach accordingly (*Lehrfreiheit*), along with the freedom of students to determine their own paths of study (*Lernfreiheit*), form the foundation of this model (Paulsen & Perry, 1895). In Humboldt's educational ideal, a holistic approach to education also played a significant role. Among the core principles of the Humboldt university model, this approach emphasized not only the transfer of vocational knowledge but also personal and intellectual development. This holistic understanding aimed not only at specialization but also at fostering a broad perspective (Ash, 2006). As a result, students had the opportunity to gain not only preparation for a specific profession but also a wide-ranging knowledge base and critical thinking skills (Paulsen & Perry, 1895). The role of the state is also of great importance in the Humboldt model. According to Humboldt's model, universities should be financed by the state, but they should not be subject to direct governmental interference (Anderson, 2000). This principle is viewed as crucial for the protection of academic freedom. It is argued that the state should support the development of universities by removing material barriers to scientific research and education (Paulsen & Perry, 1895). The Humboldt university understanding, which deeply

affected European universities, carried out the functions of "searching for the truth" and "making science for science" in accordance with the principles of autonomy and academic freedom. According to this understanding, the university has continued its existence for many years with a structure that is autonomous from the state and the market, and academics have academic freedoms (Paulsen & Perry, 1895; Anderson, 2000; Ash, 2006).

As a result of the capitalist production process, changes have occurred in the structures of universities, leading to the development of modern universities (Clark, 1998). Especially as a result of the capitalist production process, the modern university has begun to emerge as an institution that facilitates the production of technical knowledge necessary for competition and the creation of new profit areas (Marginson & Considine, 2000). The emergence of the modern university can be interpreted as an indication that "business sickness" (Gaulejac, 2013) eventually infected the university, as it did with other institutions, as a result of its becoming an epidemic.

In Bourdieu's *Homo Academicus*, which examines the effects of capitalism on the academic field in a multidimensional way, it is evident that an important framework is provided for understanding the new conception of the university and how the academic field interacts with social structures and economic conditions in this context (Bourdieu, 1988). Bourdieu, the capitalist production process significantly shapes the academic field, asserting that this process determines the economic conditions affecting the operation of universities and academic institutions (Bourdieu, 1988). Capitalism has enhanced the economic value of knowledge and education, making universities important actors in economic competition and leading them to operate in a competitive environment.

With the dominance of the capitalist perspective in universities, the mission of fostering the economic and social development of the country has also been entrusted to them (Harvey, 2007; Jessop, 2018). Since the state is in cooperation with the capital in the capitalist system, the institutions of the state shaped by the government within the framework of this understanding (Bourdieu, 1998; Jessop, 2018). Therefore, universities, which are one of the most important institutions of the state, have become institutions closely related to the market, which undertakes the functions of producing the technical and scientific knowledge needed with industrialization, spreading this knowledge, and gaining legitimacy (Harvey, 2007).

It is seen that universities, which have undertaken various missions from the historical process to the present, have evolved into the university model, which is directly related to the market today. Along with globalization, deregulation, privatization, and liberalization trends brought about the reduction of the share of public resources in higher education and played an important role in the formation of a more entrepreneurial and competitive university structure in terms of the market (Altbach et al., 2009). In the post-1980 period, with the dominance of neoliberal policies, an understanding has developed that universities should create their own resources. Universities, driven to seek new resources against public resource constraints, have begun to turn more towards projects that provide external funding. Universities, which are forced to become more and more "entrepreneurs" in order to create resources, have started to become corporations. Universities around the world, especially in the last few decades, have been faced with the necessity of performing tasks they have never encountered before as a result of the rapid increase in technological progress and adaptation to these new technological developments and the decrease in public finances due to neoliberal policies (Levidow, 2000). These new tasks are tasks that institutions associated with the market are expected to fulfill, such as

finding new resources, learning new skills required in the market, and being able to compete for external research funding (Cunningham et al., 2022). These universities, which are called entrepreneurial universities, continue to be in constant cooperation with the state and industry, as well as the role they play in the economic development of countries. In this context, the table prepared by Baporikar (2022) provides a very important contribution to see the changing missions of these universities more clearly.

Table 1. Altered View of University

Nomenclature	Purposes of Education	Role of University
Traditional University	Civic, cultural and economic goals	Custodian of socio-cultural and national values Socialization of students Supply of qualified manpower Teaching and research
Modern University/ Corporate University	Focus on technical, vocational, and professional education and training	Applied/action collaborative research in collaboration with industries, NGOs. Employability of students Growth and diversification Promotion of professional education The separation between teaching and research
Entrepreneurial University	To meet the diverse needs	Adoption of lifelong learning model Creating science parks, incubators, and industry associations Encouragement of higher education on a lifelong basis Promoting academic capitalism and enterprise culture. Putting knowledge into application. Work-Ready Students

Source: (Baporikar, 2022, p. 4)

The concept of the entrepreneurial university is closely related to academic capitalism and is increasingly embedded in a strong market logic fostered by the increasing neo-liberalization of the world order (Baporikar, 2022). Robertson (2008) describes the main factors that characterize an entrepreneurial university as follows:

Strong leadership that develops entrepreneurial capacities for all students and staff; strong ties with its external stakeholders that deliver added value; the delivery of entrepreneurial outcomes that make an impact to people and organisations; innovative learning techniques that inspire entrepreneurial action; open boundaries that encourage effective flows of knowledge between organisations; multi-disciplinary approaches to education that mimic real-world experience and focus on solving complex world challenges; and the drive to promote the application of entrepreneurial thinking and leadership (Robertson, 2008, p. 1).

As can be understood from the statements of Robertson (2008), the main features that characterize the entrepreneurial university show that corporate logic is placed in universities. It is also seen that entrepreneurial universities, which are in search of funding, have become a voice in universities in return for the resources provided by the companies to which they constantly open their doors to provide resources. Companies that provide the resources that universities need, especially demand to focus on the research they sponsor and actively participate in decisions about how research funds are spent. For example, Stanford University obtains significant research funding through partnerships with technology companies. Many technology companies in Silicon Valley provide financial resources to support university research (Etzkowitz, 2012;2013). This situation leads these companies to demand a focus on specific research topics in the projects they sponsor, thus playing an influential role in directing these projects. Another example is the collaborations between the Massachusetts Institute of Technology (MIT) and various industrial organizations. MIT receives sponsorship from large companies for its research, particularly in the fields of engineering and technology, placing importance on the companies' opinions in shaping these projects. Consequently, this results in academic work becoming more market-oriented (Roberts, & Eesley, 2011; Etzkowitz, 2012). Beyond this situation, companies can interfere with academic research and censor research results that conflict with their commercial interests

(Giroux, 2007). The research conducted by Lexchin et al. reveals that studies funded by the pharmaceutical industry are more likely to produce results that favor the products made by the sponsoring company compared to studies funded by other sources. The same research findings also uncover a systematic bias in the outcomes of published studies financed by the pharmaceutical industry (Lexchin et al., 2003). Giroux expressed how this process affected universities as follows:

Instead of critical teaching and research focused on the public good, the faculty is now dependent on corporate generosity. From being a place of dignity for dedicated teachers or rigorous researchers, the faculty has become a multinational institution and transformed into a workplace where employees sign contracts (Giroux, 2007, p. 74).

It is possible to argue that the understanding of "science for science" has been replaced by the understanding of "science for the market" in universities structured in this way. As a result of this radical change that emerged in the process of producing scientific knowledge, the necessity of rethinking the question "faculty or firm" posed by The Economist magazine (1997) in the university file has emerged. Özuğurlu's (1998) comment on this question makes a very important contribution to the discussions on this subject:

On the one hand, as this article has repeatedly emphasized, faculties are "firming up". On the other hand, large companies (McDonald, Disney, Microsoft, General Electric, etc.) create units that conduct applied research and provide vocational specialization training, and these units are often called "universities". According to the Economist, if universities are institutions that produce, disseminate and use information, it is possible to evaluate companies such as Microsoft in the same category. Faculty or firm does not matter; In both cases, knowledge production becomes dependent on the profit motive, and the dissemination of knowledge becomes dependent on its commercialization (Özuğurlu, 1998, p. 65-66).

Today, it is clearly seen that many entrepreneurial universities are in close relationship with industry, establishing technocities, science parks, technology transfer offices, and incubation centers. It is observed that the entrepreneurship trainings given in these universities (undergraduate and graduate level trainings, lifelong learning, specially developed entrepreneurship trainings, etc.) are becoming more common day by day. At the same time, within the scope of activities called “academic entrepreneurship”, companies founded by scientists from various fields of science, large-scale scientific projects, research, and consultancy services started to become more visible (Garavan & O’Cinneide, 1994; Klofsten, 2000; Yokoyama, 2006). It is seen that scientists, who are known to have established companies to commercialize their inventions, receive the most important financial support from the framework programs of the European Union. In this context, it can be claimed that the concept of an autonomous university is replaced by an entrepreneurial university, and academic freedom is replaced by academic entrepreneurship.

Bologna Process: Neoliberal Transformation in Universities

The harmonization of universities with local and global markets by granting them new functions began with the Bologna Process. This process clearly demonstrates the effects of globalization on higher education (Zahavi & Friedman, 2019). As a result of globalization, the Bologna Process can be defined as a reform process that includes the aim of creating a "European Higher Education Area" or "European Research Area" by coming together with universities in Europe in order to create a higher education organization that can compete with universities in America (Reinalda, & Kulesza, 2006). The Bologna Process in Europe and the Lisbon Strategy is seen as one of the most striking examples of international participation, which first brought together more than 40 countries to make a European Higher Education Area possible (Altbach et al., 2009).

The Bologna Process and the Lisbon Strategy play a triggering role in the efforts to establish market dominance in universities (Amaral & Antonio, 2004; Hartman, 2008). The Bologna Process aims to open higher education institutions to the market and make them more responsive to the priorities of capital groups, thus facilitating a greater integration of these institutions into the management of capital (Pechar, 2007). With this process, the transformation of higher education systems in continental European countries into the Anglo-Saxon higher education model has become one of the primary expectations. This expectation indicates a significant change. The Anglo-Saxon model, known for its market-oriented and entrepreneurial approach, emerged in the 19th century, exemplified by universities such as Cambridge and Oxford (Clark, 1998; Guerrero & Urbano, 2012). The model encourages a market-driven approach to education, promoting competition among universities. Consequently, institutions shape their educational content and delivery to respond to labor market needs and societal demands (Knight, 2004).

The adoption of this model has led to radical transformations in the higher education process, causing universities to adopt a market-oriented approach. They are increasingly being reshaped not just as educational and research institutions, but as structures that operate in alignment with global markets. In this process, market-oriented educational and research activities have increasingly become the focal point for universities (Wächter, 2004). The trend of greater collaboration between universities and the private sector, as well as a focus on research and development activities, has enabled higher education institutions to respond more effectively to global labor and market demands. Quality assurance and accreditation have become crucial, aiming to enhance educational quality and support the international competitiveness of European higher education institutions, leading to institutions undergoing accreditation processes. The impact of these reforms has shifted higher education institutions

from a traditional understanding of the university towards a new model shaped by global competition and market conditions (Wächter, 2004).

With this process, it is seen that universities have become more articulated with capital accumulation in terms of producing both industry-appropriate labor power and products, innovations and researches suitable for the market (Narin, 2011). As a result of this process, universities, which have become more compatible with capitalist globalization, have begun to lose their autonomy as they operate under market guidance in all their activities, from education to research and management. With the reduction of public funding, universities have increasingly relied on private sector funding for research activities (Zahavi & Friedman, 2019). This shift has led universities to focus more on projects that align with private sector interests, which in turn limits their academic autonomy. Educational programs have also become more market-oriented; universities are developing programs and departments aimed at providing students with skills that are valuable in the job market (Zahavi & Friedman, 2019). This transformation is shifting universities away from a focus on original research and intellectual contributions, pushing them instead to prioritize the transfer of knowledge and skills tailored to market needs (Giroux, 2007). Additionally, the presence of business representatives on some university boards has made market priorities more prominent in university management and strategy. This often results in decisions that prioritize economic returns over the university's academic mission. In the U.S., for example, the transition to market-driven management structures has been noted for its restrictive impact on academic freedom (Slaughter & Rhoades, 2004).

In the Bologna Process, countries are expected to shape their higher education policies depending on a global policy. It is possible to view this process as a form of colonization. From this perspective, it clearly demonstrates how the

educational frameworks imposed by European institutions reflect historical patterns of domination, particularly in Asia. In Asia, the influence of former colonizers on higher education policies and structures continues to be significant (Rizvi & Lingard, 2009). For instance, countries like India and Indonesia face a situation where local knowledge systems and cultural contexts are sometimes overlooked due to their adoption of the educational models of their former colonizers. This situation leads to the perception of the Bologna Process not only as a mechanism for promoting academic standardization but also as one that reinforces the historical narratives of colonial powers in contemporary educational practices. In this context, the Bologna Process can be interpreted as a structure that prioritizes Western frameworks and values, which poses the risk of marginalizing indigenous educational philosophies and practices (Rizvi and Lingard, 2009).

European Integration in Higher Education: Turkey and the Bologna Process

It is important to consider that the transformations in higher education have a historical dimension and that these transformations vary according to the unique characteristics of each country. Therefore, this process has a transformation story that is implemented in different ways in each country.

The relationship between universities and the market in Turkey began in the 1980s. Since then, the strong ideological discourse advocating for the opening of public services to the market has spread worldwide, becoming a dominant narrative (Rizvi, 2016). The populist discourse surrounding the necessity of university-market relations has gained prominence with the process of globalization. In an era where such an understanding has dominated, unfortunately, the necessary steps for system change have been taken through undemocratic means.

The transition from a welfare state model to a neoliberal state model in Turkey, as in many parts of the world, has been a difficult historical process. On September 12, 1980, a military coup took place in Turkey, leading to the declaration of martial law. During this period, the Higher Education Council was established under Law No. 2547. Since its inception, Higher Education Council has been one of the main obstacles to the autonomy of academics and universities in Turkey (Timur, 2000). This shift towards neoliberal policies has influenced the restructuring of public institutions, including universities, with an emphasis on market-driven approaches, which has been a central aspect of global economic trends since the 1980s.

After 1980, Turkish universities became increasingly aligned with the Anglo-Saxon tradition. In terms of governance and academic freedom, universities in Turkey have never been fully autonomous from the state. The political authority has held the power to shape universities in all areas, including administrative, financial, educational, and scientific matters. The establishment of the Higher Education Council in 1981 significantly centralised control over universities, further diminishing their autonomy. This system has led to a model in which universities are expected to align closely with state policies and interests, rather than operating independently as in some other academic traditions.

At the same time, through the new laws it enacted during this period, Higher Education Council was granted broad powers. The cooperation between the political power and capitalism has been clearly visible in all higher education policies, laws, and practices. The privatization tendencies that came with globalization played a significant role in reducing the dependency on public resources in higher education, leading to the emergence of a university model with a more entrepreneurial and competitive structure from a market perspective (Altbach et al., 2009). With the implementation of globalization and neoliberal

policies, higher education in Turkey has been restructured. The privatization trends brought by globalization played a crucial role in reducing the dependency on public resources in higher education, leading to the emergence of a university model with a more entrepreneurial and competitive structure from a market perspective (Altbach et al., 2009). In this already existing structure, the participation of Turkey's higher education system in the Bologna Process made it more market-oriented and led to profound changes in the higher education system.

One of the most comprehensive reforms carried out by the European Union, the Bologna Process, was adopted by Turkey in 2001, leading to significant reforms aimed at aligning its higher education system with the standards required by this process (Kaya, 2015). Turkey's participation in this process has resulted in profound changes in its higher education system. The process has focused on enhancing the international competitiveness of Turkish universities and deepening academic cooperation with Europe.

With Turkey's membership in the Bologna Process, the relationship between universities and the market became closer, and the neoliberal transformation process in universities accelerated. In the next period, almost all of the structural changes in the field of higher education in Turkey were carried out in relation to the Bologna Process. It is seen that Turkey's Bologna process is completed more quickly when compared to other European countries.

The implementation of the Bologna Process in Turkey has generally been carried out as follows: In order to fulfill the objectives announced in the Bologna Declaration (1999), student and faculty exchange programs were introduced within Turkey. Changes were made in staffing procedures, and Education and Agriculture Faculties were standardized to follow unified

programs. Initial steps were taken toward accreditation (external review), and the regulations governing graduate education were revised. The national networks for The European Network of Information Centres (ENIC) and the National Academic Recognition Information Centre (NARIC) were established to facilitate the standardization and mutual recognition of academic qualifications across Europe. Additionally, the European Credit Transfer and Accumulation System (ECTS) was implemented to allow easier credit transfer between institutions within the European Higher Education Area, making it simpler for students to study abroad and have their credits recognized. Quality assurance systems in higher education were also expanded and integrated into a broader network, with efforts directed toward promoting and standardizing these practices across institutions in Turkey to ensure alignment with European standards. The report titled "Turkey's Higher Education Strategy," issued by the Turkish Higher Education Council in 2006, was prepared almost entirely in alignment with the Bologna Process. Additionally, the Turkish Qualifications Framework for Higher Education was established as part of these efforts. To enhance and monitor quality in education and research at the national level, Turkey established the Higher Education Academic Evaluation and Quality Improvement Commission. At the institutional level, universities have set up Academic Evaluation and Quality Improvement Boards to implement quality assurance processes within their own institutions. These organizations became part of Turkey's broader effort to align its higher education system with the standards defined by the Bologna Process.

In 2015, with the issuance of a new regulation, the Higher Education Quality Council was established to replace the Academic Evaluation and Quality Improvement Commission. Numerous legal and institutional arrangements, such as the "Academic Evaluation and Quality Improvement" Regulation, were implemented. The amendments made in 2011 to Articles 44 and 46 of the

Higher Education Law No. 2547 are considered the most significant developments for institutionalizing the Bologna Process practices in Turkey. With these amendments, the establishment of course credits based on workload in line with the European Credit Transfer System (ECTS) provided a legal foundation for the Bologna Process in Turkey (Kurtoğlu, 2023). Additionally, the “National Team of Bologna Experts” project was implemented to monitor and promote the effective implementation of the Bologna Process in Turkey (YÖK, 2008-2009).

One of the primary goals of Turkey's higher education system has been to align it with the European higher education area (Önal, 2012). Within the framework of the Bologna Process, the restructuring of academic programs and the development of quality assurance systems by higher education institutions in Turkey have been among the key reforms (Önal, 2012). The quality assurance processes and accreditation requirements carried out by the Higher Education Quality Board have led to the evaluation of universities through performance-based measurements (YÖK, 2018).

The course contents of academics and the research activities of universities have started to be shaped according to the standards defined by these systems. The bureaucratic burden of these processes and the pressures brought by performance measurements have resulted in the prioritization of economic returns in educational activities (Tura, 2019).

This process has led universities in Turkey to focus more on market-oriented programs. The shift of academic programs in Turkish higher education institutions towards technical and applied programs is one of the significant reforms made with the Bologna Process (Tura, 2019). Many universities in Turkey have begun to invest more in fields like engineering, information

technology, and business rather than in areas such as social sciences and arts. This shift has caused an educational approach that focuses on meeting short-term market needs to take hold within universities. At the same time, it has led to the weakening of the enriching and critical aspects of research in universities.

This process has also led to an increase in collaboration with the private sector. In Turkey, universities have been increasingly inclined to collaborate with the private sector due to the decrease in public funding and the search for alternative sources (Önal, 2012). This trend is particularly noticeable in fields such as engineering, business, and technology. Some universities are developing joint research projects with large industrial and technology companies, and they are allocating laboratory facilities for these companies. For example, the Middle East Technical University (METU) Technopolis, one of Turkey's first technoparks, works in collaboration with various industrial and technology firms. Many companies within Technopolis develop research projects by utilizing the university's laboratory facilities (METU, 2024). Istanbul Technical University (ITU) Arı Technopolis hosts many technology and innovation-focused companies and encourages academic research and private sector collaboration. Various engineering departments at ITU participate in joint projects with the private sector and open their laboratories for these projects (ITU ARI, 2024). Gebze Technical University (GTU), working closely with the Ministry of Industry and Technology, develops joint projects with firms, particularly in the industrial areas around Kocaeli. Research laboratories are actively used in these collaborations (GTU, 2024). Bilkent University's Cyberpark collaborates with many local and international companies, running joint research projects and providing access to research laboratories for these companies (Bilkent Cyberpark, 2024). These technoparks and collaborations are leading to greater integration of universities with industry in Turkey and the development of a market-oriented research environment, which in turn limits

academic independence and shapes the priorities of scientific work according to market demands.

As in Turkey, the university system as a whole in other countries is trying to be restructured on the axis of capital's will to profit. In this context, I think it is very important to reconsider the question of whether universities, where scientific studies and education are carried out together, should be organized according to the needs of society or according to the needs of economic competition. With the neoliberal transformation, the autonomy of universities has nearly completely vanished, and they have begun to lose their social legitimacy. The educational function of universities has largely been reduced to training a workforce that meets the needs of capital, while research has shifted to focus primarily on increasing profits. At the same time, the ethical values of the academic profession, reshaped by neoliberal policies, have largely eroded, and academic freedom has almost entirely disappeared. Some disciplines, which are in closer contact with the market, have started to gain unfair advantages over others. It is not possible to talk about the autonomy of universities structured in this way, and the autonomy of academics is gradually disappearing.

Academic Freedom and The Autonomy of Academic Institutions

Academic freedom and the autonomy of academic institutions are fundamental and indispensable values of academic life in the conduct of scientific activities and in the intellectual production process (Rostan, 2010). In the absence of these principles, academic studies are doomed to create absolute insecurity, as they will have to be carried out under constant external pressure. This undermines the reliability and scientific integrity of research. For example, imagine a researcher studying climate change being pressured by the government to overlook the impact of industrial pollution. Their ability to present accurate scientific findings would be compromised due to economic

interests. In such a case, the research is shaped not by evidence but by external demands. As a result, biased research leads to flawed policies that worsen environmental issues rather than solving them. Such pressures can push academics to self-censor or alter their studies to align with acceptable narratives, eroding trust in academic institutions and damaging the quality of education and research. Academic freedom, defined as the ability of scientists to express their thoughts without any other concern other than scientific concerns and to carry out their scientific activities without encountering any outside interference or pressure (Aberbach & Christensen, 2018), is crucial in preventing such distortions. Various factors, such as government and political forces, university administration, funding organizations, corporate sponsors, academic culture, and cultural, ideological, and social norms, can exert control over the work produced in academic institutions. Therefore, academic freedom is essential to prevent these factors from collectively shaping or influencing the direction, content, and final publication of academic work.

In the European tradition, academic freedom has historically been regarded as a fundamental component of the mission of universities (Scott, 1995). Rooted in the ideals of reason and inquiry from the Enlightenment, this concept signifies the freedom for academics to pursue knowledge without interference from external political or religious authorities, allowing them to engage in independent intellectual exploration. In this context, the concept of academic freedom supports universities as spaces where intellectual innovation flourishes, where existing ideologies are challenged, and where critical debates can take place (Scott, 1995; Altbach, 2001). In the European tradition, the academic community has been entrusted with the crucial role of safeguarding this freedom to ensure that knowledge production adheres to the principles of academic integrity and impartiality (Altbach, 2001). In addition, academic freedom has been recognized as a key condition for achieving various goals,

such as the advancement of knowledge, the quality of research, the encouragement and support of initiative, innovative behavior, criticism, and variety (Scott, 1995; Altbach, 2001; Rostan, 2010).

It is seen that the radical transformations in higher education policies in the last few decades have had a significant impact on academic freedom. Rostan's (2010) determinations on this issue provide a very important framework in order to understand the factors that create this change. Rostan further asserts it is possible to make the following comments about this change: First of all, among the factors that led to this change is the change in the relationship between the state and higher education. Governments have shifted higher education institutions from forms of direct control to a system of remote guidance that requires more accountability. This change has emerged as a process experienced in many countries since the late 20th century. It is generally associated with market-oriented reforms in education, financial constraints, and the effects of globalization. For example, in the United Kingdom, market-oriented reforms aimed at higher education institutions were implemented from the 1980s, particularly during the government of Margaret Thatcher. During this period, universities were granted greater autonomy, while elements such as accountability and performance assessments also came to the forefront. The Further and Higher Education Act, passed in 1992, provided greater autonomy to universities while also introducing accountability requirements for the use of state-provided funds (Wieviorka, 2018). Another example is the United States, where the understanding of accountability in education strengthened in the 1990s and 2000s, particularly with increased standards and performance metrics for higher education institutions. This process was supported by regulatory measures at both the federal and state levels. The Higher Education Opportunity Act (HEOA) of 2008 increased accountability standards for the distribution of state funds (Burke, 2004).

Similarly, in Australia, reforms such as the Higher Education Contribution Scheme (HECS) were implemented in the early 1990s to enhance competition and accountability in higher education. These reforms provided universities with greater financial independence while also introducing measures for assessing student success and accountability requirements (Baird, 2011). The fact that all of these systems aim to evaluate the performance of both institutions and academics and to establish a closer link between financing and performance emerges as an important method in the entry of market values into higher education.

The second is the change in management mentality. This new management approach is called "managerialism," and its control over academic life is strengthened. It can be said that the traditional understanding of public administration began to change since the mid-1980s and gave way to a flexible and market-based understanding of public administration (Hood, 1991). This change represents a paradigm shift that represents the transition from management to business administration and from bureaucracy to a market-centered public administration (Hughes, 2003, p. 256). The concept of "new managerialism" can generally be defined as the adoption of organizational forms, technologies, management practices, and values more commonly found in the private sector by public sector organizations (Deem, 1998, p. 47). It is seen that this change is not only a managerial change but also the beginning of changes in the public sphere. The traditional, hierarchical, bureaucratic structure and administration, which were dominant in public administration before, brought with it the adoption of a more flexible and market-oriented public administration approach compared to the new paradigm (Hughes, 2003). In this context, the new management approach refers to the administrative management approach in which market rules such as performance, efficiency, cost effectiveness, and accountability are applied.

The roots of emphasizing a performance-based system and efficiency in academia lie in the application of business management principles to educational institutions (Callahan, 2010). This approach emerged in the early 20th century as part of a broader movement aimed at optimizing public services, heavily influenced by Taylorism and scientific management (Callahan, 2010). Over time, these ideas established the belief that educational success should be measured quantitatively, akin to productivity in factories. Such beliefs developed as part of a broader societal trend that values measurable outcomes, cost-effectiveness, and accountability. This productivity-focused new system has created increasing control and pressure over academics. In this context, it is often observed that measurable outputs, such as publications and grants, are prioritized at the expense of deeper educational and intellectual goals. It can be said that this new form of administration, which uses surveillance systems effectively, builds a structure that increases the power of the administration and reduces the autonomy of academics (Parker & Jary, 1995).

Third and finally, both higher education institutions and academics have faced increasing demands and pressures from both the economy and society to support economic development, innovation, and social progress, to provide a highly qualified workforce, and to enhance the employability of graduates. In this process, academics are expected to be more sensitive to meeting these demands and are encouraged in this regard. The necessity for academics to prove the suitability or utility of their educational and research activities in addressing social and economic needs has become a situation they encounter more frequently than ever before. Rice's (2022) claims regarding how these increasing demands and pressures contribute to greater social stratification and affect the management of ambition point to an important aspect of the consequences of this issue. Rice argues that the efforts of higher education institutions to cultivate a qualified workforce can exacerbate inequalities in

education. While wealthier individuals access better educational opportunities, lower socioeconomic groups are often confined to lower-quality education, creating a cycle that reinforces social inequality. In this context, the pursuit of higher credentials, known as "credentialism," plays a critical role in determining access to employment opportunities. This dynamic tends to deepen social stratification, as individuals from privileged backgrounds are more likely to achieve advanced degrees and qualifications. As universities increasingly focus on enhancing the employability of their graduates, fields that are not directly linked to economic productivity become marginalized. This marginalization not only leads to a decrease in the value of disciplines that provide social benefits but also results in restricted educational and career opportunities for individuals interested in these areas.

In such an environment, as pressures to align with market demands on academics continue to increase, their opportunities to pursue individual ambitions become increasingly restricted. Rice (2022) explains how the pressures on academics to align their research and teaching activities with market demands result in the restriction of their personal ambitions. As researchers feel compelled to focus on more marketable topics, their capacity for critical thinking and opportunities to explore alternative perspectives become limited. Another aspect of managing ambition is related to the emergence of economic contribution as a criterion for success. When students and academics are encouraged to pursue fields promising higher economic returns, their personal interests and passions may be overlooked, redirecting their ambition toward predetermined economic goals. This situation indicates that academic efforts are increasingly influenced by market dynamics, while also highlighting the significance of external factors shaping universities' educational policies.

The relationship between universities and markets has become increasingly close and effective, particularly in recent years. This change emerges as another significant dimension affecting academic freedom. The transformation of universities in response to growing market expectations has led to the shaping of curricula according to the needs of the labor market (Harvie, Ivancheva, & Ovetz, 2022). A concrete example of this trend is the increase in partnerships between universities and industry. These collaborations focus on applied research projects that have the potential to directly contribute to economic growth and innovation. For instance, the innovation centers at the University of California have been established to promote collaboration with local industries, directing research to respond directly to market demands. The increased emphasis of engineering programs on practical applications can be highlighted as another important example of curriculum shaping according to market expectations (Tight, 2023). For example, many universities are beginning to allocate more space for practical applications such as internships, laboratory work, and project-based learning, in addition to theoretical courses through partnerships with industry. The Massachusetts Institute of Technology (MIT) is continuously revising its curriculum to enhance applied learning environments and develop the competencies sought by employers. Furthermore, some universities are updating their curricula by introducing new courses in areas such as environmental engineering or data science, in response to demands from the business world (Harvie, Ivancheva, & Ovetz, 2022).

Due to the growing collaboration between universities and the private sector, universities have begun to carry out joint projects with industry, particularly in fields such as technology, pharmaceuticals, and engineering. The rise in patents, the emergence of start-up companies, and research projects financed by industry highlight this situation (Altbach, 2001). This shift has transformed the landscape

of higher education, leading to an emphasis on applied research that directly addresses market needs (Slaughter & Leslie, 2003; Altbach, 2001).

In light of these relationships, changes within universities have begun to manifest in the evolving understanding of financing. Particularly with the reduction of public funding, universities' shift toward private funding sources has led to a greater adoption of market-oriented funding models. Consequently, this situation has resulted in universities shaping their research priorities according to market demands (Slaughter & Leslie, 2003; Laughter & Rhoades, 2004). Lastly, performance indicators make the close relationships that universities maintain with the market more visible. Universities are assessed based on market success indicators, such as graduate employment rates, the commercialization of research, and collaborations with industry (Marginson & Considine, 2000). This transformation raises questions about long-term implications for academic integrity and freedom while influencing educational priorities.

The increasing relationship between universities and the market has begun to create a situation that threatens the freedom of universities to set their research agendas. As a result of the academics encountering interventions from inside and outside the universities, it is seen that there are changes in the determination of research priorities and decision-making processes. Most importantly, the freedom to conduct research and publish based on independent scientific views has begun to disappear. The loss of scientific freedom signifies the monopolization and control of knowledge production under the influence of specific ideological and political forces. This leads to the restriction of independent, objective knowledge and confines scientific work to a singular perspective. Moreover, since scientific concerns will be replaced by the will to profit in the conduct of scientific activities, scientific studies will always be

shaped in the focus of this will. Since the scientific will, which is left in the shadow of the will to profit, cannot be cultivated, it will certainly not be possible to talk about academic freedom. Some research results have shown that university-industry-government research cooperation can provide resources for universities to develop their research missions but can also affect their autonomy (Sarpong, 2023). While this cooperation creates negative effects on university autonomy, it is seen that it also creates changes on the labor power of academicians. Narin (2011) remarks strikingly the effects of the transformation of universities into an industry, in parallel with university-industry cooperation, on the labor force of scientists:

The process of transforming universities themselves into a dual-functional industry is underway. While the first function is the production of science and technology, the second is the production of a qualified labor force. (...) These two basic undercurrents lie behind the multidimensional transformation in universities. The first is the reproduction of labor power in line with the new needs of the internationalization of production. (...) Universities produce not only the labor power necessary for themselves and science production but also labor power in a wide area. The second is the reproduction of this production and the labor force necessary for it, as the need for the internationalization of scientific production that accompanies it. In other words, it is the necessary production not only for raising qualified labor force for the international labor market but also for raising the labor force for the needs of the transformation towards science production in the international arena (Narin, 2011, p. 8).

In this transformation process, it is seen that various arrangements and changes have been made to the academic labor process. Employment forms of academics are made insecure and flexible. Working forms such as contracted work and part-time work are becoming widespread, which puts pressure on academics and allows labor processes to be controlled by the government. The widespread adoption of short-term contracts for academic employment has

become an increasingly common practice in many countries (Keashly & Neuman, 2010). For instance, in the United States and some European countries, hiring academics on fixed-term contracts rather than full-time, permanent positions has become quite prevalent. These academics are often employed on contracts that last only a few years or even a single term, and at the end of the contract period, they face the risk of being left without job security.

This precarious employment situation creates a twofold pressure on academics. On one hand, they are compelled to meet university-defined criteria, such as high publication performance or project success, to secure contract renewal. On the other hand, they may be reluctant to undertake long-term projects or pursue original, riskier research due to the uncertainty of their future employment. As a result, academics find themselves in a constant state of uncertainty, feeling pressured to meet predefined performance benchmarks and shape their work to align with administrative demands. These flexible working conditions lead to more intense control over academic labor processes and restrict academic freedom (Keashly & Neuman, 2010).

In this context, academic capitalism, defined as the increasing alignment of universities and academics with market dynamics (Jessop, 2018), has had a significant impact on the functions, status, and roles of academics. The market-oriented transformation of universities has led to a performance-driven system, where academics are evaluated based on metrics such as the number of publications, patent applications, and project funding. For example, many universities set specific annual targets for academics, such as a required number of publications or citations, establishing performance criteria based on these outputs. The expectation of publishing in high-impact journals also emerges as a significant pressure factor. Under these conditions, academics may at times

focus on topics that can be published more quickly rather than pursuing their own research interests or addressing social issues. Consequently, essential topics like social mobility, social justice and equality, race, gender, and class are increasingly given less attention in academic work (Giroux, 2007). The corporatization of universities is also leading to the closure of many academic departments and programs that do not generate commercial profits (Duggan, 2016; Newfield, 2016; Gumport, 2000). For example, programs and courses concerned with social issues, such as critical theory, literature, feminism, ethics, philosophy, and sociology, are among the first to be sacrificed (Giroux, 2007, p.89). This situation contributes to the weakening of academic autonomy in the context of academics' working conditions, increasingly restricting faculty members' opportunities to work freely in their fields and to address social issues.

Therefore, academics are compelled to adapt to meet the performance targets set by the university. This situation can lead academics to postpone or cancel their unique or long-term research under pressure. As a result of the pressure created by these performance criteria, academic output is seen to shift from quality toward quantity (Jessop, 2018). The rising competition among academics reduces collaboration, links academic production processes more closely to market dynamics, and begins to commercialize knowledge production.

As a result, with this process, academics are being transformed into practical knowledge technicians, reduced to a type of technician with technical skills. This situation brings about the de-skilling and proletarianization of academics. Consequently, academics lose control over their labor process, and any work related to knowledge ceases to be their autonomous endeavor, becoming subject to criteria external to themselves (Gorz, 2007). Academic work is increasingly determined by the constraints imposed by economic and technical calculations.

Academics are compelled to define their work not according to their own thoughts or the principles they advocate, but based on where they hope to find recognition in the market and the best price/cost relationship (Gorz, 2007).

Production and Commodification of Scientific Knowledge in Universities

Although science is a social activity shaped according to political power relations, it is generally shaped around market relations (Giroux, 2007). It is becoming increasingly apparent that universities have a tendency to impose a uniform understanding on various issues, thereby limiting or controlling diversity of thought. In this context, Gramsci's concept of cultural hegemony provides an important framework for understanding this process. According to Gramsci, dominant groups in society maintain control not only through political or economic power but also through cultural institutions such as universities, media, and literature (Gramsci, 1971). These institutions can suppress diversity of thought by promoting a uniform understanding on various issues, thereby contributing to the reinforcement of the status quo. Today, the tendency of universities to restrict social diversity and critical thinking is increasingly transforming them into institutions that serve market interests. Marketization is forcing universities to align with private sector and government interests to secure more resources. This alignment promotes a more standardized, market-friendly mindset within universities, posing the risk of limiting critical perspectives. As Gramsci's cultural hegemony theory suggests, we are witnessing that dominant groups (here, market-oriented actors and capital) are increasingly spreading thought patterns that serve their interests not only through economic power but also, along with marketization, more extensively through cultural institutions such as universities (Gramsci, 1971). During the process of marketization of universities, university administrations and academics are encouraged to remain on an academic path that aligns with, and does not challenge, the social and economic status quo, under the justification of

securing funding and resources. For example, while some disciplines (engineering, business, applied sciences) receive more financial resources for scientific research, fields such as critical social sciences or humanities receive less funding, which is a concrete example of this situation. In an environment dominated by market supremacy, universities are increasingly moving towards contributing to the creation of a cultural hegemony that aligns with the interests of the market, rather than developing critical or alternative approaches on certain issues within society. This weakens the role of universities in producing knowledge for the benefit of society and providing critical perspectives, while also preventing scholars from questioning the existing structures within the system. This process continues to reshape the mission of universities, transforming them into structures that push for a single, market-oriented understanding instead of a broad diversity of thought.

With the opening of science to the market, the reduction of knowledge to the technical dimension and the privatization of knowledge lead to the fact that knowledge is no longer a common value and turns into an "investment object". As everything is commodified in the capitalist system, it is undoubtedly aimed at commodifying the production of scientific knowledge by global actors. In this context, as a result of the neoliberal policies increasingly taking place in the focus of scientific studies, the understanding of "science for science" being replaced by the understanding of "science for the market" requires re-questioning the relationship between capitalism and science. The focus of chemists' work is increasingly shifting from the benefit of society to the advantage of large corporations such as Du Pont, Union Carbon, Eczacıbaşı, Roche, and Bayer (Kükürt, 2009). In environmental science, the impact of fossil fuels on climate change has long been known. However, due to the lobbying efforts of major energy companies and their pressure on governments, such research has been overlooked or slowed down in the past. The funding of

environmental studies by the fossil fuel industry has led to the prominence of some research that downplays the effects of climate change (Union of Concerned Scientists, 2007). In the mid-20th century, tobacco companies manipulated scientific studies and funded scientists to downplay the negative health effects of smoking (Glantz et al., 1996). Similarly, the sugar industry has also supported some research to conceal the connection between sugar and obesity and heart disease (Kearns et al., 2016). Even universities, which were once centers of impartial scientific research in certain countries, have transformed into hubs for projects funded by private companies or government agencies in the United States, focusing on developing bullets, bacteriological weapons, or other forms of mass destruction (Kükürt, 2009). In this context, the knowledge obtained through scientific research, together with this understanding, serves profit and personal interests rather than the common good and universal values of humanity. These cases are just a few examples of companies' efforts to influence science in line with their market interests. These examples raise concerns about the possibility that scientific knowledge may be directed according to corporate interests, potentially leading to issues of impartiality.

The fact that much scientific knowledge is shaped according to the needs of capital rather than the needs of society requires rethinking the basic question of what motives should be used in the production of scientific knowledge (Özuğurlu, 1998). In this century, it can be seen more clearly that the production of scientific knowledge, which is dependent on property relations, has become dependent on the purpose of profit, and its dissemination depends on its commercialization. The relationship between science and the market has become stronger than ever before in history. Therefore, the days when scientific knowledge was produced depending on the effort to seek the truth, belonged to

the universal knowledge treasure of humanity was open to public use, and was spread by socialization began to pass.

Ball (2012) underlines that both practices and principles should be considered together in the process of neoliberalizing higher education and argues that in this process, exchange value gradually becomes a tool for university discourse and decision-making. In this context, the university which is dominated by neoliberal policies is more closely related to the production of exchange value rather than the creation and dissemination of knowledge. In that case, the university started to exist both in practice and in principle depending on the market rules. Scientific studies produced in universities become studies that are suitable for the expectations that will contribute to the reproduction of capitalist ideology on the one hand and to the accumulation of capital on the other (Kükürt, 2009). With the entry of capitalism into the field of science, knowledge production in universities dominated by academic capitalism inevitably becomes commodified. The commodification of knowledge has led academics to undergo a process in which they are forced to conduct research in accordance with the interests of large companies providing financial support. For example, the pharmaceutical industry financially supports certain health research, and this support can influence the results of the research in favor of the companies, causing distortion (Angell, 2005). The commodification of scientific knowledge leads both to the encouragement of academics to conduct market-oriented research and, as a result, to the erosion of scientific impartiality.

As a result, scientists cannot freely determine the scientific studies they will carry out, so they cannot make a decision and have control over the study. The relationship between scientists and their scientific work is broken, and this situation brings alienation. As a result, scientists begin to witness that their own

labor, the product of labor power becomes independent from itself and turns into a commodity that goes its own way. In this process, which Lukacs (2006) calls "reification", labor is rationalized; that is, it becomes a purely quantitative issue. At the same time, the scientist's activity becomes objectified towards themselves and begins to cease to be their product (Lukacs, 2006).

In this process where everything is commodified, it is seen that the meaning of the scientific knowledge production process changes when scientists start to produce information with exchange value. The work of producing scientific knowledge is beginning to turn into an area of activity that serves the purpose of careers of scientists, increases their competitiveness with each other, and works for the benefit of the market and capital, apart from students (Coşkun, 2008, p. 198). The selection of the research problem by scientists, the theoretical framework it will be based on, and the presentation of research results are all influenced by this process. Consequently, their relationships in the work environment, educational activities, and the content of the education they provide also start to be affected. As a result, the focus on creating exchange value begins to dominate the entire process. As a result, academia becomes a business that operates on market value. I think that Coşkun's (2008) determination in this context makes an important contribution when thinking about academic freedom.

Once scientific studies are carried out for marketing, or more precisely, when scientific production is turned into an output with exchange value and an academic competitive issue, all academic and scientific autonomy will be set aside, and the academician will be left at the mercy of the market or market relations (Coşkun, 2008, p. 199).

“The fact that academics will be left at the mercy of the market” can be seen as a striking analogy in making visible the gradual disappearance of academic

freedom and the authority of scientists. Entrepreneurial universities force academics to be at the mercy of the market, encourage scientists to work in accordance with the requirements of academic capitalism, or force them to do these studies with promotion criteria in order to be in the first place in the success rankings (Perkmann & Walsh, 2007). Especially globally recognized research universities such as Stanford, the Massachusetts Institute of Technology, Oxford, Harvard, California, and Berkeley encourage scientists to conduct market-oriented research, engage in entrepreneurial activities, and participate in the start-up culture. These universities reward scientists' participation in such activities. Furthermore, entrepreneurial universities offer various entrepreneurship programs to scientists and provide financial and logistical support for such activities (Etzkowitz & Leydesdorff, 2000).

It is also known that academics, who try to avoid doing studies in accordance with the requirements of academic capitalism face various problems (Slaughter & Rhoades, 2004). The exclusion of their studies by the university, financial problems, disruptions in their career plans, working in an uneasy and insecure environment are just some of these problems. Every academician and any academic production that cannot find market value and cannot perform adequately in terms of marketing is in danger of being completely excommunicated or peripheralized from academic life (Coşkun, 2008, p.198).

In a process where scientific knowledge production is determined according to supply and demand and knowledge is turned into a market-oriented commodity, while scientific production inevitably continues to shift towards knowledge areas with market value, most of the scientists either quietly or happily follow this process (Kükürt, 2009). Therefore, this culture of silence and satisfaction in academia is becoming one of the most effective reasons for the progressive disappearance of academic freedom. Today, it is seen that the founders or

partners of thousands of companies are scientists. It is seen that scientists, who both open companies as a way of commercializing their inventions and aim to earn more money through these companies, leave their scientist identity to their businessperson identity. Giroux (2007) makes a further point on this issue of transforming scientists into “academic entrepreneurs”.

Equally disturbing is the fact that a large number of academics own shares in companies that sponsor their research. As the boundaries between public values and commercial interests have disappeared, many academics are more concerned with pursuing corporate interests than seeking the truth (Giroux, 2007, p. 76) .

From the point that Giroux (2007) draws attention, it is clearly seen that scientists who adhere to the principles of academic capitalism want to make more profit by advertising their companies through sponsorship activities, which are among the secret privatization practices and are used very effectively (Ball & Youdell, 2008). Universities dominated by corporate culture turn scientists into competitive individuals who only think of their own interests, in other words, homo economicus.

Another reason why scientists turn to research with market value is the transformation in higher education policies with the Bologna Process, as stated before. Universities, which said hello to academic capitalism with the transformations within the framework of economic rationality, started to provide higher education services by prioritizing the aim of obtaining maximum profit, just like businesses offering private goods and services (Aktan, 2021). In this process, in which academic capitalism is dominant in higher education policies, it is seen that political powers have formed university programs based on technical skills with an instrumentalist approach and followed policies based on market ideology. As a result, the number of researches with market value is increasing day by day, depending on the changes in the research preferences of

scientists. With rationalization, the individual qualitative characteristics of scientists are increasingly excluded. This situation leads to the division of the work process through a rational calculation, thus breaking up the relation of the scientists to the whole of the activity and reducing the labor they spend to a mechanically repetitive function. At the same time, it makes the scientist no longer a real subject of this process, both in terms of the objective aspect and in terms of the relationship of the academician with the working process. In Lukacs's words, scientists play the role of a mechanized part inserted into a mechanical system that they find fully independent and ready to work in front of them and whose laws they have to obey against their will (Lukacs 2006, p.161).

As a result of this process, scientific activities have ceased to be the product of labor freely put forward by scientists. Although there are scientific workers who struggle and resist carrying out their studies autonomously in an environment where heteronomous working conditions are dominant, it cannot be said that scientific research activities in general are carried out as autonomous activities in scientific study areas dominated by academic capitalism.

Conclusion and Discussion

The discussions revealed by this study have shown us that, as a result of neoliberal policies reduced to the market that came with global capitalism, there has been a great transformation in universities as in the whole of social life. The Bologna process has played a decisive role in higher education policies. This process which led to stronger ties between universities and the market has, served to create a higher education market on a global level. In this transformation process, although the process has progressed differently with the influence of each country's own internal dynamics, as a result, today's universities continue to progress rapidly towards becoming entrepreneurial

universities. These radical transformations have brought along very important effects on the issue of academic freedom and autonomy of universities.

In this new restructuring process, important changes have occurred in all functions of universities, starting from the management approach. This new management approach, called "management" has led to the dominance of a management approach, whose control over academic life has been strengthened, in university administrations. It is seen that education and research activities in universities, which continue to operate in accordance with the requirements of academic capitalism, have begun to serve the capital rather than being a public service and meeting the needs of the society. Depending on these policies, scientific knowledge production has become increasingly commodified. The understanding of "science for science" has gradually started to be replaced by the understanding of "science for the market". While the production of knowledge is dependent on making a profit, its dissemination has become possible with its commercialization. Unfortunately, the days when science started out with concerns about universal values for humanity, with an effort to seek the truth, and when knowledge spread socially, are now over.

With this transformation, the use of labor power of academics working in universities has been significantly affected. The working life of academics has become based on heteronomy conditions. As a result of the disappearance of the autonomy of universities, academicians who have to carry out their studies under heteronomy conditions also lose their academic freedom. Academicians have begun to lose their control over the work they have done, and they have become increasingly alienated from the work they have done, what they have produced, themselves and their environment.

Although some academics have struggled against this process, others have become the most important actors in it. As a result of the academic entrepreneurship activities of many academics who benefit from the companies they founded, the identity of scientist has begun to give way to the identity of business person. The increase in the tendency towards research with market value due to the encouragement and coercion of universities has increased the number of such researches at a very significant level. In corporate universities, the programs were arranged within the framework of this understanding, and programs suitable for market needs began to take place more in university programs. Companies that provide funds to universities have increasingly had a say in universities. The conduct of science under the domination of capitalism and the corporatization of universities carry the danger of distorting scientific findings and distorting natural and social truth in favor of profit.

As a result, the neoliberal transformation of universities, influenced by academic capitalism, leads to the marketization of scientific knowledge and undermines the principle of neutrality, while also threatening academic autonomy and weakening the role of universities in serving the public good. This process transforms the mission of universities, causing them to adopt a market-driven approach and limit the diversity of thought.

What should be done in order for a free science understanding that is not market-driven to dominate in universities stands as an important question for all scientists. Answering this question may be possible through a very laborious collective process. Emancipating the field of higher education, which has rapidly become a global market, from the market is the first condition of making a free science by re-establishing academic freedom and autonomy in universities.

Considering that conditions are changed by people (Marx, 2013, p. 22), as stated in the third of Marx's Theses on Feuerbach, academics have the power to evaluate the system with a critical perspective and change the current order they are in, starting with themselves. As the historical process has shown us, it is possible to gain new gains and rights with the ongoing struggle and resistance, as well as the gains obtained as a result of the struggles. Today, we find ourselves in a historical moment where it is perhaps more crucial than ever to repeatedly emphasize the inevitability of fighting to free universities from both colonialism and the dominance of capitalism. Edward Said (2013) should be seen as an important resource in this struggle for freedom. Said's (2013) intellectual can be seen as a good guide for us in this struggle.

Academics should struggle for a working life where they can carry out scientific research activities in autonomous universities where academic freedom takes place. They should take steps towards humanization and subjectivation against objectification as a tool of the economic system. The organization and implementation of scientific research activity as an autonomous activity primarily depends on the autonomy of scientists, who are the subjects of this process. In other words, it means the questioning of everything that detaches itself from its right to speak and its sovereignty, from self-government, namely all the processes of his work and the economic and political decisions that determine his work (Gorz, 2014). The scientist can be autonomous when he has the power and consciousness to organize his own relationship with power or the dominant and can be organized in a way that does not involve property relations appropriate to the market (O'Neill, 2001).

Academics should be maintained in a working life organized within the framework of democratic management principles, in which critical thinking and questioning are dominant, the obstacles to the academics' mastery of all phases

of the activity they have done and their own decision to carry out are removed, and that the aim is to carry out studies that serve the progress and needs of humanity, not the market.

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