

**REPUBLIC OF TURKEY
YILDIZ TECHNICAL UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES
PH.D. PROGRAMME IN CULTURAL STUDIES**

PH.D. DISSERTATION

**THE CULTURAL POLITICS OF TECHNOLOGY BETWEEN ANXIETY AND
ANTICIPATION: THE TECHNOLOGY OPINION LEADERS ON TURKISH
TWITTER/X**

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2024

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ABSTRACT

THE CULTURAL POLITICS OF TECHNOLOGY BETWEEN ANXIETY AND ANTICIPATION: THE TECHNOLOGY OPINION LEADERS ON TURKISH TWITTER/X

From the very beginning of modernization efforts in the Turkish context, cultural anxieties and expectations have shaped discourses and representations of progress, technology and development. Today, one of the channels through which the discourse and representation practices produced by opinion leaders are visible is social networks. Although there is a rich literature on the modernization discourse conducted through intellectuals, an important question is how the rise of social media platforms has transformed these discourses and representations. In order to address a lacuna in the literature, this study focuses on the discursive practices of Turkish popular opinion leaders in the field of technology on the Twitter/X platform. By referring to the discourse practices of popular opinion leaders, it is aimed to draw a map of the patterns and variations, historical continuities. In the study an optimized method is developed, utilizing the list feature of the Twitter/X platform to identify opinion leaders producing Turkish content in technology, specialized in the field, and possessing high representativeness. Thus, the tweets/posts of the identified popular opinion leaders were classified and analyzed within the framework of certain categories and themes.

The study concludes that the cultural concerns and anxieties that dominate modernization discourses are reproduced by the identified opinion leaders. The main emphasis shared by the opinion leaders is the inevitability of technological progress. In this respect, in parallel with dominant narratives on technological progressions, the opinion leaders adopted a largely optimistic attitude that emphasized opportunities but also recognized potential risks. Thus, the stance of the opinion leaders is positioned between the protopian and utopian perspectives. In the case of Turkey, on the other hand, they adopt a culturalist discourse shaped around the concept of mentality, which puts technology in the background, and an emphasis on developmentalism come to the fore. In this context, two orientations color the discursive practices of the opinion leaders. One leans towards universalism, rooted in the Western/Enlightenment values, seeing the dominant cultural codes and the current political understanding as barriers to progress and development. The other adopts a technoconservative approach, favoring controlled progress based on tradition and embracing “nativist and national” rhetoric.

Keywords: Technology, Progress, Developmentalism, Culturalism, Opinion Leaders

ÖZ

ENDİŞEYLE BEKLENTİ ARASINDA TEKNOLOJİNİN KÜLTÜREL POLİTİKASI: TWITTER/X'TEKİ TÜRK TEKNOLOJİ KANAAT ÖNDERLERİ

Modernleşme çabalarının başladığı ilk andan itibaren, kültürel endişe ve beklentiler; ilerleme, teknoloji ve kalkınma konularındaki söylem ve temsilleri şekillendirmiştir. Bugün için kanaat önderleri tarafından üretilen söylem ve temsil pratiklerinin görünür olduğu mecralardan biri sosyal ağlardır. Aydınlar üzerinden yürütülen modernleşme söylemiyle ilgili oldukça zengin bir literatür bulunmasına rağmen, sosyal medya platformlarının yükselişinin bu söylem ve temsilleri nasıl dönüştürdüğü önemli bir soru olarak öne çıkmaktadır. Literatürdeki söz konusu ihtiyacı gidermek adına bu çalışma; Twitter/X platformunda teknoloji alanında Türkçe içerik üreten popüler kanaat önderlerinin söylem pratiklerine odaklanmaktadır. Popüler kanaat önderlerinin söylem pratiklerine başvurularak bu pratiklerdeki örüntü ve farklılaşmalar vasıtasıyla tarihî süreklilikleri dikkate alan bir harita çıkarmak hedeflenmiştir. Çalışmada, teknoloji alanında Türkçe içerik üreten, bu alanda uzmanlaşmış ve temsil kabiliyeti yüksek kanaat önderlerini belirlemek amacıyla, Twitter/X platformunun liste özelliği temel alınarak optimize edilmiş bir yöntem geliştirilmiştir. Böylece, tespit edilen popüler kanaat önderlerinin tweetleri/paylaşımları belirli kategori ve temalar çerçevesinde tasnif edilmiş ve analize tabi tutulmuştur.

Çalışmada, modernleşme söylemlerine hâkim olan kültürel endişe ve beklentilerin kanaat önderleri tarafından yeniden üretildiği sonucuna ulaşılmıştır. Kanaat önderlerinin görüşlerinde ortaklaşan temel vurgu teknolojik ilerlemenin kaçınılmazlığıdır. Bu yönüyle, kanaat önderleri, hâkim teknoloji anlatılarına paralel olarak, fırsatları öne çıkaran fakat riskleri de görmeye çalışan, büyük ölçüde iyimser bir tutumu benimsemişlerdir. Buradan hareketle, kanaat önderlerinin protopyacı ve ütopyacı perspektif arasında konumlandığı tespit edilmiştir. Türkiye özelinde ise teknolojiyi daha arka plana atan, zihniyet kavramı etrafında şekillenen kültüralist bir söylem ve kalkınmacı bir vurgu öne çıkmaktadır. Bu bağlamda kanaat önderlerinin söylemlerine rengini veren iki yönelim ortaya çıkmıştır. Bunlardan biri Batı/Aydınlanma değerlerine dayalı evrenselciliğe meyleden, hâkim kültürel kodları ve cari siyasi anlayışı ilerlemenin ve kalkınmanın önündeki engel olarak gören bir anlayışa denk gelirken, diğeri gelenekten hareketle kontrollü bir ilerlemeyi benimseyen, “yerli ve millî” retorikle beslenen tekno-muhafazakar bir yaklaşıma sahiptir.

Anahtar Kelimeler: Teknoloji, İlerleme, Kalkınmacılık, Kültüralizm, Kanaat Önderleri

PREFACE

This dissertation explores Turkey's complex relationship with technology, where fervent enthusiasm for progress often intertwines with a sense of disillusionment over perceived exclusion from the global technological forefront. This dichotomy echoes throughout history, reflecting broader themes of aspiration, ambition, the complexities, and challenges of modernization. At the intersection of technology, culture and politics, this work aims to humbly contribute to the understanding of these sentiments, their sources, pitfalls, and potential outcomes.

Many people contributed to the writing of this work in different ways and degree. Firstly, I offer my gratitude to my supervisor, Onur Güneş Ayas and co-supervisor, Alper Bilgili, as well as the members of my Thesis Monitoring Committee, Kerem Karaosmanoğlu and Adem Başpınar. Their patience, guidance and expertise have been invaluable. I endeavored to meet their expectations and fulfill my responsibilities to the best of my abilities, although there were times when I fell short.

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1. INTRODUCTION

This study seeks to investigate the evolving significance of (the concept of) technology in Turkey, considering ongoing technological developments and associated discourses. It seeks to achieve this goal through an in-depth analysis of social media content produced by an identified group of prominent Turkish Twitter/X users. The study places a specific focus on the perspectives of these opinion leaders and analyzes their views on the ongoing digital transformation, the current state of technological progress, and the intricate interplay between cultural mindset and technological trends concerning Turkish modernization. Additionally, it concentrates on the discourse surrounding the mentality behind public policies on technology, intending to provide a nuanced understanding of how these influential figures both shape and mirror public perspectives on technology within the distinctive cultural context of Turkey.

Both in local and global contexts, the concept of technology, along with its symbolic and representative qualities, has undergone a transformative evolution following the twentieth century. According to Leo Marx, although the word technology was used at the turn of the nineteenth century by the writers such as Thorstein Veblen to denote the collective mechanical arts, it gained widespread adoption only following the WWI (Marx, 1997). Eventually the concept came to encapsulate “the complex sociotechnical systems” (1997, p. 972). This evolution undoubtedly follows historical patterns observed in numerous societies, including Turkey. The evolution of the notion of technology, particularly from the mid-20th century onward, constitutes a widespread phenomenon closely tied to significant global events and advancements.

Terms such as “technique,” “mechanization,” and “industrialization” as well as the word *fen* appear to be the main tropes in modernization narratives since the late Ottoman Empire period. These buzzwords each exhibit strong semantic density, encapsulating complex ideas related to progress, efficiency, and innovation. Over time, the conceptual landscape gradually broadened to embrace the more comprehensive term ‘technology.’ It signifies a more holistic and interconnected approach to societal progress and development. This shift reflected a global trend where the understanding of technology expanded beyond mere mechanization and

industrial processes, encompassing a broader spectrum of innovations and advancements that became integral to societal transformations. The evolution of institutional nomenclature in Turkey, as exemplified by the changes in the names of prominent organizations, mirrors the broader transformation in the perception of technology. Established in 1963, commonly known by the abbreviated name TÜBİTAK (The Scientific and Technical Research Council of Türkiye), underwent a significant alteration in 2005, becoming the “Scientific and Technological Research Council of Türkiye” (Özdemir, 2012). This change, the alteration of the word “technical” with “technological,” underscores a small but significant shift towards a more encompassing understanding and the critical role of science and technology as well as research and development efforts. Likewise, the contemporary “Ministry of Industry and Technology” in Turkey has experienced noteworthy changes in both its nomenclature and operational focus (*Bakanlığımızın Tarihçesi*, n.d.). The current designation, established in 2018, reflects a culmination of earlier developments. In 2011, it operated under the name “Ministry of Science, Industry, and Technology,” emphasizing the interconnectedness of science and industry. Going further back, in 1971, it bore the title “Ministry of Trade and Industry,” highlighting the significance of both trade and industry within its purview. This progression in nomenclature highlights the evolving acknowledgment of technology’s integral role in the ministry’s responsibilities and underscores the dynamic nature of its operational landscape over the years. Tracing its history back to 1838 with the establishment of the “Meclis-i Ziraat ve Ticaret Komisyonu,” the ministry’s early emphasis centered on agriculture and trade. Its trajectory took a significant turn in 1920 with the establishment of the “Ministry of Economics,” expanding its responsibilities to cover “Trade, Industry, Agriculture, Forestry, and Mining.” As illustrated, the emphasis on economic and industrial facets took precedence over technology during this period. Today, however, the landscape has transformed, with a more contemporary focus that recognizes the pivotal role of technology alongside economic and industrial considerations.

This should not be surprising, as the world has become increasingly globalized, paralleling the evolution of our society into a highly technological one. As technology exponentially—a phrase commonly used to denote its rapid pace—and promises to radically transform every corner of everyday life, technology talk has infiltrated into popular culture and discourse. Heralding an exceptionally different future,

technological discourses and trends on artificial intelligence, cyber currencies, industry 5.0, robotics, and transhumanism have sparked technophilic and technophobic responses. Yet the consumption practices across the world and representations of technology in popular culture indicate genuine sympathy towards technology. The dominant attitude towards technology on the other hand is exceptionally positive, uncritical, and adaptive, incognizant of the social shaping of technology and the intricate interaction between technology and culture/society. The rise of social networking, start-up culture, digital entrepreneurship, venture capitalism, and the like brought about widespread enthusiasm and evangelical attitudes toward such technological trends. In the last decade, parallel to this global phenomenon, and the proliferation of technological narratives such as the so-called success stories of the formation of the internet companies, sometimes in the garages, along with various other historical and recent trends and discourses appear to be fusion into anew technoutopian discourses in local and global contexts.

Robert K. Merton, the founding figure of the sociology of science, writes in the foreword to Jacques Ellul's (1964) book *The Technological Society* that "ours is progressively technical society" (1964, p. vi). This entails that technique rules in all domains of life, from economics to politics, from art to sports. Technical/technological know-how becomes the most sought-after information. Everything now is measured in terms of usefulness, rather than intrinsic or idiosyncratic qualities. Technological solutionism has become prevalent in everyday life (see Morozov, 2013). It has become a commonsense approach to any kind of problem, just like there is an app for everything. Performance, productivity, and efficiency seem the keywords. According to Merton, "It is a civilization committed to the quest for continually improved means to carelessly examined ends. Indeed, technique transforms ends into means" (Ellul, 1964, p. vi). However, there has been no grand scheme or overarching conspiracy theory at play; instead, "technique produces all this without plan; no one wills it or arranges that it be so. ... It is a response to the 'laws of development of technique'" (Ellul, 1964, p. vii). More than 50 years later, since the translation of Ellul's book, into the era of networks, his insights seem more correlative to the society/reality in which we live than that of his own. Nonetheless, from another point, the temptation for digital/technical solutionism can be sensibly linked with instrumental rationality, a key concept particularly in Weberian sociology and in (neo- or post-) Marxist traditions

following critical theory. While technological solutionism seems yet another manifestation of instrumental rationality, a zeal for algorithms and big data has taken the shape of an ideology of the era of networks, commonly dubbed as dataism.

However, the discourse that technology is solving our problems, communication-wise or otherwise, Jonathan Sterne asserts, by no means novel: “Images of technologies affecting our lives, solving our problems (or creating new ones), or transforming our self-understandings have populated advertising since the turn of the 20th century and are present in other kinds of technological discourse going even further back” (1999, p. 259). Part and continuation of such discourse is what we have been heavily discussing nowadays as to the possible directions that artificial intelligence technology is going to take humanity. As Sterne indicates the new technological solutions almost always come with new problems, hence, they have tremendous transformative implications in culture and society, for we have come to be a technological society. Therefore, we can assume that technology in general, the internet, and networked communication in particular have become not just a part and parcel of our culture but also a cultural force *per se*.

The last two decades have been a phenomenal success for digital/internet technologies and the software industry. Digital technologies have become widespread, are now available cheaply, and are employed even amongst the most financially insecure individuals. Smartphones and a superfluous number of applications promise more productivity and connectivity, among other things. With the (relatively) cheap availability of the Internet connection and so-called “smart” devices, now is the era of the networks, of which the Internet of things, the interconnection of devices, is only part. The notions such as *networked work*, *networked production*, and *networked human* have come to the fore to explain the new nature of the relationship between humans and machines.

The concept of the network has evolved to explain interactions among machines shaping innovative production practices, as well as human-human and human-machine relations. These new orientations are driving significant changes in the realms and relationships of technology and culture. Cinematographic depictions illustrating the dissolution of both material and symbolic boundaries between humans and machines, such as the emergence of cyborgs, are now regarded as plausible future realities, not far distant. However, these projections carry substantial political, social, and cultural

implications, making them a subject of significant academic interest, extending beyond environmental risks to include ethical considerations.

In parallel to these trends, the concepts of artificial intelligence, industry 5.0, bitcoin, and similar concepts have come to dominate everyday technology discourse and popular culture mostly through the rhetoric of the advertisement industry in the service of economic interests, and popular science and technology books. On the one hand, almost every advertisement of technological devices and public talks and discussions on technology not only attempts to herald the potential consumers of the capabilities of artificial intelligence as the most recent and significant feature but also appears to be foretelling of a future that *will* be exceptionally different from the past: It is a future where the machines are going to govern themselves, which is very much different from the most fundamental claim of the industrial era, that is, the command and control of the nature, both human and environment. Moreover, it signifies the continued shift from the Fordist to the post-Fordist phase of capitalism, where individuals are perceived not merely as cogs in the machine but as nodes in the network. Consequently, this characterizes the era of the networked human.

On the other hand, popular science and technology books have gained significant popularity and are frequently cited in public discussions. Trans-humanism has become one of the key popular terms to discuss and predict the future (see O'Connell, 2017). Now, each concept, from work to relationships, has been opened to the discussion. (The sociology of Zygmunt Bauman and his conceptual illustration of post-modern times through the lens of the term liquid, e.g. liquid modernity, liquid fears, liquid love, etc. appears to be a notable theorizing attempt towards the workings of the new realities.) Yet again, such technological concepts are either celebrated and championed with excessive zeal or feared and at times linked to conspiracy theories. As MacKenzie and Wajcman point out, technological determinism is predominantly a common-sense approach when contemplating technology (1985, pp. 4–5). The problem with this perspective lies in its tendency to “promote a passive attitude to technological change,” directing our attention toward adapting to technological changes rather than actively shaping them (as cited in Bell, 2006a, p. 66). Few critics such as Neil Postman (1999) contested this commonsensical perspective; questioning the purpose a technology addresses, the stakeholders involved, the potential new issues arising from solving old ones, identifying those most adversely affected in institutions, discerning language

changes due to technological shifts, and foreseeing new sources of economic and political power that may emerge. Such critiques are crucial to moving beyond the imperative of transcending simplistic views prevalent in everyday technological discourse, especially on platforms such as Twitter/X and YouTube. Only through these critiques can society achieve a more comprehensive understanding of technology's cultural impact, encompassing both its potential for emancipation and the risk of reinforcing exploitative capitalist structures.

Navigating back to the local (Turkish) context, these discourses on technology serve as a lens capturing not just global technological trends like artificial intelligence, industry 5.0, robotics, and more, but also spotlight a renewed window of opportunity to seize the moment—an opportunity that has been perceived as missed on multiple occasions before. This resurgence of attention serves as a point of departure from which this study aims to analyze, at least partially, as to how technology is viewed in Turkish culture, exploring the unique challenges and opportunities, anxieties, and anticipations, be they technical or cultural, within the scope of Turkish modernization.

Bedri Rahmi Eyüboğlu's oft-quoted poem stands as one of the most poignant expressions that encapsulate the pervasive sentiments of anxiety and anticipation, deeply rooted in the historical perception of the “disturbing gap” between Turkey and the so-called developed countries of the West: “You need to know at least three languages / ... / Because you are not history nor geography / Nor this nor that / My little Mernuş / You are the child of a nation who has missed the bus” (Eyüboğlu, 2018, pp. 257–258). M. Serdar Kuzuloğlu, a public figure and a prominent technology opinion leader whose views on technology and technological trends are oftentimes conferred by the media and the public, cites the poem in a recording where he talks about entrepreneurship culture and angel investment (i.e. venture capitalism) in Turkey. Kuzuloğlu warns his audience to rather blame themselves than external factors in case of failures. He criticizes the frequently used example of dropping out of school in pursuit of personal goals, one of the most popular examples in the rhetoric of entrepreneurship, as in the case of Bill Gates and Mark Zuckerberg. He underlines that such figures either came from high-profile families or were smart enough to study in schools such as Harvard:

Can you enter Harvard? You are a child of a low-income family who can only study in a cheap course [*dersane*] or at a university converted from an apartment. We

must have more ambition and aims than everyone else. The thing that we must do is to work. Only this. As [it was expressed] in Bedri Rahmi Eyüboğlu's poem. (Kuzuloğlu, 2018)

Although Kuzuloğlu is not making an explicit reference and probably not so much concerned with the two-centuries debate, Eyüboğlu's poem and invocation of the metaphor of missing the bus can, and should, be analyzed within the contexts of the debates concerning the "backward" state of, first the Ottoman Empire, and later the Turkish nation. Although this line of thought, an acknowledgment of backwardness vis-a-vis the West, and possible solutions to catch up, or not to miss the next bus, now and in the past, certainly shapes discourses on technology in the Turkish context. Thus, an analysis of discourse on technology demands an awareness of the local and global, historical, and recent events and phenomena, reflections, and discussions. Nonetheless, discourse on technology in the local and global context necessitates a broader look, an analysis of multiple contexts with an awareness of the historicity of discourses on technology.

The "disturbing gap" between Turkey and developed countries (the West), as Meltem Ahıska (2005, 2010) elegantly puts it, has been on Turkey's agenda since Tanzimat. This gap has taken on new dimensions with the transition to the information (digital) society. One can observe the reactions to this new situation in two ways. While the first possibility focuses on the deepening of the gap, the second possibility is that this new situation may also offer a window of opportunity. Thus, anticipations and anxieties about the present state of technological difference/gap, which is deeply rooted in a long and painful historical process that also determines the social identity and political history, coexist with the optimism, excitement, and faith that comes with the new situation. The ongoing sharing and dissemination of even the prototypes for innovations, whether through social media or conventional channels, highlight the enduring excitement and dynamism synonymous with Silicon Valley, solidifying its powerful image rooted in/as an entrepreneurial culture. For developing countries like Turkey, the current landscape characterized by increased digitalization, recent advancements in artificial intelligence and robotics, blockchain technology, and more, is perceived as an opportunity to actively participate in the technological "race." These innovations are seen as a hopeful means to potentially narrow if not close, existing gaps. However, it's essential to recognize that this perspective specific to developing

countries is intertwined with a broader understanding prevalent in the literature—the concept of technological determinism. This perspective tends to overlook the historical context and discontinuities inherent in technologies, technological choices, and innovations. What is critical here is that not only does technology make our lives technically easier, but we also witness the nurturing of a very lively belief (technological solutionism) that socio-cultural problems can potentially one day be overcome through technology.)

In terms of concerns about the present technological gap, the so-called “backwardness,” of Turkey compared to developed countries, there is a prevailing belief that there exists a set of present and potential sociocultural barriers to steps in addressing the issue. Although this view is part of the dominant technological discourse on a global scale, one can assume that it gains heightened significance within developing countries like Turkey. Observing the debates surrounding technology in Turkey, one can discern a prevalent claim suggesting, overtly or not, the existence of a cultural foundation that poses a hindrance to (the efforts aimed at, if any) closing the technological gap.

Within these debates, technologies are portrayed as outcomes of scientific endeavors, with claims asserting that politics, religion, and individuals in Turkey exhibit resistance to science and technology. Culture, particularly political and religious institutions, is frequently juxtaposed with science and technology, at times implicitly and at times explicitly, reinforcing the idea of the unquestionability of science and technology through socio-cultural arguments (black-boxism). By positioning themselves in opposition to ideologies, these perspectives tend to overlook the historical contexts of technologies and the ideological orientations as well as determinations and interests influencing technological choices and designs.

Chapter 2 explores the cultural dilemmas that arose as a result of modernization efforts, focusing on the concepts of anxiety and anticipation. It examines the inception of modernization efforts, reactions of Ottoman bureaucrats and intellectuals to changes and events both within the Ottoman Empire itself and in Western countries. Additionally, it explores the main ideological currents of the time and the evolution of discourses on progress and underdevelopment, as well as public opinion. By exploring these aspects, the chapter offers insights into the context within which modernization and developmentalism unfolded in the Republican era.

Chapter 3 initiates the exploration by establishing a conceptual framework, based on the notions of representation and myth to lay the groundwork for understanding the complexities of the discourses surrounding culture and technology. Taken into consideration are concepts, insights, tools, and methods of cultural studies with an awareness of its critical stance. Cultural studies' approach to the notion of representation is considered convenient for this study. Although the notion of representation (i.e., What does technology signify in Turkish culture?) is emphasized, it should be noted that the notion of representation is only one part of a bigger circuit. Termed as the "circuit of culture," this conceptualization encompasses nodes, processes, or moments (see Du Gay et al., 1997). Focusing on one, two, or the entirety of these aspects within the circuit of culture, either implicitly or explicitly, and approached either loosely or strictly, a cultural studies text seeks to analyze the articulations of processes. This exploration aims to reveal the intricate construction of cultural texts or objects and the complex relationships between discursive and representative practices. Concurrently, it focuses on the nuanced interplay among economic interests, labor relations (production), consumptive activities, regulatory practices, and the construction of identities and subjectivities.

In cultural studies, the analysis of culture and its artifacts goes beyond material relations to include the crucial role of symbolic relations, where anything is considered a potential text. Consequently, cultural texts are scrutinized with a pronounced emphasis on their contexts of production and employed discursive strategies. (However, this approach aims to avoid reduction to textualism or mere textual analysis (see Morley, 1997), it does not always maintain vigilance over potential pitfalls associated with culturalism.) As is illustrated specifically in the audience-reception theory and encoding/decoding, there is no single reading strategy for texts (Hall, 2005). According to Hall, "[t]he different areas of social life appear to be mapped out into discursive domains, hierarchically organized into dominant or preferred meanings" through "a dominant cultural order" (2005, pp. 123–124). Nonetheless, cultural texts are always polysemic and subject to contestation, not necessarily adhering to dominant or preferred reading strategies. In this context, the contestation of meanings extends beyond cultural texts to scientific practices and technological choices, which are deemed "socially determined and culturally specific" (Das, 2012). While technology is considered cultural production, the choices, attitudes, projections,

meanings, and practices of science and technology are not distinct or independent from culture and history. Rather, they reflect certain “ways of life,” intricately connected to the articulations of politics, identity, consumption, production, and representation. The signifying practices involving meaning-making processes, codes, images, symbols, representative strategies, and discourses, thus, not only mutually reproduce social phenomena but also shape technology and technological choices.

While the theoretical underpinning of this work involves an exploration of artifacts and phenomena beyond material relations, delving into the significant role of symbolic relations, central to this analysis is the incorporation of both the notion of representation and myth. Myth analysis seeks to unveil the historical and social character of what may seem natural in narrative structures, providing insights into ideological assumptions naturalized through myths in modern narratives. Barthes (1972) conceptualizes myth as a second-order system of representation, and while he doesn’t explicitly draw parallels with the notion of ideology, one can discern similarities, especially in their shared emphasis on the historical foundations of ideologies.

Chapter 4 provides a detailed examination of the intricate process of identifying and selecting a small set of influential voices on Turkish Twitter/X, referred to hereafter as Turkish technology opinion leaders.¹ The analysis centers on the posts/tweets of these key figures, providing a focused examination of their contributions to the discourse on technology within the Turkish cultural context. Here, illuminated is the rationale and criteria guiding the selection of the opinion leaders, laying the groundwork for an in-depth examination of their discourse in subsequent analyses. This pivotal stage provides the necessary framework to uncover the dynamics of

¹ In this study, the term “technology opinion leaders” is employed interchangeably with “tech pundits,” “tech gurus,” “tech evangelists,” and “influencers” despite each term carrying distinct nuances. For example, although technology evangelists are at times understood as “ambassador[s] of organizational technologies, interacting with prospects, partners, users, producers, and other members of the organization” (Lucas-Conwell 2006:4), in everyday technology discourse, the term is predominantly used to refer to public figures actively introducing, championing, and propagating technology and technological trends. Similarly, in academic texts, the term “influencers” is commonly translated into Turkish as “*etkileyiciler*,” whereas in informal conversations, the expression “social media/internet phenomenon” is more frequently employed to refer to social media personalities, often on Instagram. Conversely, it is not uncommon to label individuals popular on Twitter/X as opinion leaders, with the connotation varying between pejorative and positive contexts.

technology discourse within Turkish culture, as influenced and reflected by these key opinion leaders.

The choice of opinion leaders as the focal point of this study is strategic. In the age of rapid technological advancements and the proliferation of information, opinion leaders have not undergone obsolescence, but managed to adapt to new settings, showcasing the ability to navigate and leverage the changes brought about by the information age and novel technologies. In other words, their relevance appears to be persisting, at least for the time being. In the realm of discourse on technology, both in global and local spheres, they actively assume the role of introducing, championing, and propagating technology, and technological trends, attracting significant public attention. In varying degrees, they all seem to celebrate technology and technological futurism and have an impact on the formation of, mostly techno-utopian, attitudes toward technology.

Through the detailed methodological approach expounded in this chapter, the identification of subsequent opinion leaders within the Turkish Twitter/X are identified: M. Serdar Kuzuloğlu, Selçuk Bayraktar, Tansu Yeğen, Mustafa Varank, Nevzat Aydın, Cem Say, Sina Afra, Hakkı Alkan, Alphan Manas, and Nazım Salur. Although each of these names has different lines of work, their professions are closely related to technology. Another common point of this group of people is that they closely follow technological (and scientific, to a lesser degree) trends and share them on platforms where they have space to share their ideas. The most popular of these platforms is no doubt their respective social media accounts, in Twitter/X, YouTube, and Instagram. In parallel to their popularity, which can be estimated through the interactions on Twitter/X (likes, retweets/posts, and comments) and on YouTube (view counts and comments), they appear on national television (mostly in TV discussions), other YouTube channels, TED Talks, give interviews in newspapers, and are favorite speakers for branding and marketing conferences or corporate meetings. Broadly speaking, although most of them seem to adopt an optimistic view of, and be comfortable with, and most importantly promote technology and technological trends, they are by no means homogenous, nor are the texts produced by them. Then again, all of them appear to adopt a (neo-)liberal or libertarian perspective, whether it leans towards progressivism or conservatism, promoting improved technology policies and fostering a culture of entrepreneurship. Furthermore, while most of them strictly avoid commenting on daily politics and polemical discussions, few of them actively

participate in political discourse and engage in contentious debates. Reading between the lines, they seem to express confidence that science and technology will prevail in the not-so-distant future, which might, of course, herald the end of Homo Sapiens. In any case, the future is more technological than ever, while technology is much more likely to be completely autonomous. The seemingly apolitical stance/indifference towards socio-political matters among some of the technology opinion leaders, selected for this study, one can assume, might as well be associated with a not-so-uncommon line of thinking that science and technology will mitigate, if not put an end, to social issues.

The identification of the aforementioned Twitter/X personalities was carried out using an improved method based on the List feature of the platform. The method relies on meta-data of Twitter/X Lists, containing semantic cues to infer and rank the topical expertise of its members. The power of Twitter/X Lists comes from its being a tool for social annotation. By curating Twitter/X Lists, Twitter/X users, knowingly or unknowingly, classify (directly) and label (indirectly) the other users in the network, based on how they perceive them, rather than strictly adhering to prescribed labels. For the researcher, this means “crowdsourcing” the task inference of who is who on the network (Sharma et al., 2012, p. 2), saving both time and effort. Relying on the social annotation of Twitter/X users through the Lists only can be limited in certain instances, since the information (categories and labels) they provide cannot be regarded as consistent at all times. Then again, As Wu et al. succinctly express,

the classification of users can therefore effectively exploit the “wisdom of crowds” with these created lists, both in terms of their importance to the community (number of lists on which they appear), and also how they are perceived (e.g. news organization vs. celebrity, etc.). (2011, p. 707)

Thus, with the utilization of Twitter/X List, researchers can harness the collective intelligence of the crowd, and identify opinion leaders and their public perception effectively. Building on previous studies that have demonstrated the effectiveness of this method, this study refines and enhances the approach, illustrating its flexible applicability in identifying highly influential Twitter/X users across various domains. This adaptation contributes to the broader landscape of studies in the field. Consequently, the method can be customized for different research questions,

providing researchers with the flexibility to align it with their specific objectives and data.

In the following three chapters, this study navigates through a comprehensive analysis of the posts/tweets produced by Turkish technology opinion leaders. Chapter 5 explores their perspectives on the current state and trajectory of technological progress within the context of both the evolution of technology and digital transformation. It examines their views on both the destructive and disruptive aspects of technological advancements, along with their perception of associated risks. Additionally, this chapter aims to position the opinion leaders in terms of their alignment with either dystopian or utopian perspectives.

While Chapter 5 aims to explore the views of opinion leaders within a global context, the subsequent two chapters focus on their perspectives within the local context. Constructed around the concept of mentality, Chapter 6 deals with how the opinion leaders view the state of Turkey in terms of technology and development. This chapter specifically addresses the perspectives of opinion leaders at the intersection of politics and culture. Within this context, they tend to critique the state of science, innovation, and rationality. Their views frequently involve extensive comparisons of Turkey's situation with that of developed or Western countries.

Finally, Chapter 7 mainly focuses on the character of techno-conservative discourse as well as the opinion leaders' reaction to public policies on technology. The rhetoric of technological nativism, and the role and meaning of tradition and culture are key elements of this chapter. Finally, the reactions of opinion leaders against governmental regulatory policies on censorship practices are summarized.

2. THE ROOTS AND REFLECTIONS OF ANTICIPATION AND ANXIETY IN TURKEY

The cultural dilemmas of Turkish modernization, as “an incomplete project,” continue to resonate in contemporary discourses and practices. This suggests that the tension between progress and underdevelopment/belatedness, which invokes and complements one another, has become deeply ingrained in social psychology and continues to shape national identity. In fact, this is a question of cultural anticipations and anxieties that emerge from the complex interplay of historical, social, and political factors shaping Turkish modernization. These anticipations and anxieties reflect the hopes and fears associated with technological progress and its implications for the future, both at the individual and collective levels. As such, they offer valuable insights into the ways in which Turkish society navigates the challenges and opportunities of modernization, and how it seeks to reconcile its cultural heritage with the imperatives of technological change.

For non-Western societies in particular, keeping pace with the line as well as the horizon of progress has long become imperative. Although progress and underdevelopment are different reflections of a certain reality, while keeping up with progress tends to be associated with the future of these societies, underdevelopment corresponds to a moment that combines the past and the present that must be overcome. In this respect, progress reflects the idea(s) of Enlightenment in the sense that the future can only be illuminated with the guiding light of scientific progress. The notion of progress is almost always linked with continuous advancements that shape the future (as in the notion of creative destruction that surrounds discourses on innovation). Accordingly, societies and states progress to the extent that they are freed from the shackles and burdens of a sedimented tradition (of the past). The “difference” between the stages of underdevelopment and progress demarcates the line of tension for non-Western societies, one of the most important phenomena determining social psychology and national identity. In social theory, these two stages often are analyzed with the concepts of modernity and modernization.

Especially with the Industrial Revolution, the technical superiority of the West was proven, and the line of progress was presented as a “model” for non-Western societies. If the critiques of the Enlightenment and modernity are bracketed out temporarily for analytical purposes, the notion of progress has two dimensions. On one hand, progress is associated with Enlightenment thought, on the other hand, it is linked with its tangible and technical outcomes such as industrialization and economic superiority, that is, the state of development. Thus, on the plane of language, the notions of industrialization, modernity, modernization, and the Enlightenment signify one another. Their connotations are building blocks of discourses of technology. This is accompanied by an attitude, both internally and externally, that the abstract and concrete meanings and connotations attached to the notion of progress are two parts of a whole. The perception that the “model” should be embraced entirely is linked to the notion of equating “Western” culture with modernity. Commonly endorsed by many in Turkey, such an understanding entails a division between the West and the East. This reliance on cultural essentialism tends to trigger reactive responses and lead to discussions getting stuck, potentially even fostering nihilism. This outcome is more accurately characterized as ideological rather than purely sociological (Ergur, 2020a, p. 5).

As Meltem Ahiska points out, the “model” is not constructed outside the “West”, as a *phantasy* of the “East” alone (2010, p. 27). On the one hand, the East has adjusted its disposition to this “model” through a dialogue with the West, while on the other hand, the West, as the owner of this “model,” has constantly attempted to prove the correctness of the “model” by constructing discourses as to what is the Western, and the Eastern. Therefore, in the end, the modernity of the West has come to be understood as an ideal “model” and the modernization of the East as a “copy,” both in discourses and practices in the East, whose boundaries are drawn by the West. However, these discourses and practices have fragmented and contradictory characters. According to Ahiska, this phenomenon manifests itself through a cognitive attitude, which she conceptualizes as the *Occidentalist phantasy*. Ahiska describes the contradictory nature of this attitude as follows:

The greatest paradox of Occidentalist national identity then concerns the substance of Western-ness. The West is both within and without; it signifies the desire to be both same and different. From a certain politicized perspective, it would be

desirable to eradicate the difference from the external West (namely, Europe or the USA), due to its disturbing connotations, such as belatedness and backwardness in terms of modernity. But there is another perspective, which would have the internal West consolidating its differences from the external West in order to claim national sovereignty. (2010, p. 27)

However, this contradiction is not a paralyzing one. It helps to construct new subject positions within the modern national paradigm:

The nation was designated as an organic unity distinct from Western civilization, but at the same time, the modern (and Western) conception of progress was evoked as a way of catching up with Western civilization. (2010, p. 130)

In a similar vein, Ayşe Zarakol (2011) argues that the fear of being discredited in the eyes of the West has become a part of national identity. She attempts to explain this phenomenon with reference to Erving Goffman's concept of stigma. Goffman (1963) defines stigma as "a special discrepancy between virtual and actual social identity" (as cited in Zarakol, 2011, p. 3). The stigmatized individual constantly assumes that his or her difference is known by others and that this difference can be a reason for his or her being discrediting. On the one hand, carrying forever stigmas such as "Eastern, backward, Asian, Muslim, uncivilized, barbaric" (Zarakol, 2011, p. 3), on the other hand, the anxiety of not being (sufficiently) Western, modern, developed, industrialized, secular, democratic has become a part of national identity (2011, p. 4). According to Goffman, although a stigma refers to an attribute of a person, it can be understood and interpreted on the plane of language, "as a language of relationship" (1963; as cited in Zarakol, 2011, p. 4). Simply put, a stigma is not only an externally imposed label but also related to the internalization of what is "normal," that is, a negative attitude towards one's own attributes in accordance with a certain normative standard. When Goffman's conceptualization is adapted to the national identity, it points to a situation in which the ideals set forth within the framework of (the Western) modernity are largely accepted as *sine qua non* for the progress and development (modernization) of a non-Western society, and the absence of these ideals leads to disappointment to say the least. According to Zarakol, this leads to a sense of identity crisis: "While it is extremely difficult to live up to the standards of modernity without feeling authentic, it is almost impossible not to be authentically Western" (Zarakol, 2011). In other words, a state of cultural ambivalence and entrapment between the

dichotomies of modernity and tradition, continuity and discontinuity, progress and underdevelopment. Modernization as a process encapsulates the cultural ambiguities or ambivalences, anticipations, and anxieties.

2.1. Navigating the Currents of Technological Progress in the Late Ottoman Period

The motivation behind the Turkish (as well as Ottoman) modernization was not the collective emotional state illustrated above. It was formed and crystallized over the course of time and became part of national identity during the formation of Turkey as a state. The debates on (Ottoman) modernization emerged as a reaction to the policies towards reorganizing (*Tanzimat*) the Empire. İlber Ortaylı notes that Turkish modernization corresponds to a process that began without a name. It emerged not out of admiration but out of necessity, as a result of an internal decision rather than external pressures, put into practice by *Tanzimat* bureaucrats with a pragmatic approach (2006, p. 24). According to Ortaylı, Ottoman modernization was initiated in the nineteenth century as part of the practical and bureaucratic needs of the Empire, while it was breaking up its traditional way of governing towards a centralist character (2006, pp. 121–123). In parallel, the perceptions of the threat against the West and the concern for survival compelled it to view modernization as a necessary course of action. In addition to the industrialized economic system and new management techniques, its advanced technology and the military power of the Western powers constituted the main elements of threats. Thus, it was not a wholesale modernization attempt but rather restricted to the modernization of government and military. Modern schools with new curricula were opened to educate military personnel, engineers, and doctors. Although it has been debated in different ways as to how effective and systematic these efforts were for the period, these steps taken within the framework of modernization would produce irreversible consequences in the following years in both the political and intellectual arena. Ortaylı's vivid portrayal of the *Tanzimat* period captures the prevalent sentiments and the atmosphere of the era:

The history of the *Tanzimat* period is neither dramatic, grotesque nor mutant, it is a tragedy in the truest sense of the word. It is a time when history progresses with the slow bleeding of a tragic insolubility from within. It is the longest century of Ottoman history in which a society, with its institutions, traditions, and statesmen,

moved towards an inevitable destiny, in which virtue and light emerged alongside darkness and ignorance, in which decadence and progress struggle. (2006, pp. 121–123)

In late Ottoman thought, the first coherent reaction to modernization was attempted by the Young Ottomans from the 1860s onwards. The progressive and oppositional views put forward by the Young Ottomans acknowledged the need for reformation but rejected the “enlightened despotism” of the *Tanzimat* bureaucrats. There were those, such as Namık Kemal, who believed that the necessities of the time could be realized while avoiding a complete break from tradition and in compliance with the essence of the religion, as well as those, such as Şinasi, who had a more universalist understanding (Göle, 2008, pp. 71–72). Nevertheless, despite its diverse views, this group proposed an idiosyncratic, and eclectic modernization (Bora, 2017a, pp. 24–26). Although the Young Turk movement, which emerged at a later time than the Young Ottomans, also included various views, they also took an oppositional disposition against the enlightened despotism of the political elites. They were also motivated to save the Empire. However, the Young Turks leaned towards a more radical approach to modernization, encompassing both cultural and societal dimensions. Among the members of the two movements, there was no categorical opposition to technical progress. The former movement tended to favor a cultural restoration (*ıslah*), while for the latter, incremental and gradual reforms would not address the belatedness of the Empire, therefore, it was necessary to modernize not just administrative and political but also social, cultural, and educational spheres. Theirs was a strong belief in the power of science; however, the approach they adopted can be characterized as leaning towards scientism.

Broadly speaking, the late Ottoman *intelligentsia*, found intellectual and ideological shelter within these two prominent movements and adopted a pragmatic and instrumental approach towards Western knowledge. They perceived Western knowledge as a crucial component that could address the cultural “lag,” a mismatch between material conditions and the cultural adaptation (see Ogburn, 1964). Their approach was more encyclopedic, rather than a deep and holistic reading. The aim (of the education) was to create men of action rather than building a system of thought (Bora, 2017a, pp. 30–31). According to Tanıl Bora, this attitude was driven by an urgency, coupled with a sense of alarmism. The optimism emerged after the Second

Constitutional Era, during which the members of the Young Turks had prominent role in government, was ended with defeat in the Balkan War I. During this period, the character of Ottoman modernization would become “hectic” (Aksakal, 2015; as cited in Bora, 2017a, p. 36). Of course, while both movements – *Young Ottomans and Young Turks* – adopted somewhat different approaches, there are also parallel perspectives between these two groups. There existed some other figures that were difficult to locate within these two interpretive communities.

One of the most critical junctures in the late Ottoman period, which Nilüfer Göle (2008) reads as part of “the history of rationalist views in Turkey,” was the spread of positivism (and materialism) among Young Turks after the 1870s. Positivism provided the theoretical background on the basis of which social reality could be constructed from a scientific and evolutionary perspective. The views of Darwin and Lamarck were instrumentalized in constructing a basis for the establishment of the new social order. They thought that the European experience already proved the validity of this approach. These currents, predominantly disseminated among those educated in military schools, contributed to advancing the centralization of the view that technical progress would be possible through the adoption and imitation of the cultural codes of the West.

Among the Young Turks, there existed varying approaches towards achieving the goal of modernization. For instance, whereas Abdullah Cevdet proposed a “more total and radical” (Ortaylı, 2006, p. 26) modernization, Ziya Gökalp embraced a different approach. He attempted to theorize the compatibility of reformist (westernization) ideas with culture and heritage (Özervarli, 2017, p. 2). This can be seen especially in his conceptualization of the concepts of heritage and civilization. While *hars* refers to local and national culture, the term *medeniyet* (civilization) refers to universal and civil culture. The basis of this distinction lies in Gökalp’s twofold understanding of society at the local and universal levels. A society “adopts the values of civilization that it associates with the West in the modern period, while also experiencing its own social characteristics” (2017, p. 8). Thus, “the culture-civilization distinction provided him with a basis for social unity, a framework for a common identity, and a structure to avoid sharp dichotomies between East and West” (2017, p. 8).

The relationship between society and the individual was one of the key themes in Gökalp’s thought. While the former had a privileged status; the place of the individual

is located and restricted by social boundaries for the sake of preserving culture as well as moral values. To this end, Gökalp, like most of his contemporaries, saw education as the right and only way to put the reforms on a solid foundation, no matter what kind of program for transforming society they offered. The primacy of society/group over the individual in Gökalian thought is also a direct influence of Durkheimian sociology. Thus, for him, “collective social consciousness (*içtimai/maşeri vicdan*)” constitutes the core of all value systems. To him, moral rules can only be determined through the consciousness or reason of, not an individual, but of society. It is the social consciousness that provides the individual with his morality and social qualities. Thus, he claims “Elements of culture, such as language, knowledge, religion, morality, and aesthetic standards, originate in general in society and create higher faculties in men. Therefore, the object of morality is society, which is nothing but supra-individual. Moral sacrifices of the person are for the sake of society” (as cited in Özerarli, 2017, p. 9).

2.2. The Ottoman Intelligentsia and Public Opinion

To begin with, from the Ottoman precursors to the contemporary opinion leaders, Turkish intelligentsia has been almost always focused primarily on the need for development when they discuss on modernization, westernization, reformation, or progress regardless of their different views on the subject. Their primary concern was to catch up the Western states’ level of development in terms of industrial and mainly military technology as soon as possible. This sense of urgency which gave Turkish efforts for modernization an alarmist character had long found resonance with the catchy phrase of “catching the train” or “missing the train”. Whether for the bureaucrats and intelligentsia of the late Ottoman Empire which they see in an apparent decline and falling behind Western powers or for the Republican elite who desire to form a Western-like state and nationhood, technology/technic had always been a medium to achieve development, progress and being on the front with Western states and civilization. In other words, the ideology of developmentalism has always been at the background of discourses on technological progress and gap in Turkey. Therefore, it should be noted that there is a distinct lack of in-depth discussions on technology such as exploration and engagement with technological advancements, their

implications, and their potential contributions to societal progress and development among Ottoman/Turkish intellectuals and public opinion.

Although the notion of *efkar-ı umumiye* (public opinion) began to be clearly expressed after the 1860s, it is not an easy task to determine the extent to which this concept truly represented the perspectives of the audience in the modern sense; what kind of interactions it created, and whether it had the possibility of a real dialogue. Although there was a public opinion formed in the coffeehouses, tekkes, and dervish lodges before the emergence of newspapers and magazines, the emergence of the press in Ottoman society brought about radical and irreversible transformations. On the one hand, these publications opened a window to the masses who had no say over the political system, and on the other hand, they were “almost the only means of expression of the desire for change, the pangs of modernization.” At the very least, this statement holds true for the group that transitioned from being *literati* to *intelligentsia* (Ortaylı, 2006, p. 17). The Ottoman *intelligentsia* carved out a space for itself through these means and tended to spread their ideas largely through the mass media. In its role as an opinion leader, the Late Ottoman *intelligentsia* positioned themselves as the spokesperson and advocate of a society that had no say in the political system. They assumed the responsibility of initiating radical transformations in both intellectual life and society as a whole. In this respect, the attitude of this group was interpreted as that of ideologue and social engineer. They tend to present their view on every subject, as a role model showing the public how to think. On the other hand, they were expected to be the pioneers of social change and accused of being alien to their own society at the same time.

The Ottoman intellectuals turned to Gustave Le Bon’s (1895) work on the psychology of the masses as a significant point of reference, inspiring them to adopt the roles of social engineers and ideologues. Le Bon theorized that the crowd has come to be of great importance in the making of modern history, particularly after the French Revolution, and the Paris Commune, to the extent that he dubbed his time as “the era of crowds.” Thus, a study and understanding of the laws governing the psychology of the crowd is necessary in order not to be subjected to it, as well as to command and control it. Key to Le Bon’s theory is that each and every crowd has a collective mind; the members of a crowd act like cells of a body, and their behaviors and sentiments are shaped by the unity of the crowd (Kerr, 2008, p. 69). Doubtlessly, Le Bon’s theory

of the crowd had an elitist approach, commonly observed among the late Ottoman *intelligentsia*. According to Abdullah Cevdet, it was the responsibility of the elite to teach and direct the masses: “The soul of the masses has an important virtue: they accept the ideas and sentiments constantly repeated to them without any judgment or analysis” (as cited in M. Ş. Hanioglu, 2008, p. 50).

After the reenactment of the Constitution and the end of censure there was a real cacophony especially in the big cities of the Empire in terms of ideas and the press. Hundreds of societies had been formed, countless journals and newspapers had flourished instantly on various subjects. Almost everybody had a say on how to modernize the state and save the Empire from collapse among educated class. Yet, the masses that needed to be educated mostly were not aware of nor interested in these ideas and program.

2.3. Intellectual Discussions During the Republican Era

The Jacobin attitude continued during the first decades of the young Republic. Intellectuals of this period also were among the cadre of the ruling party, RPP (Republican People’s Party). Their approach towards modernization is total westernization – or super-Westernization as Mardin coined – under the guidance of science and positivism per se (Mardin, 1974). The ruling elite felt the burden to educate and civilize the masses through revolutionary transformations in all areas of life, especially cultural and social domains. They, as accelerators in Mardin’s words, had no time to pass in vain and felt to speed up the process as in eliminating all the obstacles towards the goal. Republican ideologues and elites seemed to believe that eliminating the cultural impediments like religion, old mentality, and tradition almost automatically equates success in achieving scientific and technical progress.

Between 1923-46, although the politics attempted to conduct a program to breakthrough in the fields of economy and industry with the means at its disposal, it can be said that it did not adopt a commanding attitude (Göle, 2008, p. 93). However, in the cultural/social sphere, it did not hesitate to display an extremely imperious attitude, and this attitude was continued at the level of discourse, especially by intellectuals on the left, after the transition to the multi-party system. The positivist and Jacobin attitudes of the politicians of the single party period and the intellectuals who took a position close to these politicians can be associated with the nation-state

paradigm and with the emphasis on the transformative possibilities attributed to concepts such as state, secularism, and nation by the enlightenment program.

According to Kurtuluş Kayalı (2019) *Kadro* journal, published between 1932 and 1934, holds a special significance to decipher the typology (role, perception and psychology) of intelligentsia in the history of Turkey. The magazine, started its publication during the aftermath of the *Takrir-i Sükun* period marked by strict oppositional restrictions and top-down attempts to enforce cultural regulations, sought to codify the official ideology. The journal's stance was firmly rooted in the principles of full independence and statism. While it leaned towards historical and dialectical materialism from a leftist perspective, its analyses did not focus on the traditional contradiction between the working class and the bourgeoisie. Instead, it emphasized a critical anti-imperialist stance. At first glance, their ideological and seemingly leftist stance seems to stem from the absence of industrialization, indicating the lack of a fully developed class society (bourgeois and proletarian). While the post-1960 AMP (Asian Mode of Production) debates revolved around reinterpreting Karl Marx's views on pre-capitalist economies in Asia, highlighting their differences from Western systems of production, the *Kadro* movement had a forward-looking agenda. They aspired to envision and strive for a future society where classes do not exist. As an intellectual movement, the *Kadro* movement, as its name implies (meaning "cadre"), envisioned that social transformation could only be achieved under the guidance of an elite cadre, operating within the framework of "for the people despite the people" logic. The discourse, framed around the dichotomies of people and tradition versus intellectuals and innovators, prioritized statism and full independence over individualism and democracy. As Kayalı highlights, despite variations in their expressions, the notion that social transformation could and should be achieved under the guidance and systematization by intellectuals, but executed by the state, became a prevalent attitude among many intellectual circles for a very long time. The statist and modernizing stance, also embraced by the intellectuals gathered around journals of the 1960s such as *Yön* and *Devrim*, in the political climate following the 1960 coup d'état, celebrated by the so called leftist, Kemalist, and secular circles, was somewhat undermined by critiques of statism and intellectual culture, voiced by intellectual and political figures like Bülent Ecevit in the late 1960s (Kayalı, 2019, pp. 15–26).

According to the *Kadro* movement, who defined the time they lived in with expressions such as “high and advanced technical century” and “machine civilization”, the mechanical development of technique (technology in today’s sense) represents the final phase (and victory) of man’s struggle against nature. The *Kadro* movement viewed contemporary developments, described by terms like “high-tech age” or “mechanical civilization,” as indicative of humankind achieving its ultimate triumph over natural constraints through technological prowess. They saw the ongoing surge in advanced technology (“machinization”) not merely as a trend but as the culmination and crowning achievement of humanity’s relentless efforts to harness nature for progress, shaping a society where technical innovation is central. They argued that this era marked an epochal shift towards a fully-fledged “machine civilization,” where technology doesn’t just augment life but defines it, embodying the pinnacle of human adaptation and control over our environment, signaling both an end to natural limitations and the beginning of a new chapter in the evolutionary saga. According to them, over time, the dimensions of this struggle against nature have created social problems (class conflict, competition and struggles for interests, etc.). Despite their early critical, yet naïve, assessment of technology, which highlighted that man liberated from the shackles of nature but became entrapped by technology, the *Kadro* movement did not distance themselves from the notion of development. Instead, they actively propagated the ideology of developmentalism. The advanced/modern techniques and technologies was seen as a means of emancipation. Science and technique were understood as the engines of development, propelling societal progress and liberation. Progress and development were considered as a transition from backward technique to advanced technique (technology). Thus, in parallel with the orthodox Marxist understanding, they adopted the view that technology contains the potential to both liberate and oppress simultaneously. The reason why the *Kadro* movement concentrated their analyses on imperialism rather than the contradiction between labour and capital was the idea that developed and undeveloped countries had different contradictions. Accordingly, in developed countries the problem is between those who own the means of production and those who do not. In undeveloped countries, on the other hand, the primary contradiction lies in the concentration of industry in certain nations while it remains underdeveloped in others. Thus, the contradiction has established itself not as a class conflict but as a struggle for national liberation. This approach, which underscores the inequality between countries, is

grounded in an anti-imperialist and anti-hegemonic thesis. The statist and planning approach of the *Kadro* movement is thus legitimized (Erat, 2017, pp. 1035–1051).

One of the main emphases of both the founding cadres of the republic and left-wing movements and ideas in Turkey is the struggle between progressives and reactionaries. According to Niyazi Berkes, “The Kemalist revolution is a revolution that has been inch by inch won through a struggle between a handful of progressives behind Mustafa Kemal and an enormous mass of reactionaries who are also engaged in this struggle” (as cited in Avcıoğlu, 2015, p. 234). According to Avcıoğlu, Kemalism is based on two main ideas: Nationalism and modern civilization (2015, p. 237). Nationalism emphasizes the idea of political and economic independence rather than an ethnic emphasis. The level of modern civilization will only become possible after this independence is realized. There is a need for social revolution as a third/intermediate moment between these two moments. Thus, Kemalism is summarized as the ideal of “achieving modern civilization through social revolution within independence.” According to Avcıoğlu, the debate on what should and should not be taken from the West is not meaningful in an order where independence and social revolution are not realized. Furthermore, if these two goals are achieved, the issue of national culture (*hars*), for which Gökalp wanted to create its theoretical basis, will resolve itself, and a national culture is most likely and naturally develop within the new social structure (2015, p. 237).

Avcıoğlu, akin to the intellectuals of the *Kadro* movement in the 1930s, describes the fundamental contradiction in Turkey as a struggle between imperialism and national independence, rather than a class struggle between workers and bourgeoisie. In his view, the period between 1946 and 1960 was an interregnum marked by political and social stagnation in Turkey. During this time, conservative and reactionary forces dominated, causing a divergence between the ideals of the Republic and the actual governance, which ultimately led to a stagnation of social revolutions. This period is also significant in demonstrating how the parliamentary system could facilitate the consolidation of rule by conservative and reactionary forces in a country dependent on foreign influences and not having completed its social and cultural transformation. Therefore, Avcıoğlu posited the thesis that development, progress, and democracy could only be realized after achieving independence. After the 27 May 1960 coup d'état, Avcıoğlu, one of the founders of the journal *Yön* (meaning direction), which

became the spokesperson of the leftist movement, highlighted, like Berkes, the presence of a progressive minority group, namely the “forces of the fittest,” (*zinde güçler*) aimed at bolstering social awareness and resolving fundamental contradictions. This group comprises military-bureaucratic elites and intellectuals, representing a minority with a heightened level of consciousness. They possess a deep understanding of the prevailing contradictions and are most deeply concerned about addressing them. Similarly, Enver Ziya Karal, one of the most prominent intellectuals of the period, in an article he wrote on the coup d’état of May 27th, states that “the forward moves of our history ... were the result of the scholars and the military working together and in unison” (as cited in Demirel, 2011, p. 223). Legitimizing the coup, this discourse establishes a bridge between intellectuals and the government, while also underlining the necessity of a reciprocal relationship between social revolutions and the utilization of force. According to this legitimization strategy based on the idea of independence, development and progress is a goal to be achieved later. In the intermediate moment between independence and modern civilization, the forces in power are charged with the mission of fighting not only against foreign powers but also against “non-national circles whose interests are tied to imperialism” (Avcıoğlu, 1966). As a matter of fact, these conservative and reactionary forces, by exploiting social, ethnic, and sectarian differences, abusing religion, and acting as the servants of imperialism, have built an “iron curtain” around the masses of the people, and have hindered the potential of the broad masses of the people to be the vanguard of social progress.

Significant criticisms have been raised against these approaches, which construct development and progress through opposition to imperialism and dependence, while envisioning a top-down modernization. The conceptualization of the alienation of intellectuals became one of the most important arguments against the so called progressive (intellectual) circles, especially on the right (referred as to conservative, Islamist or the right-wing groups). The emergence of this criticism became increasingly manifest following the transition to the multi-party system.

Criticism of intellectuals cannot, of course, be viewed solely as an aspect exclusive to right-wing views and politics. For example, Bülent Ecevit, writing shortly after the coup d’état of May 27th, called on the members of the National Unity Committee and urged them “not to be carried away by the dreams and suggestions of the intellectuals

for the establishment of a democracy without politics”: “Elite democracy, coterie democracy, is a thing of the past” (Ecevit, 1960, p. 97). As a matter of fact, from the mid-1960s onwards, the RPP questioned its bureaucratic roots with its “Left of Center” discourse and, in Tanıl Bora’s words, “embarked on a populist restoration of Kemalism” (2017a, p. 473). Although it marks a significant political shift, it’s debatable how this change in discourse translated into a shift in the attitudes of intellectuals who identified themselves as “progressive” criticized by Ecevit.

In fact, İdris Küçükömer, one of the most significant and controversial figures in leftist thought in Turkey, criticized the “Left of Center” discourse and attempted to demonstrate that the politics shaped around this discourse could be traced back to the Tanzimat period. According to him, Turkey has always been characterized by a constant struggle between two fronts: the Westernist-secular forces and the Easternist-Islamist forces. Although the former group presents itself as the antithesis of the second group (leftist, progressive), according to Küçükömer, this is not case. While the Easternist-Islamist front was much more coherent and relatively more progressive compared to the Westernist-secular front, the latter, above all, prevented the emergence of a real solution. The Westernist group, although seemingly representing the intelligentsia, generally failed to establish an organic connection with the masses, and often even held views that were disconnected from the people’s expectations and interests. The “secondary” conflicts between both groups, according to Küçükömer, have served a dual function, hindered genuine progress while also facilitated the advancement of capitalism’s interests in Turkey. Küçükömer regarded the alienation of the masses as the primary issue in leftist ideology and politics. He emphasized that labeling them as “reactionary, bigoted, counter-revolutionary” was a simplistic yet misguided approach (1994, p. 122,162).

A common critique of Kemalist modernization is that it views the transformation of culture and mentality as the key to breaking away from the old and catching up with the “developed” and “advanced” Western world. The revolutions are typically constructed from the top-down by the founding elites, resulting in an attempt to achieve revolution through transformations in the superstructure (Bora, 2023, p. 279). This culturalist aspect of Kemalism was also faced criticism from within. According to the *Kadro* movement, who sought to establish the ideological dimension of Kemalism, “the revolutionary regime cannot be entered through the door of culture”

(Bora, 2023, p. 278). The public constitutes the force that legitimizes these revolutions; revolutions in which the public is not actively involved as a subject are carried out ostensibly in its name and for its benefit. Although the goal is often framed as achieving advanced Western civilization, Kemalist modernization is not devoid of contradictions in this regard. On one hand, the West is acknowledged as a civilization of acknowledged superiority, and a culturalist policy of Westernization is pursued in alignment with this perception. On the other hand, it is viewed as a force to resist because it is perceived as the embodiment of imperialism.

Bora categorizes the critiques against the culturalist aspect of Kemalism into two main categories. The first category consists of critiques coming from the left and liberal wings. These criticisms, exemplified by figures like Şerif Mardin, Çağlar Keyder, and Nilüfer Göle, interpret Kemalist culturalism as elitist, disconnected from the populace, and neglectful of their desires, often seen as imposing its will upon them (Bora, 2023, pp. 278–282).

The second category, rooted in the right tradition, critiques Kemalist culturalism based on concepts of “alienation” and “imitation.” Within this framework, the imitative nature, or as described by Hilmi Yavuz, the “transmissive” aspect of Turkish modernization, arises from the lack of direct experience with the historical process of modernization in the West. Yavuz and Pelvanoğlu propose that this inclination leads to a form of “Orientalization” within Turkish modernization (2008, p. 153). According to Bora, in these critiques, Kemalism is often accused of being exclusively Westernist and showing admiration solely towards the West, while its nationalist aspect is disregarded (2023, p. 282). Bora cautions against adopting a totalizing perspective and emphasizes the importance of not overlooking the distinctions within the Kemalist interpretation of culture (2023, p. 287).

Critiques against Kemalist culturalism similarly exhibit a continuity, spanning from earlier periods to contemporary times. In fact, conservative criticisms in this vein also cultivate their discourse within the paradigm of culturalism. Rather than accusations of detachment from the populace and Western influence, they promote concepts like “nativism” and “nationalism” as alternatives. Moreover, they sanctify the abstract notion of the “national will” as opposed to the notion of acting “in the name of the people, yet despite the people.” In what follows are described the sentiments

expressed within conservative or right-wing critiques regarding modernization efforts and the role of intellectuals.

Mümtaz Turhan posits that one of the primary causes behind the Ottoman Empire's decline was the widening cultural gap between the ruling elite (the state) and the general populace. Consequently, initiatives aimed at transformation lacked a solid social foundation, leading to a failure in mutual benefit between these two groups (1974, pp. 41–44). According to Turhan, “there is nothing as ridiculous and absurd as holding the people responsible for the backwardness of a country” (1974, p. 86). For him, “The reason for Turkey's backwardness is not the ignorance of the people, but the incompetence of its intellectuals, both in terms of quality and quantity” (1974, p. 87).

Turhan, who appears to be at ease with the notion of Westernization, contends that despite embracing modernization, the anticipated outcomes have not materialized, indicating that contemporary discussions surrounding modernization efforts remain topical. Turhan views it positively that there is a continued awareness regarding the inadequacy of efforts in this regard, as it signifies the persistence of an attitude toward seeking solutions. He underscores that the path to reaching a constructive resolution in discussions on solutions doesn't lie in ambition, fervor, or futile arguments, but rather in objective assessments. Turhan applies this guidance to his own writing, adopting a more balanced and conciliatory stance. He thinks that radical attitudes towards social change would lead to the emergence of new kinds of fanaticisms instead of the old fanaticisms that was hoped to change. He argues that failing to adopt a balanced and conciliatory approach entails risks concerning freedom of thought and social progress.

Turhan opposes both approaches that advocate for adopting Western science and technology while disregarding its culture, as well as attitudes in favor of adopting Western culture as a prerequisite for accepting its science and technology. Instead, he suggests a different approach. According to him, there exists a bunch of structural elements that make Western civilization stand out. These are science, scientific mentality, technique, law, and freedom (1974, p. 53). Turhan, who approach the question of Westernization from the perspective of mentality, recognizes the necessity for institutional transformation and the cultivation of a proficient class of experts (culture of expertise) within the framework of these fundamental elements. Therefore,

the shift in mentality underscores the need for reforming institutional mindsets prior to initiating social or cultural transformations. Failing to grasp the question of Westernization in this manner has unsurprisingly resulted in superficial imitation (1974, pp. 11–40). Turhan argues that focusing on radical transformation efforts solely within the domain of culture, rather than addressing institutional or structural changes, would be futile and could even impede development and progress. Drawing upon a juxtaposition between organic cultural evolution and imposed cultural shifts, Turhan highlights that top-down cultural transformations have failed to deliver desired outcomes. He argues that the transformation of institutional mindset is most likely and naturally catalyze a unique cultural change (Turhan, 1987, pp. 215–231; Bora, 2017a, pp. 358–359).

Intellectuals like Turhan, often associated with conservative perspectives, frequently critique “social engineering,” sometimes overtly and other times subtly woven into their rhetoric. Turhan’s critique, while not explicitly labeled as such, underscores a cautionary stance against top-down interventions and highlights the importance of organic societal development, hinting at reservations towards the notion of social engineering. It’s intriguing that conservative politics and rhetoric often juxtaposes the concept of “real” engineering against the aforementioned attempts of “social engineering” through the state mechanism and the statist intelligentsia. While both fronts seemingly agree on the importance of development through industrialization, conservative politics tends to emphasize the material aspects of development stronger. Within this framework, the idea is to secure the conventions of the culture and safeguard traditional values while pursuing industrialization and economic development through heavy industry or high technology. In this way, tangible economic progress is pursued alongside the preservation of cultural and national identity amidst modernization efforts.

In Turkey’s leader-centered conservative politics, engineer leaders carry significant symbolic weight. These leaders, often with backgrounds in engineering like Demirel and Erbakan, leverage their technical expertise to reinforce promises of industrialization and economic development within their political agendas. For Erbakan, a mechanical engineer educated in both Western and Turkish elite institutions, the emphasis on “heavy industry” forms a cornerstone of the development program under his national vision, where spirituality intertwines with economic

advancement (Bora, 2017a, p. 471) For Demirel, “engineering” serves not only as a legitimizing factor for his industrialization-focused political agenda but also, Bora analyzes, as a symbol of success attained from within society itself, forming the foundation of his pragmatism (Bora, 2017a, pp. 546–547)

Despite apparent ideological disparities between so-called conservatives and progressives, two common threads persist to a great extent: a shared statist reflex and a fervent embrace of developmentalism. Both conservative and progressive ideologies often advocate for a strong role of the state in societal transformation, reflecting a belief in state-led initiatives to guide and regulate progress. This appear to be a tendency that intersects with nearly most ideological and political currents. In the context of state-society-capital relations, transformation (structural or cultural) has always been aimed to be under the control of the state, and the state’s lack of a supervisory position has been identified with chaos or unmeasured change. A statist reflex thus emphasizes the importance of social mobility and the need for new principles through the liquidation of traditional institutions and principles. As observed in the critiques of Küçükömer and Turhan, this attitude can be said to be inherited from the bureaucrats and intellectuals who managed the process following the Tanzimat period. Additionally, both ideologies prioritize technological advancement and economic growth as key markers of societal success. This convergence highlights the nuanced interplay between seemingly divergent ideologies, revealing underlying similarities in their approach to governance and societal progress. It underscores a broader culturalist framework that not only shapes their respective worldviews despite their differences but also informs their critiques of each other’s ideologies.

From the 1970s onward, intellectual figures such as Niyazi Berkes, Şerif Mardin, and İdris Küçükömer provided more nuanced analyses on the question of modernization and the role of the state. Despite not aligning with conservative ideologies and backgrounds, these figures shared a common trait: an academic orientation. While Berkes maintained a strong affinity for Kemalism and viewed modernization as a history of discontinuities and struggles between progressive and reactionary forces, he criticized the Westernist intelligentsia. He developed a critical approach to the interpretations of Westernism and reactionism in Turkey (Bora, 2017a, pp. 405; 102). Mardin, on the other hand, points out that the political elites who founded the republic and the intellectuals who tried to justify it intellectually adopted an attitude of

“fanatical secularism”. According to him, this attitude, which can be characterized as a weakness in terms of modernity, constituted an obstacle for the republic to develop its own ethos (Bora, 2017a, p. 152).

According to Aytaç (2006), the central concept that unites the perspectives of Berkes, Mardin, and Küçükömer is the notion of a center. Through the notion of center, these figures aimed to comprehend the politics and attitudes that guide the ideas towards modernization, explicitly articulated by Mardin and implicitly present in others. Additionally, they sought to understand the interactions between different political and cultural orientations. Edward Schils’ center-periphery approach, distinct from the dependency approach, offers insight into the elements of social order and sources of social conflict. In essence, the center-periphery approach underscores the significance of central structures and environmental factors in understanding the internal dynamics and conflicts within society (Aytaç, 2006, pp. 9–11). Although the intellectual efforts of Berkes, Mardin, and Küçükömer to understand social dynamics and conflicts underscore the tensions between different social segments, there is an underlying endeavor to analyze the interactions between the state and society. Within this framework, Berkes’ emphasis on modernization aligns with a state-centered approach rather than focusing on society, while Küçükömer and Mardin explore the potential of civil society. Nevertheless, all three thinkers, drawing from the sociological tradition, systematically criticized the prevalent political thought and culture. According to Aytaç, this critical stance is heavily influenced from a rupture and transformation in Western Europe after the nineteenth century, which emphasizes the primacy of society over politics and the state, challenging the social contract-centered thinking of theorists like Hobbes and Rousseau. Thus, there has been a shift from an approach that places the state and politics at the center and seeks to understand the conditions of common life through the state to an approach that endeavors to secure the autonomy and independence of society from politics and the state. Modernization efforts aligned with the former approach attributed a pedagogical mission to the state and sought transformation through legislation. Within this perspective, the idea of freedom was perceived as a means of development and westernization rather than an end in itself (Aytaç, 2006, pp. 17–33). What sets Berkes, Mardin, and Küçükömer apart is their notable criticism of a transformation paradigm that tasked the state with a pedagogical mission rather than pursuing a broader social or comprehensive modernization through

legislative measures. This critical perspective, which they articulated at a time when it was not widely acknowledged or given much attention in intellectual circles, distinguishes their contributions.

From a culturalist viewpoint, it's noteworthy that there's a persistent narrative linking the failure to progress, modernize, and develop to cultural factors. This interpretation is shared not only among intellectuals of the early Republican period but also among present-day opinion leaders both in conventional media and social networking platforms. Besides, conservative overemphasis on culture in their discourse cannot overcome the trap of culturalism. As a matter of fact, the culturalism on both sides evokes Goffman's stigma. Culture as a hindrance against modernization for progressives and culture as sanctity that needs to be protected from degeneration and source for revitalization for conservatives both feed on the premise that "our culture" is the arena of battle or is seen as problematic in efforts for development and modernization. Both reproduce the fears and anxieties of being/becoming that culture. The same is true for *occidentalism phantasy* as well. The Western model is to be emulated, whether in technological, economic, or social sense, on the one hand and being nationally authentic on the other, is a contradictory mission that progressives and conservatives have been faced with. In terms of this dilemma, conservatives turn to their glorified past and national culture whereas Kemalists and some progressives distinguish between Western/universal civilization and Western imperialism and emphasize national (*ulusal*) character. Most of the intellectuals and opinion leaders in Turkey, including contemporary ones, have been unable to evade such entrapments and are still reproducing the same old discourses.

3. CONCEPTUAL FRAMEWORK: THE *SIGNIFICANCE* OF TECHNOLOGY

3.1. Technology as a Sign

From the perspective of the sociology of culture, an analysis of artifacts and phenomena necessitates considering not just material relations and interactions but also the significant role played by symbolic relations. Language and symbolic relations are intricately connected as language serves as a primary medium through which symbolic interactions and meanings are created, communicated, and shared within a society. While language allows individuals to assign symbols (words, gestures, signs) to represent concepts, objects, and experiences, these symbolic representations, shape social interactions, construct shared meanings, and facilitate the transmission of culture, norms, and values. In turn, symbolic relations influence language use, as social contexts and cultural norms impact the choice of words, expressions, and communication styles. Thus, language and symbolic relations are interdependent, mutually shaping and influencing one another within a social and cultural context.

In this context, technology as a sociotechnical system (as well as technological artifacts) is considered both a social product and a cultural text it is “not only a thing, a signified object to which others refer, it is also a signifier, a signal, and internal expectation” (1992, p. 297). Cultural texts are interpreted with a strong focus on their contexts, the environments in which they are generated, and the discursive strategies with which they are interwoven. As Stuart Hall points out, “the different areas of social life appear to be mapped out into discursive domains, hierarchically organized into *dominant or preferred meanings*” through “a *dominant cultural order*” (2005, pp. 123–124). Be that as it may, cultural texts are always polysemic, containing multiple layers of meaning. Treating (our relationship with) technology as a cultural text provides insights into understanding the complex interplay between, human values, aspirations, societal dynamics, and technoscientific progressions. If technology is considered a socio-cultural construction, choices, attitudes, projections towards, meanings, and practices of (science and) technology cannot be considered distinct and

independent from culture and history. Therefore, they are reflections of certain “ways of life,” bound to culture, and hence to the articulations of politics, identity, consumption production, and representation.

To provide insight into understanding the *signification* of technology in Turkish society, one of the notions the analysis conducted in this study draws upon is representation. Representations, Du Gay asserts, serve as “the interface between culture and technology” (1997, p. 23), since “meaning does not arise directly from the object, the ‘thing in itself,’ but from how the object is *represented* in language, in discourse, and the concepts and ideas in our heads, in knowledge” (Du Gay et al., 1997, p. 40). As part of the meaning-making practices, the notion of representation is firmly related to and informed by other cultural moments. According to Hall,

meanings are produced at several different sites [and] constantly being produced and exchanged in every personal and social interaction in which we take part. ... The question of meaning arises in relation to *all* the different moments or practices in our cultural circuit—in the construction of identity and the marking of difference, in production and consumption, as well as in the regulation of social conduct. However, in all these instances, and at all these different institutional sites, one of the privileged “media” through which meaning is produced and circulated is *language*. (1997a, p. 4)

Thus, the analysis attempts to offer a non-linear analysis of different but interlinked contexts (cultural moments) that “overlaps and intertwine in complex and contingent ways” (Du Gay et al., 1997, p. 4), to provide an insight into what technology *signifies* in the Turkish context in terms of cultural and societal assumptions, expectations, and anxieties.

3.2. Technology as a Myth

Along with the notion of representation, this analysis is further informed by the notion of myth in the Barthesian sense. Within the realm of language, representation (technology as a sign) is concerned with the (arbitrary) relationship between signs (form) and their meanings (concept, idea, feeling, etc.), the notion of myth (technology as a myth), as Barthes conceptualized, is concerned with the function of signs to construct cultural narratives, assumptions, and attitudes. For Roland Barthes, myth is

“a system of communication” (1972, p. 107). This is to say that it is a particular way to convey a message and “a mode of signification” (1972, p. 107). This makes it a type of speech (anything that means something). What defines myth is not the object or the material through which a myth is constructed; It can only be defined by the ways it is (its message) expressed. An object such as a tree can be a myth, that does not challenge its materiality. When an object, idea, or concept acquires new meanings within the intricate networks of social relations, it transcends its pure materiality and comes to represent notions beyond its mere physical form or intrinsic nature. The characteristic of a myth is not defined by the nature (materiality, objectivity) of a sign (e.g., a machine), but rather by its social usage. Therefore, in the analysis of a myth, the “nature” of things is less important than its being a social and historical construction (Barthes, 1972, pp. 107–109). For Barthes, myth is a second order of signification (connotation), based on a preexisted semiological chain. That is, a sign (the final term) in the first order of signification (denotation) becomes a signifier (the first term) in myth. In this way, in myth, there exists two semiological systems: the first of which (language-object) is required for myth (meta-language) to build itself based on a global sign (the final term of the first semiological chain) (Barthes, 1972, p. 115).

In this line of thinking, in this study, the notions of representation and myth are incorporated not as a rigid methodological approach, but rather to frame the investigation. While this allows for a broader contextualization, the purpose is not to strictly adhere to a fixed set of procedures associated particularly with the notion of myth, that is, semiotics. Both notions rather serve as a guiding framework for interpreting and understanding the underlying symbolic dimensions, cultural narratives, and ideological underpinnings² that construct socio-cultural dynamics and interactions, as well as the complex interplay, between society and technology in the Turkish context. The notions of representation and myth provide an analytical perspective on how technology, both as a sign and myth, is related to a chain of other signs. Technology is a slippery term. It encapsulates, represents, and connotes a multitude of other concepts, ideas, and feelings or phenomena. Depending on the context, it signifies not just its material aspects, such as machines or systems, it signifies innovation, change, transformation, and creative destruction. At the same

² The notion of ideology in this work is mostly employed, not simply as false consciousness, but also descriptively, as “the mental framework [...] which different classes and social groups deploy in order to make sense of, define, figure out and render intelligible the way society works” (Hall, 1986, p. 29).

time, it connotes and is highly tied to the notions of progress and development. This is not to negate the material reality of technological change but to emphasize that our reception and relationship with technology are shaped not just by its inherent technical aspects but also by a web of discursive formations surrounding technology.

On the other hand, these notions inform the notions of contingency. The idea that each language has a distinctive way of constituting the relation and conventions of signification has fundamental implications. All the signs and the meanings produced and circulated are bound with not just cultural codes and values as well as their materiality, but also with historical foundations: “The sign is totally subject to history and the combination at the particular moment of a given signifier and signified is a contingent result of the historical process” (Culler, 1976, p. 36; as cited in Hall, 1997b, p. 32). Thus, representation is an arena of “constant ‘play’ or slippage of meaning, to the constant production of new meanings, new interpretations” (Hall, 1997b, p. 32). (In a similar vein, Voloshinov, in *Marxism and the Philosophy Language* (1986), viewed language as “an arena of class struggle” where social groups compete to inscribe their interests and ideology in signs (as cited in Eagleton, 1991, p. 194). In a similar vein, Barthes viewed myths as a means of depoliticization, involving both “the loss of the historical quality of things” (1972, p. 142) and the neglect of “the complexity of human acts” (1972, p. 143), and, by extension, of human agency. The function and the aim of mythical speech is not to hide but to distort the meaning. The relation between the concept and the meaning is nothing but “a relation of deformation” (1972, p. 121). What is more important in mythical speech is not its literality but its intention or motivation. However, its literality freezes and makes absent its motivation. Thus, this ambiguity makes mythical speech seem both “a statement of fact” and a “notification” (Barthes, 1972, p. 123). The ambiguity is also what makes mythical speech appear neutral and innocent at the same time. In the end, myths give “historical intentions natural justifications” (Hammouri, 2020).

3.3. From *Techne* to Technology: The Emergence Complex Sociotechnical Systems

Twentieth-century discussions on technology have highlighted its ideological significance beyond mere technicality, emphasizing its role in shaping societal norms and behaviors. Technology, regarded as both an everyday presence and an ideological

construct, presents itself as neutral while fundamentally influencing human interactions and perceptions. In this context, Ergur (2020b) identifies six fundamental characteristics of technology, which constitute the basic propositions determining individuals' relationships with technology in daily life:

- (1) Technology embodies the latest techniques;
- (2) Technology is the very objects of technique;
- (3) Technology is value-neutral;
- (4) Technology consists of functions;
- (5) Technology is at the center of life;
- (6) The rationality of technology should be preferred over human fallibility. (2020b, p. 99)

In lines with these propositions, the dominant and enthusiastic narratives surrounding technology are deeply rooted in a belief in the inexorable advancement of human society through technological innovation. While the concept of technological determinism forms the backbone of these narratives, on a more nuanced level, they reflect a profound faith in progress. It should be noted that the notions and perspectives on technique (not technology) and progress are inseparable. They both construct one another. In other words, the notions of technique and progress form a symbiotic relationship, influencing and shaping each other's development and perception within society. Thus, progress is perceived as imperative, akin to an inherent feature of historical development. However, critical accounts of both the notion of progress and technology often challenge their linear understanding, questioning the simplistic perception of continuous advancement without considering setbacks, regressions, and diverse societal impacts. Before briefly outlining some of this critical and philosophical understanding of technology, it is worth highlighting the historical foundations of both notions, as they provide context for understanding their mythical nature, revealing how they have been constructed and interpreted over time.

Like many other concepts, the concept of progress can be thought to have mediated our understanding of nature and history since the earliest periods of history, at least since Ancient Greece. There is also a widespread belief that the relationship between the meanings (signified) that the concept of progress (signifier) corresponds to (signified) is arrived at in a natural process, both as a result of human experience (ontological) and by making abstractions on this experience (epistemological). But, to put it in a Barthesian manner, this is precisely where the mythic character of the concept of progress is revealed.

Contrary to common belief, the concept of progress is a relatively recent development in human history. German historian Reinhart Koselleck (2002) contends that the modern understanding of progress emerged in the 19th century. He suggests that terms like “movement,” “progress,” “decline,” and even “revolution” initially served as spatial descriptors in everyday language before assuming their roles as historical concepts during this period:

Progress became a modern concept when it shed or forgot its natural background meaning of stepping through space. The figurative reference faded. Since around 1800, progress has turned into a genuinely historical concept while “decline,” and “decay” have not been able to shed their natural and biological background meaning in the same way. (Koselleck, 2002, p. 221)

Koselleck observes that in ancient Greek and Roman societies, concepts like ascension and decline were indeed part of the political discourse. However, the primary objective of political endeavors was not progress but rather the maintenance of stability. In contexts where the phenomenon of progress is discussed, these usages tend to focus on retrospection and reflecting on the past rather than envisioning or projecting toward the future. Koselleck highlights that during the European Middle Ages, when Christian culture was dominant, theologians frequently employed the terms *profectus* and, to a lesser extent, *progressus*. *Profectus*, imbued with theological significance, denotes the salvation of the human soul and its journey toward perfection in pursuit of the divine (God’s kingdom). Hence, both words manifested as linguistic concepts oriented towards transcending worldly matters and seeking the realm beyond.

Over time, with the rise of scientific thought following the Middle Ages, the concept of progress has evolved, shedding its association with the notions of *movement* and *decline* inherent in its natural and spatial origins. Instead, it has transcended to a more abstract realm, detached from these foundational spatial concepts. With the advent of modernity, the concept of progress transformed, allowing for the possibility of uninterrupted advancement by shedding its previous connotations of biological and moral imagery, such as notions of becoming and deterioration. In this regard, the goal of spiritual perfection has been replaced by the idea of an open-ended future. (Koselleck, 2002, pp. 224–225)

The next significant evolution in the concept of progress occurred with the “temporalization” of progress, whereby the pursuit of perfection ceased to be viewed as a finite achievement and instead emerged as an ongoing process, continuously evolving and advancing. (Koselleck, 2002, pp. 227–228) During this phase, wherein technique was employed not solely for the immediate well-being of individual human beings but rather as a potentiality, humanity as a whole was perceived to be progressively extending the boundaries of its aspirations.

Finally, with Kant, the fragmented and scattered meanings of progress came to be expressed in a common concept with the collective singular *Fortschritt* (progress), while the subject of progress is universalized (Koselleck, 2002, p. 229). Through universalization, subject and object are interchanged; from the history of progress, the progress of history is inferred. Ultimately, progress emerges as a concept encapsulating an autonomous phenomenon and takes on a subjectivity of its own. Thus, by the 18th century, progress becomes the legitimizing notion of all social phenomena.

In comparison to the evolution of the modern understanding of progress, the concept of technology, on the other hand, is a considerably more recent development. Leo Marx (1997) highlights that although there were certain uses of the word “technology” to refer to “the practical applications of science” during the nineteenth century, it took nearly a century for the term to gain widespread popularity (as cited in Marx, 1997, pp. 974–975).

Techne, the word from which the word technology derived, was used in ancient Greece to encompass arts and crafts. It denoted forms of both what we call today industrial production and fine arts, as the two aspects of human activities had not yet separated into different domains. While one corresponded to objective needs, conditions, and functions of human life, the other addressed subjective ones (Mumford, 1967, p. 9). It was only with the transformation of technics, which was primarily centered around life, to become work and power-centered that the distinction began to emerge (1967, p. 9), coinciding with the coming of the Industrial Age.

According to Leo Marx, it was only in the late nineteenth century, the word technology gained widespread use. The popularization of the word is credited to Thorstein Veblen

and his contemporaries. Veblen writes that “The factor in the modern situation that is alien to the ancient regime is the machine technology, with its many and wide ramifications.” (as cited in Marx, 1997, p. 976) In the sign of machine, Veblen distinguishes between premodern techniques and modern technology: “The machine throws out anthropomorphic habits of thought. It compels the adaptation of the workman to his work, rather than the adaptation of the work to the workman” (as cited in Marx, 1997, p. 976). In the nineteenth century, according to Leo Marx, there existed

[a] conceptual void that would eventually be filled by the idea of *technology*. What was missing, from an ideological standpoint, was the concept of a form of power—of progress—that far exceeded, in degree, scope, and scale, the relatively limited capacity of the merely *useful* (or *mechanic* or *practical*, or *industrial*) *arts* to generate social change. What was needed was a concept that did not merely signify, like the useful arts, a means of achieving progress, but rather one that signified a discrete entity that, in itself, virtually constituted progress. (Marx, 1997, p. 978)

Leo Marx argues that although the concept aimed to fill a conceptual void, it eventually became characterized by vagueness, intangibility, and indeterminacy. The ambiguous nature of the concept, for Marx, has made it a hazardous concept. Marx identifies two historical strands: one emphasizing tangible objects like tools, and the other broadening to include complex sociotechnical systems. While the first strand focuses too much on physicality, the second is so inclusive that it lacks clarity. The concept of technology, with its history of intertwining artifacts and socioeconomic structures, has become prone to reification, concealing the fundamental nature of “complex sociotechnical systems.” In this regard, it has been endowed with an objective character, seemingly existing independently of its human creators and capable of controlling them autonomously. This parallels Karl Marx’s observation of commodities exerting power over human beings, with potentially profound implications for society (Marx, 1997, pp. 982–983).

3.4. The Conditions of Technological Society

While the modern meanings of technology from the seventeenth century onwards gradually expanded, the way we refer to technology in everyday speech today, referring to physical devices, came only after the twentieth century. It now

encompasses “both processes of a system and the physical devices required of that system” (Sayers, 2014).

Modern philosophers contemplated on the nature and outcomes of technology and technological society from the very outset focusing on its direct and indirect impacts. Heidegger, being one of the first critics of technology, considered both threats and potentials of technology in the modern era. For him, modern technology is dramatically different and newer than that of ancient one (Dreyfus & Spinoza, 2003, p. 340). We are exposed, Heidegger claims, to a danger by modern technology for it has brought about a new understanding and perception of not just nature (as objects) but also human nature/being. At the bottom of the problem lays what he calls calculative thinking which turns not just nature per se but also human beings into resources (as in “human resources”): “The world now appears as an object open to the attacks of calculative thought ... Nature becomes a gigantic gasoline station, an energy source for technology and industry” (as cited in Dreyfus & Spinoza, 2003, p. 340). Heidegger feared that “calculative thinking may someday come to be accepted and practiced as the only way of thinking” (as cited in 2003, p. 341). That is because, on the one hand, it seeks to turn everything into resources, by constant ordering and keeping at reserve, and on the other hand, enhance and optimize everything for maximum efficiency, to the extent that efficiency itself functions for its sake (2003, p. 342). Dreyfus and Spinoza invoke a dialogue from the film *2001: A Space Odyssey*, where the robot HAL equates happiness with efficiency: “I am using all my capacity to the maximum. What more could a rational entity want?” (2003, p. 342). In such a technological regime, where technical/technological solutionism is prevalent, even everyday practices, which remained marginal by resisting optimization, appear to be mobilized as resources (2003, p. 344). That constitutes the concern expressed by Heidegger. While calculative thinking heralds “a perfectly ordered society that succeeds in providing for the welfare of all,” for Heidegger, this is not “the solution to our problems but the culmination of the devastation produced by technicity” (Dreyfus & Spinoza, 2003, p. 342). Heidegger’s stance towards technology is not that of anti-technological, but rather suggests a more balanced and healthy relation to technology in which technology does not colonize our nature/being: “We can affirm the unavoidable use of technical devices, and also deny them the right to dominate us, and

so to warp, confuse, and lay waste on our nature” (as cited in Dreyfus & Spinoza, 2003, p. 339).

Although Heidegger was one of the first thinkers contemplating on technology, some other important figures produced significant texts on the nature of technology and its development and transformation over the centuries. Lewis Mumford, known with his *Technics and Civilization* (1934) and *The Myth of the Machine* (2 vols., 1967, 1970), published an article in 1930 entitled “The Drama of the Machines,” in which he hinted at his general approach when considering technology: “If we wish to have any clear notion about the machine, we must think about its psychological as well as its practical origins” along with its aesthetic and ethical consequences (1930, p. 150). Yet, the exaltation and promises of technical advancements and the works of inventors and scientists failed to recognize the psychological and cultural roots of technology and its impact on the cultural and social domain: “There are human values in machinery we did not suspect. ... The vast material displacement the machine has made in our physical environment are perhaps, in the long run, less important than its spiritual contributions to our culture” (1930, p. 150).

On the promises of technology, Mumford reminds us that it only exists as a cultural element, so its promises and ills are nothing but promises and ills of the social groups that exploit or make use of it according to their demands (1934, p. 6). In the second volume of *The Myth of Machine*, Mumford made a distinction between polytechnics and mono-technics. With the reign of mechanization polytechnics, primordial forms of technics corresponding to the needs and interests of human beings, were subverted by mono-technics, which is based on scientific logic. With monotecnics mass production, economic interests, military superiority, and more importantly, power came to the fore, and overcommitment to it led not just to a disappearance of traditional craftsmanship but also to a displacement of human needs, interests, and potential (1970, pp. 155–156). Although a pessimistic tone is obvious in Mumford’s writings, his stance towards technology should not be confused with Luddites, for he only advocates an understanding of technology that accords with human nature and enhances human life (Mitcham, 1994, p. 44).

Ortega offers a similar scheme and talks about three different stages in the development of technics, the technics of chance, the technics of the craftsman, and the technics of the engineer. In the first stage, there were no pre-given techniques or

methods, they were discovered by chance. In the second period, people developed certain skills and became conscious of certain techniques to the extent that a class of artisanship came into being, by which techniques were transferred to the next generations. Systematic and conscious attempts to understand and contemplate technology still lacks during this period. It was in the third stage that skills became science, with modern science as well as scientific methods, the technics of the engineer emerged. The technicity emanated from modern science and scientific way of thinking, according to Ortega, “is radically different from that which inspired all previous technics” (as cited in Mitcham, 1994, p. 48). It is “a new way for the mind to operate that manifests itself both in technics and even more in pure [or scientific] theory” (as cited in Mitcham, 1994, p. 48). In a similar vein to Heidegger and Mumford, Ortega warns this novel perception of technics, when left in the hands of the technicians/engineers alone, may leave people devoid of creative faculties and turn into “an empty form—like the most formalistic logic; it is unable to determine the content of life” (as cited in Mitcham, 1994, p. 49).

For Jacques Ellul, technology (“la Technique”) is the most dominant phenomenon of the times that we live in. While in the nineteenth, capital was the most significant force, in the twentieth century it was replaced by technology. Ellul wrote in an autobiographical text on the period he began working on Technological Society (originally, La Technique), “I was certain ... that if Marx were alive in 1940, he would no longer study economics or the capitalist structures but technology. I thus began to study technology using a method as similar as possible to the one Marx used a century earlier to study capitalism” (as cited in Mitcham, 1994, pp. 57–58).

Ellul defines the term technique, not in the way that refers to any specific technology or technology in general, but as “the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity” (1964, p. xxv). In line with the above-mentioned thinkers, Ellul also underlines that the characteristics of technique are distinct from those of the past. Emphasis on rationality and efficiency of procedures in his definition also bears much semblance to the theory of (practical/instrumental) rationality put forward by Weber.

The critique of modernity based on instrumental rationality is a distinctive feature of the Frankfurt School's critical theory. According to Andrew Feenberg, the critique of instrumentality they presented amounts to a critique of technology. In *Dialectic of*

Enlightenment, Horkheimer and Adorno argued that “reason’s old ambition to be purely an instrument of purposes has finally been fulfilled” (2002, p. 23), eventually leading to a domination of both nature and human nature. Put differently, instrumentality itself is a form of domination which, by definition, violates the integrity of objects. On this premise, technology cannot be regarded as a neutral force (as it is cultural as well) (Feenberg, 1996, p. 45).

Herbert Marcuse in his *One Dimensional Man* (1964/2007) elaborated a more explicit critique of technology based on the critique of instrumental reason presented by the founding members of the Frankfurt School. For Marcuse, “The science of nature develops under the technological a priori which projects nature as a potential instrumentality, the stuff of control and organization. And the apprehension of nature as (hypothetical) instrumentality precedes the development of all particular technical organization” (1964/2007, p. 157). Although Heidegger is one of the main sources of influence on Marcuse’s critique of technology, Marcuse takes the political dimensions of the technological universe into consideration. The technical organization as well as the restraint of reason into the domain of instrumentality in the modern era has political ramifications. Provided that the transformation of nature is extended to include the transformation of human beings and since the production of commodities is realized in the socio-cultural context, “the technological a priori is a political a priori” (1964/2007, p. 157). In this regard, Marcuse draws attention to the “political content of technical reason” (as cited in Habermas, 1989, p. 85).

Against the neutrality thesis that tools are not inherently virtuous or evil, and the Marxian proposition that asserts “the social mode of production, not technics is the basic historical factor,” Marcuse advances that “when technics becomes the universal form of material production, it circumscribes an entire culture; it projects a historical totality—a ‘world’” (Habermas, 1989, pp. 157–158). Marcuse does not aim for a design critique, as Feenberg (1996) puts it, (a critique of socio-cultural expectations, interests, and values that drive the practice of technology), but instead proposes to seek alternative forms of technical instrumentality. To overcome the dangers of the technological a priori, such alternatives may enable the possibility of a new science and technology that has no interest in conquering nature but instead advocates a harmonious relationship with it (Feenberg, 1996, pp. 47–48).

In “Science and Technology as ‘Ideology’,” Habermas offers a critique of Marcuse’s position along with his remarks on science and technology. Marcuse’s proposal for an alternative science and technology is reminiscent of the “resurrection of fallen nature,” Jewish and Protestant mystic traditions, penetrated the thoughts of Schelling, and Marx, a central theme in Bloch and reflects “secret hopes of Benjamin, Horkheimer, and Adorno” (Habermas, 1989, p. 86).

Habermas rejects the Marcusean critique of science and technology on anthropological grounds, sharing the view of Arnold Gehlen, for whom technology can be construed as the projection of bodily functions: “At first the functions of the motor apparatus (hands and legs) were augmented and replaced, followed by energy production (of the human body), the functions of the sensory apparatus (eyes, ears, and skin), and finally by the functions of the governing center (the brain)” (Habermas, 1989, p. 87). For Habermas, the technical development is driven by a logic corresponding to purposive-rational action.³ For as long as some basic principles such as “the organization of human nature”, and “self-preservation through social labor” do not change, we cannot imagine renouncing and replacing technology, for it is an outcome of such fundamental principles. In this way, Habermas regards technology not as an epochal production of a certain class, mindset, or condition, but as “a ‘project’ of the human species *as a whole*” (1989, p. 87).

As some commentators of Habermas pointed out, the neutrality of technology Habermas puts forward can be attacked on constructivist grounds. Kunneman (1990) writes that Habermas makes no distinction between the structure of modern technology and its actualization. His consideration of technology as politically neutral stems from his disregard for this distinction. Habermas instead focuses on the threat of ever-increasing domination of “technical patterns of problem-solving” in the sphere of interaction, i.e. communicative action/symbolic interaction (Kunneman, 1990, p. 119). According to Kunneman, the works of Habermas draw attention to the widening gap between knowledge and everyday practices, as a result of expert cultures. This

³ “By ‘work’ or purposive-rational action I understand either instrumental action or rational choice or their conjunction. Instrumental action is governed by *technical rules* based on empirical knowledge. In every case, they imply conditional predictions about observable events, physical or social. These predictions can prove correct or incorrect. The conduct of rational choice is governed by *strategies* based on analytic knowledge. They imply deductions from preference rules (value systems) and decision procedures; these propositions are either correctly or incorrectly deduced.” (Habermas, 1989, pp. 91–92)

phenomenon also constitutes one of the major problems of modernity. Habermas remarks that expert cultures have emanated from “professional treatment of the cultural tradition” and its segmentation into science, art, and morality, and resulted in its disconnection “from the hermeneutics of everyday communication” (1981, p. 9). Although this is a significant problem to be dealt with, for Kunneman, Habermas’ analysis diverts the attention in the wrong direction; instead, what begs for analysis is “the incorporation of science and technology in the dynamics of capitalism” (1990, p. 120).

In a similar vein, Feenberg (1996) also attacks the way Habermas conceptualizes technology. His view, according to Feenberg, is derived from the accounts of Weber, for whom science and technology are “non-social and neutral” (1996, p. 53). However, this account ignores the difference between scientific and technological formulations and their application, which cannot be analyzed without taking into consideration various social interests as well as cultural values. Feenberg suggests that Marcuse’s position considers rationalization as a value-laden (1996, p. 53). Rationality is an abstract category derived from concrete social and historical occurrences. The “slippage between the abstract formulation of the category and its concrete social instantiation is ideological” (1996, p. 52). Feenberg notes that Habermas is well aware of Weber’s error. However, the difference between Habermas and Marcuse is that while the former relates Weber’s conception of technical rationalization to “its specifically capitalist forms,” rather than questioning it, the latter refuses it altogether, for Weber’s account neglects socio-cultural influences exerted on rationality, be it some of its specific forms or a rationality in general (1996, p. 52).

It seems that in the writings of Weber, one cannot find a proper definition or conception of technology. His major focus was the rationalization of the world, the result of which was the reversal of the order of things, the way reality is perceived, the meaning found and human life organized. In his “Science as a Vocation,” Weber announces that “the fate of our times is characterized by rationalization and intellectualization,” which eventually led to the disenchantment of the world (1959, p. 155). In the modern world, human experience is incorporated and colonized by scientific means and with rational government, i.e. the modern bureaucratic order. Prediction, know-how, taming and mastering nature, including that of humans, came to the fore. Paradoxically, it is also a world that allegedly puts human beings at the

center and measure of everything (Jenkins, 2000, p. 12). These, in turn, call a retreat from everyday life of “the ultimate and most sublime values” that had long enchanted the world (Weber, 1959, p. 155).

Intellectualism, which is brought about by scientific progress, does not, however, entail an extensive knowledge of the conditions in which we live. A savage, Weber points out, knew much more in comparison to the modern human about the tools he utilized. Whereas a modern human being comparatively knows less about his life conditions as well as the workings and the dynamics of the tool he utilizes. Thus, intellectualization refers to theoretically having open access to knowledge of the technologies employed. Under this modern condition, principally anything can be mastered through calculation and technical means, while there is no place for irrationality, mystery, magical means, or incalculable forces (Weber, 1959, pp. 138–139).

Weber explains in the case of bureaucratic rationalization, how a systemic change (modernization and rationalization) brings about at the same a reconfiguration of not just material but also social conditions:

Bureaucratic rationalization ... revolutionizes with *technical means*, in principle, as does every economic reorganization, “from without”: It *first* changes the material and social orders and *through* them the people, by changing the conditions of adaptation, and perhaps the opportunities for adaptation, through a rational determination of means and ends. (as cited in Ritzer, 2011, p. 137)

In these lines and the oeuvre of Weber, one cannot find a clue that he associates a positive attitude towards the modern condition. The all-pervasive influence of rationalization is observed not only in the organization of the new economic and political order but is extended to the social order, restricting “individually differentiated conduct” (as cited in Ritzer, 2005, pp. 56–57). In *Protestant Ethic and Spirit of Capitalism* (2001), Weber talks about the mechanical and technical foundations of capitalism and how it shapes the human condition: “the technical and economic conditions of machine production which today determine the lives of all individuals who are born into this mechanism ... with irresistible force. Perhaps it will do so until the last ton of fossilized coal is burnt” (as cited in Maley, 2004, p. 70).

As Terry Maley (2004) suggests in his essay on “Max Weber and the Iron Cage of Technology” Weber’s stance towards technology can only be inferred through his conceptions of disenchantment, rationalization, and the modern bureaucratic order. Maley points out that Weber did not embrace the naive optimism of the nineteenth-century thinkers who celebrated scientific progress and technological progress and were not concerned with the mechanization of the world. They saw science and progress would eventually open up a space for individual freedom and the disposal of traditional customs and superstition. Weber explicitly protested the belief in progress: “The naive optimism in which science ... has been celebrated as the way to happiness—who believes this?” (as cited in Maley, 2004, p. 72). According to Maley, the writing of Weber was directed “to counter the hegemony of purposive rationality and technological domination in a disenchanted world” (2004, p. 75). However, Weber appears not to be offering a way to overcome or mitigate the negative effects of the modern condition. He concludes that the rationalization of the world is inescapable, even impossible to reverse.

Weber, moreover, asserts that the modern reality is radically different from the ancient one. His notion of disenchantment differentiates the modern and the premodern conditions and perceptions of human activities, considering not only material but also existential aspects. Although Weber considered that “the psycho-physical apparatus of man is completely adjusted to the demands of ... the tools, the machines” (as cited in Maley, 2004, p. 79), he does not offer a clear conception of technology; instead, he maintains an ambivalent attitude about technology. Although he acknowledges its role in determining the social condition, it is of secondary importance. It is the dissolution and segmentation of substantive rationality, which governed conditions and perceptions of human life in the premodern life, hence rationalization (of the world) is the major factor that determined the modern condition. In this context, technology is merely the totality of the tools we employ, and technological development is propelled by the logic of rationalization.

Like Weber, Marx also does not offer a clear conception of technology. Nevertheless, his analysis of the productive forces provides insights into the role and significance of technology in shaping the economic and social structures of society. An oft-quoted passage from *The Poverty of Philosophy*, in which Marx writes “The windmill gives you society with the feudal lord; the steam-mill, society with the industrial capitalist”

(as cited in Mishra, 1979, p. 136), constitutes the basis for many commentators of Marx to call him a technological determinist. In the passage, Marx writes that the transformation of the productive forces, one of two constituents of the (economic) base with the relations of production, gives rise to the transformation of the mode of production, which in turn triggers the structure of social relations.

Well aware of this criticism, Ramesh Mishra offers a different view on the question. According to Mishra, the formulations of technology (the productive forces) in the works of Marx are not clear. In the analysis of Marx, the productive forces are illustrated in three different ways: 1) They are determinants in shaping the social structure (technological determinism); 2) They are dependent on and subsumed by the relations of production (economic determinism); 3) It has a “dialectical interdependence,” implying a reciprocal relationship between technology, yet bound to “a given mode of production” (Mishra, 1979, p. 135). Mishra asserts that Marx’s analysis is not limited by technological determinism, for it “deals with the actual process of capitalist production in terms of an interaction between three principal elements of the social structure: economy, technology and polity” (1979, p. 156). Mishra, however, suggests that this cannot be explained with a reference to “the cumbersome metaphor of base and superstructure” (1979, p. 156).

Mitcham claims, on the other hand, that even though most of the commentators interpreted Marx’s theory as considering technology as a subordinate element of economics, the opposite can be claimed (1994, p. 83). This view, however, entails a reversal of economic determinism in the name of technological determinism. According to Mitcham, in Marx’s view, technology is both a problem and a solution. It was one of the major instruments in the creation of capitalism, and will likely be a significant element in the formation of socialist society (1994, p. 83).

In the era of late capitalism, the gradual computerization/digitalization of the world has deepened rationalization, and in parallel, disenchantment of the world. According to Jeffrey Alexander, “We are not only trapped inside of Weber’s cage of iron but also bound by the laws of exchange that Marx asserted would eventually force everything human into commodity form” (1992, p. 293). However, Alexander holds the view that sociological accounts of technology eliminate its symbolic status to the extent that they “reduce it to a cog in the system” (1992, p. 294). This “naturalistic view” of sociological accounts that “reifies persons and institutions” (1992, p. 294) misses the

cultural dimension of technology. Considering it as a “material variable par excellence,” led to a view of technology as “not a sign, but an antisign,” a noncultural object (1992, p. 299). However, while the materiality of technology, as something to use, interact with, etc., constitutes its one aspect, one should not miss the fact that it is also part and parcel of the cultural system.

3.5. Cyber-libertarianism as the Ideology of the Digital Era

At the turn of the twenty-first century, there existed a renewed enthusiasm around the new technologies. The era, ever since, witnessed a convergence of media and computing, and eventually, the internet complex with new forms of capitalism, venture capitalism, platform capitalism, surveillance capitalism, etc. In due course, data has come to be regarded as the new oil, valued for its potential to fuel digital economy and innovation. These developments, for the techno-utopians and the digiterati, heralded the democratization of knowledge, fostering interconnected global networks and vibrant virtual communities. They viewed it as evidence of progress and the potential for technology to create a more connected and inclusive world.

Barbrook and Cameron (1996) endeavored to outline the dynamics fueling the enthusiasm of the information age in the United States. What they termed as “the Californian Ideology” is comprised of a loose network of tech-savvy individuals, writers, artists, and capitalists. The bohemian ethos of San Francisco meets with the industrial powerhouses of Silicon Valley in a cultural fusion. In other words, “the freewheeling spirit of the hippies and the entrepreneurial zeal of the yuppies” allied in a faith in the emancipatory potential of the information age (Barbrook & Cameron, 1996, p. 45).

Technophiles of the era hold on the faith that the convergence of media and computing will lead to “the electronic agora,” a virtual setting free from censorship. Influenced by the theories of Marshall McLuhan, they surmised that the information age would eventually eliminate both the power of big business and big government, altering the social setting through the empowerment of individuals and the rise of participatory democracy. McLuhan predicted that “Electronic media ... abolish the spatial dimension. ... By electricity, we everywhere resume person-to-person relations as if on the smallest village scale. It is a relation in depth and without delegation of

functions or powers. ... Dialogue supersedes the lecture” (as cited in Barbrook & Cameron, 1996, p. 48).

This was, according to Barbrook and Cameron, from the 1960s onward, a seemingly ambiguous and “contradictory mix of technological determinism and libertarian individualism,” which they called “the hybrid orthodoxy of the information age” (1996, p. 49). The proponents of this ideology, the *digiterati*, as the privileged part of the labor force and the heirs of the novel and radical ideas of the information age, combined both the principles of market economics with the free spirit of the hippie culture. Thus, the ideals of the New Left (liberty of individualism) were loosely combined with the New Right (economic liberalism).

In line with Barbrook and Cameron, Langdon Winner (1997) also explores the ideological and cultural background of the technophilic attitude, which he terms cyberlibertarianism. Its technical backdrop is characterized by the ongoing transition towards digitalization and automation, where computerized expressions are replacing previous cultural forms and expressions. Conversely, the ideological backdrop relates to an “ecstatic enthusiasm for electronically mediated forms of living” intertwined with “radical, right-wing libertarian ideas about the proper definition of freedom, social life, economics, and politics in the years to come” (Winner, 1997, p. 14).

According to Winner, the most significant characteristic of the cyberlibertarian outlook is its full embrace of technological determinism, adapted to a novel technical context. Alvin Toffler’s wave theory of history, and the notions of post-industrial and information society, Winner writes, are typical examples. Thus, the cyberlibertarian believes that history is driven by inevitable necessities, making world-scale transformations unavoidable and resistant to resistance. However, the cyberlibertarian prefers to describe rapid technological developments in quasi-biological terms, likening them to an evolutionary mechanism (Winner, 1997, pp. 14–15).

Radical individualism and free market capitalism are the key components of the cyberlibertarian worldview. While heroism (people with vision and creativity) are championed, existing social, political, and economic structures are portrayed as barriers to self-realization (Winner, 1997, p. 15; for a critique of the heroic theory of invention see Basalla, 1988, pp. 21–25). On the other hand, free market capitalism is

viewed as a system that not only ensures growth and wealth but also holds the potential to liberate humankind.

However, according to Winner, the cyberlibertarian narrative is rather ambiguous when it comes to issues of power and distribution. Questions such as who benefits and who loses during the transformation, whether transformations will eliminate inequalities, who owns the infrastructure, and who makes decisions remain uncertain (1997, p. 16). The narrative instead focuses on the positive potential of the new sociotechnical transformation, namely digitalization, highlighting its ability to “flatten organizations, globalize society, decentralize control, and empower individuals” (as cited in Winner, 1997, p. 15). In this manner, the cyberlibertarian perspective’s enthusiasm for merging radical individualism and a free-market economy often translates into contempt for the role of government.

3.6. Technological Determinism

While cyber or techno-libertarianism appears to be prevalent among the tech-savvy populace, particularly those in Silicon Valley and the tech industries, one of its tenets, namely technological determinism, is a common attitude found everywhere. Concerning technology, most people tend to evaluate the role of technology about its potential to improve their lives. This tendency is often coupled with both individual and societal expectations from technological progress. However, on a deeper level, the most prevalent assumption towards technology is technological determinism. Implicit in this line of thought are mainly two assumptions. It assumes firstly that technical/technological changes are autonomous, residing outside/above society. Secondly, this view assumes a one-way relationship between technology and culture/society. While the former triggers changes in society, the latter has little impact, if any, on the former. This over-simplistic and deterministic, yet powerful, view “promotes a passive attitude to technological change” for it “focuses our minds on how to *adapt* to technological change, not how to *shape* it” (MacKenzie & Wajcman, 1985; as cited in Bell, 2006b, p. 66).

In response to technological determinism, scholars have put forward several perspectives to open the “black box” of technology, the intricate dynamics between innovations, by emphasizing the role of agency, and the social, economic, and political

interests of social groups and institutions. The trope “black box” was first used in the sociology of science and later embraced by sociological accounts of technology.

In his study “Black Boxism and the Sociology of Science: A Discussion of the Major Developments in the Field,” Richard Whitley (1970) used the metaphor to provide a critical account of the first wave of sociology of science, its fixation on “producers” (scientists) rather than the content of science, that is, “what is being produced.” In light of then-recent discussions, by Popper, Kuhn, Lakatos, and the like, Whitley wrote that “in denying the relevance of history and philosophy to the sociology of science, sociologists are denying that scientific ideas change and can be differentiated, that scientists can sometimes be ‘wrong’ and that knowledge is mutable” (1970, p. 62). Whitley argued that such a stance of scientific knowledge widely adopted by many (early) sociologists of science resulted in what he calls an ideology of black boxism, “which restricts research to the study of currently observable inputs to, and outputs from, a system. Any study of the internal processes, which may be unobservable at the moment, is declared taboo” (1970, p. 63). Particularly the Mertonian tradition in the sociology of science, viewed science as a perfectly working machine, progressing toward accumulating discoveries, as scientists follow perfect rationality, evaluating discoveries according to certain criteria:

The black box in this scheme is, of course, the process by which the application of the moral norms derived from the scientific method leads to discoveries. It is assumed that they produce discoveries inevitably, but we are never informed how this process works. (Whitley, 1970, p. 70)

In the realm of technology, the metaphor holds significant relevance in addressing widespread assumptions and tendencies that obscure the processes through which technological systems are produced, consumed, and regulated (Williams & Edge, 1996, pp. 1–2).

The domain of technology is mostly associated with problem-solving activities. The definition of a problem, to which a technical or technological solution is to be proposed, necessitates a social group. The social groups (government institutions, corporal organizations, or groups of individuals) interested in a given technological artifact and the meanings they associate with it play a significant role in determining not just problems, but also which problems (and consequently options) have more

relevance. The choices of certain social groups constitute a central consideration in the social constructivist approach, developed by Trevor Pinch and Wiebe Bijker (1987, p. 30). Resting upon this premise, this approach extends some of the theoretical assumptions and explanatory tools from the tradition of The Empirical Programme of Relativism (EPOR) developed in the sociology of scientific knowledge. The EPOR proposes a threefold analysis of scientific findings. The first stage of the analysis exhibits different interpretations of scientific findings. Case studies usually reveal controversies and differing opinions on scientific findings among scientists. The assumption that scientific findings are subject to more than one interpretation relates the explanations of scientific developments to the social world. In the second stage, closure mechanisms emerge: *Interpretative flexibility* ceases to a great extent and a *consensus* on the “truth” is reached within scientific communities. The third stage refers to explanatory attempts as to how closure mechanisms are related to wider social, cultural, economic, and political milieux (Pinch & Bijker, 1987, p. 27).

Likewise, Pinch and Bijker advance the analysis into the domain of technology, proposing a multidirectional model that takes into consideration the fact that development processes of technological facts and artifacts are various and selective. This view inherently challenges the linear models of explanations common in both innovation studies and historical accounts of technology (1987, p. 28). The concept of interpretative flexibility, when applied in the domain of technology, does not just refer to the ways of thinking or interpretations, but also design processes. As there is no one/best way to think or interpret technologies, it is also befitting to think that there is no one/best way of designing technologies (1987, p. 40).

Design, according to Du Gay et al., is what connects the moments of production and consumption (2013, p. 5). Although design is often associated with aesthetics, it involves purposeful and thoughtful considerations in the process of creating technologies. Unlike artists, designers consider not only form but also functional aspects of technologies. The design process involves more rational considerations such as planning, arrangement, and optimization in the process of creating technologies. In this regard, they are akin to architects. Designers, Du Gay et al. assert “have to *embody* culture in the things they design” (2013, p. 62). This entails the inscription of meanings into artifacts, encoding them with symbolic signification. Design, then, above

everything is what “gives functional artifacts a symbolic form” (2013, p. 62). In this regard, they are cultural intermediaries actively promoting consumption.

While interpretative flexibility, the dialectics of construction and interpretation (reception), is the first stage in Pinch and Bijker’s (1987) conceptualization, the second stage deals with the closure mechanism, which refers to achieving a consensus. It is the stage of stabilization, in which problems and controversies in the previous stage disappear. Pinch and Bijker differentiate two types of closure: rhetorical closure and closure that is reached through a redefinition of the problem. The stabilization of a technological artifact might not be brought by solving the problems. For instance, advertisements play a crucial role in shaping the reception and meanings of technologies. So, rhetorical moves can convince social groups as to how they perceive the problems surrounding a certain technological artifact, which may lead to its rhetorical closure and stabilization. At times, closure is reached through a redefinition of problems concerning the given technology.

While the role of interests of different social groups and the human agency is significant, it should be noted that the level of voice and influence is unevenly distributed in society. Structural and social inequality pervades the modern society. Power dynamics prioritize certain voices while excluding the others. In the same vein, as MacKenzie and Wajcman point out, “Technological and economic reasoning are strongly linked: technological decisions are also economic decisions” (1985, p. 20). For instance, the interests of big technology companies, and algorithmic manipulation of online content and behavior have profound implications for human agency. On the other hand, the process of defining problems and identifying solutions also involves various power dynamics. Neil Postman remarks that “most technologies, of course, do solve *some* problem, but the problem may not be *everybody*’s problem or even most people’s problem” (1999, p. 45). In this line of thought, he challenges the technological solutionism through the following 6 questions:

What is the problem to which this technology is the solution? ... Whose problem is it? ... Which people and what institutions might be most seriously harmed by a technological solution? ... What new problems might be created because we have solved this problem? ... What sort of people and institutions might acquire special economic and political power because of technological change? ... What changes

in language are being enforced by new technologies, and what is being gained and lost by such changes? (1999, pp. 42–53)



4. IDENTIFICATION OF THE TURKISH TECHNOLOGY OPINION LEADERS IN TWITTER/X

4.1. Introduction

This chapter presents the methods employed in this study, mainly those of data preparation, collection, and analysis. The principal content of this study that is analyzed is the tweets that have been posted/created by a small set of Turkish technology opinion leaders. While this content represents the principal data, secondary data was needed to conduct this study: the Turkish technology opinion leaders. To this end, during this study, rather than selecting a random list of Turkish Twitter/X users, one might consider to be influential personas who potentially shape the general public in the domain of technology, an Twitter/X feature called *Lists* has been used to identify influential Twitter/X users. Based on this data, through several techniques and approaches, a more refined set of 10 Twitter/X users, i.e., Turkish technology opinion leaders, was created.

This chapter is divided into three main sections. The first section briefly reviews the relevant literature on Twitter/X concerning its nature, the potential for public discussion, and the flow of information and ideas. The second section reveals the techniques and approaches that illustrate the identification of the Turkish technology opinion leaders, while the third one deals with data collection and analysis methods of the content (tweets) created by these influential Turkish Twitter/X users who are considered to be influential to shape the opinion of the Turkish general public on the domain of technology.

4.2. Background

4.2.1. Big Data and Social Science

The reflections of digitalization and digital transformation in academic research are gradually gaining more visibility. The emergence of computational science and digital

humanities are two examples to illustrate the phenomenon. Termed as “computational turn,” this shift refers to a phenomenon beyond the infiltration of digital technologies when analyzing data. It is already affecting methods and approaches concerning the collection and nature of data as well as “the epistemologies and ontologies that underlie [research programs]” (Berry, 2011, p. 1). Grey asserts that we are on the threshold of an exploratory science (eScience), a fourth scientific paradigm, after the computational, theoretical (models and generalizations), and empirical (descriptions of natural phenomena) paradigms (Hey et al., 2009).

The main drive behind this shift is the availability and the deluge of big data enabled “a new form empiricism in which data can speak for [itself],” to such extent that it heralds the end of theory, marked by the emergence of data-driven science that replaces knowledge-driven science (Kitchin, 2017, p. 30). Despite its attractiveness, Kitchin asserts that this epistemological proposition is based on fallacious reasoning. Big data is first and foremost subject to sampling bias due to its representational nature, that is, a sample of a larger reality it aims to capture. Besides, discovering patterns “is not the endpoint, but rather a starting point (2017, p. 31). In this regard, an analysis based on social theory and in-depth contextual understanding is essential, for data is generated within the scope of social, cultural, and political contexts. Further, making data intelligible is subject to human bias and framing (2017, p. 31).

It is important to acknowledge that both big data and small data⁴ come with their own set of strengths and limitations. In an attempt to define the characteristics of big data vis-à-vis small data, Laney outlined three key aspects. Commonly known as 3Vs, these aspects are volume (exponential growth of data), velocity (generated in real-time), and variety (diverse amount of structured and unstructured types of big data) (Kitchin, 2017, p. 27). Other scholars extended these aspects to include veracity (whether big data is accurate or reliable), virtue (ethical concerns), and value (whether big data increases our

⁴ On another, but related, note, while quite limited compared to big data, small data has a long history and proven track record of development across many institutions with established methodologies and modes of analysis. Small data enables us to explore in detail the ‘individual, nuanced and contextual stories’ as well as “the varied, contextual, rational and irrational ways in which people interact and make sense of the world” (Kitchin, 2017, p. 34). Besides, small data and big data can be combined in several ways and support one another. While the sample of small data research can be obtained from big data, small data studies can be complementary to big data research.

understanding) (Sloan & Quan-Haase, 2017, p. 6). These characteristics indicate that big data presents a dual landscape of possibilities and challenges. While big data promises to uncover novel patterns, correlations, and trends, an attentive consideration of certain conditions and limitations peculiar to big data is required.

In the context of social media big data, particularly Twitter/X data, Kitchin (2017) draws attention to the following challenges and limitations:

- Sampling bias (Users of a given social media platform may not equally represent the society)
- Fake data (Fake accounts or hacking)
- Algorithmic manipulation (Visibility and popularity of posts on social media are heavily influenced by ranking algorithms, rather than the interest of the users)
- API design (the data extracted are structured by APIs, thus all the relevant may not be retrieved)
- Disparity of data (Different methods of API access may generate different results)
- Fidelity (Social media posts tend to be a careful curation, not truly reflecting people's lives, views, and attitudes)

4.2.2. The Significance of Twitter/X to Analyze Social Dynamics

Social media has become an integral part of everyday life, changing not just the way information and ideas are disseminated and accessed, but also patterns of communication and interpersonal relationships. According to the We Are Social 2023 report (2023) the number of active social media users is estimated to be 4.76B, which is 59.4% of the world population. When compared with the number of internet users (5.16B) and unique mobile phone users (5.44B), it is obvious that the penetration of social media is highly extensive in everyday life. (This also indicates that about 35% still lack access to information communications technologies (ICTs). Known as the digital divide or digital gap, the phenomenon has significant societal implications in the digital world.) Although much of the internet users are also active social media users, time spent on social media (approx. 2.5h/day) is about one-third when compared to time spent on the internet (approx. 6.5h/day). In the case of Turkey (Data Reportal, 2023), the adoption rate of social media

is estimated to be about 73% of the population, which is more than 10% above the world average. Likewise, time spent using social media in Turkey is also about 20% above the world average (approx. 3h/day). Among Turkish social media users, Twitter is the 4th most popular social media platform. While Twitter is the 14th most popular social media platform with 556M global active users, users spend 5.5h/month on the platform, making it the 8th most popular social media platform in this respect.

What makes Twitter distinct from the other platforms, according to the report, is that 61% of social media users prefer to use Twitter to keep up with the news and current events, which makes it the most popular platform in this category. Beyond journalists and news outlets, Twitter also enables individuals, researchers, academics, public figures, activists, and organizations to share information, express opinions, debate, and shape public discourse. The vast amount of real-time data on a wide range of topics and discussions on Twitter allows researchers to observe and identify trends and patterns, allowing them to analyze social dynamics.

4.2.3. Social Media as Digital Square

Most of the top Twitter managers also promoted the platform as a digital public square. Jack Dorsey, the Twitter co-founder, highlighted “Twitter’s role in the world” as “a digital public square” in two different Twitter threads that he posted following his testimony before the U.S. House Committee, on Sept 5, 2018, in which he was questioned on Twitter’s efforts concerning disinformation on the platform (2018). In his tweets, Dorsey defended the platform on the ground that in any public space, information and disinformation will exist side by side. The dividing line between a physical and the digital public space, i.e., Twitter, according to Dorsey, is “greater accessibility and velocity” (Dorsey, 2018). Dorsey is not the first top manager of Twitter to define Twitter as a digital public square. In 2013, then the CEO of Twitter, Dick Costolo, in his speech at Brookings Institution, entitled “The ‘Town Square’ in the Social Media Era,” defined Twitter as “the global town square,” likening it to the Greek Agora, a “multidirectional [and] unfiltered” setting in which “the news was coming from the people it was happening to, not some observer.” The advent of media technologies, from the printing press to television, “eliminated the friction of time and space,” while Twitter, according to Costolo, has

eliminated time and space, but also brought back “all those capabilities of Agora,” based on participatory culture (Costolo, 2013).⁵ Elon Musk, who acquired Twitter in 2022, also shares the vision. In a statement following the acquisition, he remarked that “[I]t is important to the future of civilization to have a common digital town square, where a wide range of beliefs can be debated in a healthy manner, without resorting to violence.” Reiterating public concerns, he also acknowledged the possibility that social media will become divided along ideological and political lines, “into far-right-wing and far-left-wing echo chambers that generate more hate and divide our society” (2022).

4.2.4. Social Media as Critical Infrastructure

In parallel, many governments and individuals also acknowledge the significance of social media platforms for public discussion. In that respect, there seems to be an emerging discussion that social media platforms should be regarded as critical infrastructures. The premise of this proposal is based on the conviction that these platforms have become an integral part of democracies. Citizens and politicians alike make use of these platforms to share and gain information, publicly declare their intentions and deliberations, and carry out discussions to shape the political domain. While dissemination of information through these platforms is considered to empower the agency of citizens, they have also been channels of fake news, disinformation as well as social and political manipulations, posing a threat to democracies (Heumann, 2018). Designating social media platforms as critical infrastructures is thought to enable policymakers to regulate these platforms similarly to other critical infrastructures such as energy, water, healthcare, finance, etc.⁶

⁵ A significant point in Costolo’s speech is that the vision of Twitter back in 2015 was to find an equilibrium point between algorithmic presentation, i.e., content curation, and what he calls “the roar of the crowd that makes [the platform] the public town square.” Content curation, Costolo thought would make Twitter “more of an aggregator and less of the public town square.” Following the footsteps of Facebook, the design decisions of Twitter gradually privilege an algorithmic-driven feed over a reverse-chronological one (see also Peters, 2022).

⁶ The US government already formed the Cybersecurity and Infrastructure Security Agency (CISA) under the US Department of Homeland Security in 2018, defining 16 critical sectors, among which is Information Technology (CISA, n.d.-a). The agency also distributes two graphic novels, *Real Fake* and *Bug Bytes*, to combat disinformation on the internet and to communicate that “disinformation is an existential threat to the United States, our democratic way of life, and the critical infrastructure and functions on which it relies” (CISA, n.d.-b)

4.2.5. Opinion Leadership

Seen as a new form of the public sphere, while social media has arisen as a fundamental aspect of the digital world, profoundly impacting individual, social, and institutional dynamics, certain individuals stand out from the crowd, garnering significant exposure, engagement, and following. Commonly known as influencers or opinion leaders, they are part and parcel of social media platforms. Understanding the social dynamics of the platforms has become one of the central foci of academic research.

The notion of opinion leadership was brought to the attention of researchers 1940s, and thereafter has become one of the key notions in communication studies. Lazarsfeld et al. (1960), in their study on American voters, discovered that interpersonal relationships are a key component in people's (political) choices. Previous studies, such as the hypodermic needle model, emphasized the direct and significant influence of the mass media on shaping people's opinions. These studies recognized that people passively consume media content. A key finding of Lazarsfeld et al.'s study in the context of communication research was that "ideas often *flow* from [mass media] to the opinion leaders and *from* them to the less active sections of the population" (1960, p. 151). According to them, what separates opinion leaders from non-opinion leaders is firstly they engage in the field they have knowledge or expertise are much more and secondly, they function as a bridge between the media of communications and the masses (1960, p. 152)

Everett Rogers (2003) in his widely influential book, *Diffusion of Innovations*, recognized the significance of opinion leaders in the diffusion networks and programs of innovations. They defined opinion leadership as "the degree to which an individual can influence informally other individuals' attitudes or overt behavior in a desired way with relative frequency" (2003, p. 362). They recognized the significance of interpersonal relationships and the role of opinion leaders in the context of both communication process and diffusion networks, channels of communication through which ideas, innovations, and behaviors spread. Nonetheless, they challenged, the model, known as the two-step model, proposed by Lazarsfeld et al. (1960) mainly on two grounds. Firstly, the communication process does not necessarily involve the two steps. It might involve a single step, wherein the mass media can exert its influence over an individual. In some cases, on the other hand, a

communication process that involves several stages may take place (Rogers, 2003, p. 304).⁷ Another shortcoming of the model, according to them, was that it failed to acknowledge the role of diverse communication sources or channels at different stages in the process of communication and decision-making (2003, p. 305).

Opinion leadership is not uniform across individuals. According to Bamakan et al. there exist four aspects that characterize opinion leadership (2018, p. 205). These are scope of influence, domain of knowledge, behavior, and time. The scope of influence of an opinion leader can be local or global, which indicates their reach on the social network. In terms of the domain of knowledge, they can be classified as monomorphic and polymorphic, indicating whether their knowledge and expertise are in a single or multiple fields. Opinion leaders the modern society often tend to be monomorphic, contrasting those of the traditional society. A third characteristic of opinion leaders is related behavioral tendencies they display. This aspect considers that their personality as well as the ideas they disseminate can be positive/constructive or negative/destructive. The last aspect highlights the temporal character of opinion leadership. That is, an opinion leader can have short-term or long-term influence on their audience.

In the context of human communication and dissemination of ideas and attitudes, and interpersonal relationships, one of whose aspects is opinion leadership, the concept of homophily was introduced to explain the nature of social influence in communication research. Homophily refers to the principle that people are most likely to interact with those who are alike (Rogers, 2003, p. 305). According to McPherson et al (2001), the homophilous character of social influence entails the localization of information, be it cultural, behavioral, or material:

Homophily implies that distance in terms of social characteristics translates into network distance, the number of relationships through which a piece of information must travel to connect two individuals. It also implies that any social entity that

⁷ This point was partially acknowledged by Elihu Katz: "In some spheres considerably longer chains of person-to-person influence than the dyad may have to be traced back before one encounters any decisive influence by the mass media." Katz also observed that in some cases, opinion leaders themselves, while more exposed to the mass media, are just as open to personal influence as non-opinion leaders (1957, pp. 76–77).

depends to a substantial degree on networks for its transmission will tend to be localized in social space and will obey certain fundamental dynamics as it interacts with other social entities in an ecology of social forms. (2001, p. 416)

The concept of heterophily, on the other hand, refers to a pattern of social interaction between individuals with dissimilar characteristics or attributes. The opposite of homophily, in heterophilous communication, characteristics such as ethnic, ideological, educational background, or social status play less significance. However, this type of communication is uncommon since it may result in “cognitive dissonance” among individuals for messages communicated in heterophilous communication are prone to contradict one’s existing values, beliefs, or attitudes. Individual or cultural differences, socioeconomic status, or technical competence may also lead to misapprehension, leading to frustrations and ineffective communication (Rogers, 2003, p. 306). Even so, according to Rogers, heterophilous communication has a significant potential for conveying information and diffusion of innovations among various cliques. Novel ideas oftentimes enter a system through its members of higher status. While they tend to be more innovative and have more exposure to new ideas, they channel these novel ideas and innovations to other individuals. In that respect, homophily can be an obstacle to the flow of information vertically (2003, p. 307).

4.2.6. Opinion Leadership on Twitter

Twitter serves as a platform for opinion leaders to gain significant following and social influence. Regarded as possessing expertise, credibility, or authority in particular fields or areas of interest, opinion leaders on Twitter frequently shape and steer conversations, contribute to certain narratives, and influence public discourse. Their influence is not limited to their followers, for the platform enables non-followers to engage with the content they create through retweets, quotes, replies, hashtags, and the timeline algorithm, thus potentially impacting public discourse on a broader scale. In this regard, Twitter opinion leaders are likely to engage not in the two-step flow but in a complicated and multi-step flow process (Park, 2013, p. 1642), and reach a wider audience compared to non-digital communication settings thanks to the architecture of the platform.

Many studies on Twitter in connection with homophily indicate that the platform facilitates echo chambers in which users are exposed to opinions aligned with their own. There appear, however, several studies with contrasting findings. According to Colleoni et al., this is undoubtedly related to the multi-purpose uses of Twitter. When it is viewed as a social medium, it appears to have homophily as a prevalent phenomenon. However, when it is viewed as a news medium, regardless of social ties, the degree of homophily appears to be much lower, while public discussion becomes much more visible (Colleoni et al., 2014, p. 328). In the two scenarios, different dynamics can be observed regarding the influence of opinion leaders. In the first scenario, opinion leaders may act as intermediaries to reinforce certain opinions through which they contribute to higher levels of homophily, fueling polarization. This is particularly relevant when the discussion revolves around political issues. In the second scenario, on the other hand, opinion leaders may act as translators of certain trends and developments. The technology talk serves as a typical example in this regard. Unlike the everyday political talk, the technology talk does not divide the general public. Many of the expectations and concerns of individuals related to technology, regardless of their backgrounds, tend to coincide. A rather complex and rapidly evolving nature of technological developments necessitates, at least partially, intermediaries, i.e., opinion leaders, to introduce novel ideas, to filter vast amounts of information to make meaningful interpretations.

4.3. Identifying the Turkish Technology Opinion Leaders on Twitter

Several approaches have been developed to discover opinion leaders in social networks, both non-digital and digital environments, mainly for marketing and academic purposes (see Bamakan et al., 2018, for a detailed overview of these approaches). These approaches range from descriptive methods, such as observations, surveys, and interviews, to machine learning algorithms. While descriptive/conventional approaches have the advantage of simplicity, they tend to be ineffective in big social networks and pose risks such as experience bias (Bamakan et al., 2018). The bulk of non-conventional approaches on the other hand require a good working knowledge of statistics and probability, and in some cases solid foundation of software development skills. This can be one of the reasons

that the application of most of these approaches in social sciences is still uncommon.⁸ A notable exception appears to be social network analysis. A multitude of research has used the approach to study and analyze the relationships, patterns, interactions as well as structures of communication, detecting communities and information diffusion networks. Simply put, social network analysis attempts to discover important nodes in a social graph through centrality measures.

In this study, however, a relatively novel technique has been employed to detect opinion leaders based on Twitter *Lists*. Twitter allows the curation of user-generated lists, allowing the content generated by members of these lists to be displayed in a separate timeline. The metadata (title and description) of Twitter *Lists* includes information that gives valuable insight into the topical expertise of members added to them. Making use of this information has great potential for researchers to infer who-is-who on Twitter. Developed by Sharma et al. this approach offers a “more accurate and comprehensive characterization of Twitter users” compared to the other approaches such as the profile information created by Twitter users themselves (2012, p. 533).

Even though metadata of Twitter lists allow the researchers to acquire valuable information indirectly by inferring the area of expertise or interests of Twitter users and offers a more informative and comprehensive way to infer than relying on the profile information, it is far from being a robust method if used alone. This is to say that, even though the metadata of a Twitter list gives a valuable insight into, its topicality and the expertise of users added to it does not always correlate. One reason is that one’s interest does not always entail his or her expertise in the field. Another issue is that public opinion leaders are not necessarily experts (technicians) in a field; they can only be distinguished based on some relatively objective criteria. While they show genuine interest in the field they express their opinions to their audiences, these opinions are based on extensive knowledge on which they articulate complex issues and provide insights on the workings of the field in clearer and more understandable ways for the general public. In this way,

⁸ It should be noted each approach that attempts to solve the problem of opinion leader detection has certain advantages and limitations. This can be related to various factors such as theoretical foundations and assumptions, size of data, time constraints, and lack of knowledge and skill of the researcher due to the complexity of methods.

their interest resembles that of an academic one and has a different nature than that of the general public. However, this is not to be confused with their presentation of the content they create. In this regard, the style and the language manifest in their content are greatly accessible to the general public, unlike that of the academician. That is why, the data (the Twitter users) collected via Twitter *Lists* is only the first part of identifying the Turkish technology opinion leaders.

4.3.1. Data Collection (Twitter Users)

Through its *API* (Application Programming Interface), Twitter enables researchers, among many other professions, to retrieve and analyze Twitter data. An *API* (application programming interface) is a software mechanism that enables to have access to data from different applications. It is “an intermediary layer” that serves application data (commonly parts of it) to other applications in a specified way, allowing developers and/or researchers to manipulate it, without giving access to the database (*What Is an Application Programming Interface (API)?*, n.d.). The way these applications “talk” (data request and return) to each other is performed through endpoints, which is “an address that corresponds with a specific type of information” (X Developers, n.d.-a).

In this study, mainly *List*, *User*, and *Tweet* endpoints are used to access Twitter data. For some time, Twitter has been migrating to a second version of its API. Since the second version of Twitter API does not include all the endpoints that the first version has, and the first version is still available, in this study both versions have been used. This is because, while the second version has new features, not all features of the first version were implemented in the second one. To have access to Twitter API, an application for Academic Research access level has been made solely for this study. Approved by Twitter, this access level has enabled access to Twitter data with a higher tweet cap and full-archive search (currently available only for this access level) (X Developers, n.d.-c). It should also be noted that Twitter applies rate limits, that is, each endpoint allows only a specified number of requests and volume of data to be accessed on a time interval.

To interact with Twitter API and to make use of Twitter data, several software tools and libraries have also been used during this study. Most of the tools and libraries used are built on top of the Python language (Python Software Foundation, 2021). The two main

libraries⁹ used are Tweepy (Harmon & other contributors, 2021) and Pandas (The pandas development team, 2010/2021). The former facilitates access to the Twitter API, whereas the latter, is widely acknowledged as the de facto library for data processing in the Python community. For the retrieval of the tweet data, however, a more convenient tool called twarc (Documenting the Now Project, 2013/2021) has been used.

4.3.2. List-based Identification of Twitter/X Accounts

In this sub-section, the method of identifying Twitter users as well as the approaches preferred will be illustrated in detail. In summary, first, the constraints of this method will be defined. By defining and implementing specific constraints, the results obtained through the API will be refined. What follows is a detailed explanation of the steps as to how Twitter Lists are exploited to identify a set of influential Turkish Twitter accounts, which will be narrowed down to obtain a more focused and representative sample in the next sub-section.

4.3.2.1. Defining the Constraints

At the commencement of the data collection process, it is of utmost significance to have adequately defined constraints that are going to determine the course of action in the process. The constraints used for this study are as follows:

1. *Only Twitter lists in whose title or description the keywords defined (“tekno” and “tech”)¹⁰ are mentioned are to be taken into consideration.* The process intends to identify a group of Twitter users in a specified domain, which Twitter lists should be taken into consideration as one of its crucial components.
2. *Twitter users with less than 100,000 followers are to be filtered out.* This constraint is imposed to decrease the volume of data (Twitter users), and, by extension, the manual workload in the step of expanding the seed set. It is also

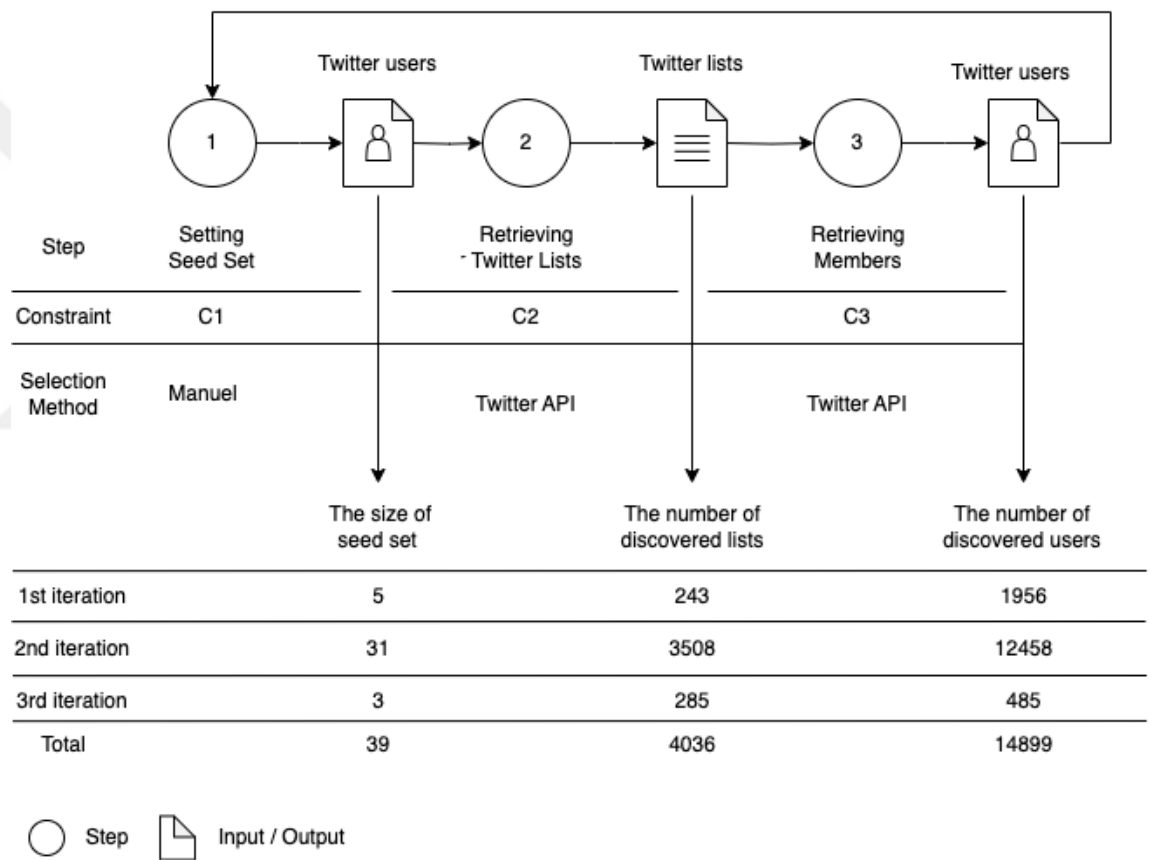
⁹ In the context of computing, a library is a collection of pre-written code that is served to be used in software projects. A library often contains commonly needed functions or routines and is called from the other piece of software to extend its functionality. A crucial component of modern software development, libraries provide sets of commonly needed functions to be reused across many projects. (“Library (Computing),” 2023)

¹⁰ The words “tekno” and “tech” are chosen as keywords to retrieve lists whose titles and/or descriptions include words not just “teknoloji” or “technology” but also words such as tekno-bilim, teknolojik, etc.

considered appropriate for the intention to identify potentially the most influential users, rather than all the Twitter users in the specified domain.

3. *Only the Turkish-tweeting users who are creating content in the domain of technology are to be taken into consideration.* Since this dissertation aims to explicate the discourse of technology within the Turkish culture, by looking into the content created by influential Turkish Twitter users, not only non-Turkish-tweeting users but also the influential Turkish Twitter users who are not tweeting in Turkish are filtered out in the process.

Figure 1: Iteratively Finding Influential Users on Twitter/X



4.3.2.2. Setting the Seed Set

As part of the preparation for the process, an initial (sample) set of individuals was identified. The individuals in the initial seed set were handpicked based on their representativeness of the broader population that is sought to be obtained in the end.

Although all the members of the set were selected through observation, they were carefully chosen to conform to the above-mentioned constraints. At this point, it should be noted that all the data retrieved in November 2021, unless stated otherwise.

Table 1: The Initial Seed Set of Twitter/X Users

Name	Twitter Handle	Followers
M. Serdar Kuzuloğlu	mserdark	1.35M
Cem Say	say_cem	251K
Serkan İnci	srkninci	217K
Alphan Manas	alphanmanas	120K
Sedat Kapanoğlu	esesci	117K

Although the size of the initial seed set is not likely to affect the final result, the process will eventually branch out (snowball) to discover other similar Twitter users. Nonetheless, choosing at least one influential Twitter user who meets the third criterion assures the method to work. The rationale behind creating a sample set containing multiple influential Twitter users is to increase the likelihood of retrieving more Twitter users from Twitter *Lists*. Besides, the popularity of the members of the initial seed set most likely guarantees firstly that a good number of Twitter *Lists* will be retrieved in the early phases of the process and secondly that the Twitter *Lists* retrieved will have many other users in the same field/domain, and that the iterative process will be completed sooner than later.

4.3.2.3. Retrieving Lists

Having the constraints defined and the initial seed set determined, first, all the Twitter *Lists* to which the members of the initial seed were retrieved via “lists/memberships” from the Twitter/X API (see X Developers, n.d.-b for documentation). The retrieved data (the

collection of Twitter *Lists*) are stored in the same location. Next, members (Twitter users added to these Twitter *Lists*) of the retrieved Twitter *Lists* are iteratively collected. During this step, certain conditions are enforced. Twitter *List* retrieved is first checked whether its owner's account is publicly accessible, for the members of the Twitter *Lists* whose owners have private accounts cannot be retrieved. Then, whether the *Lists* retrieved are already stored is checked in order not to allow duplications. Finally, whether the title or the description of a *List* matches with the predetermined keywords (the first criterion) is checked. Provided that the Twitter *Lists* that match the last condition are stored.

4.3.2.4. Retrieving Members

The last step of the process deals with the retrieval of the members (Twitter users) of the Twitter *Lists* created in the previous step. The endpoint used in this step is "lists/members." All the Twitter *Lists* collected are iterated to retrieve unique users added to these lists provided that the user has more than 100k followers (the second constraint). The iteration continues until all the collection is exhausted. The decision tree for this subprocess is quite simple for there are only two conditions to check: 1) whether the Twitter user has more than 100k followers; and 2) whether the user data is already stored. If the user data is not stored, it is stored with additional information, frequency value. This value is not retrieved through the API but is calculated during the process to be used later in the ranking/scoring part. To calculate the frequency value (how many times a Twitter user appears in Twitter *Lists* retrieved in the process), the first time a user, as a member of the lists, is returned, it is stored with a frequency value of 1. If a user is already stored (which means the user is added to multiple lists), the frequency value is incremented by 1.

4.3.2.5. Expanding the Seed Set

Up to this point, two different data were programmatically obtained from the Twitter API: 1) A collection of Twitter *Lists* (based on the first criterion) to which the members of the initial seed set are added. 2) A collection of Twitter users (based on the second criterion) from the first data (the collection of Twitter *Lists*).

In this step, the second data, the collection of influential Twitter users, is manually inspected whether they meet the third criterion (The influential users who are creating content in the domain of technology). While the members of the initial seed set were considered epitomic examples of influencers/opinion leaders in the domain of technology, not all the members of this collection can be considered as such. In this regard, the aim of this step was twofold: 1) to identify the other influencers/opinion leaders; 2) to expand the seed set with these new Twitter users to reach more Twitter *Lists*, and by extension, to identify more users. To this end, the second data (the collection of Twitter users) were inspected manually. Manual inspection mostly relied upon the descriptions of user accounts, which is commonly known as the profile bio. Often, the personal timelines are visited to gain more information, since Twitter profile bios do not necessarily yield information as to the interest or expertise of a Twitter user and might even be blank. On the other side, the public perception of an opinion leader holds greater significance than how they define themselves.

Having inspected the collection of Twitter users, 31 more influential Twitter users were determined. Besides, the initial seed set was expanded by these Twitter users. At the same time, a new set from the newly discovered users was created to be used in the next iteration of the process to branch out new Twitter *Lists*. The rationale to exclude the initial seed set in the second iteration of the process was 1) because all the Twitter *Lists* to which the members of the initial seed set are already retrieved and stored; 2) to speed up the process by minimizing API requests due to the API rate limits.

The cycle (setting seed set, retrieving of Twitter *Lists*, retrieving of Twitter users) explained above was repeated three times. In the third iteration, the number of Twitter users and lists decreased dramatically, which is taken as an indication that the data saturation point was reached.

Table 2: Expanding the Seed Set

	Seed Set	Twitter Lists	Twitter Users
1st cycle	5	243	1956
2nd cycle	31	3508	12458
3rd cycle	3	285	485
total	39	4036	14899

In the course of the entire process, a total of 4036 Twitter *Lists* that matched the first criterion were discovered. These Twitter *Lists* contained 14,899 unique Twitter Users, 39 of which were manually selected based on the third criterion. These influential Turkish Twitter users were considered to be potentially shaping people’s opinions on the domain of technology. Since the selection process was conducted manually, it should be noted that it was subject to certain biases or oversights. Many influential Turkish Twitter users were eliminated for it was observed that the content they produce was nuanced, that is, targeting not the general public, but mostly specific communities such as fintech, cryptocurrencies, digital marketing, etc. Since the aim is to identify opinion leaders that potentially influence the Turkish general public, those who were not creating content in the Turkish language were also filtered out. The final list of the selected influential Twitter users, comprised of 28 people, sorted by the list frequency, is given below:

Table 3: Identified Twitter/X Users (Sorted by the List Frequency)

	Name	Twitter Handle	Followers	List Frequency
1	M. Serdar Kuzuloğlu	mserdark	1.353.882	174
2	Tansu Yeğen	TansuYegen	445.911	101
3	Hakkı Alkan	hakki_alkan	100.815	84
4	Burak Büyükdemir	burakbuyukdemir	169.767	50
5	Sina Afra	SinaAfra	415.468	46
6	Selçuk Bayraktar	Selcuk	1.781.461	44
7	Alphan Manas	alphanmanas	120.331	41

8	Burak Bayburtlu	burak	191.136	37
9	Mustafa Varank	varank	790.757	32
10	Cem Say	say_cem	251.780	31
11	Sedat Kapanoğlu	esesci	117.267	30
12	Haluk Bayraktar	haluk	325.197	24
13	Tevfik Uyar	tevfik_uyar	105.345	24
14	Özgür Alaz	ozguralaz	229.756	23
15	Nevzat Aydın	zagortenay76	811.331	19
16	Nazım Salur	NazimSalur	100.244	15
17	Ismail Demir	IsmailDemirSSB	266.189	14
18	Yusuf Akbaba	ssysfakb	111.469	14
19	Said Ercan	saidercan	1.039.093	11
20	Dr. Taylan Yıldız	taylanyildiz	258.516	10
21	Levent Erden	leventerden	322.466	9
22	Cenk Sidar	cenksidar	103.845	9
23	Orhan Bursalı	ORHANBURSA LI	247.243	7
24	Serkan İnci	srkninci	217.710	5
25	Vahap Eren	VahapErenTR	139.291	4
26	Immanuel Tolstoyevski (Fularsız Entellik)	imTolstoyevski	116.395	2
27	Kıvanç Özbilgiç	kivancozbilgiç	210.335	2
28	Mesut Sevgili	mesut_sevgili	271.591	1

4.3.3. Measuring the Impact: Ranking Twitter Users

The most manifest indicator of a Twitter user's popularity is the number of followers. Yet, relying solely on this data is most likely not efficacious to determine a Twitter user's impact/influence on the network. To measure impact, most social media analytics companies appear to be using a variety of formulas called engagement rate. While some

of these formulations take into consideration the number of followers, what is common in all of them is that these formulas advocate that the engagement metrics, “the number of favorites, retweets, and mentions [a Twitter user’s] tweets are generating” represent a better indicator than that of the number of followers (“Twitter Engagement Calculator,” n.d.; “Twitter Engagement Metric,” n.d.). A variant of engagement rate, also called as “public engagement rate” is calculated by dividing the sum of retweets and likes by the number of followers (“X (Twitter) Engagement Rate Benchmark,” n.d.).

For this study, however, a ranking index was developed to measure the impact of the selected influential Twitter users. Although the ranking index was developed to take into consideration the variables of the engagement rate, it offers a more advanced but uncomplicated approach to measure the impact based on which Twitter users can be ranked. The variables taken into consideration for the ranking index are as follows:

1. The number of followers
2. The number of engagements (likes, retweets, mentions and comments)
3. The frequency of occurrence in Twitter lists
4. In-group popularity (who is following whom in the group)

As the first two of these variables are widely used in the engagement rate formulations to measure the impact of a Twitter user, the index developed employs two more variables, which were considered they be as valuable as the first two. The frequency of occurrence (the third variable) of a Twitter user in Twitter lists is valuable for the addition of a Twitter user into a Twitter list is a more conscious and deliberate act when compared to the following behavior. Although the data collected indicate that many Twitter users who cannot be considered influencers in the field of technology have been added to the Twitter lists promoted (in its title or description) as related to the field of technology, that does not comprise the idea Twitter lists are a great resource for identifying Twitter users in a given field. Besides, Twitter lists indirectly classify, albeit not strictly, Twitter users, the frequency value indicates a different kind of popularity. Then again, we can surmise that Twitter’s lists feature is mostly used by tech-savvy users.

As for the in-group popularity (the fourth variable), it was considered that the Twitter user who is producing content in a given field is most likely being followed by other Twitter

users in the same field. Although these might not be true in every case the data collected might not have absolute accuracy and there is more than one way to follow Twitter users (e.g., Twitter lists), it was observed that the ranking index produced meaningful results.

It should be emphasized that all the formulations proposed to calculate the influence of a Twitter user are based on publicly available data (through the Twitter API), which is relatively limited. In this respect, such formulations are far from being scientifically soundproof. The data collected on the social networking platforms might not accurately reflect or represent the individual motivations, preferences, and attitudes. Be that as it may, it was convincing that the index generated meaningful and measurable insight from the data collected in the process.

The top 10 Turkish Twitter users who exhibit greater impact factors according to the ranking index developed are given below. These individuals can be considered more influential than the rest of the selected group of influential Twitter users in shaping the opinion of the Turkish general public on the domain of technology.

Table 4: Sub-Rankings of the Identified Twitter/X Users

Sub-rankings					
Name	Rank	List Frequency	Followers	Engagement	In-Group Popularity
M. Serdar Kuzuloğlu	1	1	2	9	1
Selçuk Bayraktar	2	6	1	1	4
Tansu Yeğen	3	2	6	2	5
Mustafa Varank	4	9	5	5	4
Nevzat Aydın	5	15	4	7	4
Cem Say	6	10	13	4	5
Sina Afra	7	5	7	22	4
Hakkı Alkan	8	3	27	16	6
Alphan Manas	9	7	21	17	3
Nazım Salur	10	16	28	21	2

Ranked by the impact factor calculated by the index, the table also provides sub-rankings for each variable for a detailed comparison. The sub-ranking indicates the relative strengths and weaknesses of each opinion leader concerning the other variables encompassed by the index. The index calculates the overall ranking of each variable. It should be noted that all of them are equally weighted. The index indicates that the first 4 opinion leaders consistently perform well in each sub-ranking. Among the top 10 in each sub-ranking, these opinion leaders appear to have greater reach or respect among Turkish Twitter users, ranging from average people to tech-savvy users and the other opinion leaders identified during this study. In terms of list frequency, on the other hand, 8 opinion leaders were ranked among the top 10. This demonstrates that the list frequency variable correlates closely with the final list, regardless of the rankings. Although this does not prove the efficiency of the ranking index, it can be surmised that the list frequency is a potentially strong indicator to assess to understand the popularity of Twitter users. However, a dedicated and comparative study is needed for a comprehensive evaluation. In terms of the number of followers and engagements, 6 out of the top 10 opinion leaders were already in the top 10 in both categories. However, the other 4 opinion leaders were picked out by the index for they ranked high in the category of the list frequency and in-group popularity, although they have significantly fewer followers and lower engagement performance. Consequently, contrary to conventional expectations, it was observed from the result of the index that there is a highly inverse relationship between variables (followers and engagement vis-à-vis list frequency and in-group popularity). The variables of list frequency and in-group popularity appear to balance the variables of followers and engagement, the two key values used to calculate engagement rate. At this point, it is crucial to note that the engagement rate formulation yields divergent outcomes than that of the index. For instance, the highest-ranked opinion leader in the index (Serdar Kuzuloğlu) falls in the 24th position in this formulation.¹¹ This is because Kuzuloğlu has a significant following, yet his tweets receive relatively limited engagement compared to some other opinion leaders within the group of 28 influential Turkish Twitter users picked

¹¹ The formula is as follows: total number of engagements / (total) number of tweets / total number of followers * 100 ("Twitter Engagement Calculator," n.d.).

in the previous part. Such a finding can be interpreted as a limitation, if not ineffectiveness, of the engagement rate method.

It is also noteworthy that the in-group popularity variable, which indicates the level of recognition and respect in the domain, and the final result of the index completely correlates. That is, irrespective of their rankings, the top 10 performers in both in-group sub-ranking and the index are identical. From the inverse relationship between the two groups of variables mentioned above and the complete correlation of in-group popularity with the index, it can be inferred that popularity does not necessarily entail recognition and respect among opinion leaders (and likely tech-savvy Twitter users who create Twitter *Lists*). Since opinion leaders are in a unique position to diffuse innovations and new ideas, they are expected to possess a combination of persuasive communication skills (rhetoric) and substantial domain-specific knowledge (expertise) to interpret trends and developments, ideally in a balanced manner. The outcome of the index is considered satisfactory in this aspect.

4.4. Data Collection (Retrieval of the Tweet Data)

While the previous section deals with identifying the sample set of influential Turkish Twitter users, that is, a group of Turkish opinion leaders in the domain of technology, this section illustrates the processes regarding the principal data of this dissertation. Having identified the 10 opinion leaders mentioned in the previous section, a preliminary reading and selection process was undertaken to select which tweets they published on Twitter to be used in this study. The data was retrieved on November 30, 2021.

The selection process of the tweets for the analysis involved the consideration of two criteria. First, only the tweets that deal with technology (trends, developments, approaches, problems, solutions) were selected, the rest of the tweets were ignored. Considering the total amount of the tweets, and the timespan of the collected tweets, this was a necessary step in conducting a thorough analysis of the subject matter. Second, only the tweets expressing opinions were selected. Retweets and tweets that share articles from news outlets or other Twitter accounts are excluded from consideration, except if they are quoted with a commentary. A new dataset was created consisting of all the tweets that

meet both criteria at the same time. At the end of this stage, a total of 10461 tweets out of 212452 tweets were selected for the new dataset.

It should be noted that the tweet data retrieved are comprised of not only the content authored by Twitter users but also what is called referenced tweets.¹² Thus the Data Set column in the table indicates the total number of the individual data set of the indicated user, which includes not just tweets and retweets but also referenced tweets. The last column in the table refers to the total number of tweets that are selected and tagged to be used for analysis. Following the pre-reading stage, the selected tweets were tagged and categorized. Following numerous trial and error, the selected tweets were categorized under two main themes: global and local. Some tweets were categorized under both global and local categories. In addition, each tweet was tagged around the topics it directly or indirectly touched upon. Many tweets thus had more than one tag. Based on these tagging processes, it was determined which tweets would be analyzed where and how much in the chapters of the dissertation.

Table 5: An Overview of the Dataset

Account Owner	Twitter Handle	Tweets	Retweets	Retweets Excluded	Data Set	Selected
M. Serdar Kuzuloğlu	mserdark	55.996	1.898	54.098	76.281	2.748
Selçuk Bayraktar	Selcuk	2.675	875	1.800	4.111	305
Tansu Yeğen	TansuYegen	26.134	3.765	22.369	29.979	709
Mustafa Varank	varank	14.938	9.166	5.772	24.756	210
Nevzat Aydın	zagortenay76	15.722	1.340	14.382	15.723	180
Hakkı Alkan	hakki_alkan	39.040	2.734	36.306	52.721	2.220
Sina Afra	SinaAfra	17.089	3.497	13.592	23.706	144

¹² A referenced tweet is a tweet that has been mentioned or referenced, mostly through replies or quotes, in another tweet. Referenced tweets provide context and additional information to understand the original tweets. They are also used to track conversations and interactions on the platform, providing a more complete picture of how information is disseminated.

Cem Say	say_cem	111.45	61.396	50.055	188.01	2.748
		1			8	
Alphan Manas	alphanmanas	14.508	1.218	13.290	18.176	1.516
Nazım Salur	NazimSalur	877	89	788	1.416	60
	Total	298.43	85.978	212.452	434.88	10.461
		0			7	

3831 tweets (approximately 35%) are tagged under the category of Global Issues and Trends, 7247 tweets (approximately 65%) are tagged under the category of Local Issues and Trends, and 617 tweets are tagged under and related to both categories. The two tables given below illustrate the distribution of the most common themes of the selected tweets. In the two tables below, the most common 10 themes categorized under the two categories in the data set are given.

Table 6: The Most Common 10 Themes (Global Issues and Trends)

	Tweets (3831)	%
Disruptive technologies (robots, automation, AI, etc.)	875	23
Technology and society	578	15
Technology and progress	419	11
Technology and politics	374	10
Big tech	364	10
Science	284	7
Social media	247	7
The technological era	226	6
Trends	208	5
Space	207	5

Table 7: The Most Common 10 Themes (Local Issues and Trends)

	Tweets (7247)	%
Culture and mentality	1557	25
Technology and politics	1812	15
Technology and progress	1108	15
Science	682	15
Censorship	539	11
Technological nativism (“yerli & milli”)	517	9
Entrepreneurship	467	8
Social media	293	7
Technological infrastructure	246	7
Internet	245	7

4.4.1. Challenges and Limitations

At this stage, it would be appropriate to mention some limitations of Twitter data as a research object/material in general and the new data set created for this thesis within the framework of the criteria mentioned above. First of all, the platform promoted itself as a “microblogging service” and the initial design allowed its users to post only tweets limited to 140 characters, which was expanded to 280 characters in 2017. This limitation has long invoked the users to express themselves concisely and shortly. Following the implementation of the thread feature, some active and popular Twitter users started to create multiple tweet entries. Nevertheless, this has not become a widespread practice. Parallel to the observations regarding the platform, the data collected for this thesis manifest that tweet threads make up a very small portion of the dataset.

The character limit of the platform and users’ strategies for writing tweets within this framework differs significantly from long form writing, in which ideas and opinions are explained and justified in more detail. Thus, in general, the short-form nature of the platform, and the contents of tweets give little, if any, context of the commentary they provide. Thus, this brings a challenge for a thorough analysis of the data, in trying to

understand a Twitter user's views on a particular issue holistically and consistently based only on their tweets. Moreover, how each Twitter user utilizes the platform is distinct and often influenced by a variety of personal and professional preferences, which is yet another challenge for the researcher.

Upon comparing the dataset created for analysis in this dissertation with the total number of tweets posted by the selected opinion leaders, it becomes evident that a relatively small percentage of tweets (i.e., 5%) express opinions on technology (trends, developments, approaches, problems, solutions). Nevertheless, the dataset provides us an insight into their views on technology. Then again, the question of whether their views can be analyzed as a coherent whole still stands a challenge as explained above. Another challenge is that the tweets of the selected opinion leaders cover a relatively long-time scale.

Table 8: Timeline of Twitter/X Adoption of the Opinion Leaders

Account Owner	Twitter/X Handle	Joining Date
Sina Afra	mserdark	April 2007
M. Serdar Kuzuloğlu	Selcuk	June 2008
Alphan Manas	TansuYegen	March 2009
Hakkı Alkan	varank	April 2009
Nevzat Aydın	zagortenay76	June 2009
Mustafa Varank	hakki_alkan	August 2009
Tansu Yeğen	SinaAfra	December 2009
Cem Say	say_cem	February 2012
Nazım Salur	alphanmanas	April 2012
Selçuk Bayraktar	NazimSalur	January 2014

While the tweets were subjected to thematic analysis in this dissertation, when referring to the tweets, in most cases the last tweet was considered if possible. At times, however, tweets composed several years apart were evaluated simultaneously, despite the time disparity between them. Considering all these limitations and challenges, great care has

been exercised to avoid over-interpretation of the opinions expressed in the tweets by the selected opinion leaders.

4.5. The Faces of Influence: The Background of the Opinion Leaders

The individuals identified in this study are prominent figures in Turkey's technology landscape, representing a range of backgrounds including journalism, entrepreneurship, and policymaking. Many of them have a strong presence on Twitter, where they have the potential to shape public opinion as well as technology policies in Turkey.

One of the important points that these opinion leaders have in common is that most of them have received their education in technical and innovation-oriented fields such as engineering, computer science or business administration. As a notable exception, Kuzuloğlu, however, is the most popular and well-known of these figures, even though he did not complete his university education. Kuzuloğlu, who states that he entered the journalism profession at a time when the media was undergoing a digital transformation, is also a competent person to explain the transformation in the national context as he is one of the actors of this transformation. Another important aspect of Kuzuloğlu is that he follows technological developments in the world and compiles them by considering the local context. Kuzuloğlu's extensive knowledge of relevant literature and mastery of the subjects he is interested in elevate him beyond a mere "transmitter" position. This is to say that Kuzuloğlu's example shows that it is possible to reach an impressive position in the technology and digital world through means other than traditional education.

Some of the opinion leaders identified in this study stand out in terms of their involvement in the production and implementation of technology policies. The most prominent name at the point of determining technology policies is Mustafa Varank. Varank acquired his expertise in technology in the US, where he also received his master's degree. However, his main distinguishing characteristic is that he has been involved in policy-making processes for a long time. In addition to his experience as an MP in the parliamentary committees and plenary in the law-making process, he has also served in the executive branch as Chief Advisor to the President and finally as Minister of Industry and Technology in the 66th government. Varank, who currently serves as a member of

parliament and chairman of the Industry, Trade, Energy, Natural Resources, Information and Technology Commission, has played a significant role in shaping Turkey's technology policies over the past decade, given his political career that began in 2014 and has included several key positions.

The number of entrepreneurs, investors or businessmen in the technology sector are the majority among the names identified in the study. Hakkı Alkan, Sina Afra, Tansu Yeğen, Nevzat Aydın, Nazım Salur and Alphan Manas fall into this category. It must be acknowledged that their own business situations and the challenges they face also play a role in their views and commentaries on technology. Alkan is the founder of ShiftDelete.Net, one of Turkey's leading technology websites; Afra is one of the founders of Markafoni, an innovative e-commerce platform, and is a well-known figure in the world of entrepreneurship. Yeğen has had an extensive career in technology and telecommunications, holding various executive positions at leading companies such as, Hewlett Packard, Microsoft, Apple, Turkcell, IBM, Samsung, UiPath. Aydın is the co-founder and former CEO of Yemeksepeti.com, Turkey's largest online food ordering portal; Salur is the founder and CEO of Getir, Turkey's second unicorn, which was launched at the national level and has a very important place in the global entrepreneurship ecosystem; and Manas is a self-proclaimed serial investor and futurist who has held executive positions in various technology companies. In addition to their commercial relations, these opinion leaders are actors who are influential in the production and perception of technological discourse and use social media effectively in this context. Some of these individuals are also involved in civil society activities, contributing to foundations and associations. Alkan, who actively uses social media platforms, is a frequent speaker at technology conferences, while Manas is the honorary president of the Futurists Association of Turkey. Afra, who founded the Turkish Entrepreneurship Foundation, continues to write for scientific and popular magazines as well as her personal blog.

Although he is the director of a private company, Selçuk Bayraktar's position is different from others. Bayraktar, who is the Chairman of the Board of Directors and Chief Technology Officer (CTO) of Baykar and an engineer who serves as the Chairman of the Board of Trustees of the T3 Foundation, is someone who has one-to-one relations with

the state due to his involvement in the production of defense and weapons technologies. This is due to the nature of his work, which directly concerns the defense industries of national states, as well as his personal relations with the political power. His own family also has a share in these relations. As the son of Özdemir Bayraktar, who is one of the prominent entrepreneurs with a conservative political background in Turkey, and as a person who continues the projects initiated by him, Selçuk Bayraktar can be said to have cultural as well as social capital. (Bourdieu, 2004, pp. 11-24)

Cem Say is the only academic among the opinion leaders. He is a Professor of Computer Science at Boğaziçi University, with research interests in artificial intelligence and quantum computing. He considers himself a science communicator and has written popular science books to share his knowledge with a wider audience.

Each of these figures clearly possesses strong social and cultural capital, with extensive professional networks and a high level of recognition in industry, academia and the entrepreneurial world. A significant number of them have a prominent position in the technology sector, some of them as industry leaders. This strong network gives them the opportunity to experience technology innovations first-hand, while at the same time providing them credibility, which has the potential to increase the value of their words and actions. Indeed, as the ranking index developed in this study shows, they are not only popular but also influential (in terms of engagement of the content they produce). All these factors indicate that they have the capacity to drive influence and change in society. Their key missions include introducing and disseminating technological innovations to society, fostering entrepreneurship and innovation, sharing their knowledge and experience, and having strong industrial and academic connections. These missions are viewed as critical for increasing the societal impact of technology and digital transformation and fostering innovation.

5. THE CONDITION OF TECHNOLOGICAL PROGRESS: THE DIGITALIZATION OF EVERYTHING

Although digitalization (digital transformation) seems to be a self-explanatory concept, as one of the keywords of the dominant technological discourse today, on the one hand, emphasizes the inevitability of the phenomenon, and on the other hand, like most concepts that are frequently used and therefore assumed to be well known, it easily finds its place in narratives of technical/technological progress as a generalization and reduction. Acknowledging digital transformation's complexity and its various dimensions is pivotal for initiating successful transitions. Another point is that the emphasis on the term "inevitability" of digital transformation overemphasizes (generalizes) the productive power of progress and obscures its political/ideological content (see Habermas, 1989, p. 90). This also frames discursive practices in opposition to critical perspectives. According to this narrative, which discourages alternative viewpoints, technology, transformation, innovation, and progress are seen as unavoidable; consequently, any viewpoints beyond technical elucidations of the process are diminished to mere technical ignorance or irrational dispositions. Given these two scenarios, it can be inferred that digitalization and progress are deemed interchangeable when examining the digitalization phenomenon.

From this framework, the following section will outline the views of the opinion leaders on technology and technological progress around the theme of digitalization and digital transformation, and from this general outline, the groundwork will be laid for understanding the following sections, which will address the views of the opinion leaders on technological progress and its implications for policymakers and capital as well as for society. This sub-section will first discuss the views of technology opinion leaders on digitalization as an instrument of transformation as part of the (technological) progress. Then, the relationship between this transformation and the future designs that will be dominated by technologies and utopian and dystopian perspectives will be analyzed. Also, the question of whether these perspectives are useful for classifying the views of

technology opinion leaders will be sought. Finally, the outlines of technology opinion leaders' views on technology will be presented in the context of disruptive technologies vis-à-vis the concepts of disruption and risk (society).

5.1. Technology as Transformation

Although a multitude of concepts are employed to explicate the relationship between technology and society, the concept of digital transformation stands out today, emphasizing that the main characteristic of the process we are going through today is digitalization (Hilbert, 2020, pp. 189–194). Digitalization in this regard not only refers to the technological process but also is conceptualized as a world-historical concept. Highlighting the anticipation as well as the horizon of the future, the concept reproduces and revitalizes connotations of the concept of progress. Within this framework, the technology opinion leaders play a crucial role in making sense of, interpreting, and translating the ongoing (digital) transformation and process, which is often described in terms such as Industry 4.0, Society 5.0, and the digital revolution. These influencers contribute to shaping public understanding by providing insights not only for themselves but also for the broader society. The central notion underlying this perspective is the inevitability of encountering risks, uncertainties, and potential benefits – all of which are inherent and cannot be avoided. In the final analysis, as discussed in the following paragraphs, despite all the risks and uncertainties, the opinion leaders see technical progress as beneficial and necessary, and they strive to encourage policymakers, businesses, and individuals to be part of this transformation and to keep pace with it to reap the benefits of this transition process, viewed as an imperative rather than a choice.

First and foremost, the opinion leaders view the changes/transformation as a new phase of cultural evolution. The change of techniques and technologies as part of cultural evolution has two mutually reinforcing dimensions. The first dimension is the change of tools, processes, techniques, etc., which finds expression in the concept of digitalization (Kuzuloğlu, 2014i). Just as “stone, wood and papyrus,” which were the first tools of knowledge production, lost their importance with the invention of paper and pen, today we can talk about a stage where the computer and programming have put an end to pen

and paper as tools of knowledge production activity (Yeğen, 2015g). This process, in which the inkwell gives way to the ballpoint pen, the pen to the keyboard, and similarly the horse and the sword are rendered obsolete by other tools, points to an evolutionary process in which “the most efficient tool always wins” (Kuzuloğlu, 2014f, 2014h, 2014j, 2014k). From this point of view, it is possible to mention the “centuries-old history” of digital transformation (Alkan, 2018a).

The second dimension is a further discussion of how this evolutionary process of techniques and technologies is related to habits and expectations. Change and transformation drive not only the evolution of techniques and technologies but also influence habits and expectations. This relationship is of a reciprocal nature. New techniques and technologies transform habits, on the one hand, and create new expectations on the other. This transformation, in which the internet and mobility are at the center as if “there is no future without them” (Yeğen, 2015c), expresses a mental break with the old technologies (Kuzuloğlu, 2011e, 2013d). The world has become “too big,” for old techniques and technologies, and the transformation has opened up new possibilities, probabilities, and experiences, creating “today’s expectations” (Kuzuloğlu, 2014g, 2015b, 2017h). According to the opinion leaders, digital transformation, which represents a new stage in the evolution of technology, is a process that cannot and need not be resisted. To ensure thorough understanding and smooth adaptation, it is essential to adopt a proactive approach and a clear strategy.

Quite obvious is that opinion leaders hold a positive attitude towards digital technologies, digital transformation, and existing technologies. In this context, it is noticeable that they prefer new technologies to old ones, (Kuzuloğlu, 2015a) finds the digitalization steps of institutions meaningful (Kuzuloğlu, 2013a), and emphasizes the need to benefit from new technologies in explicit and implicit ways (Alkan, 2016d). Digital transformation, according to technology opinion leaders, increases the quality of life by increasing knowledge (Kuzuloğlu, 2011d), reducing costs (Kuzuloğlu, 2010), reliability (Afra, 2011), accessibility (Kuzuloğlu, 2011d), speed, competition (Yeğen, 2015l), mobility, efficiency (Alkan, 2016b); saving time (Alkan, 2016a); facilitating daily life (Alkan, 2017d); accessing new experience opportunities (Kuzuloğlu, 2018m), growth,

development and prosperity; reducing bureaucracy, and enhances quality of living by securing a healthy (Alkan, 2021a) life.

The positive emphasis that technology opinion leaders place on technical and technological progress in general, and digitalization as a stage of this progress in particular, should not be mistaken for transformation being a matter of choice. From the perspectives of the opinion leaders, digital transformation and the policies to be developed about it are largely expressed as a necessity, not an option (Alkan, 2020a; Kuzuloğlu, 2018g; Manas, 2018e; Yeğen, 2015j, 2015m). They underline the need for organizations and companies to act rapidly and “be courageous” (Alkan, 2017i), and engage in new technological trends (Kuzuloğlu, 2012a, 2012c; Alkan, 2018b). Those who remain alien to the process of transformation, a “the greatest mistake possible” (Yeğen, 2015h), and those who do not have a well-read understanding of how this process profoundly transforms companies, institutions and conventional ways of doing business, will not be able to exist in the future (Alkan, 2018d, 2018f, 2019a; Kuzuloğlu, 2019a; Manas, 2019b; Yeğen, 2015b).

According to the opinion leaders, we have entered an irreversible phase in history where it is impossible to “exist tomorrow with yesterday’s methods of doing business” (Yeğen, 2015r) and where the concept of digital strategy has become meaningless and has been replaced by “strategy in the digital world” (Yeğen, 2016b). In this evolutionary process, which the opinion leaders portray as a struggle for existence where those who can adapt can survive, organizations and companies should determine their strategies within the framework of themes such as entrepreneurship, R&D, innovation, differentiation, growth-oriented thinking (Kuzuloğlu, 2011c; Yeğen, 2015f, 2015k, 2015o). In addition, in this process, education will need to be reconstructed to prepare individuals for this transformation and make them part of the “digital society” (Manas, 2019k; Yeğen, 2015e).

Upon closer analysis of the statements made by the opinion leaders, one can discern a shift in perspective regarding technology’s role in culture. Instead of being viewed solely as a cultural form, technology is increasingly seen as synonymous with culture itself. This raises the question of whether this transformation is driven by the inherent nature of technology or by the dominant narratives and discourses surrounding it. In other words,

is technology itself responsible for this shift, or is it the representative strategies that are shaping our understanding of its role in culture? It should be emphasized that such a disposition is influenced by the open-endedness of the trajectory of the (technological) progress as a culture. The shift in perspective described suggests that technology is no longer viewed as a separate entity from culture, but rather as an integral part of it. This reflects a broader trend towards technological determinism, in which technology is seen as the primary driver of social and cultural change.

5.2. The Future is Now: Technology as Future

The discourses on the progress and future vis-à-vis technological change as well as the statements of the technology opinion leaders, reflect the growing prevalence and integration of emerging technologies such as artificial intelligence, robotics, and the Internet of Things into various aspects of our daily lives. These discourses often emphasize the transformative potential of these technologies, suggesting that they can fundamentally alter how we live, work, and interact with one another. Current developments fuel optimism and excitement in possible new developments and opportunities in these areas, cementing the forward-looking attitudes and willingness to embrace change and innovation. On the one hand, the opinion leaders make clear suggestions and encouragements to prepare for the future and to be courageous, and on the other hand, they announce that the future has already arrived, namely, the so-called future developments have already started to take place (Manas, 2019f; Yeğen, 2016e, 2017d). The theme of “the future is now,” has become a part of technological discourse with the proliferation of the Internet, giving its name or spirit to many reports (Messerli et al., 2019), articles (Staff, 2000), and books (Poth, 2019), is reminiscent of science fiction narratives. Indeed, according to the opinion leaders, the indicators that artificial intelligence is developing its language (Kuzuloğlu, 2017a), that information uploading to the brain has been achieved (Yeğen, 2016c), and that flying cars are very close to becoming a reality are all in coherence with science fiction narratives (Yeğen, 2021b). The opinion leaders refer to science fiction writers and narratives such as Philip K. Dick, Isaac Asimov, Arthur C. Clarke, and H.G. Wells, and state that the predictions of these

writers and narratives about the future are beginning to be achieved (Alkan, 2012; Kuzuloğlu, 2017w; Manas, 2017e, 2018a).

There is a close but not always positive relationship between technological discourses and science fiction narratives. According to this approach, which is also reflected in the views of the opinion leaders, developments, especially in the field of military technologies, are similar to the “actual version of dystopian fantasies” (Kuzuloğlu, 2019l). In any case, these two narrative genres seem to feed each other to a great extent. Even in dystopian narratives depicting the social consequences of technologies turning into instruments of domination, the setting almost always portrays the level that technological progress can achieve. Thus, both narratives are designed as a future scenario that visualizes the boundaries and limitations of technical progress rather than the past and the present.

Nevertheless, there are significant differences between the two narratives. While the emphasis on the technological imperative forms the basis of technological discourse, in science fiction narratives, the potential consequences of techno-scientific progress on human and social spheres are emphasized. As Kuzuloğlu observes, the discourse of dystopia is more dominant in science fiction narratives (Kuzuloğlu, 2020i).

In this framework, the binary oppositions of utopian and dystopian, technophilic, and technophobic do not offer a convenient classification to explain the attitudes of the technology opinion leaders towards technology. The concept of protopia, both as a third category and as a stance breaking these binaries, may be more explanatory in this regard. Kevin Kelly (2011) explains the concept as follows:

I think our destination is neither utopia nor dystopia nor status quo, but protopia. Protopia is a state that is better than today than yesterday, although it might be only a little bit better. Protopia is much harder to visualize. Because a protopia contains as many new problems as new benefits, this complex interaction of working and broken is very hard to predict.

Today we’ve become so aware of the downsides of innovations, and so disappointed with the promises of past utopias, that we now find it hard to believe even in protopia - that tomorrow will be better than today. We find it very difficult to imagine any kind

of future we would want to live in. Name a single science fiction future that is both plausible and desirable?

Based on this approach, it can be said that the technology opinion leaders' attitudes towards technology do not have a dystopian character but are positioned between the protopian and utopian perspectives; to give an example from the extremes, Serdar Kuzuloğlu expresses his views from a protopian perspective, while Tansu Yeğen expresses his views from a position close to the utopian perspective. Other opinion leaders, on the other hand, express their perspectives from different positions between these two attitudes. Accordingly, and simultaneously, the opinion leaders' views on disruptive technologies contain ideas about how technological transformation will constitute the future. In the next section, the views of technology opinion leaders on technological progress through disruptive technologies and their views on the future in particular will be analyzed more closely.

5.3. Disruptive Technologies: Technology as Disruption

The term “disruptive technologies” has been increasingly appearing in almost all technology-related content, recently. This term refers to technologies that are seen as necessarily more prevalent in the future, such as robotics, artificial intelligence, etc. highlights the explicit and implicit emphasis of technological discourse on the inevitability of transformation and implies that the transformation will not be a smooth transition, but rather a radical change of the existing order. Thus, it implies that digital transformation is a process of dislocation. The concept of digital transformation and the term disruption, which has become an important rhetorical trope of technological discourse, recalls Schumpeter's (2011, paras. 4–5; 2003) conceptualization of creative destruction. Described by Schumpeter as a process, creative destruction points to a fundamental phenomenon that enables capitalist progress. According to him, this process reproduces the structure of capitalism from the inside and replaces the old forms with the novel continually (2003, p. 83). The term disruptive technologies was coined in an article by Bower and Christensen (Bower & Christensen, 1995) in their article “Disruptive Technologies: Catching the Wave” and since then it has been used in a much more

comprehensive context than their definition. In this article, they asserted that the instinct of market leaders to maintain their dominant position causes them to overlook and underestimate the undercurrent trends in technologies and markets. These sub-waves, which start in small steps at the beginning, have the effect of eliminating old products or companies. Christensen later proposed the concept of disruptive innovations to replace this concept, recognizing that not all technologies have disruptive potential (1997, p. xiii). Today, the term disruption or disruptive technologies, which appears implicitly or explicitly in almost every context related to technology and digital transformation, is used in a much broader context than both Schumpeter's and Christensen's conceptualizations, and almost every new digital technological development is expressed as disruptive and innovative (Gans, 2016, p. vii). Thus, the terms *digital transformation*, *innovation*, and *disruption* are introduced into the dominant technological discourse in a complementary and evocative relationship. Furthermore, disruption is used to emphasize the change of techniques and technologies as well as of society, and also the disruptive nature of this transformation (Fukuyama, 2000). The subtitle of the EPRS (European Parliamentary Research Service) report titled "Disruption by Technology" is "Impacts on politics, economics, and society," emphasizing that technological transformation will have inevitable effects on the social sphere:

Disruption is a specific form of change that occurs relatively quickly or dramatically. Technology has long been seen as a source of disruption to our lives, communities, and civilizations, provoking disruptive change at all scales, from individuals' routine daily activities to dramatic competition between global superpowers. This disruption can have both positive and negative effects, although they are often unevenly distributed across different groups. (Boucher et al., 2020, p. 1)

In the World Trade Organization's report on disruptive technologies published in June 2022, blockchain, internet of Things, big data, artificial intelligence, biometrics, drones, virtual and augmented reality, and 3D printing technologies are defined as disruptive technologies (Budimirovic et al., 2022). When the term disruptive technologies is used in this study, it will be referring to one or more of these technologies.

Primarily, one of the most important issues in the context of disruptive technologies such as artificial intelligence, robotics/robotics, or 3D printers is the convergence of disruptive technologies. Therefore, while the technology opinion leaders' views on disruptive technologies emphasize the opportunities, risks, and trends for the independent application areas of these technologies, they also consider these technologies as parts of a whole, or in other words, they emphasize the convergence feature of technology. Indeed, although each disruptive technology aims to solve a specific technical problem or to realize existing solutions more effectively, it would be incomplete to define disruptive technologies in this regard. One of the most important differences that distinguishes disruptive technologies from previous technologies is that these technologies need each other to an unprecedented extent and increase each other's potential at very significant rates. For example, robots/robotics and artificial intelligence technologies increase their impact to the extent that they integrate more than they do on their separate platforms. In technologies such as autonomous driving, disruptive technologies can be seen to come together in a similar approach. In other words, developments in any of the disruptive technologies have the potential to affect and transform other technologies. The disruptive, transformative, and innovative potential of these technologies is closely related to the extent these technologies have converged and will be converging with each other.

The term Internet of Things provides a convenient illustration to describe the convergence of (disruptive) technologies and the outlines of the new technological ecosystem. It describes an order in which all devices are interconnected through local (intranet) or global (internet) networks and feed each other mutually (Kuzuloğlu, 2014b). The Internet of Things, which is seen as the pioneer of a paradigmatic change in the field of information technologies, is based on the sharing and processing of large amounts of data collected instantaneously by sensors with other devices and performing certain actions (actuators) based on the processed data (Moné, 2018). It is estimated that 21.5 billion devices, ranging from high-tech industrial devices to small household appliances, will be connected to this highly adopted and rising ecosystem by 2025 (Khan, 2020). As Alkan states, it is expected that "smart devices communicating with each other," artificial intelligence, fast internet, and "data growing like an avalanche" will shape not only industries but every corner of daily life (Alkan, 2018e). This new order, which can be described as the "age of things"

(Alkan, 2015), is considered by Yeğen as a new industrial revolution which is the dominant aspect of Industry 4.0, and advanced manufacturing (Yeğen, 2015i).

For this new technological ecosystem, in which the potential of disruptive technologies will multiply as they converge, to bring the expected benefits, some technical limitations need to be encountered. In the opinions of technology opinion leaders, two major challenges need to be addressed with regard to disruptive technologies. The existing internet infrastructure is one of the most important bottlenecks to the deployment and effectiveness of disruptive technologies (Ching, n.d.). At this point, 5G technology is being developed to overcome the infrastructural barrier to the ability of objects (disruptive technologies) to communicate with each other both rapidly and, more importantly, without any latency. Defined by Kuzuloğlu as the “next-generation communication infrastructure” (Kuzuloğlu, 2020a), 5G technology is expected to “transform almost every field from autonomous vehicles to industrial automation, from smart devices to media consumption” (Kuzuloğlu, 2020b). 5G’s capacity to both overcome a technical limitation and transform social practices is not only valued by technology companies but also by policymakers, and it is frequently addressed in reports on the digital future (Yeğen, 2020c). As Yeğen puts it, this technology stands at the center of the technological competition between the US and China (Yeğen, 2020b). According to Manas, the arrival of 5G technology will accelerate the spread of interactive technologies and applications such as virtual and augmented reality (AR/VR), paving the way for new opportunities (Manas, 2018d, 2018f). Alkan predicts that with 5G, cloud solutions will become prominent, eliminating the dependence on local and powerful computers (Alkan, 2021c).

According to technology opinion leaders, another obstacle to the diffusion of disruptive technologies is battery technology. Battery technologies, which are mostly discussed in the context of the future of the automotive industry (electric and autonomous vehicles), are, according to technology opinion leaders, vital and central to the future of all disruptive technologies that go beyond the future and needs of the automotive industry. From nanotechnologies to gadgets such as watches, phones, tablets, and eventually robotics, battery technology is as relevant as electric vehicles. As one of the biggest technological challenges, battery technology is a major bottleneck for many technologies (Manas, 2018b, 2019a, 2019g). To emphasize the importance of the issue, Manas states

that if there is to be a technological “revolution,” especially in robotics, it will be closely dependent on the developments in the battery technology (Manas, 2019i, 2021b). Kuzuloğlu also expresses remarkable views on this issue. According to Kuzuloğlu, battery technology is the “fire of the modern age” (Kuzuloğlu, 2017r). From this point of view, he points out that “the primary need of the 21st century is a new battery technology.” According to him, “the only thing that will make so many mobile devices relevant” is a new battery technology (Kuzuloğlu, 2012b). The potential developments in this field will transform many areas from “devices to political regimes,” thus becoming “the most game-changing global technology of the future” (Kuzuloğlu, 2017g).

Thus, overcoming the bottlenecks in front of disruptive technologies, and increasing the impact of technologies by engaging in a convergence relationship with transformation, will unlock the door to technical and social transformations that are difficult to predict today. The convergence of technologies will ultimately bring about the convergence of man and machine. As further discussed, in sub-section 3, in the dominant technological discourse and singularity narrative, digital transformation as a process is presented as the prehistory of the human and machine convergence (Manzanares, 2019).

The developments in the field of technology and the potential of disruptive technologies, together with the narratives about the convergence of man and machine, show that the equation between humans and machines has begun to change dramatically in favor of the machine. In Alkan’s words, one of the first and most important results of this new technological ecosystem, where “developments that break the limits of imagination” (Alkan, 2021d) are taking place, is that the efficiency of disruptive technologies has left humans far behind in many aspects. Technology opinion leaders read the current developments as a shift in the equation between machines and humans (Say, 2015k). In this respect, the fact that man can no longer compete with the machine¹³ should be recognized and not taken for granted (Manas, 2016a). Deep learning, in particular, will

¹³ Until recently, this phenomenon was about computation and processing capacity. Now, most of the advances in AI are taking place in machine learning and deep learning (and pattern discovery). When considered from this perspective, it is clear that the term artificial intelligence is mostly used in the sense of machine learning. Misunderstandings arise from not capturing this significant detail. This detail, which is as important for the debate on AI and consciousness as it is for the distinction between narrow AI and general/super AI, is also a key factor in the myths and hype surrounding AI.

eventually solve many artificial intelligence problems (Alkan, 2016c; Say, 2016a), pushing progress in this field even further, changing many other equations and paving the way for disruptive changes (Kuzuloğlu, 2018f; Yeğen, 2020a). According to Kuzuloğlu, who states that he is “glad to be able to witness the birth of the era of artificial intelligence” (Kuzuloğlu, 2016i), the days when this field, which is experiencing “the kind of development[s] that oscillate between amazement and anxiety” (Kuzuloğlu, 2017j), will become “the ‘primary’ reference source for decisions about our lives,” might be closer than we believe (Kuzuloğlu, 2018j).

Technology opinion leaders explain the change in the equation in favor of the machine mainly with rationality. The existing capabilities of artificial intelligence technology and the work being done to enhance these capabilities take this technology a step forward in terms of decision-making mechanisms. In broad terms, the ultimate goal of robot/robotic technologies is to replace human physical skills, while artificial intelligence aims to replace cognitive skills that require “intelligence” (not consciousness). In this respect, the common theme in the views of technology opinion leaders on artificial intelligence (AI) and robot/robotic technologies is that the decision-making mechanisms of machines have more rational decisions than humans. Whereas “humans are very fallible, expensive and imperfect” (Kuzuloğlu, 2017i), machines signify “stable and cheap” (Alkan, 2019c), “less time and with fewer errors” (Yeğen, 2021c), “more rational, impartial and qualified choices” (Kuzuloğlu, 2017o). According to Say, AI should be “benevolent but always logical and rational” (Say, 2017l).

In the mainstream technological discourse that considers technology as a process of creative destruction, it can be easily observed that technology is handled on the axis of opportunities and risks. It can be said that this approach, which is also seen in the views of the opinion leaders, does not ignore the risks. Nevertheless, this attitude, which is centered on the idea that technology facilitates daily life, and that the development of civilization is largely the result of technical and technological advances, is closely related

to the belief that the digital transformation that will occur with disruptive technologies will continue this line of technical/technological progress despite everything.¹⁴

In this framework, the most prominent point in the technology opinion leaders' arguments on the facilitation of everyday life by technology is that the machine, armed with superior skills and as a monument of rationality, enables human beings to transcend their limitations. According to technology opinion leaders, the inversion of the machine-human equation, which is one of the inevitable consequences of technical/technological progress, and the penetration of technology into every corner of daily life more than ever before, contains the potential of technologies to make life easier and increases expectations from technology. Advanced technology will save people from "boring" and "repetitive" work (Alkan, 2019b; Say, 2017h; Yeğen, 2015q, 2017b). With the automation of the heaviest, most tedious, and routine tasks by machines, people will be "freed from working like robots" (Yeğen, 2019b). and will gain "additional time" to use their intelligence more (Yeğen, 2018b). Advancements in AI technology entail unprecedented possibilities across diverse sectors including healthcare, and education, enhancing information management through improved data processing and categorization, along with bolstering security measures. These innovations herald a promising future filled with novel capabilities and advancements (Alkan, 2017; Yeğen, 2015). A future scenario in which self-driving cars reduce accidents, the need for oil disappears, artificial intelligence acts as a judge, and robot assistants are part of our daily lives awaits us (Alkan, 2020b; Manas, 2016i, 2019e; Say, 2017f; Yeğen, 2015p, 2016a, 2016f, 2016g, 2019a). In this future scenario, one of the most important issues for opinion leaders is the expected transformations in the field of health. Organs to be produced with 3D printers and diagnoses to be made by artificial intelligence with a high rate of success will be the most important achievements of digital transformation. According to Yeğen, more of these

¹⁴ It may be argued that after the World Wars, there was an awareness of the destructive effects of technology. Nevertheless, Tocqueville's views on the Industrial Revolution in England as early as 1835 clearly show this two-sided attitude: "From this foul drain the greatest stream of human industry flows out to fertilize the whole world. *From this filthy sewer pure gold flows* [italics mine]. Here humanity attains its most complete development and its most brutish; here civilization works its miracles, and civilized man is turned back almost into a savage" (1979, pp. 107–108).

technologies entering our lives means a more prosperous future (Yeğen, 2019b, 2019a) where we are most likely to “live life with more joy” (Yeğen, 2018c).

Nonetheless, while the diffusion of technology means, first and foremost, a much easier life and the overcoming of human limitations, to a great extent, transformation inevitably brings many risks and uncertainties. In this context, the fact that machines make qualified and rational decisions implies first and foremost the transformation of work and business life. This conclusion coincides with the fact that economic relations are at the center of modern society, as underlined by sociological thought: Industrialization and modernity are two phenomena that call upon, transform, and move each other forward. At the heart of industrialization as a transformation in the context of mechanization of production is the phenomenon of automation. Automation aims to maximize production possibilities, capacity, and efficiency, and in this respect, can be considered at the center of production relations. In this respect, the digital transformation of automation refers, on the one hand, to the further spread of automation in terms of production processes and relations and, on the other hand, to the fact that, unlike previous industrial revolutions, activities that require brain power (‘cognitive repetitive labor’), as well as muscle power (‘manual repetitive labor’), are undertaken by the machine (Davies, 2021). Automation, which has been a part of our lives since the Industrial Revolution, will thus spread to much wider areas both vertically and horizontally with digital transformation and generate disruptive effects.

Production costs, which are both one of the driving forces and one of the outputs of automation, and the point where, in Kuzuloğlu’s words, “the expectations of the consumption curve[s]” (Kuzuloğlu, 2017i) intersect, make human costs, shortcomings, errors, and inefficiencies visible. These developments, which imply the reconstruction of automation, mean that thanks to new and disruptive technologies, human-related shortcomings, errors, risks, and uncertainties are eliminated to a great extent (Yeğen, 2019c). According to technology opinion leaders, these developments will inevitably lead to a new and “different organization of work” by both deepening and spreading automation in the context of production relations (Manas, 2016b). This order will have two important consequences. On the one hand, the spread of automation together with disruptive technologies promises a dramatic reduction in production costs and access to

cheaper products and services, while on the other hand, it will ultimately result in the dehumanization of production mechanisms. According to Kuzuloğlu, no country is in an advantageous position against the cost advantages brought by automation, which is the main element of this new and different business order (Kuzuloğlu, 2017d). Thus, the dehumanization of production processes can be considered as a side effect and inevitable consequence of the motivation to achieve efficiency, speed, accuracy, and cost advantage. It can be argued that this result is not seen by technology opinion leaders as an ontological threat, but rather as an outcome of technical progress, a challenge to be overcome in the new order. Kuzuloğlu argues that even though this process we are going through is qualitatively different from previous transformations, the machines “taking jobs from humans,” to which we “owe our existence,” is a phenomenon that we have constantly encountered since the transition to agricultural society (Kuzuloğlu, 2016d, 2016e, 2017c).

Disruptive technologies are likely to bring about many other uncertainties as well as the transformation of professions/work. While Alkan finds a future in which “tiny robots with artificial intelligence that fix our bodies” are “both exciting and frightening” (Alkan, 2017h), Yeğen introduces a robot that speaks multiple languages and has facial expressions to his followers as “frighteningly real” (Yeğen, 2016d). In a similar vein, Kuzuloğlu asks the question, “Why is it that humanoid robots should be both appealing and frightening?” (Kuzuloğlu, 2018n). According to him, the possible consequences of disruptive technologies “need to be analyzed much further” (Kuzuloğlu, 2018i, 2018n, 2018o, 2019g). Kuzuloğlu draws attention to the fact that many of those who produce and shape technology neglect critical perspectives, which is vital for ensuring that technology serves human values and promotes social good. According to him, there is reason for concern that this might “dehumanize technology” (Kuzuloğlu, 2019c, 2021a).

It is fair to say that the possible destructive effects of disruptive technologies on the social sphere and concerns in this direction are often expressed around artificial intelligence technologies. In Alkan’s words, “as everything gets smarter and becomes infected with artificial intelligence” (Alkan, 2017a), there will be unethical and unacceptable uses of technologies in the future as there are today (Yeğen, 2017a). Yet, opinion leaders do not associate the potential for misuse of disruptive technologies with the technologies themselves, but rather with the people who use and control them (Manas, 2016f). For

example, Say states that “AI engineers have the same feelings as those who developed nuclear weapons” (Say, 2015c). While caring about the ethical debates in this field, he expresses concern about total compliance with the regulations to be introduced (Say et al., 2016; Say, 2017a). Say states that negative scenarios about the future and concerns in this direction should not prevent AI studies as follows: “In the short term, the benefits are clear, in the long term, I think it is unlikely that it will go away” (Say, 2018c). Manas agrees that the direction of the development of AI depends on people (Manas, 2016f). Manas states that “conscience” comes as standard equipment in AI just like humans, but humans have lost it. According to him, he points out that efforts to establish ethical standards for AI technologies indicate that moral boundaries can be violated.

As Kuzuloğlu eloquently puts it, “There is no issue as overarching as artificial intelligence on a universal scale as neither the question nor the subject has an ending” (Kuzuloğlu, 2017p). Kuzuloğlu states that minds are confused about AI technologies and that attitudes on this issue are handled on the axis of hope and fear (Kuzuloğlu, 2016h). Nevertheless, the “swings to the extremes” on this subject can be useful as a warning (Kuzuloğlu, 2016b). According to Kuzuloğlu, one of the reasons for this confusion and anxiety is that popular culture (i.e. Hollywood) presents a false and misleading view of AI’s capabilities. This view makes AI look like “general” (AGI) intelligence. However, the “narrow” AI that we experience today does not harbor “human ambitions and expectations.” According to Kuzuloğlu, the fiction of artificial “general intelligence,” which we encounter more in dystopian fiction, may never come true. According to him, the biggest obstacle to the actualization of this idea is again “the selfishness and arrogance of human beings.” Therefore, it is not artificial intelligence itself that should be feared (in the “narrow” sense), but the humans who will eventually program and control it (Kuzuloğlu, 2017m, 2017l, 2017n).

5.4. The Paradox of Progress: Risk Perception in a Tech-driven World

A close look at the warnings about expectations and worries, hopes and fears, excitement and anxiety, opportunities, and threats in the views of technology opinion leaders shows that they draw attention to the uncertainties of the future, but that, despite everything,

technology is on a path of progress, both technically and in terms of making life easier. In this approach, which can be associated with evolutionary thought, risks, rather than being ontological, even so, correspond to new situations brought about by changes/transformations. Risks thus correspond to new challenges in the course of history. If technical progress is inevitable, its consequences will necessarily be inevitable as well. In this vein, the question of for whom disruptive technologies carry possible disruptive effects becomes significant. For example, automation promises a radical reduction in production costs, while at the same time risking dehumanization. Similarly, for companies that embrace this transformation effectively, it provides a new window of opportunities, while for those who fail to take precautions, it holds the risk of extinction (Manas, 2019d). On a similar note, blockchain technology, which Say describes as a “revolutionary computer science/economics idea” (Say, 2019f), offers the potential to make a state-monopolized privilege available to everyone (Kuzuloğlu, 2018h).

In this respect, it can be considered as a gain for individuals and a risk for states. Thus, It is conceivable that risks and opportunities have a character that varies depending on the position from which the transformation is perceived. In this case, the question of how technology opinion leaders address the actual and potential effects of transformation in terms of policymakers, capital, and society and the positions of these actors becomes important. The answers to this question will help us to understand how opinion leaders view both digital transformation and technical progress, which is largely driven by disruptive technologies, and how they position actors concerning the risks and opportunities.

According to Ulrich Beck, who sees modern societies as risk societies, an increasing (global) awareness of risks has developed in parallel with industrialization, globalization, and technological changes. The reality of risk, which has a global character, makes no social or national distinctions. However, this does not mean that risks can be overcome, and the utopian goal of a world society can be achieved. It is more likely to lead to social inequalities taking new forms. In other words, it means that social inequalities are reproduced through the unequal distribution of risks. The reality of risk is thus likely to bring about new social conditions and conflicts. According to Beck, risks have a two-way character; in new social configurations, risks are not only the dark side of opportunities

but also perceived as market opportunities. Thus, parallel to the development of the risk society, new social antagonisms will emerge between those affected by risks and those who turn risks into opportunities. According to Beck, in this context, the means of communication and the control of information (the relationship between information and power) will play a critical role in the struggle to identify risks:

The social and economic importance of knowledge grows similarly, and with it the power over the media to structure knowledge (science and research) and disseminate it (mass media). The risk society is in this sense also the science, media, and information society. Thus, new antagonisms open up between those who produce risk definitions and those who consume them. (Beck, 1992, p. 46)

Unlike Beck's analysis on the multifaceted nature of risk society, the views of technology opinion leaders, while acknowledging the risks inherent in technological progress, often fails to offer a critical perspective. By framing risks as mere byproducts of change and emphasizing the inevitability of progress, the opinion leaders appear to downplay the uneven distribution of risks and opportunities among the segments of society. This oversight stem partly from their neglect of the power dynamics that shape the narrative surrounding technological risks. Furthermore, they tend to overlook the systemic and structural aspects of technology, often attributing its shortcomings to human failure to realize its potential. Their views appear to illuminate this point.

5.5. Broken Dreams: The Unfulfilled Potential of Social Media

Opinion leaders' assessments of social media (largely Twitter) are largely in line with their general attitudes towards technology in terms of opportunities and threats. Nevertheless, when compared to other (especially disruptive) technologies, they draw a more pessimistic picture. One reason for this, unlike other technologies, the interaction between social media and people are more visible compared to the other technologies. On the other hand, social media use and expectations have changed significantly in terms of individual and social interactions. Thus, despite the potential of social media as an important part of the internet complex to create an information society and bring humanity closer together, it has also brought along many negative effects and risks, and this

expectation has turned into a significant disappointment. Kuzuloğlu states that he initially thought that social media would “trigger a global enlightenment”, but his experiences in the process have shown that the character of different social groups has become more and more apparent within social media (Kuzuloğlu, 2016a). Social media has thus degenerated into a tool that cripples the potential of the information society, so to speak, by degenerating internet culture. The most important factor behind this phenomenon is related to another subject that is often overlooked: “the lazy side of human beings, which is inclined towards pleasure...”(Kuzuloğlu, 2020h). Despite this negative image, social media, like “water seeping through the roof”, contains treasures for those who seek knowledge and those who really want to be informed (Kuzuloğlu, 2019i).

Although they do not express it as clearly and explicitly as Kuzuloğlu, it is quite possible to say that other opinion leaders have developed a relatively critical attitude towards social media in parallel with this changing perception. Nevertheless, this does not mean that the full potential of social media has been utilized. Despite all its negative uses, social media today fulfills important functions in terms of informing the public, strengthening civil society and democracy, and influencing political institutions and policymakers.

Opinion leaders’ observations on social media correspond to a coffeehouse metaphor. When evaluated from this perspective, social media, which resembles a neighborhood coffeehouse (*mahalle kahvehanesi*) (Say, 2020h) , is full of rich examples of the nature of human beings and society, as well as the character of individuals and social mediocrity. In this respect, social media can be considered as a “collective mind barometer” (Kuzuloğlu, 2020e).

Colonized by fake content, trolls, and bots; social media has turned into an environment of disinformation and misinformation, surrendering to hate speech and lynch culture. Social media has turned into platforms where algorithms meet and feed each other with human weaknesses and malicious aspects. Thus, conversations are confined to certain echo chambers and the potential of social media to understand the “other” is greatly limited (Kuzuloğlu, 2017s). This also reinforces the fact that, as Kuzuloğlu observes, Twitter is largely a “medium of transmission, not communication” (Kuzuloğlu, 2014e).

According to Kuzuloğlu, the content and conversations do not go beyond “coffeehouse gossip” (Kuzuloğlu, 2020e). This result, in which everyone becomes an expert, pontificates by rote, ignorance becomes more visible than knowledge, and a cacophony is produced, is nothing but an output of the social mediocrity (mentality). This situation also transforms social media into an apparatus that increases polarization and hatred and serves the opposite result when it is expected to foster a culture of criticism (Alkan, 2020c). Platforms where interaction is constructed as consent, encourage this mediocrity through an algorithmic order. Because the platforms are not able to decide whether the advertiser or the user is the real customer (Kuzuloğlu, 2018c). Thus, in a social environment where no one has a personal agenda and therefore prefers to go with the flow, social media turns into a “circus [and] fair” where individuals turn into a herd (Kuzuloğlu, 2019j). In such an environment, depth and deepening will be out of the question (Kuzuloğlu, 2012d).

In the context of this study, it appears that opinion leaders’ observations on social media are meaningful in at least a certain number of interconnected ways. Firstly, these findings seem to support the framework outlined in the previous section on technology as a general concept regarding its relationship with human beings. This corresponds to the potential of technology as tools and solutions to always produce positive outcomes. However, the human factor is not very visible in the previous section where opinion leaders emphasize the inevitability of technological progress. Roughly speaking, this can be explained by the fact that the opinion leaders’ views have significant parallels with the dominant narrative that the technological largely determines the social. Especially in the context of the full convergence of disruptive technologies, technology as a craft will gain full autonomy and declare its complete independence from technology (*techne*) as understood in the pre-modern period. Especially the discourses and myths produced within the framework of quantum technologies herald the possibility of a paradigm shift in the not-too-distant future. This is closely related to a belief in the possibility that the liberation of technology (general artificial intelligence, autonomous vehicles, etc.) will coincide with the liberation of human beings. Although it is arguably the case that a critical attitude towards technology is gradually asserting itself, this narrative is reproduced with each startling technological innovation and is even widened to include threats. As a strategy of

conviction, opportunities are always recalled in the same context as threats. There is thus a further implication that threats are as inevitable as opportunities, perhaps even more so.

Secondly, in the terms of the interaction between human and technology, while disruptive technologies are likely to render human beings more invisible and dysfunctional, social media makes the human and the collective more visible. Thus, while technology flows “inevitably” towards its own perfection within the framework of the optimization principle, social media can be considered as a plane that reveals human imperfections. This does not mean that social media does not affect the social, nor does it mean that opinion leaders ignore it. Moreover, opinion leaders criticize both social media and platforms from this perspective. Despite all these criticisms, it does not turn into a critical attitude towards technology, even though it stretches the perspective that treats technologies as neutral. After all, it is humankind that both produces and consumes technology. There is no technology independent of human beings. Technology is considered not only as tools and solutions but also as a potential. Social media, then, has the potential to democratize information and make it accessible to everyone. However, social media is a concrete proof that the potential of technology is consumed and misused by humans.

Thirdly, the fact that the opinion leaders’ emphasis on a social medium is highly visible in their observations on user behavior on social media in Turkey is an important sign that they evaluate Turkish society’s relationship with technology within the framework of a culture and mentality (Kuzuloğlu, 2008). Thus, while the attitude towards technology prevents us from realizing its potential, it is observed that opinion leaders associate it with both the flaws of the human (global) and a cultural attitude (local) (Manas, 2016l). At the intersection of technology and culture, social media is a laboratory where knowledge and ignorance, the old (traditional) and the new (modern), real news and disinformation, democracy, and the absence of a culture of criticism are simultaneously observed. Thus, the cultural (local) as well as the humanitarian appears as an obstacle for exploring the potential of technology.

6. POLITICAL DYNAMICS AND MENTAL FRAMEWORKS: ASSESSING THE CHALLENGES OF CLOSING THE TECHNOLOGY GAP

In the previous section, it was claimed that the observations and opinions shared by opinion leaders on the current reflections of technological progress are largely unanimous and that there is no noteworthy criticism that goes beyond the dominant technological discourse, which tends to emphasize the positive aspects of technological advancements and/or emphasize the technological imperative. These perspectives underscore the convergence of fields such as artificial intelligence, the Internet of Things, and robotics, contributing to the expanded reach and heightened impact of technology. It is asserted that technology has now attained an unprecedented level of influence. These advancements, often associated with the notion of creative destruction, are depicted as an inescapable and inevitable reality. In this widely acknowledged narrative, the systematic addressing of disruptions, contradictions, deviations, choices, and the diverse dynamics revealed by technological decisions within their social implications is notably lacking. One contributing factor to this phenomenon is the challenge of keeping up with the rapidly evolving technology landscape. While this remains true on a global scale, it poses even greater challenges for developing countries like Turkey, encompassing not only technical but also cultural aspects.

A noteworthy departure from the prevailing trend among opinion leaders, Kuzuloğlu stands out by offering critical perspectives. One of his tweets addressing algorithms provides a clear demonstration of his relatively critical stance:

Algorithms are not neutral. They never have been, and they never will be. They are merely about scaling the main structure [seems to be referring to capitalism] in terms of speed and quantity. Therefore, the consent given to technology is a form of consent to the dominant mindset. (Kuzuloğlu, 2019f)

It should be noted, however, that akin to his counterparts, he underscores the vital need for Turkey to actively engage in the global science and technology race for the nation's development and progress. The opinion leaders echo the anticipation of narrowing the “disturbing” technological gap, often associated with connotations of backwardness—a phenomenon with a long and dense historical background. In this context, the opinion leaders' attitudes towards global technological developments, fueled by an optimism that gives small room for risks and concerns, but is also nourished by the concept of the technological imperative, occasionally shift to an anxious discourse at times with profound pessimism in the context of Turkey.

All the opinion leaders whose views were analyzed in this study share a common perspective: a profound anticipation for Turkey to actively participate in the technology race and to secure its “rightful place” among developed nations. They are all well aware that the key to this path is to evolve into a society that not only consumes but produces technology.

Within this framework, it can be asserted that even though the opinion leaders whose views were analyzed in this study agree upon the fact that the technology deficit is one of the most critical problems for the development of the nation, requiring an urgent and visionary solution, they hold diverse perspectives on the root causes and the potential solutions of the issue at hand. Despite the differences in details, these predominantly critical perspectives are expressed on two main axes. The substantial criticism directed at the government, public policies, and politicians often attributes the issues to structural problems to a significant extent. In parallel to this, as the second axis, the opinion leaders problematize the failure to close the technological gap as a matter of mentality, a problem that dates back at least two centuries. These two main axes (politics and mentality) cannot be addressed in isolation from one another. The opinion leaders often struggle to determine which is more crucial and more dominant. As much as politics feeds on social conditions and mentality, they also complain about a cultural climate in which politics reproduces these conditions. Thus, in practice, although the solution is anticipated from the state and politics as decision-making authorities, it appears quite challenging for political mechanisms to alter the course of the nation and transcend the societal conditions and mentality that contribute to the current condition as well as to the stigma of

backwardness. From this perspective, it is manifest that opinion leaders problematize mentality as a more important phenomenon. Within this framework, this chapter will focus on their social and cultural criticisms around the concept of mentality, while their criticisms of public policies and the mentality that governs these policies will be discussed in the next chapter through more specific themes.

In this chapter, however, it should be noted that the views of Varank and Bayraktar will be omitted due to their distinct approaches to the issue of mentality. Their views will be incorporated at the outset of the next chapter. Another reason for this decision is that they are actively involved in or contributors to current technology policies. Within this context, they assert that the existing policies will play a role in narrowing the technology gap. Their criticism mainly revolves around the argument that the current policies lack adequate support. Given this distinction, these two stances, representing the two sides of the debate, will be individually addressed along with a comparative analysis between the two positions.

6.1. Innovative and Scientific Mindset

Explanations and narratives on the nature of technological changes are largely retrospective and centered on a particular mindset and on the efforts of individuals and institutions with that mindset. For instance, the historical narrative of the 19th-century Progress and Enlightenment is constructed around a mindset that evolved through the endeavors of scientists like Galileo, Kepler, and Newton, along with transformative events such as the Reformation and the Renaissance. Similarly, Weber's emphasis on the economic and social mentality embedded in the Protestant ethic, leading to the emergence of capitalism, presents a comparable form of explanation. In a similar vein, the perspectives presented by the opinion leaders appear to emphasize two central themes in this context: A profound faith in science and a culture of entrepreneurship, fostered by societal values and norms. These perspectives underscore the belief in the transformative power of scientific advancements, research and development activities, and the importance of cultivating an entrepreneurial spirit as essential elements in achieving a state by which Turkey can actively participate in the technological race.

However, opinion leaders believe that to reach such a state, there needs to be a transformation of mentality. This appears to be one of the focal points of their most significant criticism, extending beyond individual transformation to encompass broader cultural and societal shifts. Their critique revolves around the notion of backwardness, arguing that a stagnant mindset and cultural resistance contribute to the technological gap. In their view, overcoming this gap requires not only individual but also collective efforts to foster a culture and society that embraces innovation and progress.

The concept of mentality has proven to be instrumental for the Turkish intelligentsia and academia in the context of modernization since the Young Ottomans. For the opinion leaders, also, the concept of mentality also has a high explanatory value. For them, while economic and social development and technological progress can only be possible with an innovative and entrepreneurial mentality guided by reason and science, the technological gap not only indicates the lack of this mentality (positive) but also the existence of an alternative mentality (negative). From this standpoint, the experiences of developed countries serve as the most exemplary illustration. Hence, to achieve the goal of “reaching the level of contemporary civilizations,” a capacity for innovative thinking and the necessary conditions for fostering this ability must be established, a sentiment that has been consistently emphasized since the Tanzimat era. The innovative mindset, which is as much a process as it is a state, cannot be considered independent from the effective utilization of limited resources, substantial investment, and dedication to research and development activities as well as the formulation of appropriate and strategic technology policies.

The opinion leaders also portray the mentality that enables progress as an orientation of society, the state, and capital as a whole, meeting based on commonalities rather than differences. Nevertheless, capital and entrepreneurship stand out as the driving forces of progress and technological development. The role of society is confined to fostering a cultural awareness that sustains the trajectory of progress. One dimension of this is that individuals contribute to progress by specializing in strategically determined areas that will create added value and make a difference. Yet, this cultural awareness does not envisage wider participation of individuals in decision-making. The notion of depoliticization within the dominant technology discourse, no doubt resonates with

Roland Barthes's concept of myth. Barthes argued that myths function to naturalize and depoliticize cultural concepts, rendering them seemingly inevitable and universal. In the context of technology, presenting it as apolitical and detached from historical and social contexts reflects a myth-making process. By framing technology as a neutral force governed by common goals, this narrative obscures underlying power dynamics and avoids critical examination of issues such as control, ownership, and sharing. Thus, mythification operates to shape perceptions by presenting technology as an uncontested and inherently apolitical entity.

The role of the state is, however, quite ambiguous, and not easily decidable compared to society and capital. Then again, it is oftentimes positioned somewhere between the two. By improving the quality of education, the state should contribute to increasing the cultural awareness of society and lead specialization in the right way and line with the needs of the market. In this respect, the state is given the role of paving the way for capital and the market, on the one hand, and regulating the market very carefully and sensitively on the other, without hindering innovations. According to this view, the emphasis on the necessity and inevitability of establishing decision-making mechanisms in not so far distant, based on data and science can also be interpreted as a technocratic sensibility—a preference for governance rooted in technical expertise rather than broader political engagement.

Technological progress becomes a plausible outcome when actors within the triad of politics, society, and capital establish an infrastructure (technical as well as cultural) by aligning themselves appropriately with the aforementioned perspective. However, attaining technological progress necessitates a foundation where not only a physical infrastructure but also a mental and cultural infrastructure is in place. This holds for both the dominant discourse in technology circles and among the opinion leaders. The most fundamental element of this infrastructure is scientific enterprise and research and development activities. Of course, knowledge production and R&D activities are not independent of the choices, orientations, and mentalities of actors. However, being scientific and the ability to think scientifically forms the basis for progress. The mentality of progress is thus almost equated with the ability to think rationally and scientifically, while the technological gap is attributed to the absence of these skills.

The ambivalent emphasis on rationality or rationalism not only emphasizes instrumental reason in the Weberian sense but perhaps more than that, it proposes the rejection of unscientific attitudes through labeling as dogmas, superstitions, fatalism, etc. The transformation of mentality is, thus, envisioned as acting in accordance with reason and science and their imperatives. Thus, the root cause of the technological gap is specified as a cultural problem rather than an economic one. In a society that is dominated by political culture and agendas, and composed of individuals who are unable to abandon traditional/conventional patterns of thinking and doing business, it is unlikely to foster an innovative mentality that values the scientific beyond daily and political interests. In this context, the absence of a comprehensive and systematic critique of technology and capital in the opinions of opinion leaders more or less appears to stem from an intellectual extension of anxiety related to the technological gap, specifically, the perceived failure to attain the desired level. In this sense, culture (modernity) and progress (technical/technological development) are interconnected and cannot be regarded as independent entities. Such a distinction not only lacks significance but is also a fundamental cause of lagging behind. These perspectives, by a universalist and enlightenment outlook, frame a dichotomy between being civilized or not, and ignoring contingencies.

6.2. The Fall of Nations and Ways Out: Different Perspectives

It can be asserted that the intellectual debates on the themes of underdevelopment and development in Turkey have, to a certain extent, been carried out on two main axes that intertwine with each other. One of the common points of these two approaches is the presupposition that the West offers the best model in both respects. The character of the institutional structures that have emerged in the West throughout history is associated with positive outcomes such as freedom of expression, participatory democracy, rule of law, free market economy, encouragement of innovation, and entrepreneurship. Such phenomena are seen as essential elements of technical and social progress and sustainable development.

The first of these approaches, which can be roughly categorized under two headings, is the criticism that points to structural problems, which are primarily seen in economics-based approaches. Structural problems focus as much, if not more, on freedom of expression, democracy, the character of political institutions, and the shortcomings of policies carried out within the framework of these themes, as they do on economic policies. Cultural orientations/attitudes (cultural dynamics) constitute the second main axis of this debate. Discussions within this context, consider the realization of technological progress and development in relation to specific cultural dynamics. In other words, cultural attitudes largely shape the processes of development and progress. Approaches that try to explain underdevelopment through cultural orientations largely associate structural problems with cultural orientations. Structural/institutional problems are largely considered a result of cultural orientations and the dominant mentality. First and foremost, this process is considered a cultural change that expresses the transition from a faith-centered worldview to a worldview centered on reason and science. In Turkey, this cultural transformation, which would make technical progress achievable, is particularly associated with the concept of mentality. Mentality not only corresponds to a worldview but also refers to the patterns of thought that determine our actions. Thus, there are different degrees of cultural essentialism in these explanations.

Sabri F. Ülgener is one of the most important figures in Turkish academia to address the issue of mentality and underdevelopment in detail. Ülgener first and foremost uses mentality in the sense of economic mentality and addresses it in the context of the question “Why could not we capitalize?” It is possible to see this as a form of the question “Why did we fall behind?” by extending it to the economic context. According to Ülgener (2006a, p.4), mentality is the structure that creates both material and social aspects of a culture. Ülgener, who sees mentality as “the total of values and beliefs,” claims a society’s understanding of morality consists of a set of norms and rules as the output of this world of mentality (p.17). The basis of the “medieval mentality” that hindered Turkey’s progress was traditionalism and an understanding of authority (hierarchy) (p.109). As a result of this, a way of life resistant to all kinds of change and innovation (p.107), a “stagnant, idle understanding of life” (p.81), a “lack of concern for the future” (p.79), and a stance that is completely dependent on the land and keeps its wealth “buried” without capitalizing

and activating it (p.237). According to Ülgener, the typology derived from such a mentality encompasses those content with their fate, not inclined to complain about their condition and circumstances, individuals who are satisfied, and do not deviate from the ordinary (p.120). Additionally, it includes those who, despite having an affinity for gold and silver, do not leverage them as economic tools but rather use them solely as a means of indulgence and status (p.154). This attitude described by Ülgener closely aligns with how the opinion leaders perceive the social and cultural structure of Turkey. Despite its individualistic appearance, this perspective, excessively communal, does not prioritize the greater good of society. The culture of Sufism, rather than Islam, is identified by Ülgener as the root cause of this mentality and human typology. If the reasons for the backwardness in the East were to be listed, Islam would come last (p.84). This is because Islam is actually the religion of trade and merchants. But Sufism is dominated by the mentality of artisans and craftsmen (p.114). In the early Islamic periods, the mentality of victory and jihad brought with it movement, dispersal, and spreading to different places. With Sufism, however, this was reversed and became “a philosophy of patient and humble inertia that dislikes changing places and lands” (p.179). The rise of Sufism transformed the ideal human type from one characterized by bravery and valor to a modest and ascetic ideal, fundamentally altering the cultural fabric, which, according to Ülgener stands as the root cause of the lack of (technical/technological) progress.

Unlike Ülgener, Cavit Orhan Tütengil (1963) addressed the problem of underdevelopment with a more economics-based approach. According to Tütengil, physical and human geography, race, or religion alone cannot determine underdevelopment and cannot provide a final framework of analysis. From this point of view, Tütengil puts an important distance from cultural essentialist approaches. One of the things that makes Tütengil’s analysis valuable is that he bases his analysis not on a comparison between developed and underdeveloped nations based on current conditions but on the differences between pre-industrialized European countries and today’s underdeveloped countries. According to him, there are basically three major differences between pre-industrialized European nations and underdeveloped countries. First, the development of European nations has a cumulative character. Industrialization was already achieved with more or less intellectual, economic, and social capital. Secondly,

the existence of the bourgeois class with efficient financial practices, (capital accumulation) and entrepreneurial spirit has been the driving force of progress. Thirdly, and in parallel to the second point, the existence of a pre-industrial middle class helped industrialization to take place. Tütengil does not elaborate on the existence of a pre-industrial bourgeoisie and middle class or the character of these classes. Nevertheless, his emphasis on both the cumulative character of progress and the concept of class as well as his assertion that underdevelopment or progress cannot be reduced to cultural elements distinguishes him significantly from cultural and essentialist approaches. Although various versions of this historical socio-economic interpretation have emerged in later scholarly analyses in later times, this perspective was not widely embraced among Ülgener's contemporaries. The perspective put forth by Tütengil, which emphasizes the cumulative nature of progress and the role of class while rejecting cultural reductionism, is notably absent in the views of the opinion leaders.

In this context, the views of the opinion leaders appear to oscillate between Ülgener's cultural perspective and approaches akin to those of scholars like Daron Acemoglu, who provides an analysis of structural factors to explain the dynamics of economic and technological development. In their book, *The Fall of Nations*. Daron Acemoglu and James Robinson (2012) attempt to challenge three common explanations for the decline of nations and the origin of inequalities. These are the geography, culture, and ignorance hypotheses. The first hypothesis is the widespread belief that "geography is destiny." In this form of explanation, geography is used to refer to the resources of a country. Thus, it is claimed that (natural) resources are the most fundamental determinant of a nation's success. The second hypothesis establishes a relationship between culture and wealth. According to Acemoglu and Robinson, the explanatory power of the culture hypothesis is quite limited. Rather than being an independent variable, culture is largely a product of structural elements (institutions). It is the result rather than their cause. In this framework, the relationship between religion and development is a weak one. Neither Weber's explanation linking Protestant ethics to progress nor the explanation linking the poverty of Middle Eastern societies to Islam are useful generalizations. Lastly, the ignorance hypothesis sees the decline of nations in terms of a lack of knowledge on the part of rulers or society about what the right policies are and how to implement them. Unlike the other

two hypotheses, the ignorance hypothesis seems to offer a ready-made prescription. Problems will be overcome if enlightened, knowledgeable rulers are put in charge or if they are given the right guidance to implement the right policies. Acemoglu and Robinson argue against all three hypotheses and try to offer a non-essentialist form of explanation.

Their primary emphasis in the analysis is on the critical role of inclusive institutions, as they argue that development and progress can only be achieved through the presence of such institutions. They assert that not only the Western experience but also the experiences in the East, in places like Korea and Japan, prove this. The reason why the Industrial Revolution started in England is closely associated with the existence of “unique inclusive economic institutions” that emerged in England in the historical process. The development of these economic institutions was based on the inclusive political institutions that emerged after the Glorious Revolution in England in 1688. After the Glorious Revolution, a series of rational policies such as strengthening property rights, developing financial markets, weakening state-sponsored monopolies in foreign trade, and paving the way for a free-market economy could be put forward. Thus, technical, and technological progress paved the way for an inclusive political understanding that was sensitive to the wants and needs of society.

According to Acemoglu and Robinson, inclusive economic and political institutions, as in the case of the UK, explain the rise of nations better than any other hypothesis. The decline of nations is closely related to the existence of exploitative economic and political institutions:

Nations fail today because their extractive economic institutions do not create the incentives needed for people to save, invest, and innovate. Extractive political institutions support these economic institutions by cementing the power of those who benefit from the extraction. Extractive economic and political institutions, though their details vary under different circumstances, are always at the root of this failure. (2012, p. 372)

Thus, while inclusive political and economic institutions play an incentivizing role, exploitative political and economic institutions function oppositely. They are oriented towards protecting the interests of a certain minority and power holders. In such a

structure where resources are distributed unfairly and inequality increases, it is not possible to achieve a sustainable economy and prosperity.

This framework drawn by Acemoğlu and Robinson can be considered an important departure from essentialist explanations, especially in the cultural sense. Although the necessity of inclusive institutions as the key to progress and prosperity is a phenomenon discovered through the Western experience, they avoid explaining it in terms of Western cultural codes. Thus, imitating this experience as a model, i.e. building inclusive economic and political institutions, would mean realizing development by imitating the Western institutions, not its cultural codes. It has more to do with choices than the scarcity of resources offered by this region, cultural orientations, or ignorance. These choices are political as well as technical. One significant shortcoming of both Acemoğlu and Robinson, as well as the opinion leaders, is their oversight of the Western experience of colonialism and primitive accumulation. In essence, the formation of institutions occurs in the aftermath of colonialism and primitive accumulation, contributing to their distinctive nature. This aspect raises concerns about the oversimplification and subtle depoliticization inherent in their approach, as they neglect the intricate relationship between institutional development, political power dynamics, and historical contexts/contingencies.

When evaluated in terms of the attitudes expressed within the framework of the underdevelopment problem, it is observed that the most important common aspect in the criticisms of the opinion leaders, not excluding Varank and Bayraktar, is the issue of mentality, despite the differences in the content and perspective. In the case of the opinion leaders, excluding Varank and Bayraktar, however, they exhibit a partial alignment with Ülgener in their emphasis on mentality, while also adopting Acemoğlu and Robinson's focus on institutions.

Although political actors and the government are the main addressees of the criticisms raised by the opinion leaders in this context, society and the business world also receive their share. The reason for this is that the opinion leaders are concerned about the difficulty of realizing and sustaining the ground that will make it possible to produce technology and a total digital transformation without cultural awareness and transformation. In other

words, the problem is largely one of mindset. Steps taken and to be taken to close the technological gap without confronting this situation may offer palliative solutions in the short term. However, failure to realize a deep-rooted mindset transformation may lead to a deepening of the technological gap in the long run. This situation, which has a complex structure, stands before us as a problem that is difficult to solve, with many intertwined phenomena feeding each other.

In the upcoming sections, the perspectives of opinion leaders will be explored with a nuanced lens, seeking to unravel the individual viewpoints that contribute to the broader collective stance. This approach aims to recognize and explore the diverse range of opinions within this discourse. The opinion leaders seem to anchor their hopes on a clear understanding of the origins of the problem and potential solutions, rather than relying on the prospect of achieving a total cultural transformation in the short term. Additionally, the acknowledgment of societal and technological shifts, alongside the influence of the digital era on new generations, may act as catalysts pressuring toward a cultural transformation and integration with progress. In this context, their stance can be viewed as an anticipation to hasten this evolving process.

6.3. Belatedness as a vicious circle

Although the fact that Turkey has lagged in the technological race has not led to a complete abandonment among the opinion leaders, it is clear that they oscillate between hope and despair. Undoubtedly, due to their positions and characters, the opinion leaders give reactions that sometimes overlap and sometimes diverge. Especially in the statements of Manas and Kuzuloğlu, oftentimes a deep pessimism can be observed. According to Manas, Turkey is far from having a cultural and political mentality suitable for the training of entrepreneurs such as Steve Jobs and Elon Musk, or the development of major technological projects and, in parallel, for the creation of a Silicon Valley-like technology ecosystem (Manas, 2011, 2020b). Although profound change and transformation are needed to overcome this phenomenon, the opportunities to catch the trend of progress have been wasted one by one, and the questions asked about the causes of this phenomenon have become almost meaningless (Manas, 2021c). At this point, not waking

up from a state of slumber and not developing the right strategies will be costly and may cause Turkey to become a colonial country (Manas, 2021a). According to Kuzuloğlu, it is not meaningful to expect an improvement under the current circumstances. Like a gambler, Turkey is spending its future incalculably. According to Kuzuloğlu, “Turkey’s plans for the future are like the recklessness of a prodigal son who bets with the three pennies in his family’s hand” (Kuzuloğlu, 2014l). This sad picture of the country seems to take one to the brink of madness. According to Kuzuloğlu, who defines himself as “a journalist, obsessed with technology & trends”, this interest in trends serves as a kind of “antidepressant” for him (Kuzuloğlu, 2017f). “In a country where all priorities are saving the day (self) and rent,” it will not be possible to overcome the current conditions; at most, “unique intermediate ways” will be found (Kuzuloğlu, 2020c). Against this negative picture, Kuzuloğlu paints, it seems that he also carries the hope that one day common sense will prevail and his criticisms should be evaluated within this framework (Kuzuloğlu, 2019k).

In contrast to Kuzuloğlu and Manas, the other opinion leaders expressed a relatively more optimistic tone regarding the future and the possibility of overcoming the phenomenon of Turkey’s delayed development. Among these figures, Cem Say, who fiercely criticizes policymakers (the government) the harshest, believes that the mentality in power and individuals with similar mentality are not likely to have a say in the future. The new generation will break this cycle in the light of reason and science (Say, 2020m). Sina Afra, on the other hand, does not find it meaningful to lose hope and become pessimistic. He refers to the importance of keeping hope alive and realizing the potential of the country despite all kinds of negativity (Afra, 2014f, 2016). Tansu Yeğen and Hakkı Alkan similarly avoid painting a pessimistic picture. It can be asserted that their views emphasize the optimism of the will rather than the pessimism of the mind (Alkan, 2021e; T. Yeğen, 2021). Thus, the problem of mentality forms the background of the opinion leaders’ discourse that oscillates between cautious optimism and pessimism. It is seen that hope is constantly postponed but not abandoned, turning it into an expression of anticipation for the future (time and generations).

The assessment of Turkey’s current state by the opinion leaders is marked by an anxious and troubled demeanor in both perspectives, albeit to varying degrees. According to

Ahiska (2010), the primary cause for concern lies in the connotations associated with technological differences, which imply a sense of lateness and backwardness in the context of modernity. Tütengil asserts that this disconcerting situation is intertwined with the consciousness and awareness of being late, and as the level of awareness increases, so does restlessness. However, Tütengil suggests that this unease can yield positive outcomes by raising awareness that the solution lies within and can be addressed through sacrifice and hard work (1963, p. 159). In this framework, individuals who influence public opinion, although not easily categorized as intellectuals in the traditional sense, bear significant responsibility, especially in the age of social media. Despite the challenge of finding a pure intellectual typology applicable to broad audiences, these influential figures, even with ideas that may lack systematic organization, contribute to raising awareness among the masses.

6.4. Codes of the Western Mind

The perception of scientific and technological progress among opinion leaders is characterized by a holistic view, acknowledging it as a collective achievement of humanity rather than the exclusive efforts of individual nations (Kuzuloğlu, 2020d; Say, 2018g, 2020l). They view progress as an outcome of the scientific and technological endeavors of developed countries that have embraced the modern mentality, which is commonly associated with a cultural attitude that prioritizes reason and science, originating in the West and aligning with the Western experience. It is crucial to note that opinion leaders emphasize the universality of progress rather than promoting overt Westernism. This is to say that, while they acknowledge the Western experience as a prominent example, they emphasize the universal principles of reason and science upon which it is founded. Although the West still stands as a practical example, every nation will be part of the race for progress if the principles that make progress possible (reason and science) are adopted as a mentality and are supported by institutional and structural elements. For example, although countries such as the United States, China, Korea, Japan, Israel, and India are in a race and competition in terms of national strategies and each of them tries to stand out, this does not change the fact that they contribute to progress to different extents (Say, 2018a). Therefore, scientific and technological progress possess a

universal character, contributing to the advancement of civilization and humanity (Say, 2015l, 2017f).

The remarks of opinion leaders on China provide an interesting case in this regard. China's transformation into a technoscientific superpower, along with its underlying reasons captures attention. Although China has an authoritarian regime and a very poor record in terms of freedoms, China's competitive strategy in the field of cutting-edge technologies and space achievements is striking. According to the opinion leaders, China's successes can be attributed to its emphasis on science and well-educated human resources, enabling it to keep up with the competitive conditions. In this respect, according to opinion leaders, thanks to science, China has been able to position itself as a key player for the future (Alkan, 2021b; Kuzuloğlu, 2011b; Manas, 2014a; Say, 2018a; Yeğen, 2017c).

Even though opinion leaders paint the big picture of technological progress in this way, they make a distinction between countries that are contributing to technological progress and those that are lagging behind in the race for progress, which mostly follow these developments and consume the products and solutions generated by this progress. In this context, Turkey is currently far from being an actor in this progress. Before discussing how they characterize the situation that prevents Turkey from being part of this race, it would be meaningful to touch upon their views on how countries that have succeeded in becoming part of the technological race have done so.

Technological progress, as an achievement, is, for the opinion leaders, more than anything else, not an accidental phenomenon (Manas, 2015c). The transformation of creativity into progress takes place primarily against a cultural background. Only in this cultural background can different elements come together harmoniously and synthesize with great skill. Progress is the output of such a mindset. The basic characteristic of this mentality is, first and foremost, scientific understanding and the importance of knowledge, and technical and technological progress cannot be handled independently of this understanding. Countries that have succeeded in becoming a part of technological progress guided by reason and science have been able to build inclusive economic and political institutions and, within this framework, have been able to create a dynamic

culture and ecosystem that allocates sufficient and strategic resources to education (Manas, 2018g; Yeğen, 2018a), and research and development, and encourages entrepreneurship and hard work (Yeğen, 2015a). Indeed, it is only on such a cultural ground that the free circulation of ideas and competition, and a culture of efficiency and innovation can flourish (Yeğen, 2015d).

While opinion leaders commonly emphasize science and reason, widely recognized as Western values, they also juxtapose these with the Eastern mindset when examining the current conditions. While countries that have managed to be part of the race for technological progress have managed to create a culture that can fulfill the requirements of the information age, the situation is quite different in the Middle East. Turkey, on the other hand, seems to be stuck between these two different mentalities (East vs. West), unwilling to give up both worlds despite everything (Manas, 2016k). According to opinion leaders, this in-betweenness constitutes one of the most important obstacles to development. The concept of Easternness, denoting a mentality rather than a specific geographic region, poses a significant impediment to the cultivation of a culture that fosters science, reason, and progress.

The terms “technology,” “progress,” “science,” “innovation,” and “reason” hold symbolic power, representing different cultural narratives. In the “West,” they evoke innovation and efficiency, whereas in the “East,” they may align with heritage and alternative paths to progress, if not stagnation or regress. The Eastern mentality (and Muslims) is far from contributing to technical and technological progress and civilization (Manas, 2015b; Say, 2014e, 2014f, 2015j). According to Manas, the production of patents as an important indicator of development is a criterion that well explains the value the Eastern mentality attaches to innovations and the negative state it is in. Manas draws attention to the discrepancy between the share of Muslims in the world population and the share of patents they produce. Manas associates this situation, which he describes as a phenomenon that cripples the ability to develop even simple solutions, with a lack of questioning, self-criticism, and a fatalistic view (Manas, 2017c). Similarly, Kuzuloğlu characterizes the Eastern mentality as “the inability to face one’s mistakes, to ignore them, to make excuses” (Kuzuloğlu, 2018e). This is one of the major reasons for the failure of the East vis-à-vis the West. According to Say, who often emphasizes that humanity is uniting

around a global civilization, Turkey should make the right choice and be “the part of humanity that explores other planets” rather than “the part that chops down heads or trees.” Indeed, according to him, “victory” will be for those who give importance to reason, science, and technology development (Say, 2017e).

The critiques voiced by opinion leaders, such as Manas and Kuzuloğlu, not only contribute to current cultural discussions on technological progress but also reflect a reinterpretation of the history of modernization. Their emphasis on questioning, self-criticism, and innovation within a holistic cultural context suggests a deliberate effort to redefine historical narratives, selectively choosing examples that align with their vision of development. This nuanced approach calls for a reevaluation of historical perspectives and the incorporation of diverse cultural elements in the discourse on technological advancement. Furthermore, the sentiments of anticipation for progress and anxiety about the technological gap/lag operate hand in hand, creating a dynamic oscillation between the two in their perspectives.

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6.5. Geography as Destiny

A key theme that reveals the anxiety of opinion leaders is their interpretation of geography, emphasizing that it acts not just as a physical reality but as a mental category intertwined with historical residues, shaping Turkey’s socio-cultural mentality and potentially hindering development and change. Their choice to echo existing cultural vocabulary, utilizing “geography” with a more negative connotation than that of “culture,” in the local context, reminds us of Goffman’s concept of stigma, where certain attributes become powerful symbols carrying societal judgments. In this context, the term

“geography” takes on a stigmatizing role, laden with historical residues and mental constraints, reinforcing the opinion leaders’ narrative of Turkey’s challenges as deeply entrenched and difficult to overcome. For the opinion leaders, geography is more of a mental category than a physical reality, in the sense that the residues of the past cannot be easily abandoned and prevent one from acting following the conditions of the times. In this context, geography also seems to be equated with the concept of mentality. Turkey’s unique socio-cultural mentality performs a function that limits, rather than paves the way for, the potential for development and change. As a burden of the past, mentality constitutes an obstacle to the future.

According to Kuzuloğlu, Turkey insists on repeating the same mistakes and not learning from the past. According to Kuzuloğlu, “This geography is like an Alzheimer’s patient who has been awarded immortality. It is doomed to live the same life over and over again, forever.” This vicious circle cannot be broken, and a strong vision that promises hope cannot be put forward. This emphasis on geography as fate reveals a deep anxiety rather than a reckoning. This anxiety is described as “a determinism woven by the machine of political geography” to borrow from Mollaer’s expression (2018, p. 16). This intractable problem is related to the cyclical character of mentality as an obstacle to progress. The mentality thus takes on an insurmountable, almost deterministic character, in which detachment from the world’s agenda and inward/self-containment multiply and invoke each other.

This perspective, overtly expressed by Kuzuloğlu and subtly interwoven into the views of other opinion leaders, suggests strong echoes of orientalist discourse, encompassing elements such as cultural essentialism and the dehistoricization of the East. As Arif Dirlik (1994, pp. 97–98) notes, Edward Said’s critique of orientalist discourse reveals an epistemological foundation rooted in cultural essentialism, portraying societies through simplified cultural traits. This tendency, termed culturalist essentialism, homogenizes spatial and temporal dimensions, overlooking internal spatial differences within societies and categorizing diverse Asian cultures under a common “oriental” label. Temporally, on the other hand, it substitutes a timeless cultural essence for the dynamic lived experience of culture, resulting in a desocialized and dehistoricized conceptualization. This perspective is essential for understanding why orientalist views simultaneously admire

civilizational achievements and consign oriental societies to historical antiquity, as culture replaces a nuanced understanding of their historical development.

According to Said, orientalism goes beyond a simple geographical categorization and involves “a distribution of geopolitical awareness into aesthetic, scholarly, economic, sociological, historical, and philological texts” (Said, 1979, p. 12; as cited in Dirlik, 1996, p. 98). In this sense, it operates as an “epistemological reordering of the world,” indicating that as a representative practice, it is not solely an “intellectual instrument of imperialism,” but rather is “intellectual imperialism” (Dirlik, 1996, p. 98). The “epistemological reordering of the world,” becomes evident in the machinery of discursive and representative practices:

The things to look at are style, figures of speech, setting, narrative devices, and historical and social circumstances, not the correctness of the representation nor its fidelity to some great original. The exteriority of the representation is always governed by some version of the truism that if the Orient could represent itself, it would; since it cannot, the representation does the job, for the West, and *faute de mieux*, for the poor Orient. (Said, 1979, p. 21).

The perception that “geography as destiny” poses a difficult problem, rooted in a cyclical mentality resistant to progress, aligns with Said’s notion of the unbroken machinery of representations shaping geopolitical awareness. Both critiques highlight deep-seated anxiety and determinism, exposing a struggle to break free from historical patterns and engage with a transformative vision based on science and reason.

6.6. World agenda vs. Turkey’s agenda

This dichotomy of withdrawal/detachment from the world is often emphasized in contexts where opinion leaders point to the strong difference between the national agenda and the world agenda (Alkan, 2017e; Aydın, 2017). According to them, the domestic issues of the country and the political agenda seem to have imprisoned the society as a whole in an invisible cage. The opinion leaders’ views in this direction correspond to Ahmet Hamdi Tanpınar’s following lament expressed in his diaries: “Turkey does not allow its children to occupy themselves with anything but themselves.” In a similar vein, Kuzuloğlu argues

that Turkey is “a geography closed to itself and its troubles” (Kuzuloğlu, 2019d). Thus, the country is cut off from the outside world and far from reality, condemned to be content with merely watching the developments in the world (Kuzuloğlu, 2014m; Manas, 2014b). It is possible that this “illusion” and the state of dormancy in which the country finds itself could have serious and irreversible consequences (Kuzuloğlu, 2016f). The deep dissonance between Turkey and the world agenda, which Say criticizes in a similar but rather sarcastic manner, is closely related to Turkey’s socio-cultural and political preferences (Say, 2016f, 2017c, 2018i). According to Manas, Turkey cannot read and perceive the world (Manas, 2019h). This situation, which deeply worries Manas, and causes Turkey to lag behind, is largely due to the colonization of the entire agenda by domestic politics (Manas, 2015a, 2016d). Too much focus on the country’s domestic affairs prevents it from having the mindset to understand, let alone be a part of, the scientific and technological developments and space discoveries taking place in the rest of the world, and this is likely to lead Turkey’s future towards an undesirable and worrying direction. What is desirable, then, is the country to be integrated into the world agenda and system in a broad perspective. This integration will pave the way for being part of scientific and technological progress, achieving a competitive position, and increasing the overall welfare of society.

According to the opinion leaders, one of the main reasons for the disconnect between the world’s agenda and Turkey’s agenda is that the current political agenda has invaded all areas of daily political debate, leaving no room for any other agenda. This situation, which absorbs all the energy of society, occupies people’s minds, isolates them from developments in the world, and confines them within daily politics. This situation, as described by the opinion leaders, gives hints about their disdain for (daily) politics and aligns with the concept of depoliticization, where political discourse and engagement are constrained or overshadowed by other concerns. It is hinted that focusing more on technology, rather than on politics, appears to be the solution. This inclination is undoubtedly a manifestation of a global and broader trend where political discussions are becoming increasingly marginalized, and alternative approaches, such as technological advancements, take precedence in shaping societal priorities. The elevation of technology over politics in this context could be seen as a myth that positions technological solutions

as natural and unquestionable alternatives to political discourse, contributing to a depoliticized worldview, championed by Silicon Valley elites (Turner, 2018).

To a significant extent, opinion leaders make their criticisms on a more indirect or abstract level rather than making topical comments on the intense agenda of politics. Say and Manas differ from other opinion leaders at this point. Among the opinion leaders analyzed in this study, Say, who uses Twitter the most intensively, shares mostly about daily politics. A small number of these posts are under the theme of science and technology. Manas, on the other hand, intensely and concretely criticizes public policies in parallel with the agenda on the intersection of technology and economy. It is observed that opinion leaders other than Say and Manas refrain from making political comments to a significant extent, except for the Twitter and Wikipedia bans, and in the events of the Gezi and the July 15, 2016.

In this context, opinion leaders portray politics as a necessary evil, albeit an unpleasant one, at least for the time being. This is particularly evident in the case of Turkey. Politics (state, government, parties) in Turkey seems incapable of developing policies and effectively establishing regulatory and guiding mechanisms to catch up with science and technology-producing countries. This situation is associated with two intertwined phenomena with blurred boundaries. On the one hand, there are chronic structural problems in many areas such as education, law, and the economy. In this context, the distortions in the education system, the slow pace of the democratic system, serious concerns about freedom of expression, and interventions in lifestyles are among the issues frequently mentioned. On the other hand, the social environment and mentality both feeds and is fed by this situation. What is worrying at this point is the absence of social and political awareness of the need for total development, the steps that need to be taken in this direction, and what should be prioritized. As mentioned earlier, this is due to the mentality codes that dominate Turkish society.

Opinion leaders often complain about a cultural atmosphere where politics meets mentality, feeds it, and feeds on it. This cultural atmosphere, which is one of the issues they are most concerned about, and which causes them deep anxiety, sucks the energy of the society like a vacuum, trapping Turkey within itself and isolating it from the world.

In this context, one of the biggest problems is polarization and communication and the inability to individualize in this context. It is often emphasized that polarization kills the culture of debate, criticism, and tolerance and that different and opposing ideas are not tolerated and are suppressed. Kuzuloğlu's following statement summarizes his view on this issue: "We have become detached from the world and reality ... We have been condemned to eat each other in our little world." According to him, "It is impossible for a country where almost everything depends on daily politics and politicians to have a claim in today's global competition." On this plane, where politics invades the entire agenda, fanaticism is fueled and people come to love their party more than their country (Kuzuloğlu, 2016c). This cultural ground, where right and wrong are determined according to the criteria of partisanship and antagonism, has become a reality where everyone talks but no one listens (Kuzuloğlu, 2014a). Criticism is used only for destructive purposes, while good things are not embraced and good deeds are not appreciated: "Most of the people around me falter, are surprised, don't know how to react when I appreciate the (in my opinion) good things they do. In a culture that focuses all its power on criticism and vilification, appreciation is the biggest confusion. If we complain about the bad, we should embrace the good and make it grow" (Kuzuloğlu, 2019h). According to Kuzuloğlu, "Turkey has turned into a country of hate." He raises an alarm over a pervasive trend of excessive criticism and animosity towards all aspects of culture and society, which he labels as "hate consensus." Unfortunately, such a negative mindset is also mirrored in digital culture in Turkey. To illustrate his point, he references Turkish movies' ratings on IMDb, stating, "The scores Turks give to Turkish movies on IMDB are like a summary of the country and our view of life. Either 1 or 10. There is almost nothing in between."

Even though Kuzuloğlu presents a rather pessimistic portrayal, he retains some hope that there exists a silent majority in Turkey. This "silent majority" has the potential to change the fate of the country (Kuzuloğlu, 2019m). Through the examination of prevailing trends, assumedly linked to the question of cultural lag, Kuzuloğlu offers critical perspectives, filtering these patterns through a socio-cultural lens. Nevertheless, by considering the silent majority as the agent of change, he adopts a seemingly paradoxical stance.

Additionally, this exploration reflects a sense of cultural ambivalence about the relationship between the realms of political and social culture.

Even if one can speak of such ambivalence in Kuzuloğlu's case, Manas's views are characterized by an attitude that holds political culture and political actors responsible rather than social culture. Compared to Kuzuloğlu, Manas displays a stronger inclination to attribute responsibility to political culture and politicians who allegedly contaminate society. Manas generally regards political culture and the politicians/policymakers as the main culprits, emphasizing their direct role as well as the potential to address issues. For Manas, politicians have "successfully" turned society against each other (Manas, 2013c). Like Manas, Alkan also complains about the heavy burden of daily politics, noting the collective tensions across various sectors of society (Alkan, 2017g). His observations on the subject matter are alarmist, where he talks of a "cloud of hate" descending upon the nation. The main reason for the opinion leaders' negative stance towards the determining role of daily politics seems to be their concern about the risk of unnecessarily wasting the energy of the country and society and thus jeopardizing its future (Alkan, 2017f, 2017g).

Parallel to the opinion leaders' general conviction that focusing on the agenda colonized by politics prevents creativity, development, and progress, Manas describes Turkey's political landscape as "a country where both winners and losers lose" (Manas, 2014d). This observation is noteworthy not only as an indictment of the quarrelsome nature of politics in Turkey but also as an indication that the phenomenon that confines society to the present is constructed around the dynamics of winning and losing in politics. According to Murat Önderman, a cultural historian, society's interest in politics is closely related to the meaning that social segments attribute to politics. In the background of this interest, as much as the advantages of being in power, and even more than that, the perception of the risks and threats posed by being in opposition stands out as one of the most fundamental factors shaping social segments' approaches to politics. In other words, there is a mutually reinforcing relationship between individuals' uncertainty about their future in Turkey and the likelihood that changes in the political arena will have a large-scale impact on the social sphere. In a similar vein, historian Şükrü Hanioglu describes the main character of political culture in Turkey as a "winner takes all" and the loser is marginalized (Ş. Hanioglu, 2015). His observation presents an alternative interpretation

of this phenomenon, a perspective that resonates with Manas's characterization of current politics in Turkey as a scenario where "both the winner and the loser lose." As a matter of fact, according to Hanioglu, the possibility of a "libertarian social contract" becomes difficult to emerge on this plane where the aim of current politics is perceived as the seizure of power not to be shared, where politicians have difficulty in grasping the demands of all segments, and where political discourse and attitudes have intense patriotic emphases. According to Hanioglu, who sees this situation as related to the state of consciousness of the members of the political class rather than a lack of social consciousness, two structural elements reveal this view of political culture in Turkey. The first of these is identity politics, which, with its marginalizing nature, leads to the emergence of a confrontational environment. The other obstacle to the development of a common consciousness is the drowning of politics in mega discourses. Just like identity politics, these mega-discourses that cause divisions are built on "causes" from the depths of history (Ş. Hanioglu, 2015).

6.7. Habitus and Mentality

One of the most important differences that distinguishes Kuzuloğlu from other opinion leaders is that he presents fragments of daily life to his followers as if he were a cultural commentator. These critically harsh cultural fragments point to a reckoning with a mentality (cultural climate) that surrounds everything and determines action. Kuzuloğlu's criticism is not a wholesale denial and rejection of the society and culture he lives in, but an effort to understand and make sense of it.

Mediocrity is one of the issues Kuzuloğlu emphasizes and complains about the most in this context. There is widespread carelessness and lack of respect for one's work and one's selfhood. Sloppiness and inconsistency as indicators of mediocrity manifest themselves even in our simplest actions: "In short, when we cannot be consistent even in cheese, there is no consistency in politics, trade, education, and social values. [...] Everything is a whole, friends. A good typewriter does not make a good writer. The secret of life is curiosity, care, intention and mentality" (Kuzuloğlu, 2020g). In this cultural environment dominated by clumsiness and inconsistency, people are trapped in their small troubles and

focused on short-term satisfaction. This situation, which gives an insight into human capital, is a serious obstacle to creating a vision for the future, development, and progress. In a broader context, this phenomenon is an outcome of the cultural milieu and mindset. Action and thought take their main color from this cultural milieu. Thus, an oppressive culture living under the “cave-in of taboos” (Kuzuloğlu, 2016g) functions as “a giant vacuum that empties everything in one fell swoop” (Kuzuloğlu, 2017b).

A society that has not been able to move from being a community to being a society, that has not been able to build itself and its mentality, is one of the most important elements that keep this cultural environment alive. One can almost speak of masses and crowds rather than individuals. Belonging to a group and the “need for false prophets” (Kuzuloğlu, 2021b) is a dominant and widespread tendency. People are almost unable to direct their own lives. Thus, partisanship turns into a deep intolerance of those who are not part of one’s community, crippling action and thought, and multiplying mediocrity. This phenomenon, which exploits the energy of society and imprisons people with clichés and slogans, drags thought into a climate of polarization, black and white: “Symbols save the lives of those who cannot speak flag, uniform, color, epaulet, badge, slogan... The symbol monotypes. We are all different colors” (Kuzuloğlu, 2014d).

Thought and action are treated as parts of a whole in Kuzuloğlu’s views. Unlike other opinion leaders, Kuzuloğlu, in addition to his judgmental attitude towards mentality, problematizes it at the level of thought. In addition to the aridification and desertification of thought, there is a widespread “problem of abstraction” in the system of thought (Kuzuloğlu, 2020f). This situation, which gives an idea of the mediocre state of thought, permeates every corner of daily life, and affects almost every dimension of culture, revealing a deep contentlessness. This drought of thought, which manifests itself as a lack of content and depth, seems to emerge from a sense of hurry. This hurry, which constantly postpones stopping and thinking for a moment, constantly tries to fill every void. Thus, by crippling thought and creativity, it determines the cultural and social environment and manifests itself as a distortion in every field.

Like Kuzuloğlu, Manas also makes a series of observations about the social environment. According to him, the questioning of society is suppressed. This situation manifests itself

as a lack of creativity. In a country where there is no creativity, it will not be possible to create added value (Manas, 2013a). Creativity requires self-confidence as well as the ability to question (Manas, 2013b). Emphasizing that society has a serious problem with self-confidence, Manas points out that this situation manifests itself in unconvincing, exaggerated, and hollow discourses (Manas, 2014c, 2016g). On another level, the problem of self-confidence manifests itself as a series of complexes. It will not be possible to move forward as a country unless we can get rid of a cultural environment that promises to do the tallest, the widest, and the biggest of everything (Manas, 2016e, 2019c).

According to Önderman (Morva, 2023), the manifestations of social culture in Turkey show that the tension between the life-world and the system world is not the same as in the West. According to this distinction, which has an important place in Habermas' social theory and the theory of communicative action, the system world, which operates according to the principles of instrumental reason, has colonized the life world through market forces and bureaucratic mechanisms. Pointing out that the opposite is sometimes possible in Turkey, Önderman associates this with the collectivist character of Turkish culture. Although tradition often refers to a religious context, it has been overlooked that collectivism is a phenomenon that feeds on tradition. Collectivism refers to a level where kinship relations, fellow countrymen, clans, and communities determine social behavior. On this plane, where power is reproduced through relational networks, the state (even though it does not lack legitimacy and is symbolically powerful) does not have much say over the "minute contextual routines" of everyday life. Rather, we can speak of an "orderly anarchy" constructed by social subjects. This phenomenon, which does not have a class character, can be explained not by the concept of ideology but by the concept of habitus.

Underlining that meaning in social practices does not always coincide with meaning in grand narratives, Önderman claims that the relationship between ideologies and religious worldviews and social practices may not always be connected. As a chain of habits, culture often includes behaviors without questioning their causes and consequences. In this sense, culture has a naturalizing effect. Önderman concedes that habitus explains this function of culture better than the concept of ideology. Habitus points to the automatic nature of the routines of daily life and behaviors, that is, their spontaneity.

In this sense, the reciprocal relationship that opinion leaders establish between the dominant mentality in Turkey and the cultural mediation overlaps with Önderman's analysis through the concept of habitus. The intersection of both opinion leaders' and Önderman's emphasis on social mediation points to a degeneration. This degeneration, which finds expression in the conceptualization of "orderly anarchy", is an order that individuals establish and make the norm and eventually become enslaved to it. The idea of order is a manifestation of the mentality that social subjects transform into behavior without questioning, rather than the existence of choice.

As everyday life in Turkey is not completely dominated by the system, one cannot speak of a single centralized understanding of order that controls society from the top down. According to Önderman, rather than a centrality of power in the Foucauldian sense, there are orders within orders and powers within powers. In this sense, it seems that in Turkey the state's power over society (from above) is strong, while the power within society (within) is weak. This indicates the existence of a double order in Turkey. This double order in which law and legislation confront social norms can also be read through the perception of the public sphere. In the West, the public sphere points to a framework of responsibility, while the private sphere is an area of freedom and choices. In Turkey, on the other hand, according to Önderman, the public sphere is identified with arbitrariness and freedom, while the private sphere is constructed as an area of discipline.

Önderman argues that the conceptualization of "dominant culture" is not useful for understanding everyday life in Turkey. Instead, he prefers the metaphor of "cultural main streets." One of these cultural boulevards is collectivism and the other is authoritarianism. Since these two phenomena often, though not necessarily, intersect with each other, it becomes impossible to draw a clear line between political culture and social culture. The tension between these two phenomena traps individuals in the present and eliminates the distance that would make it possible for individuals to construct their world and criticize it. Collectivist culture fosters cynicism towards both the state and other social subjects and creates an atmosphere of social insecurity.

In the context of sophistication and belatedness, habitus, and mentality ("habituated dispositions") as a cultural unconscious also determine the relationship with knowledge

(and science). The problem, then, according to Önderman, is not ignorance, but the fact that organized anarchy, i.e. double order, is a serious obstacle to the construction of a public consciousness.

6.8. Science: “Our only refuge”

According to opinion leaders, Turkey cannot achieve technological progress without having a say in the scientific field. However, for this to be realized, Turkey needs a transformation of mentality that will also include political processes. This mindset transformation emphasizes the necessity of transformation in two areas, political and cultural. These two fields cannot be separated from each other. There are no easy answers as to which one determines the other more, and therefore the answers as to where to start to “catch the train” will not be easy ones. Nevertheless, the fact that modernization efforts in Turkey have been largely top-down from the very beginning, within a framework in which political mechanisms have been used predominantly, has parallels with the widespread belief that the state should be the main actor that should take responsibility in the race for science and technology. Similarly, although opinion leaders also attribute more responsibility to the state in this regard, what needs to be done in any case is to abandon traditional ways of doing business and thinking, to have a rational vision guided by science, and to put forward science and technology policies within this framework. Otherwise, it will not be possible to be part of the scientific and technological race, and in a world where the gap between developed and undeveloped countries is widening and the category of developing countries is expected to disappear, there will be a risk of being condemned to always being left behind.

Although all the opinion leaders have a positive and unquestioning attitude towards science, it is clear that Say and Kuzuloğlu have the most emphasis on this issue. Other opinion leaders’ views on both science and the area where science and technology intersect are less explicit and indirect compared to Say and Kuzuloğlu. It can be said that the main purpose of these posts is to raise knowledge and awareness about the studies conducted in the field of science. The posts do not make in-depth inquiries into the nature of science or emphasize the ideological character of scientific activity. Although science

is mostly positioned against ideology, the emphasis on the objective and evidence-based nature of science coincides with a scientism that tends to put science before the social and political. In this framework, science, like technology, is treated as neutral. The actual and potential gains of scientific activity are emphasized. The belief that scientific studies will produce revolutionary hopeful and exciting results and create new opportunities in every field is expressed (Bayraktar, 2014b; Manas, 2019j; Yeğen, 2015n, 2020d).

Describing himself as both a science writer and a science literate, Say clearly emphasizes his admiration for science and mathematics (Say, 2014c, 2017i). He often tries to correct misconceptions and misunderstandings about science (Say, 2013b), and intensely criticizes comments and practices that he considers as anti-scientific. According to him, science is an activity that corrects its own mistakes and renews and updates itself (Say, 2015b). There is no place for dogmas in science (Say, 2020f). Science warns, enlightens, and saves us (Say, 2016d, 2016e, 2020n). In his words, “When one moves away from science, one approaches death” (Say, 2020j). Not listening to science, and ignoring it, leads to disasters (Covid-19) (Say, 2020b, 2020c). According to him, the pandemic has shown us that “science is our only hope, the rest is a story” (Say, 2020a).

There is no better option than science to understand the universe, to reach the stars, to defeat cancer and death, to reach the truth and progress (Say, 2019d). The story of humanity flows in this direction. There has been “general progress since the dawn of humanity” in many areas, especially in health and safety (Say, 2018d). Current ecological risks are likely to be solved under the guidance of reason and science (Say, 2018e).

According to him, scientific and technological developments have a universal character (Say, 2019a). Scientific developments are the achievement of all humanity. Say emphasizes that all human beings are in the same boat (the world) and that great progress has been made under the guidance of reason and science. Great beauties have been created and everything will get even better with science (Say, 2018j). Among the sciences, information theory is of special importance for Say. Computer science is a science that will help to understand the universe beyond engineering (Say, 2015d). He emphasizes the indispensability of natural sciences and computer programming and the need for it to be

a compulsory course in schools (Say, 2015g, 2015e). He describes mathematics as a science that everyone should know (Say, 2020g).

The main reason why Say frequently emphasizes science with an activist spirit is that he thinks that the current culture and politics in Turkey are far from reason and science, and even opposed to them. He thinks that the current government in Turkey pursues policies that are far from reason and science. It is distanced from the founding principles of the republic, which prioritize science, and even has an attitude against them. In this context, according to Say, the following well-known statements of Atatürk should be a guide for society and politicians: “The truest guide for everything in the world, for civilization, for life, for success, is science. To seek guidance other than science is carelessness, ignorance, and error” (Say, 2019e).

Say often emphasizes the power of “reason and science.” In this respect, what happens every day in Turkey shows that reason and science are not in power. For him, reason and science are almost synonymous. His emphasis on reason can also be read as a call for all decision-making mechanisms, especially political ones, to be guided by science. Even if Say does not raise a fundamental objection to the institution of politics in his tweets, it is clear from his views that he defends the superiority and primacy of the scientific over everything else. Carl Sagan’s reminder of the following quote can be read in this context: “It is not uncommon for scientists to say, ‘This is convincing; I was wrong,’ change their minds, and never defend the old view again. I don’t remember such a thing happening in politics or religion” (Say, 2018h). Although he agrees with the view that politics and science are not two independent fields, according to Say, politics will be able to make the right decisions as long as it is guided by science. For Say, the ideal is not only for rulers to take reason and science as their guide but also for those who are ruled to “attach importance to reason and science and determine their rulers according to this criterion” (Say, 2020e).

Kuzuloğlu, like Say, does not hide his admiration and amazement for science and the outcomes of scientific activity throughout history (Kuzuloğlu, 2014c). Science is “[t]he endeavor [that] even its coincidences lead to good” (Kuzuloğlu, 2018p). For Kuzuloğlu,

science and technology are above all about challenging nature and playing god: “I believe that science is, at its root, divinity, which is why I bless and respect it” (Kuzuloğlu, 2017k). Science and technology “turn night into day, sees what it cannot see, hears what it cannot hear, learns what it does not know, questions, objects, rejects its conditions and tries to transform” (Kuzuloğlu, 2018k). Kuzuloğlu is in favor of looking for the reason why scientific activity has positive results as well as negative ones, not in science, but in human beings. As “Science is our only refuge” (Kuzuloğlu, 2017t), man will always try to direct it according to his interests and expectations. “Money, religion, science, nature can easily be transformed into something harmful in the hands of man. The reverse is also true” (Kuzuloğlu, 2017u).

In this framework, science is not an ideology. Science (and technology) itself is neutral. Rather than having an absolute subjectivity, science (and technology) can be part of ideologies. The fact that ideologies use science (and technology) to describe and characterize themselves does not make them ideological (Kuzuloğlu, 2017v). There are, of course, inevitable consequences of science and technology being largely determined by the demands of the state and the market (Kuzuloğlu, 2017q). One of the most fundamental reflections of this is the culture of expertise. As a result of the penetration of professionalization and institutionalization into all areas of life, a deep alienation has been encountered, and the social structures and systems surrounding human relations have been understood as natural, inevitable, and uncontrollable. Thus, the human will has been crippled in overcoming the problems caused by the order shaped by the demands of the state and the market (Gümrükçüoğlu, 1995).

One of the important issues Kuzuloğlu touches upon at the intersection of science and technology is the efforts to create a “new human”, especially within the framework of genetic studies. Science is taking firm steps forward in this regard (Kuzuloğlu, 2018d). On the other hand, although genetic studies are an opportunity to fight against many unrelenting diseases, the question of whether human beings can be defined as human in today’s sense in an age where genetic studies are more visible is philosophically difficult (Kuzuloğlu, 2018l). Efforts such as gene editing bring with them opportunities and threats,

anticipations, and anxieties. According to Kuzuloğlu, there is a high probability that such efforts will inevitably condemn us to fascism and domination (Kuzuloğlu, 2019b).

The opinion leaders' emphasis on the importance of the scientific and their strong belief in science is reinforced by their critical attitude towards the non-scientific tendencies they see in society. Through themes such as conspiracy theories, superstition, and astrology, society's distance from science and scientific mentality is problematized. These criticisms, which at times appear as serious explanations and at other times as a sarcastic tone to emphasize the absurdity and irrationality of the claims, are accompanied by a deep disappointment. Rejecting scientific facts in the name of skepticism, sometimes disguised as pseudoscience, is fueled by irrational beliefs and baseless speculation. According to opinion leaders, this tendency, which is widespread in society in the age of science and technology, is quite surprising and contrary to the spirit of the age. These "curiosities", which also signify Turkey's detachment from the world agenda, are a source of anxiety for them.

Kuzuloğlu describes conspiracy theories, which are "half-baked information, clichés, inconsistent analyses, and coffeehouse gossip" (Kuzuloğlu, 2018b) as a strategy to avoid confronting the real world and producing solutions: "Conspiracy theories are (mostly) excuses for the failures of individuals and societies. Covering up laziness, ignorance, and incompetence with abstract concepts such as 'sovereign global powers' sounds good, but it is not helpful." (Kuzuloğlu, 2018a) This orientation, which shows the social and mental average in the country, is fed by a post-modern tendency and creates "resistance against the truth" (Kuzuloğlu, 2020j). Yeğen describes conspiracy theories as a form of distraction and manipulation. According to him, conspiracy theories are "lies developed to keep developing countries behind the game" (Yeğen, 2021a). Manas' comments and criticisms of the conspiracist mindset are located at the intersection of politics and culture. "When will we stop living with these conspiracy theories?" (Manas, 2020a). Manas, who cannot help but ask, emphasizes that Generation X and Y grew up with conspiracies about the families that rule the world and that this will continue until Generation Z arrives. In a society where it is prestigious to talk about secret powers and deep forces, the media, acting irresponsibly, gives space to these people and lets them panic the masses.

Say's criticism of the conspiracist mindset is sharper and harsher. The predisposition to conspiracy theories as a rising trend is appalling. This trend, which he describes as "the rise of ignorant confidence" (Say, 2018f), is nothing but a medieval mentality. According to him, conspiracy theories in the name of skepticism lead to speculations far from the truth and weaken the healthy thought processes of society: "Of course, a healthy dose of skepticism is essential for democracy, for critical thinking, for a scientific approach, for journalism. What I am complaining about here is not scientific skepticism, but a combination of ignorance, hostility to science and plain idiocy" (Say, 2019g). He expresses that this kind of ignorance (anti-vaccination) in the age of science enrages him and that those who believe in conspiracies harm not only themselves but the whole of humanity. Pointing to the tendency to accept all claims on an equal footing, Say emphasizes that science is the only tool we have to distinguish the true from the false, the absurd and inconsistent from the scientific (Say, 2021). For him, the solution lies in critical thinking and scientific literacy. According to him, scientific literacy, which is the best solution against conspiracy theories that "weaken the immune system", is a characteristic that even most educated people lack (Say, 2020d).

According to Say, another trend that shows society's distance from science as much as the conspiratorial mentality is the interest in astrology and futurism. According to him, this widespread tendency, especially nurtured by the media, is nothing more than a fraud and a figment of the imagination. These worrying tendencies should be combated as they indicate a search for guidance other than science.

The fact that opinion leaders frequently emphasize reason and science together may indicate, first and foremost, that they see scientific activity as a natural consequence of the use of reason. At the same time, in these emphases, which also imply the inseparability of reason and science, dispositions that are fed by religion or tradition, even if they do not originate from them, are positioned against reason. In this attitude, there is a negative equation where reason and science reside on one side. Thus, the distinction between the irrational and the non-scientific seems to disappear. In this attitude, which can be called positivist consciousness, ignorance refers to both the irrational and the non-scientific at the same time. While ignorance is associated with darkness at the metaphorical level and with tradition historically, the image of the Middle Ages combines these two levels. It

functions as a crystallized image of both darkness and tradition. The construction of this dominant image/metaphor of the Enlightenment took place at this positivist level, where the period has been called both the Age of Enlightenment and the Age of Reason. Nevertheless, this represents only one aspect of enlightenment thought. “Westernist” tendencies, which emphasize that Turkish modernization can only be realized in a way that includes not only Western technical dimensions but also its cultural dimensions, largely ignore these differences within enlightenment thought.

Especially from the late Ottoman period onwards, it is clear that “Westernist” orientations defined and designated science as a *sine qua non* for the development of a new and rational society (Ş. Hanioglu, 2013). Science popularizers of the Late Ottoman period, particularly those with materialists dispositions, believed that that adopting a scientific mindset was crucial for society to move past superstitions to ensure progress. Their approach tended to excessively prioritize science as the only valid form of knowledge. However, their proposition leaned more towards scientism than an advocacy of a genuine scientific approach (Bilgili, 2015, p. 568, for the utilization and prevalence of the scientistic mentality in Turkey, see Bilgili, 2017, and 2021). The scientistic/positivist consciousness among the intellectuals appears to have crippled the emergence of critical approaches to examining the relationship between science, technology, and society up to the present day in the local context. This attitude is often accompanied by additional psychological factors in non-Western societies. The anxiety of not being modernized enough (in other words, not having enough say in the fields of science and technology) and the stigma of being late point to the absence of the necessary distance for criticism in at least two ways.

First, there is the postponement of criticism as a result of not being (sufficiently) modern to the extent that it points to the coexistence and transformative power (creative destruction) of the concepts of enlightenment, progress, reason, science, and technology. This implies the idea that criticism of what is not existent (technological progress) is not possible. Secondly, the concept of progress, like the other concepts it invokes, is as intertwined with the culture as it is with the material-economic (industrialization, development, high technology), perhaps even more so. To the extent that progress as an object of desire is a “fixation” in terms of social psychology, there will be no distance, no criticism. This situation, which manifests itself in a very open-minded attitude towards

new technologies and sometimes is observed to reach the level of a fetish, also points to the difference between being modern and being a modernist. As a matter of fact, according to Mardin, to the extent that modernist attempts in Turkey failed to understand the nature of the social processes through which Western institutions developed, they first turned into imitation and then into a psychology of belatedness manifested itself in consumption:

If one who wants to imitate Western institutions does not approach them with the concept of the autonomy of social processes, he will not be interested in the dynamics of [a given] institution. It will imitate the external appearance. This is only the first stage. Having failed in the second stage, the elite, in its deep and gnawing doubt, will turn to “fetishism” and use the goods of the West as “opium.” (Mardin, 1991, p. 247)

The importation of Western influences, along with its institutional and behavioral patterns, instead of comprehending the context that constitutes it, leads to taking what already exists with a sense of being too late. In the discourses of the opinion leaders, this situation turns into a rhetoric that Mardin characterizes as “fetishism.” So much so that while the reasons that constitute the West as a whole are ignored, the prescribed discourse also overlooks the context of the local.

7. PUBLIC POLICIES ON TECHNOLOGY AND THE MENTALITY OF TECHNO-CONSERVATISM IN TURKEY

The term mentality is defined in dictionaries as a particular way of thinking or a perspective, encompassing a range of attitudes, beliefs and values that shape how individuals interact with the world around them. However, in most of intellectual and academic texts that deals with technology, change and modernization, it connotes a way of thinking that is resistant to change, deeply ingrained cultural norms and beliefs. In this sense, society is perceived as being stuck in the past or unwilling to adapt to the demands of the modern conditions. Likewise, in the statements of opinion leaders, the word mentality serves as a signifier representing the thoughts and perceptions that cause and contribute to the perpetuation of belatedness. These critical attitudes mostly emphasize the need for a transformation of mentality. However, the explicit and implicit references to mentality in these criticisms, which are highly of anxious, restless, and agitated character, almost always have an accusatory tone. Similar to the opinion leaders whose views were presented in the previous section, Varank and Bayraktar also maintain this approach in their use of the word. However, despite this obvious similarity in form, the subject of criticism is quite different.

Notably, the views discussed in the previous chapter criticize mentality by associating it with a cultural background, that is largely inherited from the tradition and the past. This critical stance to mentality subjects almost the entire society (cultural/social codes), including conservative thought and those in political power. Thus, mentality refers to a context in which the cultural, ideological, and the political have an intricate and complex relationship with each other. This further deepens the complicated ground that constitutes the basis of the critique of mentality. At this point, the reason why opinion leaders prioritize scientific activity over politics and ideology is related to their naïve attitude towards these phenomena, as well as their tendency to adopt scientific activity with a deep conviction. Sometimes, this attitude even leads to an understanding that positions science

and technology at opposite poles with politics and ideology. This ignores the complex relationship between the phenomena mentioned and superficializes the critique of mentality.

Varank and Bayraktar's critique of mentality differs from the approach of the opinion leaders discussed in the previous section and diverges from them in crucial respects. While in the previous section, a broad social criticism was made regarding the existing public policies and political circumstances, it is apparent that the focus of Varank and Bayraktar's criticism of the mentality is on those they regard as marginal, whom they accuse of being Westerners, and who are positioned against the ruling power in the current political circumstances. Although this minor group is not capable of representing the entire society, for many years it has imposed its mentality on the majority of the society with a policy of cultural denial. Thus, while the criticism of the mentality by opinion leaders other than Varank and Bayraktar targets a very broad cultural ground, which includes conservative thought practices to a large extent, the criticism of Varank and Bayraktar takes it as a mission to struggle with a mentality that is claimed to have regressed with the AK Party period. Criticisms in this direction have a certain degree of continuity with the criticisms of the military-bureaucrats-intellectuals who read Turkish political life on the center-periphery distinction. This elite group (1969), which Mümtaz Soysal describes as a "dynamic minority", is seen as the agent of modernization by the center, while their values for the periphery are the representation of a destructive modernization. These criticisms do not subject society in general or culture as a whole. Varank and Bayraktar's criticism is directed against a mentality that they associate with "authoritarian" (tutelary) and "elitist" character, which takes an attitude not only against tradition, culture, civilization (Turkish-Islamic), and history but also against the nation. In this context, Varank and Bayraktar's criticism of mentality, unlike the criticism of other opinion leaders, is directed towards a group they consider to be the culture of the minority. Despite these differences, Varank and Bayraktar's emphasis on both technological progress and scientific activity as the enabler of this progress is, at least in form, parallel to the views of other opinion leaders. In this context, according to them, those who oppose the current policies make a "cheap" opposition and insist on an ideological position. This mentality, far from appreciating the policies put forward for technology production, is

criticized for even trying to obstruct them and is defined as one of the obstacles to development. According to Varank and Bayraktar, making science and technology a primary agenda, benefiting from the knowledge of scientists, raising awareness among young people through scientific activities, and making Türkiye a center of attraction for scientists are among the main objectives. The policies and vision presented in this regard are emphasized. For example, science and technology are described by Bayraktar as “the ideal of an independent and prosperous Turkey” (Bayraktar, 2018h) and by Varank as “the main road that will lead to a prosperous future” (Varank, 2019). This goal, which they describe as climbing Turkey “above the level of contemporary civilizations” (Bayraktar, 2018e), a phrase borrowed from Atatürk, can be read as an extension of the Ottoman ideal of the Ottoman Reform Edict (*Islahat Fermanı*) of 1856. In the Edict, the aim was “maturing the conditions that befit the gloriousness of The Sublime State and are worthy of the important and lofty position it rightfully holds among civilized nations.” This goal has found appeal with both conservatives and people favoring Western ideas. As in the late Ottoman reform movements, the idea of reaching the level of contemporary civilization was the common denominator for the founding elites of the Republic, despite differences in methodology. Approaches that agree on the goal to be achieved differ in the content and path to be followed to reach that goal. According to Varank, it is unacceptable for the government’s commitment and current policies on this objective to stall or slow down. However, Varank expresses his disappointment that the opposition exploits the image of science, instead of backing government policies for achieving this objective. By imposing “community pressure” on scientists, the opposition lay for the potential of future generations, widely recognized as the nation’s “bright future” (Varank, 2021a).

7.1. On The Mentality of Techno-conservatism

Varank and Bayraktar’s explicit emphasis on the necessity of science and technology for a prosperous society is accompanied by a critique of the West (Varank, 2020a). Of course, this criticism does not reject the technological superiority of the West, but rather draws attention to the use of this superiority to maintain a “colonial mentality.” In this discourse, the West prioritizes its interests above the interests of humanity as a whole. In this sense,

despite the technological sophistication of the West, especially the lack of a moral dimension is especially and consistently underlined. On the one hand, the West continues its imperial and colonial practices in various forms, while on the other hand, it tries to impose order on the rest of the world by teaching democracy, freedom, and civilization to the rest of the world. It prefers to remain deaf to injustices in the rest of the world and even provides the “logistics” for these injustices (Varank, 2015b). The West displays a hypocritical attitude by legitimizing its hegemonic power at the level of discourse using its media (Varank, 2015b). Thus, the Western discourse on democracy and freedom is portrayed as far from sincere. This gap between discourse and practice, according to Varank, indicates that these concepts are considered just “idols from *halvah*” for the West (Varank, 2015a). Bayraktar’s critique of the West is especially noticeable when he juxtaposes it to Turkish-Islamic civilization, drawing upon the well-known phrase from the national anthem of Türkiye, in which “the civilization” (i.e., the Western civilization) is depicted metaphorically as single-fanged monster. Such imagery underscores the depth of this comparison made by Bayraktar. Certainly, such vivid language used by Bayraktar serves to highlight his stance regarding Western values. His portrayal of Western civilization as inferior or lacking compared to Turkish-Islamic civilization suggests an alignment with perspectives critical of Western norms and principles. By depicting Western civilization as deficient in humaneness while emphasizing its hunger for power and dominance, Bayraktar reveals his value system and perspective concerning cultural differences, implicating a sense of cultural superiority tied to Turkish-Islamic traditions as opposed to those prevalent in the West.

The West assumes an attitude of presumptive invulnerability, neglecting spiritual concerns, and placing emphasis on material possessions. Conversely, the esteemed and historically rich Turkish-Islamic civilization anchors its foundation on attributes like clemency and fairness. Within Bayraktar’s analysis, he ascribes considerable historical depth and firm roots to Islamic civilization. Simultaneously, he paints the West as devoid of substantial origins. These divergent attitudes result in thematic variations centering around issues of strength versus empathy alongside a harmonious fusion of spirituality with material considerations in Islamic thought, whereas Western philosophy tends to lean

more heavily towards materialistic aspects while occasionally paying little attention, if any, to spiritual matters (Bayraktar, 2017b, 2018i, 2019b, 2019c).

An important point in these critiques is that they reflect not only a political or cultural competition/conflict but also a struggle for representation in terms of the semantic and symbolic density of technology. Varank and Bayraktar's perspective points not only to a power struggle against local and global dynamics in traditional terms but also to a competition for control of the contemporary symbols represented by technology and innovation. This technology-driven perspective in criticisms of the West implies not only an economic or military power struggle but also a symbolic quest for superiority or at least equality. In this context, the representational power of technology is considered not only as a material sophistication but also as a cultural and symbolic superiority. In other words, criticism of the West is part of a cultural struggle, not only on a technical level but also on a semantic and symbolic dimension. As will become clearer in the following pages, for Varank and Bayraktar, technology and independence are two fundamental elements that call for and require each other. In their perspective, technological advances are not only an element of economic power but also a critical factor for achieving and maintaining national independence. Technological progress not only increases a country's economic welfare but also strengthens national security and independence. From Varank and Bayraktar's perspective, a country that does not strengthen its technological infrastructure cannot fully ensure its national independence and may remain at risk of foreign dependence.

For Varank and Bayraktar, the strong link between technology and independence is placed in the perspective of a clash of civilizations. This important difference also distinguishes them to a great extent from the opinion leaders whose views are presented in the previous section. In their views around this theme, Eastern civilization is indirectly while the themes of Turkish, Ottoman, and Islamic civilization are explicitly prominent. In this respect, it can be assumed that what is meant by "our civilization" is the Turkish-Islamic civilization. In addition, a synthesis in the Gökalgian sense does not stand out in this emphasis on civilization. Unlike the Gökalgian perspective, which emphasizes the indigenesness of culture and the universality of civilization and proposes an artificial distinction between culture and civilization (Bora, 2017b, p. 24), this mode of discourse

almost equates and rejects Western civilization and culture. It describes the two civilizations as rivals. This attitude is most evident in their criticism of admiration of the West in Turkey. The Westernist mentality that judges its own culture by “wondering what the West would say” is described as “loser and obsessed” (Bayraktar, 2015a; Varank, 2014b). While admiration and imitation of the West are expressed as a mandate and “betrayal of one’s history”, it is emphasized that the only way for Turkey to build a strong future is to adhere to its history and values (Varank, 2021b). It is not Western culture and civilization, but the rich cultural heritage, scientific and civilization values of the Turkish nation that must be protected and passed on to future generations (Bayraktar, 2020a).

Although they do not distinguish between culture and civilization in Gokalp’s terms, it is possible to say that they position themselves in Gokalp’s line regarding their approach to technology and science. They evaluate civilization (*medeniyet*) within a national framework as well as culture (*hars*), which Gokalp considers national too vis-à-vis civilization (*uygarlık*), but they adopt Gokalp’s universalist approach (*civilization-uygarlık*) towards technology and science. Although they are differentiated based on expression, they continue the same attitude in practice.

(Turkish) Conservatism is not an anti-modernist movement as it is often misunderstood in Turkey (Bora, 2017a, p. 341). From this point of view, it will be clear that it would be wrong to automatically equate conservatism with opposition to science and technology. In Bora’s words, conservatism “aims at taming modernity with tradition” (2017a, p. 341). Although religion and culture form the cornerstone of tradition by being inseparably intertwined, which one will be more dominant in how tradition is expressed in the political domain has always been subject to conjectural conditions. Thus, for Bora, the context and relation between religion and culture differentiate to the extent that the three forms of the Turkish right - conservatism, Islamism, and nationalism - influence discursive practices under different conjectural conditions. According to Bora, conservatism should be defined as “a state of mind, a stance/feeling, a style” rather than “a current of thought” (2017a, p. 342). Conservatism, which has a synthesist character, thus tries to restrain modernization/modernity with national culture and to maintain the two together. (2017a, p. 343). As an orientation that always carries cultural pessimism in its baggage, conservatism, as can be seen in the statements of Varank and Bayraktar, is driven by

concerns of degeneration and excessive westernization. Progress is treated as a technical question/issue. In this case, the conception of civilization is treated as two separate dimensions, technical and moral. The relationship between technology and culture is overlooked. This attitude is the result of a practical, pragmatic, urgent anxiety. It is a luxury to thematize the relationship between technology and culture within a society that feels itself in constant distress. Instead, technology is something to adopt and imitate to get out of the state of affliction. Because it is the ability to use technique and technology that can answer to disease, war, exploitation, and occupation. For this reason, many things can be temporarily bracketed. The fact that the purpose is determined by a sense of urgency leads to a similar attitude towards the capitalist order and capitalism.

According to this view, which is most clearly expressed in the verses of Mehmet Akif Ersoy, the technical and scientific advances of the West can and even must be adopted. However, its moral values should be bracketed. In other words, according to this perspective, while technical developments are positively evaluated, the moral dimensions are criticized and put aside. Thus, the desire for a controllable change is expressed. This distinction between technique and morality, which is characterized as a contradiction for some, constitutes one of the fundamental dynamics shaping the conservatives' discourse on technology.

The conservative selective approach towards modernization, which finds expression in Mehmet Akif's writings, can be seen in the modernization efforts of other factions as well. The selectivism of the conservative camp in the opposition between culture and technology resembles the others' selectivism in the opposition between capitalism versus democracy, law, and freedom (Ögün, 2023). In the case of capitalism-democracy selectivism, technology continues to be a discursively determining factor. Because technology is the element that reveals and announces the power and legitimacy of science.

Although the history of conservatism in Turkey can be traced back to the Young Ottomans movement and Namik Kemal, it is generally accepted that it gradually became dominant after the post-1945 period in the modern Turkish Republic. Yahya Kemal and Peyami Safa were the most important representatives of conservatism during the pre-1945 period. After the transition to multi-party politics, conservatism acquired a different character

compared to the previous period as a result of the objections against social engineering. In Yahya Kemal and Peyami Safa, the emphasis on the past and tradition manifests itself as a cultural sensitivity rather than a religious one. Religion and/or the Past are treated with an aesthetic emphasis. In pursuit of an original and inevitably synthesizing modernity, this line of thought seeks to reinvent and reconstruct tradition eclectically.

In the present day, unlike Yahya Kemal's time, conservatism is not only an aesthetic feeling and nostalgia but also reconstructed as a different social design under the pressure of rival movements. Mollaer describes this new reconstruction process as techno-conservatism. He argues that today's political power (its representatives) views the world within the framework of a techno-conservative ideology. According to Mollaer, techno-conservatism is built on a tendency that is more evident in the thoughts of Necip Fazıl Kısakürek than in the conservatism of the pre-1945 period. According to this understanding, in which the aesthetic dimension of conservatism is weakened and its technical and progress dimension comes to the fore, "mosque minarets and factory chimneys" are idealized together (Kısakürek, 2005, p. 381; as cited in Mollaer, 2016, p. 54). According to Kısakürek, the number of factories should be at least as many as the number of minarets, which is a religious obligation: "So much so that every minaret is engaged to a factory chimney." In Kısakürek's ideas, the call to prayer rising from minarets and the smoke rising from factory chimneys together "represent the aim to took the mastery of the West on matter" within the framework of "the cause of defeating the Western spirit and culture." (2005, p. 383). The distinction between technique and culture expressed in Kısakürek's writings is influenced by a mindset that perceives technique as purely instrumental. The hadith which translates as "*A wise word is a believer's loss. Wherever he finds it, he is entitled to take it immediately.*" is interpreted as the imperative to use and adopt technology. Moreover, it is possible to say that the distinction between technology and culture seen in both Mehmed Akif and N. Fazıl indicates that technology is produced independently of culture and that this perspective determines conservatism's approach towards technology. It should also be noted at this point that, the technological superiority which is expressed by Westerners because of the progressivist understanding and as a sign of the superiority of Western civilization and Western nations (Ernest Rennan, H. Spencer, etc.), was also tried to be shown baseless.

According to Mollaer, this understanding of seeing minarets engaged in factory chimneys turned into a marriage with capitalism and took its current form (2016, p. 56). In other words, conservatism has entered a process of reconciling religious and cultural values with the modern capitalist world by focusing on technical and economic elements rather than aesthetics. The “justice” and “development” of AKP (Justice and Development Party), which broke away from the National Vision movement by choosing a path that reconciles with the West on the political plane and defines itself as a conservative democrat, are indicative of such a synthesis. Actually, in the words of AKP leader Recep Tayyip Erdoğan, conservative democratism characterizes “a modernity that does not exclude tradition, a universality that accepts localism, a rationality that does not reject spirituality, and a change that is not fundamentalist” (as cited in Bora, 2017a, p. 406).

In the period before the AK Party, the political representation of the coexistence of the emphasis on the preservation of national values and the discourse on technical progress and development was most clearly found in the National Vision (Milli Görüş) movement. While the discourse on heavy industry or development was included in the prescriptions of other political movements, this was represented in the National Vision movement starting with the National Order Party (Milli Nizam Partisi) in terms of its combination with the preservation of values. This discourse found its legitimacy with Erbakan as he was “a professor of mechanical engineering who studied in Germany and was a faculty member at Istanbul Technical University” (Bora, 2017a, p. 471). Here, there is an attempt to produce an alternative to the development models of non-Western societies. (2017a, p. 471). Nevertheless, the political understanding of the National Vision movement did not remain constant. As Nilüfer Göle aptly puts it, the party’s principle emphasis transformed “from ‘heavy industry’ to ‘welfare’” (2011, p. 82). At this point, it should be worth noting that although there are eclectic and overlapping points, there are also points where conservative and Islamist politics differ from each other in terms of the unity of “technique” and “values.” The desire for development and reaching “the level of contemporary civilizations” is also common here, but the ways and methods differ. In this respect, movements that have been trying to create an alternative to Westernist modernization since the late Ottoman Empire have somehow maintained this unity despite the differences and changes, from the Democrat Party (DP) to the Justice Party (AP), from

the National Order Party (MNP) to the Motherland Party (ANAP), from the Welfare Party (RP) to the Justice and Development Party (AKP).

The change in the discourse of conservative or Islamist political representation (“from ‘heavy industry’ to ‘welfare’”) will be more meaningful when read along with the transformation of political economy in the world. Abandonment of Keynesian economy policies after the 1970s and their replacement by neo-liberal policies across the world, the rise of finance capitalism found expression in conservative discourse as well. The political and social discourses designed with a developmental approach under the hegemony of the USA until the end of the 1970s were transformed with the new world system. While developments such as the emergence of new competitors (Far East) and the elimination of the Communist world heralded a new economic order, it is understandable that conservatism shifted from a developmentalist discourse to a welfare discourse. It is possible to see the same attitude in the electric design of TOGG cars. Because the means to support the sustainability of the developmentalist discourse around the world were gradually disappearing, it could not be expected that Turkish conservatism, which is highly revisionist, would not keep pace with this change. In conditions where the dream of full employment, which is a derivative of the developmental discourse, was no longer possible, the aim of encouraging entrepreneurship and spreading wealth through trade should be read as the projection of the worldwide change in Turkey. In this way, it is possible to explain the shift toward welfare discourse at a time when the value-added production by industry in the world economy was gradually declining. “Welfare is not the reward of production, but its executioner.” (Ögün, 2023).

Varank and Bayraktar’s opinions, when evaluated in the context of the political evolution and value change described above, offer an important perspective on the unity of “technique” and “value” in conservative and Islamist politics. In particular, the technology-oriented projects and innovation efforts pioneered by Varank and Bayraktar provide a good example of an approach that focuses on technical and economic development goals alongside the religious and cultural emphases of traditional conservative politics. Unlike conservative politics of the past, this involves an emphasis not only on the preservation of values but also on technical progress and development. Thus, what Varank and Bayraktar do, as well as what they say, represents the most

tangible reflection of the current effort to create an alternative to the Westernist modernization that has been adopted since Ottoman modernization. This shows that the opposition to Westernist modernization in the past has become a part of today's conservative politics through technology-oriented projects and innovation efforts. In this context, the Ak Parti's emphasis on technology and innovation, particularly in the defense industry (in which Varank and Bayraktar are key actors), is paralleled with the increasing prominence of the "National Technology Initiative" and the nativist-national discourse. This strategic approach is a reflection of a political vision that aims not only for technological independence and economic development but also the strengthening of national identity and values.

7.2. The (Discourse on) Technological Nativism

The concept of nativism (*yerlilik*) has arisen solely through the identification and integration of all the elements and factors that contribute to the nationalization of a geographical area (Yetim, 2016, p. 116). Mollaer's following assertion on the historical journey of nativism appears to illustrate the point:

It seems that "the new life" (Ziya Gökalp), which implied the socio-political horizon of 'modernization' in the 1910s, maintained its meaning as "national life" while acquiring a different ideological horizon from Turkism during the 1920s (Yahya Kemal); [However] in the 1940s it came to express "ways of life" [in the anthropological sense] (Tanpınar). (Mollaer, 2018, p. 62)

In the 1990s, a new interest and understanding of nativism emerged in Turkey, as in the world, in the axis of identity problems under the influence of globalization and the conditions of late capitalism (Yetim, 2016, pp. 116–117). Nativism never lost its currency and transformed political, social, and economic agendas until today. The rise of the concept in the 21st century has come with a new form and agenda. This form, which can be dubbed neo-nativism, is "the rediscovery of the land as homeland, history as the sacred past and religion as the strongest unifying element" (Subaşı, 2010; as cited in Yetim, 2016, p. 127). The aim is to ensure that history, culture, geography, and indigenous knowledge and experience are not abused or neglected, but rather acknowledged and respected. Even

though, this strong emphasis on localism, it also aims to achieve “a healthy synthesis of universality and nativity” (Yetim, 2016, p. 129).

Although the discourse of “native and national” (*yerli ve milli*), remains a common theme in today’s conservative political jargon, has its place in the vocabulary of other ideological groups in Turkey (Bora, 2018, pp. 194–195). It has become a concept that is reproduced especially in the political discourse of AKP recently when it distanced itself from the West. Being “native and national”, on the one hand, constitutes the rhetoric of a struggle with the burden of the past, against the Westernist elite and mentality whose “roots are outside.” On the other hand, it establishes a basis for production, technological development, progress, or rising to the “level of contemporary civilization.” In this respect, the concept has a structure that is compatible with the flexibility of the decisions made as a result of the political conjuncture and provides legitimacy to it. Depending on the context, it variably contains an emphasis on Anatolianism, nationalism, or a collective community of Muslims (*ummah*).

Sarıbay, by placing nativity on the axis of capitalism and orientalism, considers it as sterile, rootless, and far from authenticity (Sarıbay, 1999; as cited in Yetim, 2016, p. 124). According to Alkan, however, it is a state of living in peace with oneself, one's affiliations, beliefs, and disbeliefs. Necdet Subaşı, on the other hand, argues that nativism in Turkish politics is instrumentalized in achieving pragmatic goals (Subaşı, 2010). Ahmet Çiğdem conceives nativism as a condition that creates weakness from the perspective of modernity. He remarks that nativism, being a petty bourgeois ideology, will never achieve the status of a "positive" movement (1998). Çiğdem boldly asserts that societies that value and preserve their native identity are, in his view, “the weak link in historical evolution.” (1998; as cited in Yetim, 2016, p. 121).

7.3. Reactions to the Nativist Narrative among the Opinion Leaders

The perspectives of opinion leaders on technology policies and production in Turkey, along with broader perceptions of technology, can be classified within the framework of the "native and national" discourse into three distinct categories. The first group (Varank and Bayraktar), as key actors in terms of the implementation of technology policies,

embraces the political discourse of “native and national” and views technology that is not dependent on external sources as a condition of “independence.” Protecting essential cultural values is one of the emphases of the first group. The second group emphasizes the universality of technology along with a general reaction to the ideological attitude of the government. The third group, on the other hand, has an approach that expresses technology policies and related developments more descriptively and tries to keep themselves in a “neutral” position in the implicit struggle between these two groups. In this context, this group employs a combination of the “native and national” approach alongside with the universalist discourse. This section will mainly examine the narrative of the first group represented by Varank and Bayraktar, while also exploring the nativist-nationalist discourse of the second group and the neutral position of the third group for a comparative analysis.

It would be appropriate to start with the following passage by Nuri Pakdil, who can be considered one of the pioneers of the recent conservative and nativist mentality in Turkey to understand the discourse of “native and national” in Varank and Bayraktar’s perceptions of technology. Pakdil establishes an opposition between nativism and the Republicans, the proponents of Westernization and Marxism:

The native thought, that conditioned us in our historical formation, the thought, which was suppressed with the 1923 revolution, that is, the Islamic thought, is slowly but firmly moving back into the hearts as independent and honorable. This is, in fact, a civilization’s struggle for existence. ... When our relationship with the people becomes fully conscious, the revolution will become hollow, westernism will become hollow, and Marxism will become hollow. In other words, all these will be depopulated ... However, the aim is to be constructive all the time, to fuse native thought with the people and the state. Contemplating this is a necessity of our civilization. (as cited in Yetim, 2016, p. 128)

One notable aspect of the contemporary discourse on nativism and nationalism, characterized by the blend of the people and the state, as described by Pakdil, is its manifestation of self-confidence rather than a defensive mindset. One of the reasons for this self-confidence is the democratic legitimacy achieved through elections and

dominance and power over institutions and the bureaucracy that the parties from similar traditions had not been able to establish before. In this context, in Bora's words, nativity and nationalism represent "a reaction to the 'foreign'-cultured elites, an inculcation of self-confidence, a spirit of rebellion" (Bora, 2018, p. 196) The challenge and stance in Varank's question "Whose land are you kicking out?" (Varank, 2013d), is the visible form of Bora's statement and this attitude permeates all of his tweets. While defending AKP's actions, criticizing opposing views, or explaining an issue that he thinks is wrong, Varank constantly constructs his sentences based on this position. The nativist discourse constitutes an important reference point in large-scale infrastructure projects and investments in the defense industry, particularly in developments in weaponry technology. In this respect, Varank's tweets on UAV and UCAV technology emphasize this discourse. In his conservative language, there are posts about UAVs and UCAVs, (Varank, 2015e, 2015d) naval technologies, and national software; striking pride in the production of these technologies, and harsh language is used against criticisms of the nativist approach. For example, while talking about the effective fight against terrorist organizations thanks to UAVs and UCAVs, negative criticism of unmanned aerial technologies is described as "a reflection of their betrayal" (Varank, 2017). Aydın Doğan, who is a symbolic example of the elite against whom the struggle is being waged, and the newspapers of the Doğan Media group are criticized for their discomfort with the national technology: "Why are the fake newspapers of the fake media boss Aydın Doğan so disturbed by the National Technology Initiative?" (Varank, 2015c).

In the tweets of both Varank and Bayraktar, nativity and nationality serve as manifestations of self-reliant production, denoting an absence of external support, particularly from Western sources, and symbolizing triumph in the face of perceived obstructions imposed by Western entities. In this regard, the only route toward technological advancement lies in dependence on native resources. It is useful to look at the relationship between nativism and the West at this juncture.¹⁵ As one of the

¹⁵ Since the differences between concepts such as Westernization, Westernism, or Westernism, which are close to each other and sometimes used interchangeably but have some differences between them, are not

fundamental dynamics of Turkish politics, nativism has turned into a form of claiming or challenging the Ottoman culture that the Republic excluded (Yetim, 2016, p. 125). The Westernization policy of the Republic caused a problem of alienation in some circles in the society, and as a reaction in the process, it was embodied as nativism in their feelings, thoughts, and behaviors. As the Republic's ideal of "the level of contemporary civilizations" represented by Westernization, while for many positions that still regard themselves as "Eastern" the ideal of nativism against Westernization naturally emerges. Because nativism is one of the strongest pillars of tradition against Westernization (Yetim, 2016, p. 129). In the narrative of nativism, which is a form of objection to the "illusion" of equating Westernization with modernity, it is not modernization that is rejected. It is, the top-down Westernization mentality that causes the alienation of the nation, that is away from national and spiritual values, and that ignores tradition (Özışık, 2023, 544). Consequently, every sentence in the debate on nativity began to be considered within the East-West dichotomy and even the debate was doomed to be "locked in" (Ünsal, 1998; as cited in Yetim, 2016, p. 119) within this dichotomy. Birkan describes the adventure of Westernization as "escaping from home" and emphasizes that "the house is gone already." Mollaer, on the other hand, pointing out the resemblances between *Diriliş: Ertuğrul* TV series and the Vikings series, cries "the king is naked" concerning the West: "Before native-national generation, there is a narrative of an allegedly native-national establishment produced with the desire of being Ragnar Lothbrok. The West seeps through the cracks. The West is desired, its desire is desired. The intensity of the native-national discourse is directly proportional to the intensity of this desire" (Mollaer, 2018, p. 22). "What would it look like if we removed the "West" from the discourse of the nativist?"¹⁶ asks Mollaer. "The West is the greatest ideological pillar of the nativist." he concedes "Because the West gives the conservative the power to talk about origin and lost innocence" (Mollaer, 2018, p. 19).

within the scope of this study, it would be appropriate to prefer the West as a comprehensive concept by bracketing them for now.

¹⁶ Mollaer evaluates nativism in Turkey as both an ideology and a discourse. It functions as an ideology due to its continuous vertical reinforcement in the political sphere, while also serving as a discourse as it is present in the sphere of culture (2018, pp. 13–14).

In the final analysis, despite and in light of all these debates, it is a fact that Western rhetoric is as important today as it was in the past for a nativist and nationalist stance. For example, according to Bayraktar, “We do not need Germany’s Industry 4.0, Japan’s Society 5.0, Britain’s Catapult, which will result in us becoming an open market for others and make us completely dependent on foreign countries in terms of technology, but the ‘National Technology Initiative’ of Great Turkey” (Bayraktar, 2018d). Both the word “national” in the chosen concept and the fact that the other examples given are embodied through the West¹⁷ shows that the nativist-national discourse and anti-Westernism are combined in one tweet. On the other hand, the relationship between nativism and the West is not always in the form of a conflict. Of course, “uncompromising Westernization” is excluded (Yetim, 2016, p. 117) was not an option for many people in the past, and it is not possible for many segments of society today. There is a similar situation in Tanpınar’s conceptualization of “composition” (*terkip*). For him, composition is a living thing, and “everything that passes through customs is melted in the pot of composition” (Mollaer, 2018, p. 52). The “ideal” style embodied as “taking the West’s technique but not its culture” is an indication of the efforts of nativity or nativism to avoid being positioned as “anti-technical or anti-technological” in relation to the West.

Both Varank and Bayraktar’s approach towards technology is not one of criticizing, but of trying to do something as much as possible. They seem to have heard the warnings of the technology opinion leaders in the previous section that “let’s not miss the train” and have taken action. Both dream of becoming a country that produces technology rather than consumes it. Other opinion leaders have realized that the “train is running away” or that it is difficult to catch it (perhaps) because the target is far away and have preferred to criticize by developing a view on “how these things should be done.” However, Varank and Bayraktar’s (and partly Alkan’s) efforts to bring the distant target closer to the National Technology Initiative are noteworthy. Considering the current state of affairs, it wouldn’t be completely unreasonable to assert that the National Technology Initiative has demonstrated efficacy to some extent.

¹⁷ Although Japan is a Far Eastern country, it is sometimes referred to as an extension of the West. Similar debates continue for South Korea and sometimes China.

Bayraktar's tweets on the native technologies show that he is trying to be one of the ones who put his hand under the stone. His tweet "It's time to change this misfortune...!" is like a response to the metaphor of "missing the train" that technology opinion leaders constantly emphasized in the previous section. Bayraktar, a consistent advocate of the "native and national" technologies (especially UAVs and UCAVs), maintains the same excitement and enthusiasm when discussing the first national guidance system they developed in 2004, the National Technology Initiative or *Teknofest* (Bayraktar, 2016, 2017c, 2018a). Bayraktar emphasizes the importance of technological development at every opportunity and for example, claims that "a better world will be possible with the rise of our civilization. Our civilization will rise with a National Technology Initiative in the footsteps of our ancestors" (Bayraktar, 2017a), can be understood as the rise he refers to implies not only to the scale of Turkey but also to a more comprehensive civilization (Islamic civilization). Bayraktar, who attributes the independence of Turkey, and thus the independence of civilization, to a technological revolution; has high expectations from the technological breakthroughs that he directly or indirectly pioneered. Bayraktar, who also keeps historically good examples on his agenda, states that afterward, efforts for a national technology were blocked and an "assembly industry" model dependent on foreign countries was adopted (Bayraktar, 2017e, 2017f, 2017d). The statement "The basis of our independence is the Defense Industry..." (Bayraktar, 2018f), of the @teknofest Twitter account, which Bayraktar retweeted, shows the strong link he establishes between technological developments and especially the defense industry and the independence of the country.

Especially during his ministerial term, Varank, as one of the architects of the National Technology Initiative, associates what has been done in the defense industry with being an independent country, similar to Bayraktar. For Varank, Turkey's development will be possible through a "native and independent defense industry (Varank, 2020b), not one that subcontracts to international companies."¹⁸ Bayraktar emphasizes a similar emphasis

¹⁸ In his Teknofest speech in 2018, President Erdoğan emphasized his leadership in this field by stating that they made a breakthrough in the defense industry during his term as Prime Minister and that Turkey has become a country that can produce 65 percent of its defense industry needs by itself. Indeed, defense industry exports, which were 487 million dollars in 2006, reached 1.824 billion dollars in 2017 (Özışık, 2023, 541) and 5.5 billion dollars in 2023¹⁸ (Görgün; 04.01.2024; 20:33).

on native and national development. The emphasis on industrialization that does not compromise its values has been replaced by the ideal of technological progress that is dependent on its values and independent from the outside. The Turkish left's discourse of "independent Turkey" has been replaced by a new discourse in which the aim is "beyond" the level of contemporary civilizations. This aim can be achieved with technological progress under the leadership of the "Teknofest youth" with Islamic sensitivities, that are not dependent on foreign sources, that are independent and "not by emulating others, but by relying on our youth" (Bayraktar, 2018e).

For the second group of opinion leaders, the insistence on "native and national" is not rational for a country that has already "missed the train." In this discourse, which emphasizes the transcendence of global capitalism beyond nation-states technological production and outputs cannot be "native" and "national" anyway and it is a futile effort to deal with the native and national. Cem Say is a typical example of the second group in the "native and national" debate. He has an approach that emphasizes the universalism of technology with an attitude that sometimes ridicules national/native technology production. For example, the investments made in the "domestic automobile" are criticized based on the existence of "autonomous cars" in the world (Say, 2015h). Similarly, policymakers' excitements about the domestic automobile are ridiculed as "Don't get me wrong, joy for the automobile that will go on Earth, not on Mars" (Say, 2015f). Similar to the rhetoric of "missing the train", Say characterizes domestic technological production as a kind of "futile endeavor." This characterization is legitimized through the "advanced" technological moves in the world. This discourse is accompanied by the dichotomy of "tradition-religion" and "modern-science." According to Say, "There is no native or foreign in science" (Say, 2020i). Technology policies in Turkey are criticized by referring to the representation of the traditional and religious with expressions such as "until the third hour" (üç vakte kadar) (Say, 2015i) or "qiblah finding officer" (kıble bulma görevlisi) (Say, 2016b).

Another aspect of the criticism of the second group on technology policies within the nativist discourse is the questioning of "in which degree native and national" these technologies are. Alphan Manas is a good example of this situation. Manas' general approach is similar to Say's. "The native and national" technologies are ridiculed through

attempts he sees as “more advanced” in the world. According to him, while China is now making “autonomous cars”, Turkey is still “in love with automobiles” (Manas, 2015d). According to Manas, “native” does not mean “sufficient” (Manas, 2016c). Instead of being “native”, it is more rational to produce in another country (Manas, 2016c). While criticizing the irrationality of the native technology production, Manas also points to administrative and institutional problems and laments “let’s not say why the national defense industry is not developing in Turkey” (Manas, 2016h). Similar to Say, in Manas’ statements, the emphasis on the universality of technology through the transnational character of capitalism goes hand in hand with the ideological critique within. His views appear to converge the emphasis on national production with criticism of the discourse surrounding nativism. He highlights the impracticality of striving for complete domestic technological production and, instead, advocates for collaboration. Additionally, he questions the current level of domesticity in technological production, noting that certain elements are already outsourced. (Manas, 2016j, 2017a, 2017b).

The nativist narrative employed by the first group is both conveyed and consolidated through the charismatic leadership of the President, making him a significant factor in its dissemination and reinforcement. Erdoğan’s speech at the 2019 Teknofest, in which he recited the lyrics of Cem Karaca’s song “The Mechanic’s Apprentice” and then went on to say “we also wore overalls” (Türkiye Cumhuriyeti Cumhurbaşkanlığı [Presidency of the Republic of Türkiye], 2019) is the embodiment of “the new era,” wherein the policy and narrative of the National Technology Initiative plays a pivotal role. Indeed, according to him, “the first condition for true independence in today’s world is to become a country that designs, develops, produces and exports technology” (Türkiye Cumhuriyeti Cumhurbaşkanlığı [Presidency of the Republic of Türkiye], 2018). To reach such a point, it is necessary to move towards a goal where “Turkey’s future lies in technology and innovation” (Türkiye Cumhuriyeti Cumhurbaşkanlığı [Presidency of the Republic of Türkiye], 2020). Erdoğan reinforces the relationship between progress and technology by stating that Turkey does not accept the role of a “backward or underdeveloped” country assigned by the West.

The aspiration of achieving complete independence and development through technological advancements, a defining feature of conservative political discourse in

Turkey, is often intertwined with references to the nation's past but also its potential future trajectory. However, the distinction between these aspects is often blurred, leading to confusion. When Tanpınar laments when he remarks that “We cannot be ourselves as we want to be” (as cited in Mollaer, 2018, p. 63), he seems to underscore this confusion and indecisiveness. In contrast to Tanpınar, Yahya Kemal’s perception of the past displays more certainty and decisiveness, as reflected in the phrase: “I am the future whose root is in the past” (as cited in Mollaer, 2018, p. 63). When Bayraktar authoritatively uses the phrase “from the roots to the skies,” he not only celebrates the achievements in the defense and aerospace industry, but also echoes the certainty and conviction found in Yahya Kemal's perspective (Bayraktar, 2017g). For Bayraktar, “The children of a deep-rooted civilization” (Bayraktar, 2019b), are striving to elevate “the rich cultural heritage of our beloved nation” (Bayraktar, 2020a).

For Bayraktar and Varank, both past efforts and current achievements in the field of science and technology are acknowledged as valuable, and should serve as inspiration for future generations, particularly the youth. The references to “Hezarfen, Cevheri, Vecihi”, “Nuri Demirağ, Devrim automobiles”, and “beet engine” exemplify this sentiment (Bayraktar, 2015b, 2015c, 2020b). Varank’s statement “If you do not protect your history, you cannot protect your future” underscores the interconnectedness between understanding one's past and ensuring a prosperous future (Varank, 2013a). He suggests that a society's history serves as a foundation upon which its future is built, emphasizing the importance of preserving cultural heritage, learning from past mistakes, and drawing inspiration from past achievements. A firm sense of self-identity and continuity is emphasized as pivotal in this context, as it lays the groundwork for building resilience.

In the statements of Bayraktar and Varank, the references to the past and the aspiration for technological advancement are both framed within a narrative of “civilization.” They view the past and history as a heritage to be proud of, with landmarks like the “Hagia Sophia Mosque” or the “Fatih Mosque restored by TIKA in Kosovo” symbolizing cultural treasures and historical legacies that embody the richness of their heritage (Bayraktar, 2021a; Varank, 2010). According to Bayraktar, “a better world will be possible with the rise of our civilization. And our civilization will rise with the National Technology Initiative in the footsteps of our ancestors” (Bayraktar, 2017a). However, they openly

refer to the interruptions from both external and internal sources that have occurred in the past. Bayraktar claims that Turkey has the potential to become “number one in the world in this technology if it is not blocked in this field and if [current efforts] continue with the same determination” (Bayraktar, 2021b). The efforts however should take into consideration of an ethical perspective. Nevertheless, these efforts should be guided by an ethical perspective and should not be driven by greed, but rather "justice, mercy, and humanity." The model to follow is one based on ethical considerations such as "justice, mercy, and humanity," rather than giant enterprises competing with greed (Bayraktar, 2020c).

The perception of Varank and Bayraktar on the past closely aligns with that of President Erdoğan. He reinforces the nativist-national position with a sense of identity rooted in the past, by referring the struggles and achievement of the ancestors. Erdoğan, who asserts “the need [of the nation] to be at the forefront in all areas of technology,” reinforces a sense of identity rooted in the past. He invokes the enduring spirit of progress exemplified by the forebears: “Our ancestors, throughout the centuries, have always imagined and pursued greater achievements, striving and often reaching their goals.” In this respect, the nativist narrative intricately links the images of the past with the potential of the future. In other words, the trajectory of the nation towards future is proposed to be guided by a tradition of aspiration and resilience inherited from past generations (Türkiye Cumhuriyeti Cumhurbaşkanlığı [Presidency of the Republic of Türkiye], 2018, 2020). In Erdoğan’s statements, as well as in the views of Bayraktar and Varank, memory serves as a powerful tool for shaping collective consciousness, providing a framework for understanding identity and guiding aspirations for the future. However, as the extensive uses of the past imageries indicates, the nativist narrative does not align with Raymond Williams' concept of "culture is ordinary," which suggests an embrace of domestic culture. Instead, it tends to reflect the nationalist-conservative belief that historical change is driven by “great men (sultans)” (Mollaer, 2018, p. 20)

The names attributed to technological innovations serve not merely as labels but also play a pivotal role in crafting the narrative surrounding these advancements. *Gökbey*, *Kuzgun*, *Fetih 1453*, *Akıncı*, *Aksungur*, and *Cezeri*, for instance, evoke rich historical and cultural references. Furthermore, they serve to reinforce the national and indigenous identity of

the country. In essence, these names become emblematic of a broader narrative that celebrates Turkey's historical heritage, technological prowess, and aspirations for self-reliance in innovation. Branding national efforts to achieve technological progress under the term “National Technology Initiative” (*Milli Teknoloji Hamlesi*) reflects a deliberate strategy. It signals a concerted effort to assert Turkey's unique path and vision for technological progress, distinct from global trends or terminology. This approach announces a commitment to advancing technology in alignment with its national interests and values, emphasizing native innovation and self-reliance as key pillars (Bayraktar, 2019a).

The statements referring to the festival reveals the evolution of the nativist narrative. The transition from the "Generation of Asım" to the "Teknofest youth" signals a transformation in the conservative narrative, albeit not in terms of underlying principles (Türkiye Cumhuriyeti Cumhurbaşkanlığı [Presidency of the Republic of Türkiye], 2023). Through initiatives such as *Teknofest*, there's a deliberate effort to actively engage younger generations, to align them with both traditional values and contemporary aspirations for technological advancement, as part of the “native and national” policy. As the Chairman of the Board and Chief Technology Officer of the T3 Foundation, which organizes *Teknofest*, Bayraktar expresses his profound optimism and high hopes for the youth of Turkey. He believes in their potential to drive technological innovation and progress, emphasizing their pivotal role in shaping the country's future (Bayraktar, 2017h, 2018a, 2018b). He emphasizes his commitment to nurturing young people with the aspiration of positioning Turkey as “a leading country in every field of technology” (Bayraktar, 2018c). He describes the festival as a platform “to inspire children and support young people” (Bayraktar, 2018g) in order for achieving the “ideal of an independent and prosperous Turkey” (Bayraktar, 2018h).

7.4. The Reflections of the Past: Burden or Legacy?

Progress has almost severed its ties to today. Where progress is perceived as extending far into the future from the present, looking back at the past is often regarded as being stuck in it. In this context, amidst the urgency and preoccupation with keeping pace with

the speed/tempo of progress, fundamental questions emerge regarding the extent to which elements of the past, encompassing culture, “that which belongs to us” can be conserved and transmitted into the future. These questions arise as existential dilemmas from which cultural anxieties emanate, demanding careful consideration and deliberation. While the proponents of the Westernization/modernization continue to maintain the first attitude dominantly. It is also clear that conservatism adopt the second attitude without giving up the idea of progress. In other words, although the ideal of reaching the level of contemporary civilizations (“*muasır medeniyetler seviyesi*”) is a common goal, the ideal to achieve this varies in terms of how and in what direction it will be pursued. This differentiation not only shapes the perspective on history, the past, and cultural background but is also shaped by these factors. This cultural polarization can also be interpreted as a struggle of representation. Ottoman and Republican images are juxtaposed in discourse strategies. Often, this struggle of representation, shaped around themes of rupture and continuity, can be observed to redefine, and reconstruct history. At this point, the experience or legacy of the Ottoman Empire is juxtaposed with the experience of the Republic (still as an ongoing modernization project).

Tanpınar(2018), in the preface to his book “Five Cities,” strives to discover a third path to transcend the dichotomous nature of tradition and modernity. He prefers to view the contrast between the old and the new; the sorrow felt for what is lost with the advent of modernity juxtaposed with the desire to embrace modernity, not as conflicts, but as drama. Tanpınar asserts that both his contemporaries and the preceding generation perceived modernization as a civilizational shift and placed their collective hopes upon it. As a long and devastating experience, he likens it to a journey through steep bends and cliffs. According to him, this journey is an adventure that takes place “in the climate of criticism, denial, acceptance and rejection, hope and dreams.” This adventure, according to him, “will be the real drama of Turkish society until a day when a more productive work will reshape our lives in every sense.” The extension of this journey is not about knowing the way to go. What makes the journey difficult is that as we go from past to future, the past increasingly preoccupies us, and the lost past turns into a growing void in our identity and character. This tension, which should not be resented, Tanpınar states, should not lead us to denial and ignorance, but to reconciliation and understanding.

Although Tanpınar describes himself “once a Westernist” (“*eski bir garpçi*”) his stance has been widely understood as cultural conservatism, Tanpınar was neither conservative in the prevalent sense nor as the proponents of the “super Westernization.” On the contrary, as Dellaloğlu describes, Tanpınar was a “seeker of modernity in the country of modernization.” This was a Western (“*batılı*”) attitude, not Westernist (“*batıcı*”). While Westernization rejects the past and establish it as a discontinuity, The Western experience, without imitating another model, has succeeded without denying its own experience, tradition, and past. Thus, Tanpınar offers a proposal outside of a Westernist or conservative (reactionism) perspective. This proposal includes being modern within the framework of the principle of “continuing to change, changing to continue.” On the other hand, an approach based solely on change and discontinuity would be incapable of creating a tradition and would turn into a rootless, weak, contentless form:

Tradition in our country always evokes the turban, the bride price, the coiffe [*takke*]. But this is not the only tradition! Renaissance is tradition, Baroque is tradition. The West has no such complex. The university is also a tradition. In the West, rectors and deans wear robes. We wear them too, but we don’t have an equivalent, we dress like this because that’s how they dress in the West. (as cited in Dellaloğlu, 2021, p. 157)

Among the opinion leaders, Kuzuloğlu appears to be the most aligned with the disposition of Tanpınar, thus, positioning him outside the two main cultural camps in this regard. The fact that Tanpınar’s statements and Kuzuloğlu’s perception of modernity by putting the word “modern” in quotation marks can be explained by the lack of tradition, as the perception of modernity is “always patched on itself” and is related to a feeling of incompatibility (Kuzuloğlu, 2021c). This emphasis on tradition, distinct from mere conservatism and nostalgia, highlights a dilemma situated between the tensions of continuity and change. The question of where the equilibrium between tradition and modernity will be established remains a significant uncertainty.

Kuzuloğlu, on the other hand, makes the following observations regarding the experience of modernization: “The fact that Anatolia has been deprived of the opportunity to find its own ideas, ways, and means has inevitably led to the ‘modern’ perception being always

applied to itself, leading to an external view. The sole reason for tissue mismatch is not always the imposition of modernism from above” (Kuzuloğlu, 2021d). These statements, implying an alternative, unique, modernity that does not turn into an identity problem, are related to Kuzuloğlu’s observation in his previous tweet about the motivation behind Ottoman’s modernization process: The motivation behind the modernization effort in the Ottoman Empire is “the impetus to overcome the modern world,” which made the Empire vulnerable over time. Thus, as an important phenomenon to be considered, according to Kuzuloğlu, the arrival of modernity in the struggle against modernity, albeit its seemingly paradoxical nature.

Unlike Kuzuloğlu, Say’s disposition toward the past/history is reminiscent that of the proponents of Westernizations. He evaluates the Ottoman legacy as a burden that must be rid of. Trivializing scientific activities in the Ottoman era, he, for example, interprets the destruction of the observatory as evidence of Ottoman opposition to science. He asserts that scientific progress was hindered within the Ottoman Empire, ultimately contributing to its decline: “The regime that destroyed the Istanbul observatory with cannon fire was bad, the Republic is science, it is good” (Say, 2017k).

Manas on the other hand takes a more impartial stance on the Ottoman legacy. He writes that the real motive that elevated the Ottomans was the attention given to science and scientists. He argues that this should be considered in approaches to the Ottoman Empire. He believes that history should be used not to create heroism but to learn from experiences. As an example, he mentions that while the television industry shows interest in Ottoman sultans, it does not show the same interest in Ottoman-era scientists. Additionally, Manas, along with Kuzuloğlu, shares the belief that the Turkish people’s attitude towards history is problematic. The Turkish people, living in the past, show a tendency to overlook the present moment. They believe those who seek refuge from contemporary challenges by probing into the past and those who employ history as a form of solace is likely to experience dissatisfaction. Although no clear address is given in this shared approach of Kuzuloğlu and Manas, the same attitude can be seen in those who praise the glorious history of the ancestors and those who miss the ‘golden age’ of the Republican era. History, both Ottoman and Republican, is reanimated in memory as a kind of nostalgia.

Manas, conversely, adopts a nuanced perspective regarding the Ottoman legacy, emphasizing the pivotal role of scientific advancement and intellectual pursuits in the empire's elevation (Manas, 2017d). He contends that scholarly endeavors should be central to assessments of Ottoman history, advocating for a departure from narratives of heroism towards a more reflective engagement with the past. For instance, he critiques the disproportionate focus of contemporary media on Ottoman rulers at the expense of neglecting the contributions of scientists from the era (Manas, 2018c). Manas underscores the need to reevaluate prevailing public perceptions that overlook the significance of scientific achievements in Ottoman society. Manas also highlights concerns regarding the Turkish populace's historical consciousness, noting a tendency towards nostalgia and escapism from present challenges. He criticizes those who idealize past glories or seek solace in historical narratives.

On the other hand, Mustafa Varank, who served as the Minister of Industry and Technology between 2018 and 2023, associates current developments in technology with the past. According to Varank, the momentum gained today in the field of technology is related to the “right” connection with the past. For this reason, in his post about the opening ceremony held in 2020, he evaluates the Demirköy Fatih Foundry in the city of Kırklareli as a reference point that makes today's technological developments possible. For Varank, who constantly reminds the world of technology towards history and historical heritage, history is the way to protect the future (Varank, 2013a). He sees the mid-15th century foundry and the Turkey of the 2020s as organically integrated. Although his emphasis is mostly on economic independence, it is noteworthy that he does so through a manifestation of Ottoman military technology in the 15th century. In this context, there is an assumption of intellectual continuity spanning from the 15th century to the 21st century, suggesting a perception of historical homogeneity between Ottoman and Republican Turkey with regards to advancements in science and technology.

It is possible to say that Varank and Bayraktar show a more consistent approach to historical heritage. They evaluate scientific and technological developments from the perspective of “the benefit of Turkey”, regardless of the period. An example of this can be seen in the fact that they easily use Devrim automobiles and the Istanbul Observatory in the same sentence. The difference in attitude between Varank and Bayraktar is an

approach that realizes that it is not possible to get rid of the burden of the legacy of history. What should also be underlined here is that Bayraktar and Varank are also selective in their examples, evidently observed among all the opinion leaders.

Compared to the other opinion leaders, Cem Say is notable for taking a firm and inflexible position on topics related to the pre-republican era. He believes that on one side, there are efforts and initiatives aimed at ushering Turkey into a new era with the formation of Turkey, while on the other side, there are opposing forces working against this transformation. He highlights the reforms implemented by the founders of the republic, such as the emancipation of women and language revolutions. Specifically, initiatives to coin Turkish terms in scientific domains like mathematics is seen as eliminating obstacles to scientific understanding, consequently facilitating the cultivation of scientific mentality in the Republican Turkey. According to Say, today there are still significant numbers of dissenters who refuse to comprehend this crucial step towards scientific reasoning and progress. The current state of affairs, encompassing both cultural and political spheres, diverges from the intended outcomes and obstructs the achievement of the reforms' objectives. This encompasses challenges such as a lack of scientific understanding within educational policies and extends to the cultural domain (Say, 2014d, 2014g, 2014h, 2015m, 2016c, 2017d, 2017g, 2018b, 2020k, 2020k).

7.5. Censorship and Control: Social Media Bans and Regulations in Turkey

The history of criticism of censorship practices in Turkey can be traced back to the emergence of newspapers in Turkey. Especially in the last period of the Ottoman Empire, in parallel with the emergence of newspapers, governments has always been eager to control the media. Efforts in this direction were not limited to the Ottoman period, but have continued to this day in different forms. These efforts of governments have often been subject to criticism in the context of freedoms and have been associated with authoritarianism (Koloğlu, 2010; Mardin, 2017). Parallel to the spread of the Internet and social media and the decline of conventional media, the Justice and Development Party (JDD) governments have taken many steps to regulate the Internet and social media. These efforts, which the JDD governments describe with expressions such as blocking

(access), regulating, limiting, stand out as one of the issues that the opinion leaders criticize the government policies most openly and harshly. The opinion leaders have expressed their concerns about the increase in restrictions of the internet and social media platforms without hesitation and have expressed their concerns in many different ways. The most important argument put forward by the opinion leaders in this context is that such practices are against the spirit of the (digital) age and the internet. According to them, increasing pressure and control mechanisms over the internet first and foremost limit the freedom of society to express its opinions. On the other hand, the government's blocking efforts is regarded as a collective punishment by depriving society of the possibilities of the information society and new technologies.

The progression of social media bans in Turkey has been shaped by a sequence of events that have deeply influenced national discourse and sparked significant debate. The first instance of Twitter access being blocked took place on March 20, 2014, immediately after President Erdoğan's speech at a rally in Bursa, where he famously proclaimed, "We will eradicate Twitter, all of them." This declaration was closely linked to escalating tensions following the events of December 17-25, 2013, often referred to as the "Judicial Coup Attempt." In his speech, President Erdoğan characterized social media as a source of societal terror due to the dissemination of false information and manipulative content. Against the backdrop of these events, the government perceived Twitter as a channel for degenerate activities, including black propaganda and perception management, supposedly disrupting the course of events. Erdoğan condemned Twitter as "one of the institutions that encourages all kinds of immorality, all kinds of espionage and spying for their gains and opportunities," asserting that such a concept of freedom was intolerable ("Erdoğan," 2013). President Erdoğan's initial disapproval of Twitter traces back to the 'Gezi Park' protests in 2013, a year prior to the ban's enforcement. During that time, he characterized Twitter as "a complete nuisance," portraying it as a platform that terrorizes society and serves as a hub for disinformation ("Erdoğan," 2018). These developments emphasize the intersection of political events and digital communication platforms in Turkey, where social media bans have become intertwined with broader national concerns and policies.

The temporary ban on Twitter imposed in March 2013 was canceled on April 3 following a ruling by the Constitutional Court that regarded it a violation of the freedom of expression guaranteed under Article 26 of the Constitution. Following this, in April 2015, access to the platform was once more limited due to the spread of footage depicting the killing of Prosecutor Mehmet Selim Kiraz. The restriction was lifted after the removal of the footage.

In July 2015, Turkey imposed another temporary block on Twitter, following its failure to promptly remove content related to the deadly suicide bombing in Suruç, which resulted in the loss of 32 lives. Notably, since then, measures to restrict access to Twitter in Turkey have shifted away from complete bans on the platform. Instead, they have evolved into targeted actions such as blocking specific objectionable tweets or accounts originating from within the country.

Wikipedia and YouTube have also faced restrictions at various times in Turkey. Wikipedia was subject to extensive censorship measures starting in 2017 due to its failure to remove specific content concerning Turkey's involvement in the Syrian civil war and allegations of state-sponsored terrorism. Similarly, YouTube has encountered frequent blockages, initially in 2007 over a video insulting Mustafa Kemal Atatürk, and later due to various content-related issues, including videos discussing sensitive political matters or violating Turkish laws.

In the light of all that's happening, the opinion leaders have consistently voiced their criticism across various instances of platform restrictions and censorship. Nevzat Aydın views the restrictions as "shameful," asserting that they severely damage Turkey's image and hinder its potential for foreign investment potential (2014a, 2018). Nazım Salur implies that restrictions on technology contradict its fundamental nature: "Technology and bans! These two words don't look good together at all," emphasizing the association of technology with freedom and innovation (2014). Manas mocks censorship practices by highlighting the disparity between a society reliant on Virtual Private Networks (VPNs), hence "VPN Society" to access information and a true information society (Manas, 2016). He emphasizes that practices such as censorship, blocking and slowing down, and content removal are contrary to Turkey's vision of the future. Alkan, who mostly takes a

supportive stance toward the government's technology policies emphasizing national development, views restrictions as indicative of a prohibitionist mindset, suggesting that such actions by authorities are both lamentable and unacceptable (2017c). "It is very sad [that] the authorities play three monkeys," he writes, emphasizing his disappointment with the refusal by authorities to address or acknowledge the issue (2014). For Alkan, bans and restrictions is most likely to lead to isolation from the world, and are far from being a solution. According to him, if the government aims to combat "crime and immorality," instead of outright banning social media platforms, it should adapt its approach without penalizing an entire society (2017b, 2020d)

Compared to other opinion leaders, Kuzuloğlu and Say adopt a notably more severe tone in their criticism of the restrictions. According to Kuzuloğlu, censorship practices resemble those depicted in the novel *Fahrenheit 451*. By drawing parallels to the dystopian world of the novel, he appears to emphasize the gravity of censorship and its potential to suppress free thought and expression (2011a). As technology enables individuals to bypass traditional power structures and express themselves directly, governments feel challenged in maintaining authority and controlling narratives: "In an era where people can convey messages and express demands without needing politics and media, the only card the other side [the government] has is to ignore and obstruct" (2013c) He suggests that the attempts to censor and block the internet reflects an outdated mindset that "still believes it can accomplish something in this era by censoring, silencing, and blocking," failing to recognize the changing dynamics of communication and information dissemination in the digital age (2013b). He appears to suggest that attempts to control information through censorship are ineffective and counterproductive in the long run. Additionally, he asserts that in cases of censorship, it is the citizens who suffer consequences, highlighting the punitive nature of government actions (2017e). Kuzuloğlu, who struggles to comprehend the efforts to control and limit freedoms in the information age, raises a poignant question: "Why this fear against the conscience, opinion, and common sense of individuals?" He underscores that the current generation, which he describes as outdated, lacks an understanding of the essence of the internet. Kuzuloğlu expresses hope for future generations, believing that those who have grown up with the internet are more likely to grasp its true potential (2018q, 2019e).

Similarly, according to Say, in today's world, authoritarian governments can be categorized into two distinct groups: those utilizing information technologies to reinforce order and those opting for outright bans (2019b). Say asserts that Turkey falls into the latter category, arguing that such bans would isolate Turkey from the world, aligning it more closely with nations like Eritrea and Pakistan (2014b). In a satirical vein, Say contends that while Turkey may not have developed its own space station like China, it has matched China's level of censorship, as evidenced by the blockage of Wikipedia (2016g). He draws a historical parallel, likening the Wikipedia ban to the Ottoman Empire's delayed acceptance of the printing press: "Is today's hostility to the internet rooted in the ancestors' centuries-long struggle with the printing press?" (2019c).

In summary, the majority of the opinion leaders regarding the bans on access to social media platforms, which commenced in 2014 and have persisted for several years, largely believe that controlling information is futile. They argue that people will always find ways to circumvent the censorship, potentially making social media platforms even more appealing. Additionally, they express concerns that such bans influence the country's global reputation negatively and are embarrassing, even disgraceful, on an international scale. The consensus is that banning Twitter, or any social media platform reflects a backward approach, hindering technological progress and impeding the country's development. The opinion leaders perceive these bans as a significant impediment to democratic governance, completely opposed to democratic principles (Afra, 2014a, 2014b, 2014c, 2014e, 2014d; Alkan, 2016e, 2018c; Aydın, 2014b; Kuzuloğlu, 2013b; Say, 2013a, 2014a, 2015a, 2017b).

Unlike the outspoken criticism from the other opinion leaders regarding censorship practices, Bayraktar and Varank adopt a notably different stance. Bayraktar believes that while censorship is not ideal, "there should be measures in place to combat those who violate people's privacy and human dignity" (2014a). Varank, on the other hand, shares concerns about the misuse of anonymity on the internet to commit crimes and spread hate speech without facing consequences. He advocates for holding individuals accountable for their actions online and believes that social media platforms, like Twitter, should take action against those who use anonymity to engage in criminal behavior or spread hate speech. While he does not openly endorse censorship practices, he calls for social media

platforms to take a stronger stance against such behavior and demands stricter enforcement of policies to prevent online misconduct (2013c, 2013b, 2014a).



8. CONCLUSION

While digital technologies grew exponentially, discourses on and representations of technology evolved, encompassing multifaceted dimensions in both local and global contexts. The convictions formed within this continuum encapsulate past limitations, limitless possibilities, and future expectations. Dominant technology discourses often revolve around opportunities and threats. In the local context, on the other hand, technology assumes nuanced meanings through diverse representation mechanisms. In the history of Turkish modernization, this Janus-faced character is evident, where the anticipation of technological progress and the anxiety stemming from the technological gap are inseparable. The coexistence of these dual sentiments becomes integral to discursive and representative practices, reflecting the complex dynamics inherent in the pursuit of technological advancement within the Turkish context. This dualism encapsulates the simultaneous drive for progress and the challenges associated with narrowing the technological divide, shaping the narrative of Turkey's modernization journey.

The narratives, myths, and representations surrounding (the notion of) technology in Turkey are intricately intertwined with the historical context, encompassing past, present, and future anxieties, and expectations. From the outset of modernization of Turkey, the aspiration to “reach the level of contemporary civilizations” has served as its guiding motto. It encapsulated the overarching goal and motivation, emphasizing the desire to catch up with and align itself with the advancements of the Western civilization. It highlighted the significance of modernization as a driving force in shaping Turkey's socio-political and economic landscape throughout its history. Despite the overarching aspiration for modernization, the process in Turkey has been characterized by a rushed and eclectic approach, resulting in somewhat chaotic attempts to implement Western values and institutions. These efforts are intricately shaped and is shaped by Turkey's unique historical and cultural context.

Given its often traumatic nature and outcomes, it is understandable that a significant portion of academic and intellectual literature in Turkey has focused, or at least touched upon in some way, on the question of the modernization. From the outset, intellectuals have played a crucial role in guiding both the masses and the state regarding the potentials and risks associated with modernization. While there exists a rich literature on the modernization discourse of intellectuals, the impact of the emergence of social media platforms on these discourses and representations has not been thoroughly explored. The rise of social networks gave way to novel forms of opinion leadership, although the typology of intellectual has not completely vanished. Intellectual figures and opinion leaders in social media differ in several aspects. Intellectual figures typically and ideally possess specialized knowledge or expertise in certain fields and often engage in critical thinking and rigorous analysis. They often contribute to academic or scholarly discourse, write books or articles, and participate in public debates. Their influence often extends beyond social media platforms and may encompass various traditional media outlets as well. They are expected to engage in nuanced discussions and may present multiple perspectives on complex issues. The credibility of social media opinion leaders, on the other hand, often depends on factors such as their perceived authenticity, relatability to their audience, and their ability to create engaging content. Thus, opinion leaders in social media may or may not possess technical expertise or intellectual background when discussing cultural and social issues. Then again, they are considered to play a crucial role in shaping opinion formation due to their ability to reach and influence large audiences on social media platforms. Thus, the content they create on social media platforms may provide insights into how representations and discourses on technology are reflected and shaped.

Twitter/X stands out as the platform where public discussions about various topics, including technology, often take place. Opinion leaders, sometimes referred to as influencers, often hold significant influence on social networks due to their large followings and their capacity to shape mass opinion. To this end, the Twitter/X platform has been selected to identify a specific set of opinion leaders.

In the process of identifying opinion leaders, an optimized method has been developed, leveraging the list feature of the Twitter/X platform. The criteria for identification include producing Turkish content in technology, specializing in the field of technology, and possessing high representativeness. In the end, ten opinion leaders have been selected from a pool of candidates based on their adherence to the established criteria and their significant influence in the field of technology on Twitter/X platform. The selection process is attentive to both vertical (public perception and engagement) and horizontal (peer perception) dimensions of information diffusion. Following the identification process, tweets/posts of the identified popular opinion leaders were retrieved and classified within the framework of certain categories and themes.

The background of the identified opinion leaders indicates that they are prominent figures in Turkey's technology landscape, with diverse backgrounds in journalism, entrepreneurship, policymaking, and academia. Most of them have educational backgrounds in technical or innovation-oriented fields like engineering, computer science, or business administration. However, exceptions like Serdar Kuzuloğlu, who lacked formal education but excelled in journalism during the digital media transformation, demonstrate alternative pathways to success in the tech industry. Figures like Selçuk Bayraktar and Mustafa Varank stand out for their involvement in crafting technology policies. Varank's extensive experience in policymaking, including roles in parliament and as Minister of Industry and Technology, has significantly shaped Turkey's technology landscape. Bayraktar, on the other hand, has close ties with the government and chairman of the one of the biggest companies in defense industry in Turkey. A majority of the opinion leaders are entrepreneurs, investors, or businessmen, shaping technology through their ventures. Examples include Hakkı Alkan, Sina Afra, and Nevzat Aydın. These opinion leaders effectively utilize social media to shape technological discourse, sharing insights and engaging with audiences. Some are also involved in civil society activities, contributing to foundations and associations. All individuals possess strong social and cultural capital, with extensive networks and recognition in various sectors. This credibility enhances their influence and ability to drive societal change. Their missions include introducing and disseminating technological innovations, fostering

entrepreneurship and innovation, and sharing knowledge and experience. They play critical roles in increasing the societal impact of technology and digital transformation.

Within the context of (digital) transformation, the views of the opinion leaders reflect to a great extent the dominant reception of technology and lack a critical perspective in depth. One of the key points that shape the dominant understanding of the technology of opinion leaders is the perception of inevitability. Accordingly, technological progressions are seen as revolutionary and a natural evolution, emphasizing its unavoidability. However, this dominant perspective fails to adequately question the social, economic, and environmental impacts of technological change. It also overlooks choices and perspectives that could guide these transformations. In parallel, the emphasis on inevitability is accompanied by a sense of admiration. None of the opinion leader appear to embrace a dystopian view of technology, but rather tend to align between protopian and utopian perspectives. The protopian perspective is relatively more sensitive toward the risks associated with technologies and technological change without abandoning faith in progress. On the other hand, the utopian stance holds the view that further technological advancements will overcome those risks. Then again, it should be noted that the risk perception in two perspectives, albeit not radical, is different. Thus, technological developments are largely viewed within the framework of opportunities. While the protopian view partly involves a critique of technology, the utopian view is immersed in the “dizzying speed” of technological developments. Among the opinion leaders, while Kuzuloğlu stands as a typical example of the protopian perspective, Say and Yeğen tend to embrace a utopian outlook.

Based on the conviction that digital transformation will be increasingly disruptive, the opinion leaders express a deep concern that failing to catch up and keep up with the technological transformation is likely to bring about profound outcomes on a national scale. This concern is paradoxically two-dimensional. The bulk of the technology opinion leaders, who equate technological advancement with human betterment, and envision a better world, where the trajectory of technological advancements leads towards the concept of global citizenship, also firmly believe that national measures and policies should be developed simultaneously.

The views of the opinion leaders also are marked with optimistic outlook on the disruptive and destructive potential of technology (creative destruction), which is likely to pave the way to a new kind of relationship between humans and machines. This transformation implies that the relationship between the two is more likely to acquire a new dimension. Thus, the relationship of humans with things in general and with technology in particular will be altered in the ontological shift, disrupting the hierarchy between the two. Apart from the changing nature of this relationship between humans and machines, there are also quantitative dimensions in this new hierarchical relationship. The opinion leaders emphasize the character of technology as an extension of human beings, assisting and complementing them, to eliminate their deficiencies. At the same time, they tend to interpret the technological developments, as heading towards a post-human future, if not a trans-human one. They hold a firm conviction that the old perspectives are to be replaced with new technologies. In this emerging scenario, radical interpretations advocate adaptation, while more moderate interpretations suggest maintaining a critical view while being compatible with technology. It is noteworthy, but not completely surprising, that the opinion leaders believe that what is old has already been destroyed while what is new unfolding at a rapid pace, strongly emphasizing the need to adapt to the new for the sake of the future. It is at this juncture that the perspective among the opinion leaders diverges as to how technological progress can be caught up, each one suggests a different path to progress and (and adaptation) to the future. This divergence in perspectives towards (technological) progress, as to how the technological gap is to be closed, forms the central themes of their discussion in the Turkish context.

It has been found that the cultural concerns and anxieties that dominate modernization discourses are reproduced by the identified opinion leaders. However, the discursive practices of the opinion leaders reflect two opposing perspectives. The first perspective leans towards universalism, based on Western/Enlightenment values to a great extent. From this viewpoint, the dominant cultural codes and prevailing political understanding are seen as impediments to progress and development.

The opinion leaders who adopt this perspective is loosely aligned with the modernizing paradigm of the Westernist intellectuals historically. Kuzuloğlu, Manas, Say, Yeğen, Salur, Aydın, and Afra fall into this group, However, it should be emphasized that they

appear to adopt a liberal and anti-imperialist perspective, albeit seemingly contradictory. Among this group, the harshest and most concrete criticisms are voiced by Say, Kuzuloğlu, and Manas. Accordingly, they dominantly assert that technological progress should be dealt with within the framework of reason and science. In this respect, the experience of the West stands as the only point of reference. At the same time, the opinion leaders argued that Turkey's prevailing cultural codes are the biggest obstacle to technological progress and that technological progress can only be realized based on cultural transformation.

They have the conviction that the dominant cultural codes repeat communal and traditional patterns of thought and action, rather than having an individualized perspective that puts the general welfare of the society at the forefront. It is within this framework that they ascribe negative meanings to the concept of mentality. The concept has long been an important analytical tool in modernization debates, almost always accompanying the concepts of progress and underdevelopment. Thus, it has been observed that the concept of technology is equated with the concept of progress at the level of representation, carrying the baggage of modernization efforts.

Thus, they express the concern that dominant cultural codes cannot be reconciled with global history (technological evolution) due to "sedimented tradition." This perspective has strong echoes of an Orientalist discourse on the East. Similar to the Orientalist discourse, emphasis is placed on cultural essentialism and the ahistorical discourse of the East. The colonial practices of Western experience are bracketed within the framework of Western enterprise, reason, and science; implicitly, the East is treated as outside these values, as backward or static. Nevertheless, an "in-betweenness" can also be observed in the narratives of the opinion leaders. It has been noted in the literature that the expectation of realizing technological progress based on the Western experience and the fear of not being able to realize this expectation has become part of the national identity. Based on this observation, in the discourse of opinion leaders, there is a sense of being stuck between the East and the West, between the underdeveloped and the developed. On the other hand, one of the most important observations they make is that (daily) political conflicts shape and even suffocate society; thus, the cultural basis that makes technological progress possible and the research and development activities, scientific

perspectives, and technology policies that are shaped on this basis are not on the agenda. Nevertheless, there is an ambivalence as to whether it is social culture or political culture that is more decisive.

The other perspective, on the other hand, adopts a techno-conservative approach, favoring controlled progress based on culture and tradition and embracing “nativist and national” rhetoric. The views of Bayraktar and Varank fall into this group while Alkan can be positioned within both groups. Like the previous group of opinion leaders, Varank and Bayraktar also criticize the mentality, but the object of this criticism is that the current policies of the government are not sufficiently supported by the segments they identify with the Westernist mentality. Nevertheless, just as they agree on the need and urgency for technological transformation, Varank and Bayraktar share the views of the first group on issues such as science, technology, progress, innovation, and entrepreneurship.

The main point on which they differ, however, is that technological progress should be built based on traditional/cultural values. At this point, Varank and Bayraktar’s views are expressed within the framework of technological nativism. The stances of technology opinion leaders towards technological nativism, which also forms the backbone of current technology policy, can be categorized into three groups. For the first group, represented by Varank and Bayraktar, “the native and national” technological production is the only solution in the road to full independence and development. The discourse of nativism and nationalism produced in this context is shaped by references to the past and a vision of the future through the ideal youth. The second group, including Say, Kuzuloğlu, and Manas, emphasizes the universality of technology in the context of the nativist discourse. Considering the notion that other nations are advancing to the next stage, the narratives concerning technological nativism are viewed appear to be irrelevant for this group. This critical discourse aligns with both political and ideological opposition directed toward the political authority. The third group, represented by Alkan and Yeğen, takes a more descriptive approach when it comes to technological nativism rather than taking an ideological position. In this direction, both “advanced” technological developments in the West and “the native and national” technological movements are praised from the same distance.

In the final analysis, the opinion leaders reproduce the common myths on technology, viewing it from an evolutionary perspective. The historical foundations of the notions of both progress and technology indicate their relatively recent development. The notion of technological imperative and the perspective of technological determinism influence their views. They tend to view technical and technological changes as autonomous, existing outside or above society. Particularly in the context of digital transformation, they appear to advocate for adapting to technological progressions rather than actively shaping them. In this line of thought, they commonly adopt technocratic consciousness that prioritizes technical expertise and rational decision-making in governance and policy-making processes. In the realm of politics, the bulk of the opinion leaders appear to believe that experts, particularly those with technical or scientific knowledge, should play a significant role in shaping and implementing policies. They appear to favor depoliticization of decision-making, minimizing the influence of partisan politics (daily politics) and ideological agendas in policy formulation and implementation. The opinion leaders largely overlook the global risks of industrialization and capitalism. They rather emphasize the potentials of technological progressions while neglecting the broader societal impacts, systemic inequalities as well as power dynamics shaped by capitalist structures.

In the local context, opinion leaders commonly express a developmentalist stance that relegates technology to the background. This tendency is highly related to a sense of urgency which has long framed the discussions on modernization from its outset. The extensive use of catchy phrases like “catching the train” and “missing the train” are illustrative of the alarmist nature of developmentalist discourses, perpetuating anxieties about the technological gap. In other words, the sense of backwardness lead to feeling of inferiority, which, at some point, manifested as cultural anxieties. At the intersection of culture and technology, the stigma of lagging behind (technological gap) and long-standing cultural anxieties mutually reinforce each other. The interplay of these two factors fosters the flourishing of culturalist perspectives.

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