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Fear and Architecture: Learning from Mega-Projects and Canal Istanbul as a Case

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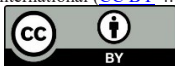
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ABSTRACT

Fear has been a fundamental aspect of human existence throughout history, and its connection with architecture has evolved as cities and the built environment have changed. Mega-projects, such as Canal Istanbul, play a significant role in shaping urban fear. Considering this fact, this study explores the relationship between fear and architecture in the context of mega-projects, with a focus on the case of Canal Istanbul, to define fear, identify its different types (environmental, socio-economic, technological), and examine their common underlying factor: generating a situation of uncertainty. The research investigates the Canal Istanbul project as a case study, presenting arguments supported by theoretical sources to explore the relationship between fear, architecture, and uncertainty. In this regard, this study adopts a qualitative and interpretive research approach. It provides insights into the potential consequences of the Canal Istanbul project concerning fear and architecture by emphasizing the importance of transparency and public participation in mega-projects, highlighting the need for detailed analysis and scientific references. Overall, the research contributes to understanding the interplay between fear, architecture, and mega-projects, offering valuable insights for future urban planning and development.

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Highlights	Contribution to the field statement
<ul style="list-style-type: none">- The relationship between fear and architecture is explained through the mega projects.- The reasons why mega-projects and their relationship with the concept of fear are to be discussed from today's urban life with different perspectives.- The argument develops from the discussions of urban fear types and concludes with an assumption of generating a situation of uncertainty for the cities.- As a mega project, Canal Istanbul Project has created various types of fear in the society	<p>The originality of this article is grounded on the analysis of the relationship between fear and architecture and concludes with a unique discourse of generating a situation of uncertainty for the cities. The article examines the concepts of fear and architecture, explains mega-projects and presents their relationship with fear and illustrates Canal Istanbul Project as a case.</p>

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1. Introduction

Fear has existed since early human history; therefore, the concepts of fear and architecture have been related. However, as cities and the built environment change, the meanings of fear and architecture in cities also change. Power has used architecture as a tool from the past to the present to be talked about for many years and to leave a mark on cities. Today, mega-projects are the most important representatives of this concern to leave a trace. The Palm Deira Project was designed and built in Dubai; the Line Project was designed in Saudi Arabia; and the Mega-China Projects are mega-projects planned to be built in the 21st century. In recent years, Istanbul has witnessed the government's policy of rapid urbanization through urban regeneration and mega-projects. Istanbul is an emerging global city and an attraction point for real estate investors, which make their lion's share from the capital invested in urban mega-projects (Dogan & Stupar, 2016).

Canal Istanbul, one of the mega-projects of Istanbul, is an extremely large-scale urban project that was announced as a "Crazy Project" in 2011 by the government. However, since the project was announced, it has been widely discussed in public, political, and scientific publications and caused serious concerns. Therefore, since the beginning of the project's announcement, the whole process has caused fear and has a strong relationship with architecture. Similar to other mega-projects of the 21st century, where fear drives architecture and architecture drives fear, resulting from their existence.

Since the Canal Istanbul project did not have a transparent process, limited information about the project could only be obtained from Canal Istanbul's website. In addition, it is seen that the information on the official website is still not transparent and is not supported by scientific references. The decisions and explanations regarding the route, scale, budget, and the project's environmental impacts were announced to the public between 2011 and 2022 and have changed several times. They do not contain scientific information or general uncertainty regarding the project. This uncertainty is related to the unpredictability of mega-projects, a common feature of mega-projects, and is an important fact of the Canal Istanbul Project. It directly creates an atmosphere of fear through Canal Istanbul and its architectural existence.

Within the scope of this article, we examined the inconsistencies mentioned above and the contradictions. We presented the possible relations between fear architecture and mega-projects through the example of the Canal Istanbul Project and disclosed the types of fear in this project. Therefore, this study first examines the relationships between fear and architecture. Secondly, the emergence and characteristics of mega-projects from the past to the present are introduced, and the relationships between fear and architecture are explained. Lastly, it is aimed at examining the Canal Istanbul Project as a case study and as a mega-project to reveal its technical features, literature review, and visible and invisible reasons. As outputs, the types of fear created by the project are presented. In the conclusion section, the possible consequences of the Canal Istanbul project are evaluated concerning fear and architecture, and outputs are presented on whether the project should be built.

The article's research method is based on qualitative and interpretive theoretical and emancipatory approaches, and evaluations are presented through Canal Istanbul as a case study. The idea of mega-projects generating uncertainty within the relational architecture of fear is unique. This statement can be evaluated as a possible contribution to the area.

2. Fear and Architecture

2.1. Definition of Fear

According to the Oxford English Dictionary, "anxiety" is "a feeling of pain or discomfort caused by a sense of impending danger and a state of concern for the safety of someone or something." Fear is a personal reaction that manifests as apprehension in the face of danger. (Tanyeli, 2022). Wurff, Staalduinen, and Stringer define fear as a sense of threat to one's well-being and a sense of being unable to overcome its existence (van der Wurff et al., 1989). Bauman likens fear and evil to Siamese twins. "You cannot meet one without meeting the other." "What we fear is bad; we fear what is bad."

Fears describe what people find bad (Bauman, 2006). The idea of "fear of fear" lies at the root of agoraphobia. This thought can be explained as the fear of excessive body reactions resulting from fear



and the consequences they will cause (Goldstein & Chambless, 1978). Fear of fear is a common feature not only for agoraphobia but also for different types of anxiety disorders, such as panic disorder, general anxiety disorder, social phobia, and obsessive-compulsive disorder (Chambless & Gracely, 1989). We unavoidably develop fear-inducing thoughts due to what we hear, hear, and see on television, in movies, in theatres, and in everyday conversations.

For this reason, in the development of the fear reaction, in addition to the natural occurrence of a negative event, the information we obtain from our environment may also cause the same kind of reaction (Gençöz, 1998). At this point, we see that observing an event can be a source of fear in addition to experiencing it directly. This condition is called fear of crime. Fear of crime can be described as "an emotional fear or anxiety reaction against a crime or symbols associated with crime" (Ferraro, 1995). In addition, according to studies, it can be said that fear of crime is a more common problem than the crime itself (Ditton et al., 1999). People can experience a variety of emotions about crime. These emotions are changeable. These feelings about crime are hidden in the answers to the survey questions about 'fear' (Farrall et al., 1997). Three cases are mentioned in the crime victimization surveys on fear of crime. Fear is the product of victimization, that is, it is experienced by the person who was exposed to the crime; it is the product of deterioration in social control; it is the product of the urban environment; it is the product of how people experience and interpret the urban space (Ditton et al., 1999). Fear is a distinct, primitive, and basic emotion (Izard, 1992). This primitive emotion brings with it a defensive response. Defence, a behavioural action, is a tightly organized component of the human motivation system. Fear is associated with intense neurobiological and cognitive features. It is revealed when dangers directly and imminently threaten us. The action tendency that this emotion elicits is the 'fight or flight' response (Lang, 1995). That is the 'emergency response' or the 'alarm response.' Strong fears lead to strong avoidance behaviour. Theorists consider this response to be an evolutionarily favoured, ancient response. The response is characterized by an urge to escape. This impulse reflects fear's basic propensity for action and flight (Cannon, 1929).

The clinical manifestation of fear is most evident in panic attacks. People experiencing panic show a behavioural urge to 'get out of there' in extreme fear. These impulses have important social consequences (Tangney et al., 1996). For example, these people avoid getting into situations where their urge to escape can be blocked. When a person begins to avoid a situation that causes fear, he restricts his freedom of movement. This restriction blocks the emotions we can experience in everyday life. Avoiding the possibility of experiencing the thought of 'what if something negative happens?' is the product of 'fear of fear' (Gençöz, 1998). Fear increases personal resentment and decreases the desire to participate in social encounters (Ferraro & Grange, 1987). Based on the concept of fear defined by Bauman, characterizing the thing feared as "evil" involuntarily necessitates an action plan, as it describes the elimination of the "evil" on which the fear is based (Bauman, 2006). All these dynamics of fear and eliminating evil are welcomed in space. Uğur Tanyeli likens the fear of socializing to swimming in the sea on the shore. There is uncertainty in the sea, and one fears uncertainty, but such behaviour destroys the possibility of experience (Tanyeli, 2022).

Since the beginning of time, fear has been one of humanity's most pressing concerns. Since cities have evolved, the fear concept has also evolved. The concept of fear has also influenced and shaped architecture. In the prehistoric period of medieval cities, people used vast walls or fences to fortify their cities and protect them from their enemies (Ellin, 1997). Then, with capitalism, new insecurities arose. These insecurities created new construction methods. It attempted to resolve the fearful atmosphere created by the use of architecture. More controllable spaces began to be created. By using architecture in an overly controlled way, more controllable spaces are created, which is expected to make people feel safe. However, this triggers fear and anxiety in people's lives.



2.2. Architecture of Fear / Fear of Architecture

The city's diversity provides people with opportunities to experience and learn. However, due to practices based on the fear factor, the city has become a stray, restless, and disorderly place (Bannister & Fyfe, 2011) reflected in the city's walls and gates aimed at creating sheltered areas. With the development of technology, boundaries have been crossed. Taking precautions against danger by drawing borders also creates fear in people because they will not think they are safe anywhere except in the areas where the borders are drawn. Furthermore, implementing high-security measures, such as secure sites, shutters, alarms, bulletproof windows, and so on, has increased public distrust.

Along with the modern period, the elements in the city became a cause for danger. Social and geographical mobility gained momentum with increased railways, factories, etc. In the modern era, the difference is now seen as an element of danger, and fear has arisen against the difference (Bannister & Fyfe, 2001). They separated functions by comparing cities to machines. This approach is isolating. As a result, social awareness has decreased, the city's fabric has deteriorated, and the environment has been damaged. The class differences that emerged with capitalism gave birth to colonial culture. Capitalism has caused a lack of foresight and uneasiness among the people around it. These insecurities created spaces that could be controlled, observed, and controlled, courthouses, police stations, and prisons are examples. The Panopticon prison model can be given as a striking example of a prison. This architectural concept was developed by Jeremy Bentham in the late 18th century and included a circular prison design where a central watchtower allowed guards to observe the inmates unseen. The design was intended to create a constant sense of surveillance and control that would instil fear in the prisoners and prevent them from rebelling. Another example of these practices is the Pruitt-Igoe residential project in St. Louis, Built in the 1950s, which aimed to provide affordable housing for low-income families. However, the project was poorly designed, with buildings that were difficult to maintain and lacked adequate lighting and other amenities. The result was a sense of decay and neglect that created a breeding ground for crime and other social problems. The project was eventually demolished in 1972 after being in operation for less than 20 years.

With all these developments, the transition from the architecture of fear to the fear of architecture began. After Baron Haussmann's reconstruction and the new urban design of Paris, the bourgeoisie segregated itself from the low-income and working classes by constructing arcade buildings (Frisby, 2004). Furthermore, it sampled factory workers, where workers did not have enough time to complete mass production (Ellin, 2001). With the rebuilding, everything was to be made uniform. However, it was not possible to eliminate the differences. The idea of defining a single ideal for the needs and wants of all people is not possible. Efforts to create safe areas have fed the feeling of insecurity because anxiety and fear, especially fear of crime, have emerged everywhere, including in areas defined as safe.

At the beginning of the early modern era, modernist architects and designers criticized the Iron Age's understanding of urban design and building decoration styles. They used functionalism as a methodology and the discourse that 'form follows function.' However, from the 1950s to the 1960s, post-modern architects accused modernist architects of orienting people like machines and alienating them from everything, as discussed in the book 'All That Is Solid Melts into Air' (Berman, 1982). Some ecological and post-modern movements, such as escapism, nostalgia, and detribalization, sought to return to pre-industrial period movements, such as new urbanization against isolation, segregated master plans, and zoning (Ellin, 2001), which evidenced fear from the early modern period. In the book "The Death and Life of Great American Cities," Jacobs (1961) argued that modernist planning principles, such as zoning and separation of uses, led to destruction. He said it causes the loss of urban communities and social diversity. Instead, he advocated a more organic and mixed-use approach to urban design that values human scale, pedestrian activity, and social interaction. Many safety solutions were developed in cities to protect urban economic development (Bannister & Fyfe, 2001). For example, using lockable cars, monitored CCTV surveillance systems, and security guards reflected some security concerns (Ellin, 2001). Paranoid typologies explained this situation when various low-income communities took precautions against crime. Luxury camps with high-security monitor



surveillance systems, where wealthy people live, pocket ghetto communities surrounded by police barricades (Flusty, 1994), where low-income people live, and gated communities are examples of the architecture of fear. All this insecurity continues today. Integral urbanism and good urbanism are solutions to the isolation and fear of separate functions caused by the separate cities created with the master plan. The concept of integral urbanism indicates that the new urban movement model focuses on solving urban problems through participatory design. Develop cities that are best maintained through organic interventions rather than master planning and social engineering. Five qualities are displayed to achieve this. Hybridity, connectivity, porosity, authenticity, and vulnerability (Ellin, 2006). Some examples are Vauban, Germany: This neighborhood in Freiburg is designed to be car-free and incorporates a range of sustainable technologies, such as solar power and rainwater harvesting. Barcelona, Spain: This city has implemented innovative urban planning strategies, including pedestrian-friendly streets and a network of public squares and green spaces.

In his book *Good Urbanism*, Nan Ellin's approach to the city is also subtle. Good urbanism respects the past by preserving historical textures and reusing existing structures, preserving their value while improving the low-performing ones. We can also see potential in what we call problems. The High Line project in New York is one of the strongest examples of this perspective. The High Line was the former elevated rail line. It has been transformed into a public park with green spaces, seating, and other amenities. The project was designed to create a warm, inclusive public space to unite people and develop a sense of community (Ellin, 2013). Interventions in cities with fear and security concerns have been discriminatory and destructive. Setting up borders or creating safe havens did not reduce fear but increased it.

In conclusion, fear will always be in our lives. Today, we are confronted with mega-projects proposed by governments concerned about leaving no trace. The great intervention of these projects in the city also creates various fears (environmental, technological, economic, etc.) for society.

3. Mega-projects and Their Possible Relations with Fear and Architecture

Mega-projects are not phenomena that belong to the 21st century; their historical roots go back to the times of hunting and gathering, even to sedentary life if Göbeklitepe is taken into account. Monuments and temples built in the names of gods, pharaohs, and kings are the beginning of mega-projects. God-kings and emperors wanted to go down in history through these gigantic monuments that they thought would stand for centuries (Uzunçarşılı Baysal, 2017). In this context, mega-projects have resulted from the authorities' desire to leave a mark. When politicians stay in power for a long time, they want their names to go down in history, and they use architecture and mega-projects as tools for this purpose (Tezer, 2013). The authorities desire to leave a trace can undoubtedly be considered a policy of demonstrating power. From the past to the present, it can be seen that in every interval, the authorities have somehow left their traces. The desire to leave a trace is related to the fear of being unable to leave something of themselves when they look back. This sense of fear may result from producing 'mega-projects' today. Actors' relative power and interests in an epistemic community may change over time. Still, apart from ideological orientation, we find certain constants in their culture—assumptions about their roles that favor action even at the risk of certain displacement. First, within any particular historical moment, members tend to believe that they “know” how best to do projects and to assume that, once conceived, a mega-project is inevitable, i.e., “if we didn't do it, someone else would”. In other words, while progressing, experts within the epistemic community see themselves as being in a better position than others to minimize risks (Gellert & Lynch, 2003).

In the age of technology and information, it is possible to say that the number of mega-projects worldwide has been increasing in recent years. Particularly in developing countries, mega-projects are a part of neo-liberal policy. It is a fact that, in order to have a place in the global world as a city, mega-projects are the most effective tool to increase the authorities' desire to generate mega-projects. In the globalized world, cities compete with one another for financial capital while experiencing construction booms to promote mega-projects. In a certain context, mega-projects help support the fear released



through architecture. In some cases, uncertainty and complexity accompany the fear. From this perspective, fear can establish a strong association with uncertainty and complexity.

On the other hand, a power expression through architecture could be the result of this competition. At least from the perspective of many urban planners, legislators, and corporations, strategic and large-scale mega-projects are becoming more associated with the perception of a city. (Bornstein, 2010). On the other hand, community responses to mega-projects. Mega-projects adhere to an urban development model that many governments prefer: high-profile strategic projects with the potential to achieve short-term objectives, attract outside capital, and redefine a neighborhood or the city. Mega-projects respond to the fierce struggle between cities worldwide for capital, knowledge workers, visitors, and prestige (Dicken et al., 2002; Brenner, 2004).

Technology now controls a sizable portion of society thanks to modernity. In this society, due to scientific knowledge and technological development, some things that could not have been done in the past are now possible (Tezer, 2013). As technology becomes a tool for development, societies' and governments' desire to show themselves with new projects, i.e., mega-projects, emerges. Technological development pressures us to create mega-projects (Özbekhan, 1972). Such mega-projects will seek to implement something on a scale that has never been done before in the place where they are being built, often relying on new knowledge and technology. Mega-projects are handed down from one era to the next, but the difference in our time is their number and scale, which are growing incredibly. Massive infrastructure investments are at their peak, especially in the transportation, energy, water, and agriculture sectors. Today, with technology, because mega-projects are considered large-scale projects with large capital, supported only by visuals and without any feasibility studies, no clear information is provided to the public. However, it is obvious that the larger the scale of mega-projects, the greater the risk. It should be emphasized that the right to the city and the right to nature should speak against mega-projects. It should be considered that natural assets can renew and produce themselves. After the right to the city, the right to nature should also be discussed (Harvey, 2007). Calculations for mega-projects are often unpredictable. Mega-projects frequently cost far more than expected, opening them up to allegations of corruption (Tezer, 2013). Mega-projects are sometimes not explained to the public fully and can often lead to questionable situations, one of which can be related to the budget; sometimes, the unforeseen budget issue can be an issue not understood by the public over time. Some see an uncertain future for mega-projects; they would argue that their declining numbers, whether due to globalization's emphasis on flexible production, social protest, or the exhaustion of potential sites, indicate that the bias toward scale may be a thing of the past (Gellert & Lynch, 2003).

Projects are never completed at the predicted cost and on time. From energy transportation to agricultural projects to water, in 9 out of 10 projects across all sectors, costs are exceeded and borne by governments, taxpayers, and consumers (Uzunçarşılı Baysal, 2017). The magnitude of mega-projects and their power to influence society mean that democratic decision-making processes based on majority voting are often at the expense of the people living in the areas where the projects are located (Tezer, 2013). Another problem is the need for transparency in the decision-making and democratic deliberation processes of the projects and to maintain confidence in the functioning of the oversight mechanism for their implementation.

Since the late 1970s, a new stage of capitalism has been emerging. In a world in which all the rights and gains provided by the social welfare state are destroyed, states are run like corporations. Even under the guidance of global corporations, citizens are turned into consumers; basic social rights such as housing, education, and health are transformed into commodities that can be bought and sold, the commons are privatized and offered to capital; the city, the countryside, nature, history, and cultural assets are commodified and put into accumulation processes; moreover, rights and freedoms and the norms of the rule of law are violated; the public interest is transformed into the interest of capital... In this new phase, which puts capital/profit, not people or life, at its center, we are at the turning point where democracy is moribund. Therefore, it is necessary to look at mega-projects differently without ignoring those mentioned above (Uzunçarşılı Baysal, 2017). According to David Harvey, one of the



world's leading social theorists, the reproduction of urban space gains importance in neoliberalism, which cannot generate significant profits since most profits are derived from the speculation of assets and the creation of new assets to be invested in. That is to say, the crisis of over-accumulation in industrial production, the first cycle of capital, is solved in the second cycle by investing this accumulation in urban space and commodifying urban space. Mega-projects can solve the accumulation crisis, which is the most extreme point that urban transformation in this second cycle can reach.

According to David Harvey, in neoliberalism, which cannot be a significant producer of profit, most of the profit is derived from the speculation of assets and the creation of new assets to invest in. In this context, the reproduction of urban space also gains importance, as the problem of over-accumulation in the first cycle of capital, industrial production, is solved by investing this accumulation in urban space. Mega-projects are reconfigured and reterritorialized environments where the participation of local, regional, and national elites and the function of national and occasionally transnational capital are typically prominent, as will be made plain in the contributions to this volume. Increased urban competitiveness and global visibility are seen as essential outcomes in the development of these projects. Still, mega-project design and implementation also frequently address the need to bring together and harmonize several scales of power because, in various socio-political contexts, the configuration of political power exhibits different and distinct relationships between the local, regional, national, and global domains of social action (Del Cerro Santamaría, 2020).

Thus, the city, which was the place where commodities were produced in this second cycle, now produces land to be transformed for the needs of capital as a mega commodity. Mega-projects, which are considered urban projects, are evaluated as so absurd that they can be considered urban; they are the lifeblood of revitalizing the global economy without realizing the countryside (Uzunçarşılı Baysal, 2017). Flyvbjerg characterizes mega-projects as related to uncertainty because of their understated risks and outsized returns. Disasters destroy the environment, destroy the habitats of entire communities of living beings, trigger displacement, plunge states into financial crises, or shake their budgets. In this context, the risk is broad, including environmental, social, financial, health, and safety risks (Uzunçarşılı Baysal, 2017).

Mega-projects can also be considered 'mega decisions' in another sense. It is possible to consider that these 'mega-decisions' are not only a change on the urban scale but also a change on the emotional level. At the same time, urban paranoia caused by mega-projects can lead to disconnections from the city in people's daily lives. It can cause a person to gradually disconnect from the city, reduce his/her relationship with the city, and reduce 'porosity.' These disconnections may cause fear and insecurity in society. Mega-urban projects can cause damage to society; these large urban projects do not benefit all residents and serve a minority of the population (Cugurolo, 2013). Mega-projects envision an ideal, non-existent space with unquestioning environmental, political, and economic rules. However, this vision belongs to a local ruler aiming to express power (Cugurolo, 2013). The Canal Istanbul project will shape the future of Istanbul and its surroundings. Still, this hugely significant project has not been open for discussion at a public inquiry and has been conducted in a non-transparent manner. Although almost nine years have passed since it was announced, no official document has been released publicly (Ceylan Baba, 2020). This continuous state of ambiguity creates an everlasting unease, that turns into fear. From this comes a society that lives in fear and a social order that operates by mechanisms contingent on this fear (Ceylan Baba, 2020). This non-transparent, ever-changing sea of information creates an atmosphere of unease and insecurity in society.

4. Canal Istanbul Project as a Case

Canal Istanbul is a mega-project that aims to build in the European part of Istanbul and is announced on April 27, 2011, as a 'Crazy Project' by the Turkish Republic Government (Ceylan Baba, 2018). The project aims to create a parallel artificial canal to the Bosphorus in Istanbul. According to the former president of the Chamber of Architects, Mücella Yapıcı, the project is not only the mega-project of Istanbul but also the mega-project of Turkey (Köksal & Öztürk, 2017). Moreover, the Canal Istanbul

project continues the New Istanbul Project, including the Istanbul 3rd Bridge, the New Istanbul Airport, and other existing construction projects (Logie & Morvan, 2018). In addition to referring to the prospective shores of Canal Istanbul, the project is also planned as an enclave around the New Airport (Mutman Uluengin et al., 2022; Logie & Morvan, 2018).

Furthermore, it is stated that, in addition to hotels, cookhouses will be located along the canal and numerous mosques in each neighborhood. The official aim of the Canal Istanbul is; to decrease busy ship traffic on the Bosphorus and rotate the cargo ships to the Canal Istanbul, thereby avoiding ship accidents and creating safe routes for these ships (Ceylan Baba, 2020). In addition, the Ministry mentioned that the new canal aims to protect and preserve the historical and cultural heritage (Ceylan Baba, 2020). On the other hand, according to critics, the implicit aim of the Canal Istanbul Project is related to economic gains, which are linked to the New Istanbul Project, which is a round of mega-projects in Istanbul (Ceylan Baba, 2020; Kılıç, 2020). As far as the official website of the project shows, scientific studies and analyses have not yet been shared with the public, and the canal route and measurement distance vary yearly and remain uncertain.

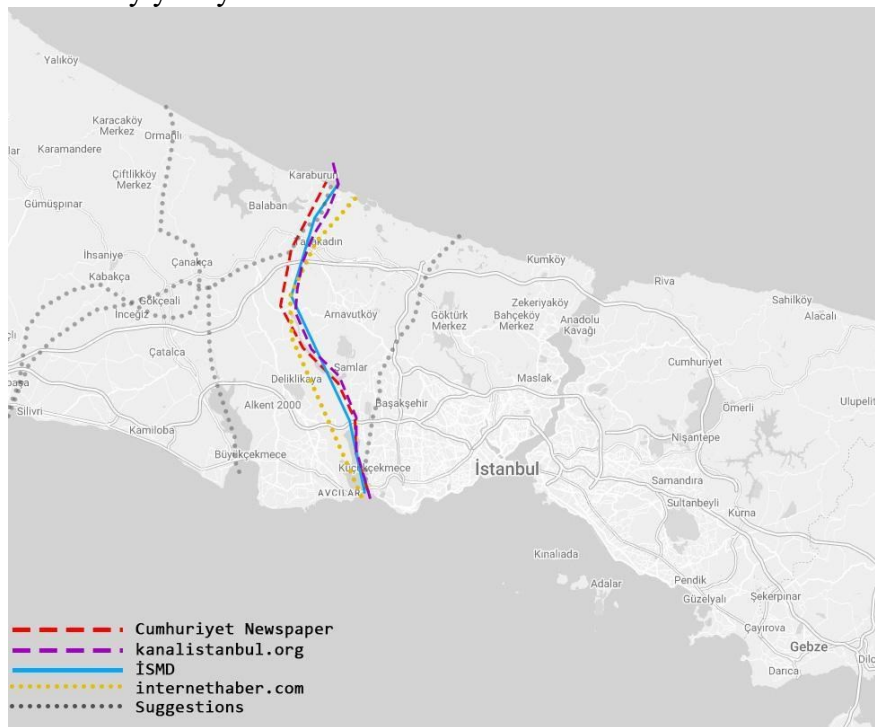


Figure 1. Alternatives routes of Canal Istanbul.

4.1. An Overview of the Canal Istanbul Project

The physical features of the Canal Istanbul Project have many controversial issues. The project has multiple alternative routes and remains uncertain. The Canal Istanbul Alternatives Route Diagram depicts the canal's planned alternative routes. The last approved canal route is on the Küçükçekmece-Sazlıdere-Durusu axles (see Fig. 1). On the official website of the project, the technical features of Canal Istanbul were published; the length of the route is 45 km the minimum width is 275 m, and the depth is 21 m. On the other hand, environmental experts criticize this amount of excavated soil, who say it can create air pollution and noise (Ceylan Baba, 2020). In addition, several sources have different costs for the Canal Istanbul Project. According to the Ministry of Transportation and Infrastructure, the project budget is 75 billion Turkish Lira (Ceylan Baba, 2018). However, since the exchange value of the Turkish Lira currency has been decreed, the project's cost is increasing daily.

On the other hand, it is mentioned in the 'Workshop Report of Canal Istanbul' in 2020 – the project cost does not reflect reality. As it is a mega-project, the project's cost could be very different from the calculated cost, and new cost inputs may appear during the project's construction stages (Kılıç, 2020). As mentioned in this study's "Mega-Projects" chapter, mega-projects are never completed at the predicted cost. In addition, the project cost could be increased during the construction process

(Uzunçarşılı Baysal, 2017). On the one hand, mega-project decision-making processes based on majority voting are often at the expense of the people living in the areas where the projects are located (Tezer, 2013). The Canal Istanbul Project is also an important factor for the Istanbul population. The 1/100.000 scale zoning plan of the project states that five hundred thousand people will live in the project area. On the other hand, the population of the Canal Istanbul Project estimates that if all the announced 800,000 housing units are built, a population of 2.4 million can be expected in the area (Mutman Uluengin et al., 2020; see Fig. 2).

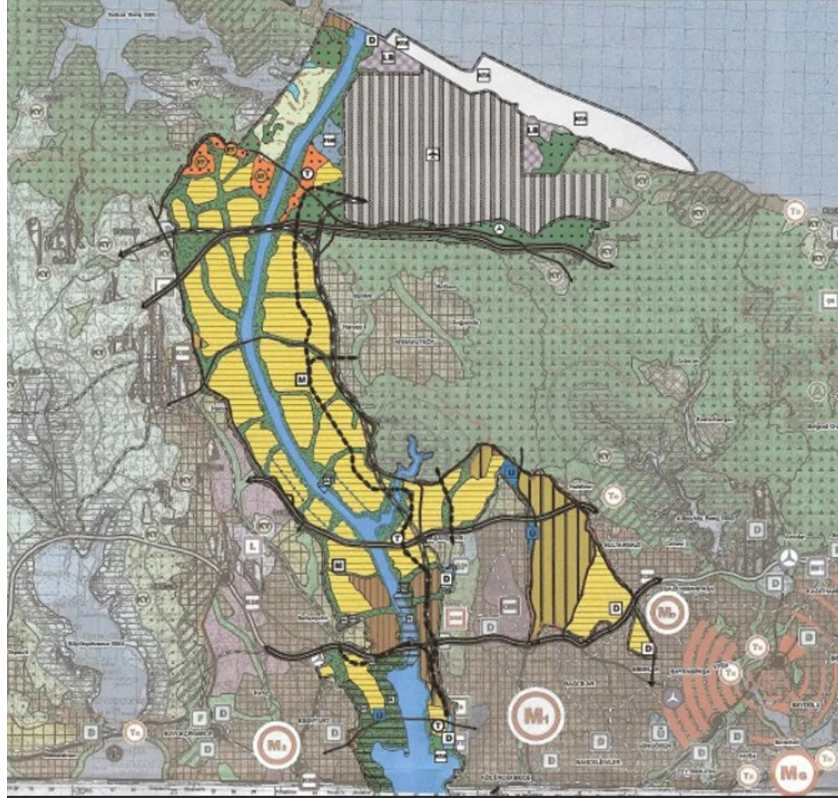


Figure 2. 1/100.000 Canal Istanbul Project Plan (Kılıç, 2020).



Figure 3. Canal Istanbul Project Initial 3D Renders (Ceylan Baba, 2018).

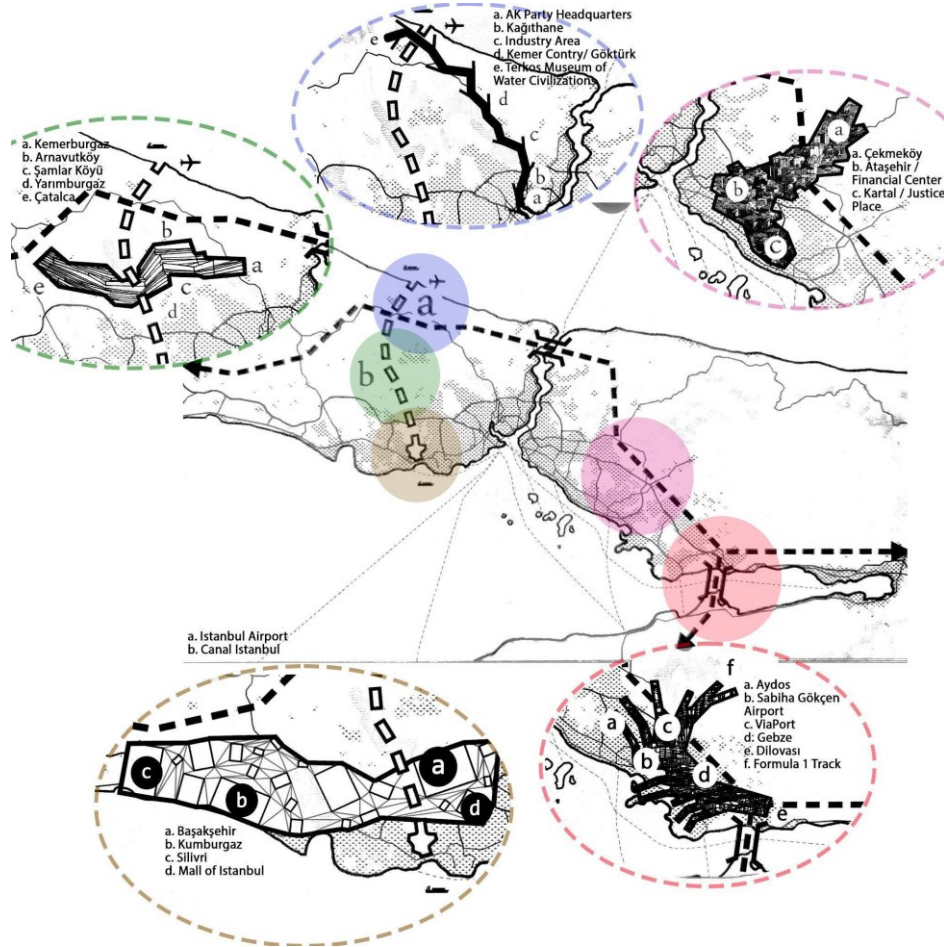


Figure 4. Canal Istanbul Project continues, and the New Istanbul Project.

4.2 Literature Review on Canal Istanbul Project

Since its announcement, the Canal Istanbul project has been the subject of interest in the local and international press and academic articles. The main topics discussed in the articles are environmental, infrastructural, economic, political, security, and international law. The environmental topics include ecological effects, earthquakes, sea animals, and the habitation of natural life. According to the Ministry of Communication, project effects on ecology and the environment have been considered by scientific works, and the project will not damage natural areas or archaeological sites. However, the scientific works mentioned by project supporters and the government are still unavailable. On the other side, the critics pointed out that the project will destroy the Marmara Sea (Saydam, 2015) and the Dead Sea animals (Ceylan Baba, 2020). Furthermore, in the EIA (CED) report, salt water from the canal of the groundwater source could adversely affect states (Kılıç, 2020). Also, due to its current route, the project will destroy the Terkos and Sazlıdere natural water sources, which are important drinking water sources for residents of Istanbul (Baba, 2020). According to academicians, the project will also affect Istanbul's archaeological sites (Kılıç, 2020). Another topic discussed in the articles is related to the economic effect of the Canal Istanbul Project. From the perspective of critics, it is pointed out that; according to the non-official aim of the project, it aims to become an attractive center for investors (Ceylan Baba, 2020). Conversely, it is evaluated as a logistical gain for Istanbul (Karataş, 2021). According to the critics, the Turkish Bosphorus, recognized as a UNESCO cultural heritage site connecting two continents, must be protected (Öğüt, 2014). On the other hand, it is stated that; Turkey has the right to unilaterally determine the legal regime of the canal due to the existence of an independent political authority (Çınar, 2017). The figure below shows the timeline of research on the Canal Istanbul Project as a literature review summary.

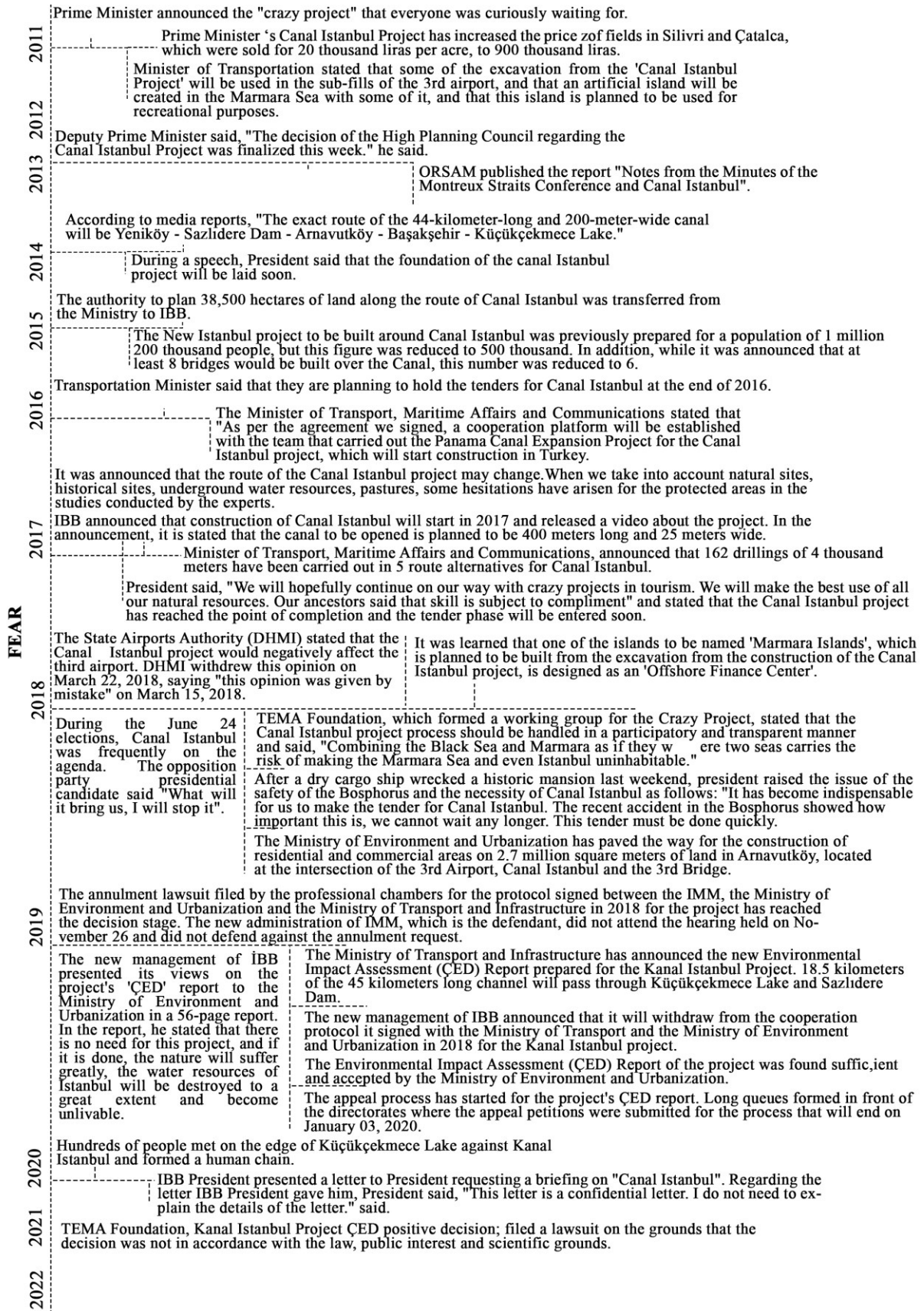


Figure 5. Timeline of the research on Canal Istanbul Project.

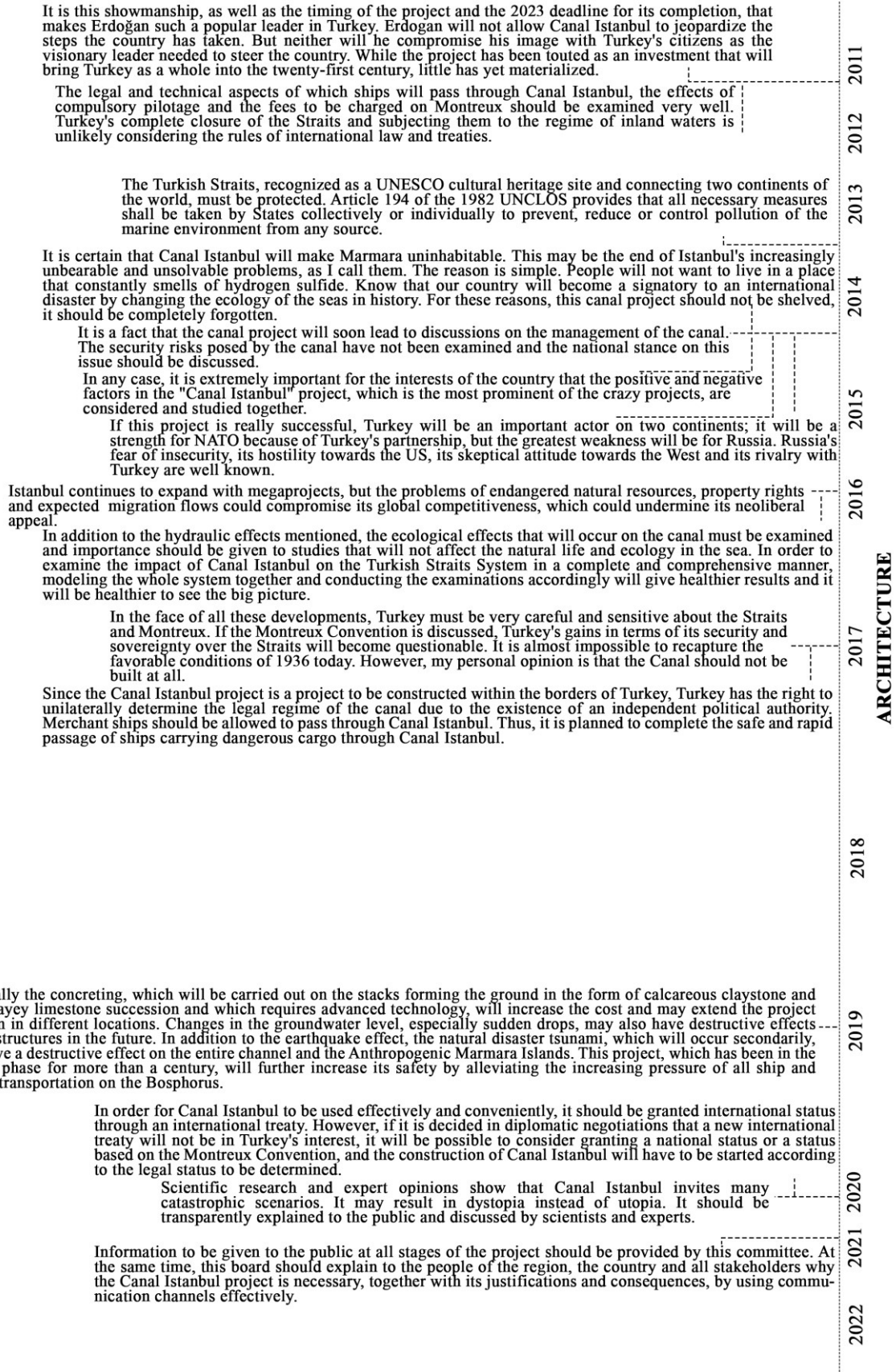


Figure 6. Timeline of the research on Canal Istanbul Project.

The Timeline of the research on the Canal Istanbul Project is categorized into two parts. One lists “news” about the project, and the other lists “scientific articles.” In the news part, it is mentioned that project

alternative routes news, the negative comments of opposition politicians about the project, and the environmental damages of the Canal Istanbul project in some news reports are included. Also, one of the criticisms of the project is its economic effects. The number of news and statements about the project by the supporters has increased, especially during the election period. Also, the scientific article listed the project's international law and security issues, economic topics, and environmental-technological topics. The project remains uncertain because the details of the project regarding cost, routes, construction periods, technique details, construction techniques, and other topics remain uncertain. This uncertainty concerns a relationship with fear of society.

4.3. Possible Relations of the Canal Istanbul Project with Fear

The Canal Istanbul project has many possible relationships with fear regarding the environment, technology, economy, politics, sociology, security, and *uncertainty*. From this point, there is fear of uncertainty both on the governmental side and public concerns. According to scientific research on Canal Istanbul Project, the project should be presented to the public with all circumstances, evaluations, and possible effects on Istanbul (Ceylan Baba, 2020; Mutman Uluengin et al., 2022; Ögüt, 2014). Fear typologies such as economic fear, political fear, fear of safety and security, environmental fear, and technological fear occur with an examination of the project (Ceylan Baba, 2020; Mutman Uluengin et al., 2022; Ögüt, 2014; Saydam, 2015). Also, fear of power and political and economic fear is the main fear of the project supporters.

The most prominent aspects of the project are environmental fear and technological fear. Therefore, excavation works, transportation of excavated soil, and construction equipment in Figure 6 - illustrated by the Istanbul Planning Agency (IPA) - show the effect of fears on Istanbul.

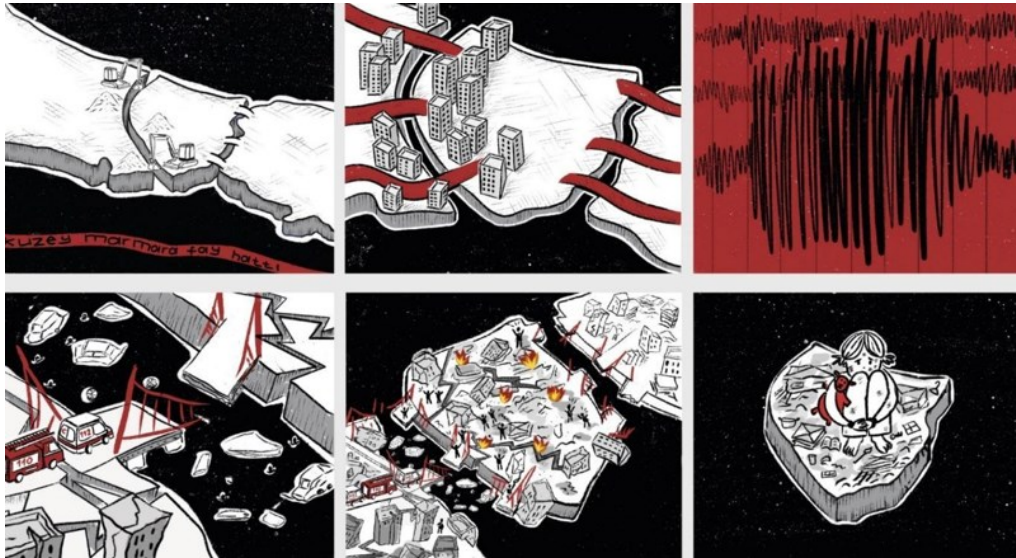


Figure 7. Technological Fear (Yıldırım, 2021).

Other possible results of environmental effects of the project are, due to heavy excavation works and transportation of excavated soil, Istanbul will have air pollution and noise (Ceylan Baba, 2020). In addition, the new project will be a risk to ecological life and affect natural life (Saydam, 2015). Figure 7 - which is illustrated by I.P.A - explains the environmental effect of the Canal-Istanbul-Project.



Figure 8. Air pollution and Construction Works (Yıldırım, 2021).

Another type of fear is economic and political, presented by project supporters and critics. Economic and political fear strongly relates to neo-liberal politics. The scientific articles present the Canal Istanbul Project as the result of neo-liberal policies (Köksal & Öztürk, 2017; Mutman Uluengin et al., 2022). The official page of the Canal Istanbul Project states that the project will be economically gain because ships pass through the new Canal by payment of pass (Ceylan Baba, 2018). On the one hand, Canal Istanbul Project aims to become a center of attraction for foreign investors, which is mentioned as an implicit aim of the project. Moreover, it is mentioned that the Canal Istanbul Project is a Utopian Project, which can result in dystopia, which shows dystopian aspects of fear (Ceylan Baba, 2020; Mutman Uluengin et al., 2022). Therefore, the community views this approach with fear and raises concerns about displacement, population growth, and increased cost of living.

Fear of Security is one of the other aspects of the project. The new Canal to be opened with the Canal Istanbul project makes the status of the Bosphorus controversial in the international community. Furthermore, it is mentioned that; the legal and technical aspects of which ships will pass through Canal Istanbul, the effects of compulsory pilotage, and the fees to be charged on Montreux should be examined in detail (Ece, 2011). Other typologies of fear coexist with the international anxiety generated by the project. Also, project problems of endangered natural resources, property rights, and expected migration flows could breach global competitiveness (Dogan and Stupar, 2017).

As mentioned in the previous chapter, fear occurs when a sense of threat to the well-being and a feeling of being unable to overcome the source of fear. Furthermore, the feeling of “bad” is related to fear (Bauman, 2006). Moreover, from a societal perspective, this fear is considered a fear of uncertainty. Canal Istanbul Project maintains the fear of uncertainty on the side of the Project supporters, critics, and society level. Furthermore, fear of architecture shows itself within all aspects of the fear of Canal Istanbul Projects.

The image below gives a concept map of this study that includes keywords in the relationship between the Canal Istanbul Project and fear. It is prepared from general to specific and includes keywords related to fear of architecture, paranoid structures, integrated urbanism, and good urbanism.



because the projects demand many excavation works and construction techniques, which will result in noise, air pollution, and destruction of the ecological environment. While the official reason for the project is to provide logistics, transportation, and security on the Bosphorus, the unseen reason for the project, which is based on economic interests, is to make this region a centre of attraction. This causes economic fear as it will burden Istanbul and Turkey financially. On the other side, the project's cost varies, and the possibility that the Canal Istanbul project will be built at a higher cost than the estimated cost, as in mega-projects, causes economic fear in the power and the public. Also, as neo-liberal politics affect the project and Istanbul, it is mentioned in some articles that the project would affect Istanbul's residents in terms of population and demography. All these fears mentioned above generate an unclear future for the realization of Canal Istanbul. This argument supports the idea of uncertainty in Istanbul. Another characteristic of mega-projects is the desire to generate interest and talk about the project. The political power desires to leave a mark on the city and mega-projects are used as a tool for this desire. Fear of the lack of this mark can be explained as another type of fear related to mega-projects. Also, the safety and security issues that arise from national and international laws, the safety of the strait, and ship accidents in the Bosphorus, which are widely discussed and scientific articles have been written about, are other fear factors related to the arguments of political power.

In conclusion, the project should not be constructed for economic, transportation, or environmental reasons. However, if the power decides to do this, the process should consider public opinion and be transparent. After the literature reviews and our analysis, this project will change Istanbul's ecosystem regarding nature, air, water, animals, economic loss, international law problems, security, and others. Therefore, considering the damages of mega-projects and the fact that this research reveals that many fears are harboured over the Canal Istanbul Project, the project's construction should be removed from the agenda. Even if it is criticized for the climate crisis, mega-projects are still being carried out. Its proliferation is alarming, but mega-projects continue to be made for developing countries. This situation has changed in developed countries, and they now take a more fragmented approach instead of producing mega-projects. Developing countries continue to develop mega-projects to exist and be heard in the world.

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