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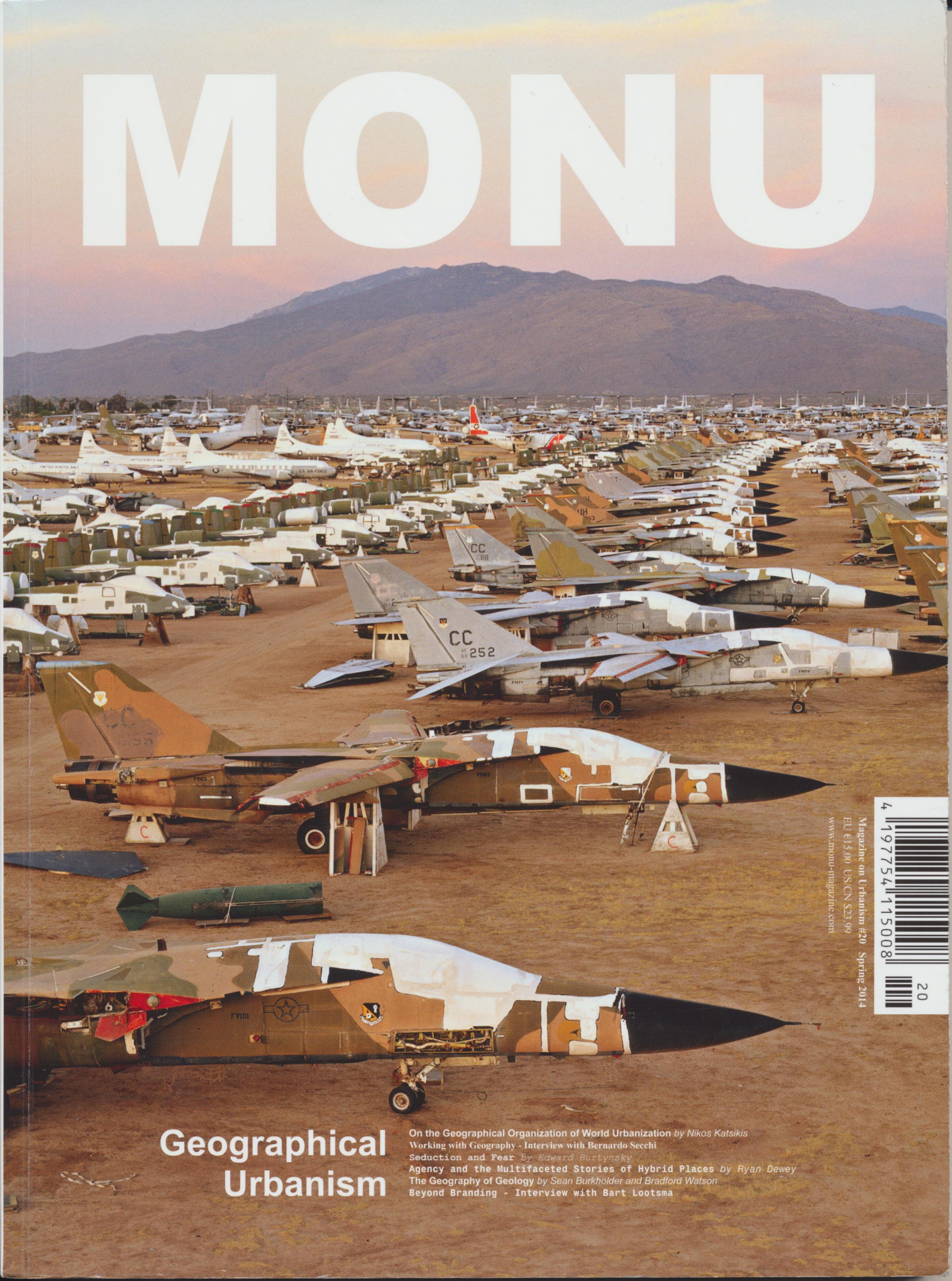

Geographical Urbanism

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Strait

By Neyran Turan

Speculating on the content, objectives and methods of the discipline of geography, and in opposition to those who would see geography simply as a collection of descriptive facts about the earth and its inhabitants, Lev Semenovich Berg, one of the most prominent Russian geographers of the early twentieth century, emphasized the need to focus on landscapes and study them from a geographic point of view. Berg wrote:

Many are of the opinion that the scope of geography should be limited by earth's surface. This is not correct. Geography should consider all the earth's crust to the depth affected by those exterior forces that transform the surface...A simple listing of facts concerning the distribution of any phenomena or objects—in other words, chorography—does not bring much to geography; this is the material for geographic description...The purpose of geographic research is to reveal links and regularities that exist between separate objects of interest to the geographer, the main question being, "How do particular sets of objects and phenomena affect each other, and what are the results of this spatially?" In other words, the final goal is the investigation and description of both natural and cultural landscapes...If we translate the word geography as "land studies," the meaning that should be assigned to it is not "the study of the earth"; but "the study of lands"...or even better, "the study of landscapes."[1]

Two points could be extracted from Berg's formulation for seeing geography as the "study of lands." First point would be in relation to the potential of a geographic framework in urbanism, which would suggest an expansion for spatial thinking where dichotomies—such as the city and the country, the natural and the urban, as well as the national and the international—would be transcended and the linkages among various scales are further experimented. A second and perhaps a more important point would be that, if geography is more than the mere description of the physical qualities of the earth and is instead a spatial framing of relationships with respect to the disposition of natural and cultural phenomena, this adds an important nuance to the geographic framework's potential for architecture and urbanism. While in recent architectural discussions, the idea of the geographic has provided an emphasis on infrastructure, landscape and territory, it in parallel evoked the pervasive "data mapping" phenomenon and its descriptive visual information fetish where the critical evaluation of the material is mostly suspended. Berg's formulation is helpful in terms of discerning the actual potential of geography for architecture. Beyond the visualization of physical features and phenomena, geographic framework provides unprecedented spatial perspectives for our built environment, which can the incorporated into our thinking and practice in unconventional ways.

One such perspective is revealed through a focus on the Bosphorus Strait of Istanbul. Evoking the geographic dimension as a new contextual ground for examining the urbanism of Istanbul, the essay will elaborate on the relationship between geography and urbanism through the case of the Bosporus Strait.

The Bosphorus Strait

In March 1994, a dramatic accident occurred at the Bosphorus Strait. At the northern exit of the Strait, *Nassia*, a 100,000 tons tanker carrying crude oil from the Novorossiysk port in Russia, collided with a cargo ship, which exploded and ran ashore.

Nassia immediately caught fire and released over 13,500 tons of oil to the sea, and the spills continued for a week. Except for the hundreds of smaller accidents that occur from time to time at the Strait, the last major accident at the Bosphorus was the Independenta oil tanker accident of 1979, which was even wider in scale.[2] While the damages caused by the 1994-Nassia accident was equally devastating—which costed over $1 billion in damages and closed the international transit shipping at the Bosphorus for a week—what made the accident of 1994 so important was its relation to wider geopolitical scales.

The 1994-tanker accident occurred at a delicate moment in the history of the Bosphorus Strait. After the collapse of the Soviet Union, and the opening up of oil and gas resources to the world from new sovereign nations in the Caspian Sea during early 1990s, the Bosphorus Strait gained importance as a vital energy transport route that could help deliver those resources to the world market. Although the legal disputes regarding ownership of the Caspian Sea oil and gas resources and the rights to exploit them between Russia and her previous dependencies (especially Azerbaijan, Turkmenistan, and Kazakhstan) had already created regional conflicts, equally pressing geopolitical questions emerged regarding new transportation routes from this landlocked sea.[3] In addition to the new post-Soviet states, the European Union, the United States, and multinational energy companies were all eagerly interested in the opportunities offered by the Caspian Sea resources.

Although the Bosphorus Strait has been an energy corridor for oil products exported from the Batumi port through the Suez Canal and East Asia since 1892, what made current tanker transportation crucial was its extreme density. Although the Strait does not directly connect to the Caspian Sea, the only way out for Caspian oil was via existing pipelines to the Black Sea ports of Novorossiisk (in Russia) and Supsa (in Georgia), where the oil was put on ships that sailed to the Mediterranean through the Strait. Hence, with the opening of the Caspian oil reserves in the 1990s, the Strait became one of the six busiest and important oil-shipping routes, i.e. "choke-points" of the world, along with the Suez Canal, the Straits of Malacca, Bab el-Mandab, the Strait of Hormuz and the Straits of Dover (figure 1, 2).[4] Estimated to be three times busier than the Suez Canal and four times busier than the Panama Canal, 5 per cent of the world's total sea trade in oil passed through the Bosphorus in 2002.[5]

Compared to the other choke-points, however, here have been utterly problematic geographic aspects for the "liquid pipeline" of the Bosphorus Strait. Since the Strait passes through the heart of Istanbul, a city of 12 million citizens, the accelerating oil tanker traffic meant an ever-increasing risk of tanker accidents that could cause devastating consequences for its population. What complicates the matter even further is the geographic form of the Strait with its sharp and narrow turns, making it of the most difficult channels of the world from a navigational point of view and thus even more at risk for accidents.[6] The risk associated the oil tanker accidents is a serious one. It was speculated that an oil tanker explosion at the channel would act like an "atomic bomb" for some or an 11.0 Richter scale earthquake

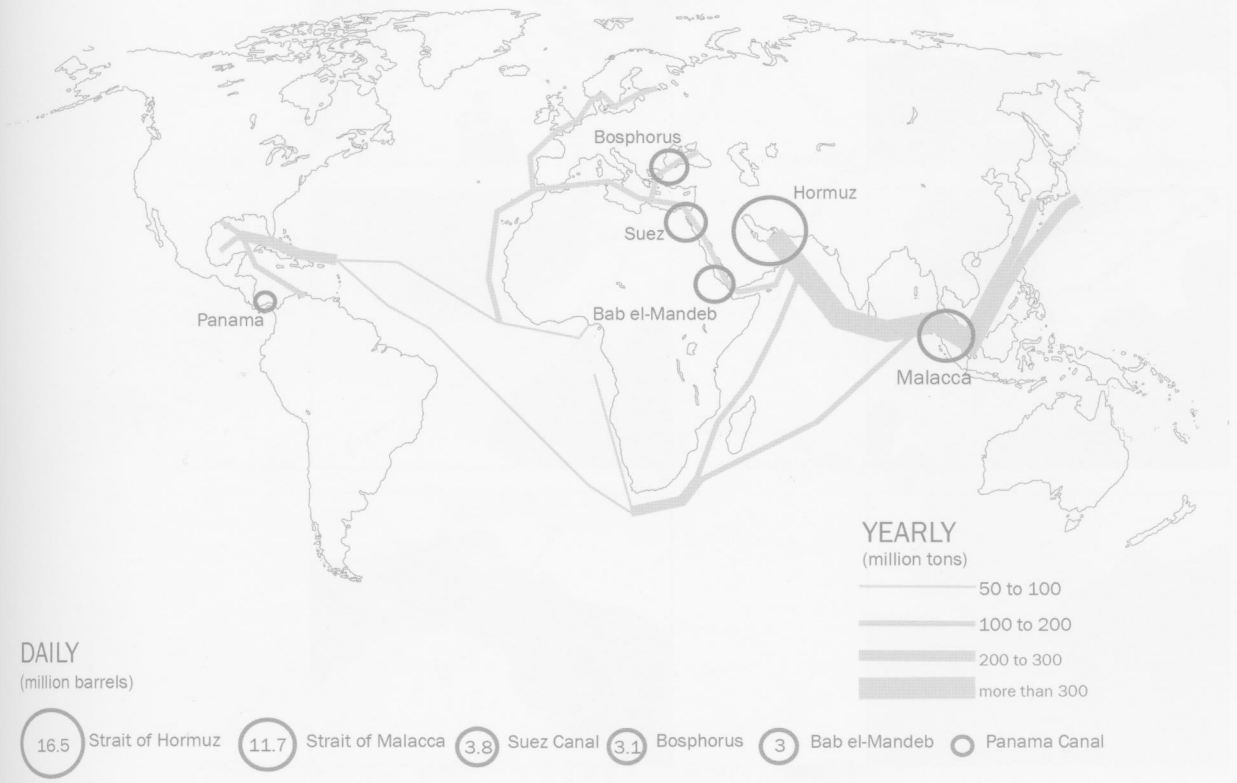

Figure 1: The Bosporus Strait among the other "choke-points" of the world. Diagram by the author

for some others whose impact can also reach 50 kilometers in diameter.[7]

Situated at the heart of the city as a twisting extraterritorial spine, the Bosporus Strait was strictly unsettling for Turkey. Positing the issue as a "total ecological nightmare," and arguing from an environmental standpoint, Turkey was clearly opposed to the use of the Bosphorus as a transit route for Caspian oil. Turkey's Environment Minister declared during early 1990s: "No country has the right to endanger the lives of 10 million people just because it wants to sell oil. We will never allow our sea lanes to be turned into oil pipelines."[8]

Although international straits, such as the Bosphorus, are governed by the 1982 United Nations Conference on the Law of the Sea, this law does not apply to the Bosphorus because of the terms of the Montreux Convention of 1930s, which guarantees the free passage of vessels through the Straits. That is why Turkey could neither interfere with the transit of the tankers nor ban the transport of hazardous materials according to the Law of the Sea. However, the Law of the Sea also allows for safety measures (such as pollution control or fishing regulations) by states bordering an international strait mediated by the consultancy of the International Maritime Organization. Immediately after the *Nassia* accident and with the support of the International Maritime Organization, Turkey introduced further controls and regulations for shipping through the Bosphorus (evoking the argument that it had the right to assure the "environmental safety" of the Strait for maritime traffic).[9]

How exactly do these geopolitical conditions affect the contemporary urbanism of Istanbul? In order to answer these questions, one more layer needs to be considered regarding the changing role of the Bosphorus Strait. That was Turkey's ongoing interest for the transport of the Caspian oil through the (1,760 km long) Bakü-Tblis-Ceyhan (BTC) Pipeline, which would pass through Azerbaijan and Georgia and link the oil to the Turkish Mediterranean port of Ceyhan as an alternative to the Straits (figure 3). As the longest oil-export pipeline in the world, the BTC is one of the most important transnational infrastructure projects undertaken by Turkey since the 1990s, as the country has aimed to become an east-west energy corridor.[10] In this context, because of conflicting interests regarding the multiple pipeline projects and routes from the Caspian Sea to the Mediterranean, the geopolitical significance of the Bosphorus once again affected the positioning of the city in relation to its larger landscape.

In what way did these geopolitical considerations change the relationship between Istanbul's urbanism, geography and terrain? Although the BTC pipeline itself does not past near Istanbul, its indirect repercussions illustrate a delicate relationship among *geopolitics*, *territory* and *ecology*, or the "Greening of

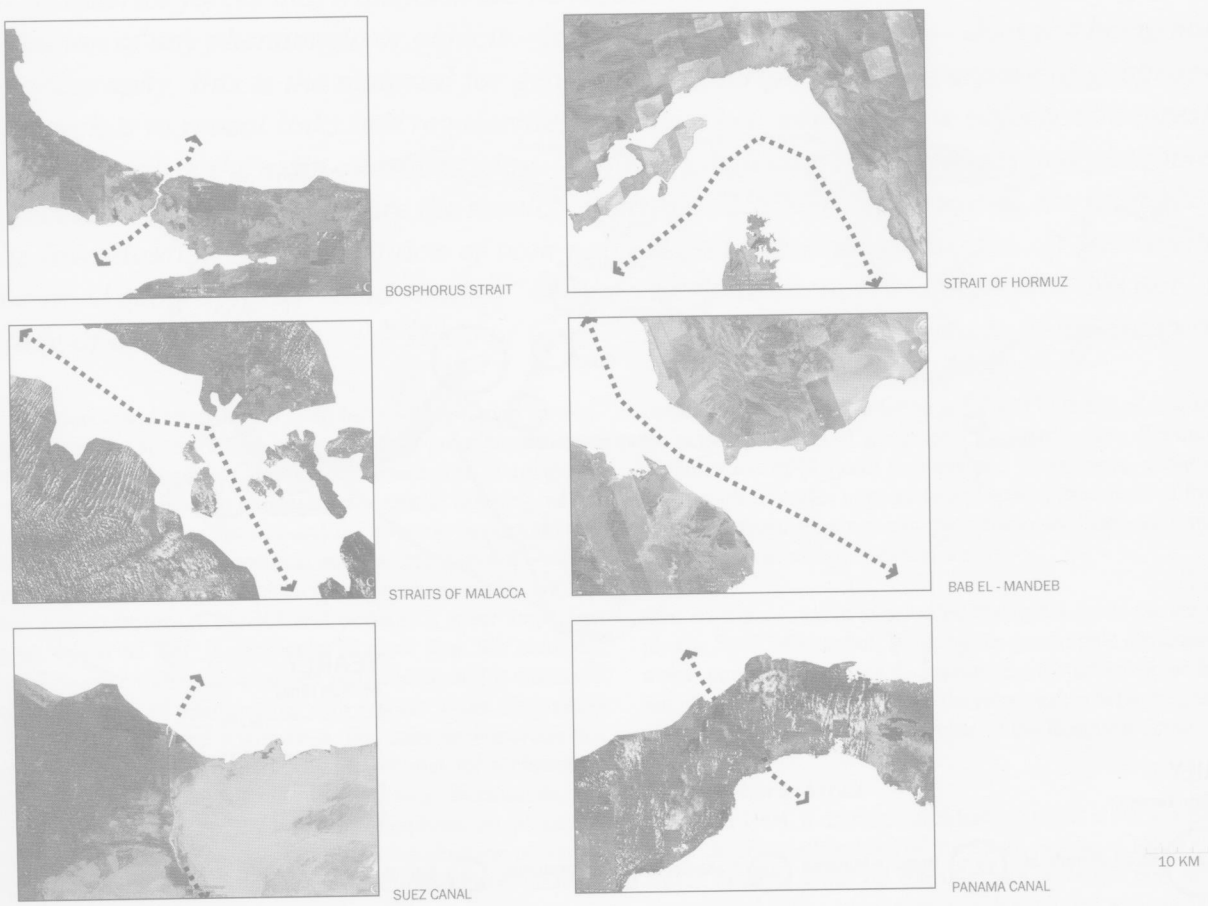

Figure 2: The Bosporus Strait in scale comparison with the other major choke points. Diagram by the author

Geopolitics"[11] —to borrow Thomas Friedman's recently coined term for the politics of sustainability within our contemporary geopolitical environment. More specifically, if the pipeline is as an invisible infrastructural layer (in BTC's case it is literally invisible because of contested politics of the region: it is buried) physically disconnected from Istanbul, its intricate relationship to the oil tanker risk factor as well as urban ecology opens up a much broader conceptualization of the risk at the Bosphorus where wider geographic domains are automatically brought into the picture. That is, despite the seriousness of the risk, Turkey's push to reduce traffic passing through the Straits under the banner of "environmental safety" was conspicuously related to the government's promotion of the desired BTC pipeline project as opposed to the Straits.[12] Recalling sociologist Ulrick Beck's claim that "even the most restrained and moderate objectivist account of risk implications involves a hidden politics, ethics and morality," the risk associated with the Bosphorus Strait and its ecological significance was intricately linked to its wider geographic context. Regarding risk, Beck writes:

Risk is not reducible to the product of probability of occurrence multiplied with the intensity and scope of potential harm. Rather, it is a socially constructed phenomenon in which some people have a greater capacity to define risks than others.[13]

Spatial implications of risk at the Bosphorus would illustrate Beck's point even more clearly.[14] In parallel to government negotiations about the exact routing of the pipeline (whether or not it will pass through Turkish territory) and recognition of the potential risk of accidents at the Bosphorus Strait, conferences regarding the ecological value of the Bosphorus and the need to protect this environment and its biological diversity would accelerate immensely.[15] An interesting example of a paradoxical political connotation of environmental risk at the Bosphorus is an essay presented by a marine scientist and scholar at a symposium in Istanbul about navigation through the international straits. Emphasizing the biological diversity of the Straits water corridor, and focusing on the oil spills that had occurred within the last year, the author would write:

In conclusion, when the oil transport with tankers increases, the risk of pollution will rise. The oil pollution level found in Turkish Straits was higher than any other straits of the world. Our investigation on the oil pollution measurements...proved that the better export route for Kazakh and Azeri oil is definitely through the Bakü-Ceyhan pipeline.[16]

This under-conceptualized relationship between the geopolitical and the territorial dimension of the Bosphorus actually recalls an earlier moment in the 1930s Istanbul when important changes were taking place regarding the international sovereignty relations over the sea route after World War I and the remilitarized

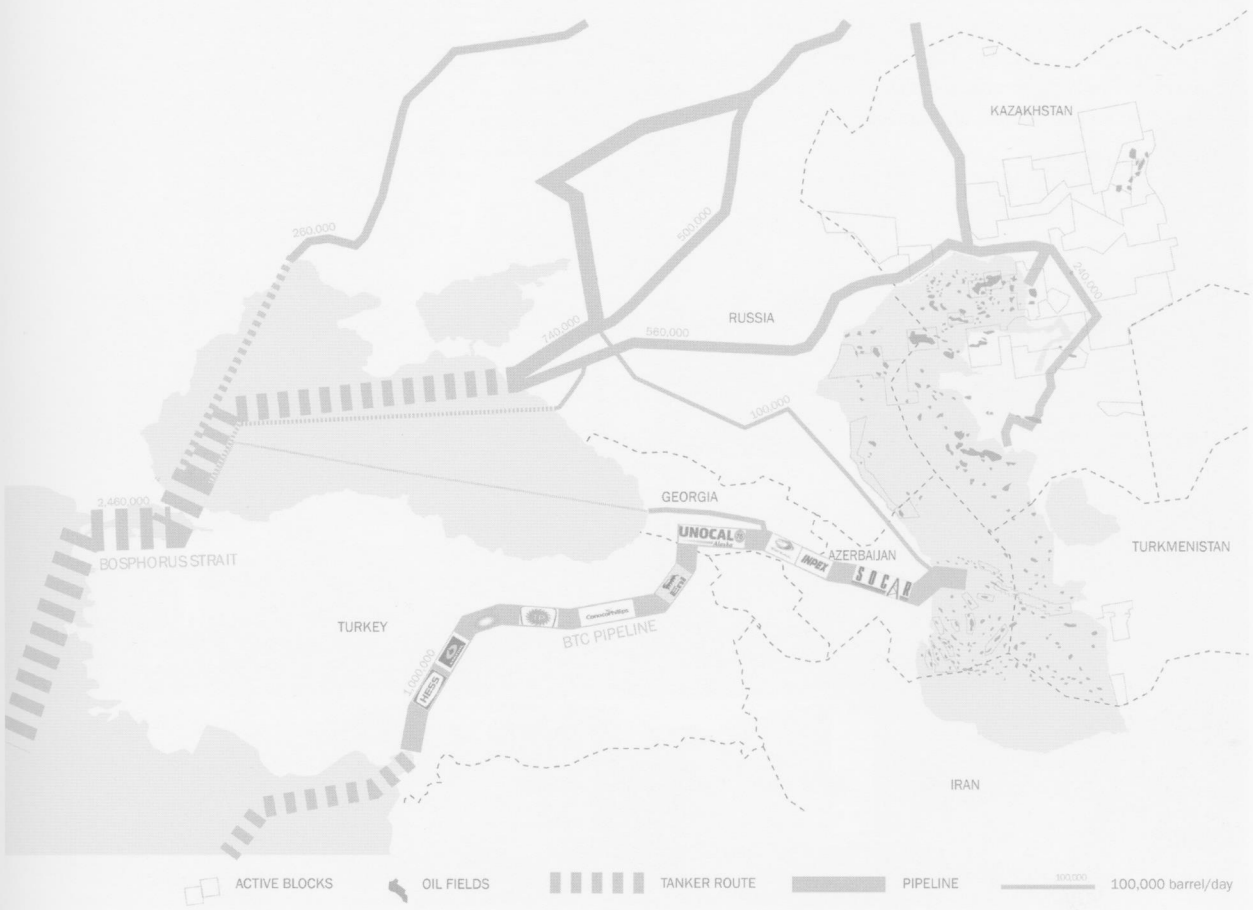

Figure 3: The BTC pipeline as an alternative route to the Bosphorus Strait. Diagram by the author

territory after the Montreux Convention. The geopolitical shifts of the 1930s not only triggered a territorial re-conceptualization of the city but also imparted a specific sensibility regarding the landscape and topography of the Bosphorus where the city was flattened to be understood as a landscape and territory.[17] In the 1990s however, in the context of shifting geopolitics, the Bosphorus' renewed significance as an energy corridor triggered discussions about ecological preservation. Compared to the 1930s, when the internationality of the sea route and the military/territorial connotations of the Bosphorus made it a "healthy environment" promoted to be settled and developed, by the late 1990s, the same international route would turn into an "environmental risk zone," this time, highlighting its fragile ecology.

As the number of international vehicles passing through the city has increased tenfold compared to the beginning of the 1930s, the appreciation of their unsettling scale against the narrow Strait has been virtually hidden from the city, where the international vehicles are almost flattened to be part of the Bophorus picturesque (figure 4). The only moments that have briefly shattered this complacency have been the occasional errors, that is, the accidents occurring in the vicinity in the form of a collision, grounding, fire or even a ship striking one of the waterfront mansions by the sea. These accidents have been the only moments when the visual screen is lifted; and by these accidents, the Bosphorus terrain transforms into a zone of insecurity and risk, situated in the very heart of a dense city (figure 5).

Portraying the Bosphorus Strait within its wider framework demonstrates an alternative archeology for the relationship between geography and urbanism in Istanbul. This framework is important, not only to be able to write unconventional histories but also to be able to project alternative futures for the contemporary city.

Neyran Turan is an architect, and currently an Assistant Professor at Rice University School of Architecture. She has received her doctoral degree from Harvard University Graduate School of Design (GSD), holds a masters degree from Yale University School of Architecture. She is a founding editor of the Harvard GSD journal New Geographies, which focuses on contemporary issues of urbanism and architecture, and is the editor-in-chief of the first two volumes of the journal: New Geographies 0 (2008), New Geographies: After Zero (2009). Turan is also a co-founder of NEMESTUDIO, a research and design collaborative based in Houston. Turan is currently completing the manuscript of her book titled: "Geographic Istanbul: Episodes in the History of a City's Relationship with its Landscape."

Notes:

1. [italics in original]. Lev Semenovich Berg (1915), "The Objectives and Tasks of Geography," in *Foundation Papers in Landscape Ecology*, translated from Russian by A.V. Khoroshev and S. Andronikov, John A. Wiens et. al., eds., (New York: Columbia University Press, 2007), 11–19. Originally published in *Izvetiya Russkogo Geograficheskogo Obshchestva* 15:9 [Proceedings of the Russian Geographical Society] (1915): 463–475.
2. The first major hazardous accident of Istanbul occurred in 1960 when the Greek-flagged World Harmony collided with the Yugoslavian-flagged Peter Zoranic, leading to the death of 20 crew members, severe oil pollution and fire that lasted several weeks, suspending the transit traffic. In 1979, Romanian-flagged Independenta and the Greek freighter Evriyali collided at the southern entrance of the Strait. 43 crew members died, 64,000 tons of crude oil spilled into the sea and 30,000 tons burned into the atmosphere.
3. For more info on the Caspian oil, see: Kamyar Mehdiyoun, "Ownership of Oil and Gas Resources in the Caspian Sea," *American Society of International Law* 94:1 (Jan., 2000): 179–189. US Energy Information Administration (EIA) estimates proven oil reserves in the region as 48 billion barrels, which is comparable to those in Libya. It is also estimated that the Caspian Sea region produced an average of 2.6 million barrels per day of crude oil and lease condensate in 2012, around 3.4% of the total world supply. The region's natural gas potential is even more significant than its oil potential; regional proven natural gas reserves are estimated at 292 trillion cubic feet, comparable to those in Nigeria. Caspian Sea: Oil," EIA Official Energy Statistics from the US Government, http://www.eia.doe.gov/cabs/Caspian.
4. More on the topic see: Jean-Paul Rodrigue, "Straits, Passages and Chokepoints: A Maritime Geostrategy of Petroleum Distribution," *Les Cahiers de Geographie du Quebec* 48:135 (December 2004): 357–374.
5. 61 million tons of oil passed through the Bosphorus in 1997; and this number doubled to nearly 123 million tons of oil (approximately 28 tankers a day) in 2002. As of 2013, around 50,000 vessels traveled the Bosphorus, with more than 8,000 of them carrying hazardous cargo, primarily oil or liquefied-petroleum gas.
6. The Strait is about 31 km long and its width varies between 700 meters and 3500 meters. To navigate the curves, vessels have to change their courses at least 12 times with a maximum angle of 80 degrees—four of these turns are blind corners, that is, approaching vessels cannot be seen until it is too late.
7. Necmettin Akten, "The Bosphorus: Growth of Oil Shipping and Marine Casualties," *The Journal of Black Sea/Mediterranean Environment* 10:3 (2004). Donna J. Nincic, "Sea Lane Security and U.S. Maritime Trade: Chokepoints as Scarce Resources," in *Globalization and Maritime Power*, ed. by Sam Tangredi (National Defense University, 2002), 143–171. For the concept of the accident and its political and cultural relevance in our contemporary society, see Paul Virilio, *Unknown Quantity*, (London; New York: Thames & Hudson; [Paris]: Fondation Cartier pour l'art contemporian, 2003).
8. Stephen Kinzer, "Fearless Turks' Big Fear? Oil Tankers," *The New York Times* (October 24, 1998).
9. The Traffic Separation Scheme of the Turkish Straits, which divides the channel into lanes, was put in action in July 1994 with the approval of the International Maritime Organization. For a history of the legal regime for the international straits, see: Satya Nandan, "Legal Regime for Straits Used for International Navigation," in *Proceedings of the Symposium on the Straits used for International Navigation*, 16-17 November 2002 (Istanbul: Turkish Marine Research Foundation, 2002).
10. In addition to the annual $200 million revenue that the pipeline brings from transit fees, increased importance of the port of Ceyhan on the Mediterranean is also an important plus for Turkey. An international consortium of eleven partners—Britain's BP; Azerbaijan's SOCAR; Norway's Statoil; U.S. based Unocal, Amerada Hess, and ConocoPhillips; Turkey's TPAO; Italy's Eni; Japan's INPEX and Itochu; and France's TotalFinaElf—began construction of the pipeline in 2002. With a 30 percent share in the project, BP is the largest stakeholder, and served as acting leader for the project's design and construction phases. For more on the topic, see: Zeyno Baran, "The Bakū-Tbilisi-Ceyhan Pipeline: Implications for Turkey," in *The Bakū-Tbilisi-Ceyhan Pipeline: Oil Window to the West*, ed. by S. Frederick Starr and Svante E. Cornell (Washington, DC: Central Asia-Caucasus Institute Silk Road Studies Program, 2005).
11. Thomas Friedman, "The Power of Green," *New York Times Magazine* (April, 15 2007).
12. Since most of the oil coming from the Caspian Sea was routed through the Black Sea and the Turkish Straits, the BTC pipeline meant the substitution of the Turkish Straits route, and accordingly becoming the actual export route for the oil to get transferred to the Mediterranean Sea.
13. Ulrich Beck, "Risk Society's Cosmopolitan Moment," *New Geographies: After Zero* (2009): 25. Re-quoted from, Ulrich Beck, *Risk Society: Towards a New Modernity*, translated by Mark Ritter (London, Newbury Park, CA: Sage Publications, 1992).
14. Between the years 1953-1992, 110 accidents occurred at the Istanbul Strait; for the years 1982-1998, the number increased to 714.
15. Historical and cultural value of the Bosphorus would also be re-emphasized by the risk discussions (Bosphorus was declared UNESCO Heritage site declared in 1972, Geneva Convention Historical Site, 1982). See for instance, Bayram Öztürk, "The Istanbul Strait: A Closing Biological Corridor," in Ismail Soysal, ed., *Turkish Straits: New Problems, New Solutions*, op. cit.,145–155. For the "risk map" of the Bosphorus, see, Emre N. Otay and Şafak Özkan, "Istanbul Boğazı Risk Haritası," *Proceedings of the 5th National Conference on Coastal Engineering*, May 2005, 19–32.
16. Kasım Cemal Güven (Istanbul University, Institute of Marine Sciences and Management), "The Petroleum Transport in Turkish Straits," *Proceedings of the Symposium on the Straits used for International Navigation*, op. cit., 154.
17. See Neyran Turan, "The Strait, the Beach, and the Highway: Shifting Edges of Istanbul," in *Landscapes of Development*, edited by Panayiota Pyla (Harvard University Graduate School of Design Publications, 2013).

Figure 4: Colossal flattened. Spatial proximity of the cargo ship passing through the Bosphorus. Photos by the author.

Figure 5:

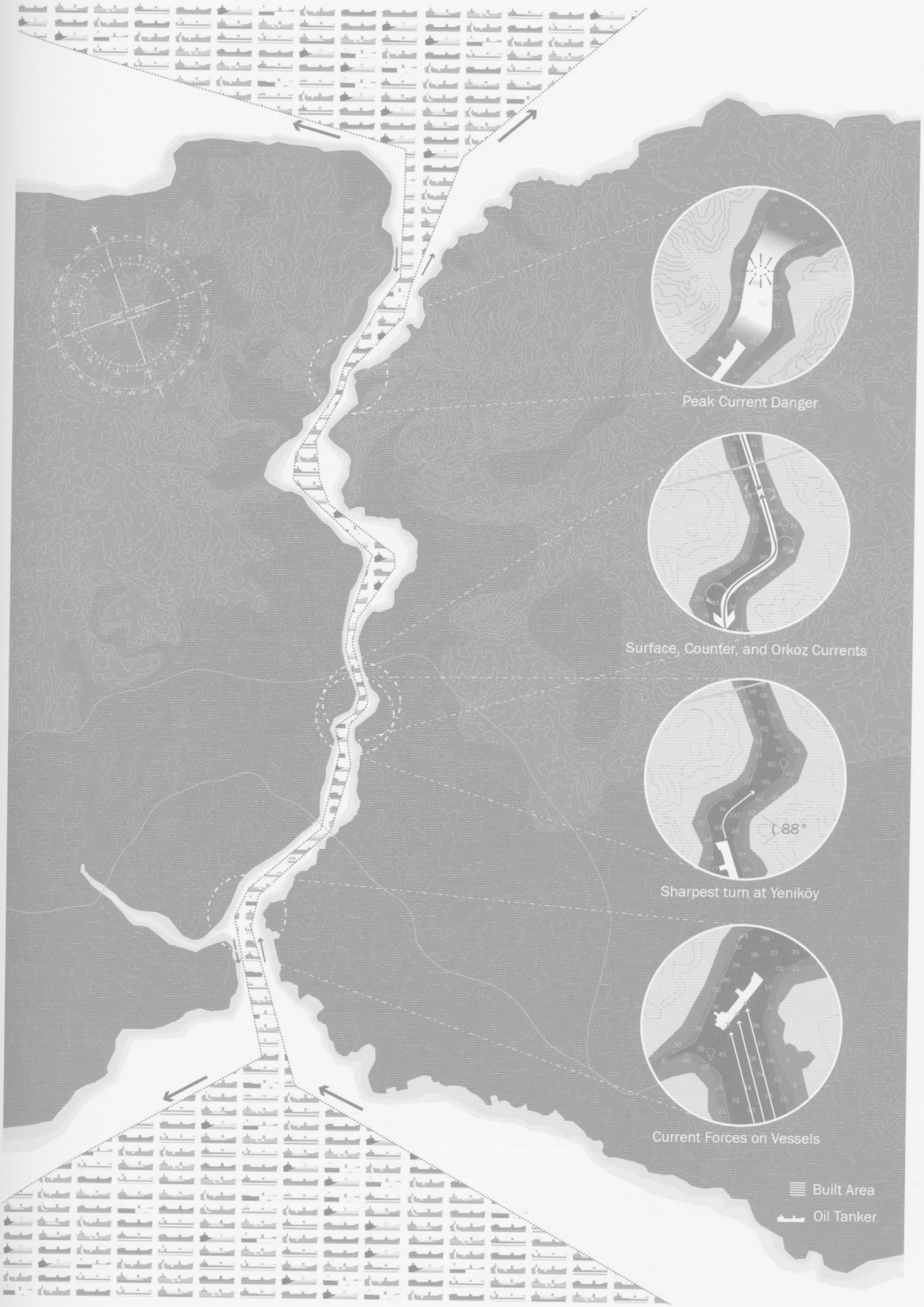

Figure 5: International shipping route passing through the Bosphorus. Drawing by the author. (Research Assistant: Sam Biroscak)