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On November 16, 2019, the Iranian cybersphere tumbled into the darkness. Ordered by the Supreme National Security Council and imposed by the Ministry of Information and Communications Technology, the blackout was meant to prevent riots that were expected to arise over skyrocketing gasoline prices. Iran's broadband outage constituted the first incident in history that has effectively isolated the whole nation against the World Wide Web. Will it remain the last?

descended upon Iran, the country was already stricken down with a crisis. From the holy city of Mashhad to the cultural sites of Shiraz, from the industrial hub of Isfahan to the capital Tehran - in recent years, the country experienced a sharp spike in civil unrest. It was at the turn of 2019 and 2020 when another series of revolts called for the abolishment of the Supreme Leader Ali Khamenei and his government.

NOVEMBER 15, 2019, 00:00, TEHRAN. The government silently introduces a rise in petrol prices, ranging from 50 percent, up to 300 percent - effective immediately. For the country that has already succumbed to soaring inflation, it is the breaking point. Demonstrations commence overnight and grow into a storm torching dozens of banks and government sites. The protests quickly meet military response - security forces across the country clash the riots using tear gas and machine gunfire.

To CAPTURE THE genesis of the uprisings, *The Perspective* reached out to Vittorio Felci, Senior Researcher at K3, Malmö University and Affiliated Researcher at the Center for Middle Eastern Studies (CMES) at Lund University.

"The Roots of the protests are to be found in Iran's bad economy and its effects on the population, in particular, the massive unemployment rate and high inflation", explains Felici, adding that the current state of the economy can be traced to the United States' withdrawal from the 2015 nuclear deal and the new wave of sanctions imposed by Donald Trump.

"I would say that the decision to raise fuel prices occurred at the wrong time, as the people were already struggling and could not stand any more economic pressure", continues Felci, noting that by no coincidence, the unrest clustered in rather impoverished areas, inherently vulnerable to economic distress.

LESS THAN 24 hours after the protests began, the country started experiencing Internet restrictions that gradually transformed into almost complete digital darkness. While "typical" shutdowns may occur due to cyberattacks or damage to undersea cables, the case of Iran was far from ordinary. The international community agreed that the shutdown constituted an attempt to cease the flow of information inside and outside the country.

"The outage of the Internet made it difficult for the protesters to communicate with each other and that affected the demonstrations. But they sought other ways. Those living in border towns used the SIM cards from neighboring countries; some also succeeded in penetrating the 5% Internet bandwidth - this way some news and videos were sent overseas" comments Mehdi Ghavideldostkohi, Persian Language and Iranian culture instructor at the CMES.

FOR MANY PEOPLE, the concept of purposely disconnecting an entire country from the Internet remains abstract. To bring this idea closer to understanding, The Perspective asked Maria Kihl, Professor in Internetworked Systems at Lund University, to explain what kind of methods the regime used to orchestrate the outage.

"THE IRANIAN GOVERNMENT demanded all major Iranian Internet Service Providers (ISPs, network operators) to disable international traffic. It means they had to shut down all communication going to networks outside Iran. Every time Internet traffic is sent to another network, it must pass a specific router in the operator's system that handles the inter-network communication. So it is quite easy to shut down the Internet if you control all ISPs in a country - like Iran's government does", explains Kihl, noting that the domestic Internet was available, but since all major media platforms are hosted abroad. Iranian users could not access them.

Social Networking Services such as Twitter, Facebook, and YouTube for long have been an engine of collective organization and grassroots news coverage. Over the years, social media have contributed their fair share towards shaping the political landscape of Iran - especially in the

period following the Arab Spring. Vittorio Felici further explains that over the last half a century, Iran saw two major waves of activism.

"THE FIRST WAVE emerged during the Shah's reign from 1974 to 1979. This period saw a global 'human rights revolution' that made Iran a primary target of transnational advocacy networks. The second wave concerns digital activism against the Islamic republic from 2009 to the present."

FELCI ADDS: "DIGITALIZATION of Iranian politics during and after the Persian Awakening illustrated the power of social media in terms of generating opposition, shaping political discourse, and facilitating action in the face of a powerful autocratic regime."

SINCE 2009, THE government has undertaken several steps to prevent the spread of the digital revolution. The establishment of the Iranian Cyber Police (FATA) and the National Information Network (SHOMA) embodied the pinnacle of those efforts. According to the information retrieved from the EU Council Regulation No 359/2011, in 2012, FATA issued national guidelines for internet cafés that obliged the owners to install CCTV cameras, collect their guests' credentials, and preserve their search history for 6 months. Data of such scope would easily allow the authorities to track down the activists or anyone considered a threat to national security.

ONE OF THE people deemed as such was Sattar Beheshti, author of a blog called My Life for Iran. According to journalismisnotacrime. com, a website documenting violations of press freedom in Iran, Beheshti was detained by FATA and beaten to death after publishing a series of posts criticizing the regime. Beheshti had disclosed the abuses within the Iranian judicial system, as well as generous, long-term funding of Hezbollah - a political and military group based in Lebanon.

THE DEVELOPMENT OF SHOMA, on the other hand, remains in progress. Around 80% complete, as of May 2019, it is set to replace the Internet without vast economic repercussions. The Iranian regime is not battling denial - while short-term Internet blackouts can temporarily

hide the atrocities of the regime, it comes at a steep cost. NetBlocks, a non-governmental organization monitoring Internet freedom, estimated the total cost impact of the five-day shutdown around \$300 million.

"Many complained about the disruption of businesses that were 100% Internet-dependent. Internet blackout also created problems for education, especially for students", points out Mehdi Ghavideldostkohi.

GHAVIDELDOSTKOHI'S REMARKS COULD not be more accurate - industrial investors, largely dependent on foreign partnerships and suppliers, were abruptly disconnected from their sources of import. The startup ecosystem became virtually deprived of its ground base. E-commerce, taxi and navigation services, online banking transactions, and business deals were all thrown into turmoil that severely crippled the revenues and further distorted the economy.

As GHAVIDELDOSTKOHI MENTIONED, the blackout also took a toll on education. To examine the academic angle, *The Perspective* contacted two Iranian students. One of them, Leyla Namdarimoghaddam from the College of Idaho,

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— Mohammad, a student at the Sharif University of Technology in Tehran

was in the United States at the time of the blackout. The Perspective asked how she found out about the Internet outage in her homeland.

"I was trying to call my family but none of them answered. Finally, in the news, I saw what was happening. My mood completely changed and every day I was praying for their safety. There were lots of emotions: anxiety, sadness, and uncertainty because I used to talk to them daily", says our interviewee.

"The protests continued despite the shutdown. I know some people from outside of Iran who helped to organize them, and I know that many Iranians in other countries were protesting as well.



THE SITUATION WAS terrible. People were getting killed. One of my relatives died accidentally in the crowds. The situation was really hard to overcome. Being in the US and witnessing what was happening made me feel exhausted and worried all the time", admits Leyla.

MOHAMMAD, A STUDENT at the Sharif University of Technology in Tehran, also agreed to share his experience and reflections from that period. The Perspective asked how the shutdown proceeded and what kind of obstacles he met throughout the process.

"I REMEMBER I was studying at the time. I got tired and wanted to check my cell phone, but there was no Internet signal. I tried restarting the phone a couple of times but that did not help. I thought it might be a problem with my bill, so I called the mobile network company, but they didn't pick up. A few hours later I realized I was not alone."

MOHAMMAD CONTINUES: "I am studying computer engineering. The blackout was a disaster for us. Instead of searching for programming issues, we had to look them up in textbooks 1000 pages long. The process that should take less than one minute lasted half an hour."

At the end of the conversation, *The Perspective* asked about the impact of social media on generating opposition movements in Iran.

"I AM NOT calling it opposition. It's a very classy word. What social media does, especially among young people, is fueling the rage and anxiety by posting sensitive content like shooting and beating during the protests. It does not stimulate a well-written political and social dispute. So, what social media does, in my opinion, is not generating opposition, but rather generating a will to protest, which may make the situation even worse. In a riot, it is the bullies who become leaders and take things under control", concludes Mohammad.

WHILE IT IS estimated that the clashes left between 300 and 1500 Iranian protesters dead, the authorities refused to declare any specific numbers. Several more thousands are said to have become wounded, detained or tortured. The UN independent experts expressed their deep concern over the riots and the blackout, while the United Nations Human Rights Council (UNHCR) maintained its 2016 position that "the same rights people have offline must also be protected online".

A LOT IS said, but seemingly little is done for the Iranians themselves. Amid the sanctions imposed and the deals reached, there is the human cost - often overlooked. The economic embargoes do not seem to yield expected backlash, only add up to the misfortune of ordinary Iranian people, who are stuck amidst the vicious cycle of power play. United in disagreement against the regime, they flood the streets only to meet violent retaliation instead of change. The retaliation conjures new sanctions, that yet again cause collateral damage. And so goes the cycle.

Now Iranians also face permanent exile from the global Internet community. If Iran's intranet successfully replaces the Internet, the world will grow a blind spot. And what could happen behind the digitally closed doors?

Let's hope the time won't tell.