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LEAD ARTICLE

The 2017 Saudi-Qatari crisis: The White House and *The New York Times* see two different events

Anthony Moretti

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Abstract

The 2017 dispute between Saudi Arabia and Qatar provided the Trump administration an opportunity to demonstrate how it would conduct foreign policy and potentially alter the diplomatic relationships established with each country by its immediate predecessors. The dispute also allowed for an examination of how *The New York Times* would frame the conflict. This manuscript reviews the census of stories appearing in the main news section distributed by the newspaper from the beginning of the conflict through to the end of the 2017 calendar year. The results indicate the Trump administration's view of the conflict appeared to be simplified as a good actor and a bad actor, influenced by the president's affinity for one of the nations. *The New York Times* regularly highlighted the mistakes it believed the White House was making in addressing what it saw as a more complex dynamic between the two Middle Eastern nations.

Keywords

Saudi Arabia, Qatar, Middle East, framing, newspaper coverage, New York Times.

Introduction

On June 5, 2017, a simmering dispute between Saudi Arabia and Qatar exploded. On that date, Saudi Arabia, joined by Bahrain, Egypt, the Maldives, the United Arab Emirates and Yemen, cut ties with Qatar, in a move that 'created an immediate crisis for Qatar, whose only land border is with Saudi Arabia and which imports about 40 percent of its food from the Saudis' (Barnard & Kirkpatrick, 2017). The Saudis closed their side of the Saudi-Qatari border and refused to allow any Qatar Airlines flights going to or coming from Qatar to

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fly over their airspace (Calder, 2017). Qataris in Saudi Arabia and two other nations were ordered to leave those countries (Al Arabiya, 2017). Saudi Arabia also demanded that Qatar-based Al Jazeera be shuttered because, in Riyadh's eyes, it had become too close to the Muslim Brotherhood (an enemy of Saudi Arabia) and 'advanced extremist or sectarian views on the channel' (Fahim, 2017).

This manuscript reviews two elements connected to what unfolded in that part of the Middle East. The coverage period began on June 5 and ended with the conclusion of the 2017 calendar year. First, public comments and statements coming from the White House about the crisis are examined. Second, this paper reviews reporting and editorials from *The New York Times*, long considered the newspaper of record in the United States, about the situation. The author recognizes as 2017 wore on attention was being paid to the Saudi-led effort to rout Houthis from nearby Yemen, and that media attention at times linked what was happening there to the dispute between Saudi Arabia and Qatar (Henderson, 2017). This manuscript does not explore the Saudi-Yemeni situation or any reaction it engendered from the White House.

Perhaps the best way to frame the Saudi-Qatar issue for unfamiliar audiences is to remind them that Saudi Arabia is the most prominent Sunni Muslim state throughout the Arab and Middle Eastern world, while Qatar is a Saudi rival and characterized, at least nominally, as allied with Iran (Walsh, 2017b), which has the largest Shia Muslim population in the region (BBC, 2013). Qatar is also home to Al Jazeera, a 24-hour news agency and 'the most popular news channel in the Arab world' (Carlstrom, 2017) and a perpetual critic of Saudi Arabia.

In May, 2017, and roughly one month before the blockade began, President Donald Trump made a state visit to Saudi Arabia, his first such trip as president. While there, *The New York Times* reported, he delivered a speech about terrorism, telling 'leaders of dozens of Muslim countries gathered there that he considered the kingdom a crucial ally in fighting terrorism and confronting Iran' (Hubbard & Fisher, 2017). In Saudi Arabia, he articulated his belief that 'radical ideology' needed to come to an end and that the Saudi leadership had impressed upon him that Qatar was providing millions of dollars to terrorist groups (Wintour, 2017). Seeing Saudi Arabia as a critical ally in his vision of a so-called 'Arab NATO', the President knew the 'Saudi leadership was eager to do business' after years of frustration at the policies pursued by Barack Obama (Rogin, 2017). What the president failed to discuss was Saudi Arabia's hostile actions throughout the Middle East, actions equated to terrorism by its critics (Armstrong, 2014). One critic suggested Saudi Arabia is the 'fountainhead of Islamic extremism' and has 'lavishly financed' terrorism around the world (Butt, 2015). As the Saudi-Qatari

dispute unfolded, Trump steadfastly refused to discuss any controversial Saudi actions as terrorism.

Literature review

Framing is a powerful influence in daily print and broadcast journalism. It leads to a decisive narrative about news events; once formed, the frame is difficult to break. Entman (2006) reported that frames developed from the words and images used by news agencies as they chronicled important events. Nelson et al. (1997, p. 222) stated that frames help ‘to make sense of a broad array of information and events while suggesting a suitable course of action.’ Dimitrova et al. (2005) added the emphasized elements of a story become more salient to the audience. An often-used frame, especially in international news, is crisis or conflict (Cozma & Kozman, 2018; Elena, 2016; Semetko & Valkenburg, 2000). Government sources are critical in this process of selecting frames (Entman, 2004); they regularly appear as supposedly credible news sources to discuss domestic and world events. The suggested credibility of these important actors gives their words legitimacy (Tuchman, 1973). Actions have responsibilities, and media frames, reinforced by sources, can dictate who is deemed to be the cause of a problem and who should be tasked to fix it (Iyengar, 1991).

Underscoring the selection of words, images, sources and ideas can be the unconscious absorption of assumptions that journalists make about the world around them and their audiences’ acceptance of news stories (Hackett, 1984). Journalists and their employers also must consider cultural, political, societal and organizational factors in their development of frames (Kim et al. 2010).

These cultural attributes are integral in identifying and understanding societies, and people who believe they are similar to each other are more likely to relate to each other. By extension, those people who are considered different could be classified as threatening (Galtung & Ruge, 1965; Salwen & Garrison, 1989). Distance negatively affects this idea of who is, and who is not, different; when it does, stereotyping occurs. Shaheen (1985, p. 161) reminds us that the ‘greater the distance we are from any group, including Arabs, the greater the reliance upon preconceived images about that group.’ He adds that when it comes to Arabs and the Middle East, a firm stereotype in the United States is in place:

Many myths perpetrated by writers for television and film, novelists, cartoonists, and others promote false perceptions. Arabs are portrayed as extremely wealthy, as sex maniacs and white slavers. They are described as terrorists, their society as violent, and their religion, Islam, as radical. (p. 162)

Perhaps worse, Shaheen finds plenty of examples of mainstream journalists employing language or imagery that equates the typical Arab or Middle Eastern man or woman as dangerous to the West.

Gentzgow & Shapiro (2004) find the stereotypes cut both ways, with many people in the Arab and Middle Eastern world holding negative views about the United States. They suggest the culmination of that animosity became crystal clear when only half the people from that region who responded to a survey believed the Sept. 11, 2001, attacks were absolutely unjustified.

Well over a decade and a half since that September date, the hostile stereotypes have hardened: the Muslim terrorist in many American eyes; the crusading American in many Muslim eyes. The subsequent war on terror following Sept. 11 that began under the George W. Bush presidency, and the numerous terrorist incidents perpetrated by radical Muslim men and women all over the world have affirmed to many Americans this terrorist idea. The last three U.S. presidents have grappled with how to contain so-called radical Islam, a phrase that especially resonates with Americans on the right of the political spectrum (Abdelkader, n.d.).

Compounding the problem of stereotyping and anti-Muslim and anti-Arab sentiments evident in Western media reporting (Guzman, 2016; Morin, 2016; Polonska-Kimunguyi & Gillespie, 2016; Powell, 2011) was the absence, for decades, of a powerful international broadcaster within the region disseminating Arab and Middle Eastern analysis and opinion locally and beyond. When Qatar-based Al Jazeera launched in November 1996, it quickly established a reputation for solid reporting and a lightning rod for criticism.

Lahlali (2011, p. 84) writes that ‘the channel’s chief aim’ is to offer ‘a platform for voiceless people.’ According to Seib (2005, p. 601), on Al Jazeera, ‘everything from the role of women to the competence of governments is addressed, often loudly.’ He adds that Al Jazeera was largely ignored in the West until the aftermath of the Sept. 11 attacks. Its reporting about the attacks and especially the subsequent U.S.-led invasion of Iraq often conflicted with U.S. preferred themes, frustrating American officials eager to present a globally accepted argument that war was justified (Seib, 2005).

Al Jazeera also has made enemies in other Middle Eastern countries: Bahrain, Kuwait and Saudi Arabia have reacted negatively to the news agency’s reporting. Pintak (2006) argues that the negative reaction should not be surprising because almost every government there historically has held a tight rein on the broadcast media. Pintak (2006, p. 71) adds that Saudi Arabian leaders were most disturbed by Al Jazeera because it ‘not only impinged on their near-monopoly of pan-Arab media, but the station had the temerity to give voice to those who would question the House of Saud.’

Kraidy (2013) argues Saudi officials find Al Jazeera troubling because it disseminates images that might call into question the strict piety and gender separation that undergirds Saudi Arabia. Hammond (2012, p. 190) calls this effort to narrow the parameters of approved commentary and appearance as the ‘cordon sanitaire around Saudi Arabia in the Arab media, a sanitised zone where no news inimical to the realm of Al Saud can make its way through the purified information ether.’

The New York Times has long been considered a pre-eminent newspaper in the United States. Merrill (1968, p. 13) stated that an elite newspaper should be ‘serious, concerned, intelligent and articulate,’ and he argued *The New York Times* met such criteria. The newspaper also has been used by multiple scholars who examine U.S. media reporting of international events (Ramaprasad, 1987; McCoy, 1992; Goodman, 1998; Chang & Zeldes, 2006; Luther & Radovic, 2014). Despite its domestic and international accolades, it has not escaped criticism for its reporting from and about the Middle East. Barranco & Shyles (1988, p. 255) found that the newspaper disseminated substantially more coverage about Israel than of its Arab and Muslim neighbors, with one effect being ‘infecting the international news agenda with disfigured perceptions of the Mideast.’ Zelizer et al. (2002) reported the newspaper differed from two other leading U.S. competitors in coverage of the early stages of the Intifada that began in 2000. Ha (2017) suggested that the newspaper’s editorials too often framed the Arab Spring through an American lens, with a warning that American interests could be jeopardized if the movement had sustained success.

In summation, news frames, once established, quickly are equated with fact, most especially when they are created by powerful government officials and interests. American media often have endorsed the frame suggesting the Middle East is hostile to American interests and contributed to the stereotype that Muslims in that part of the world are eager to attack Western men and women. *The New York Times* has been criticized by researchers for an imbalance in reporting about the Middle East, and because of its laudatory record of international news coverage influences other news agencies as they report from and about the region.

Methodology

The coding period for this research began on June 5, 2017, when Saudi officials and several of their allies announced the severing of relations with Qatar. The coding period concluded with the end of the 2017 calendar year, so as to allow for a full examination of how *The New York Times* reported what was happening

between the two nations, and how the Trump administration spoke of the situation throughout 2017.

This paper first identifies and analyzes all public statements disseminated by the White House that pertain to the Saudi Arabia-Qatar crisis. The author recognizes that the president discussed the crisis with other regional leaders; however, Saudi Arabia and Qatar were the main combatants in the dispute. As such, the president's interactions with representatives of those nations offered the best framework for examining how his thoughts, opinions or actions might have changed throughout the period under review.

The author retrieved all statements from the White House's Office of the Press Secretary website² pertaining to the Saudi-Qatari crisis. In reverse chronology, the website lists all statements from the Trump administration. The author scrolled through each page on the website seeking the statements required for analysis. The keywords included 'Saudi Arabia' and 'Qatar', and the names of the countries' leaders. The researcher downloaded any statement that mentioned Saudi Arabia, Qatar, or one of its leaders and referenced the conflict between the two nations. These statements were then read to ensure they referred to telephone conversations or meetings with a Saudi Arabian or Qatari official. Those that met these criteria were used in this study.

This paper also reviews a census of stories and editorials relating to the Saudi Arabia and Qatar crisis that appeared in the main news section (Section A) of *The New York Times*. This section was the only one used because it offers the top national and international stories of the day. It also contains the editorial and op-ed pages. Four questions helped to determine whether to select a story or editorial from this section. Did the story or editorial reference Saudi Arabia and/or Qatar? Did it highlight the crisis from a Saudi and/or Qatari perspective? Did it analyze how the U.S. government was engaging with the leaders of those countries and others in the region as it addressed what was happening? Was Al Jazeera included anywhere in the story? The researcher does not dispute that cultural, athletic, social, educational and other issues might have been affected because of the Saudi-led decision to boycott Qatar; however, this paper reviews a narrow perspective: the U.S. response to the decision and how *The New York Times* framed the conflict and the Trump administration's response to it.

Using the ProQuest Newsstand database, the author separately entered 'Saudi Arabia' and then 'Qatar' into the search bar. The aforementioned June 5 and December 31, 2017, dates were included. Toward the bottom of the

² The White House's Office of the Press Secretary website. Available at: <https://www.whitehouse.gov/briefing-room/press-briefings>

ProQuest Newsstand database homepage and under the ‘Source type’ column, ‘Newspapers’ was checked in order to limit the number of possible entries. Once that information was entered, the search advanced to a new page, where it was possible to find *The New York Times* under ‘Publication title.’

Informed by the research of Hester (1973), Abdelkader (n.d.) and others, particular attention was paid to the official line emanating from the White House about the crisis; whether radical Islamists were accused of stoking the uncertainty; which nations the administration asserted were responsible for what was happening; and which nations the Trump administration believed were attempting to resolve it.

RQ1: Consistent with the idea of political leaders being aware of and responding to international crises, especially those that carry a perceived or real threat to their country, how did the White House publicly address the Saudi Arabia-Qatar issue?

Research by Entman (2006), Nelson et. al. (1997), Dimitrova et. al. (2005) and others on framing assisted in identifying RQ2.

RQ2: Consistent with research into framing, what narrative about the crisis formed within the pages of *The New York Times* over time? Was one nation seen as the cause of the dispute? Did the newspaper counter or support aspects of the crisis promulgated by the White House?

Research from Lahlali (2011) and Seib (2005) validates that Al Jazeera operates without government repression; nevertheless, as Hackett (1984) and Kim et. al. (2010) noted, journalists are influenced by political, societal and cultural norms as they perform their daily tasks. Recognizing that Qatar’s norms differ from America’s, would the U.S. newspaper support a legitimate news agency even when it operated in a country with values that often clash with America’s?

RQ3: How often did *The New York Times* mention that Saudi Arabia and its allies demanded Qatar-based Al Jazeera be shut down, and did the newspaper rally in any way to support the news agency?

Results

The White House’s database of public statements reports eleven separate items relating to the 2017 Saudi-Qatari crisis. More specifically, it indicates the president spoke to Saudi leaders six times and to their Qatari counterparts three times over the roughly seven-month period identified in this study. (Two other statements highlighted the president’s conversations with leaders from more than one nation.)

In addition, thirty-six stories from *The New York Times* were coded in this research study. Saudi Arabia, much more so than Qatar, was of interest to *The*

New York Times during this study period. Multiple reports from and about the Kingdom that had nothing to do with the dispute with Qatar were disseminated, though not coded. Using the search criteria mentioned in the methodology, Saudi Arabia appeared in the pages of *The New York Times* almost 230 times during the coding period. Qatar did almost 100 times.

RQ1: The statements from the White House consistently highlighted two somewhat simplified frames: President Trump supported Saudi Arabia because it wanted to rid terrorism from the Middle East. In line with this, nations in the region that sought to eliminate terrorism were America's friend. The second frame suggested Iran was the opposite of Saudi Arabia: a nation eager to foment terrorism. As such, the White House contended Iran was the hostile power in the Saudi-Qatari conflict, a known sponsor of terrorism and Qatar needed to consider the ramifications of remaining in Tehran's good graces.

On June 6, one day after the blockade was announced, President Trump spoke to Saudi Arabia's King Salman about the dispute with Qatar for the first time. The White House (2017g) official statement noted, 'The two leaders discussed the critical goals of preventing the financing of terrorist organizations and eliminating the promotion of extremism by any nation in the region.' One day later, *The New York Times* reported, 'The president also asked King Salman... to draw up a list of grievances for Qatar to address, according to a senior administration official' (Sanger, Landler, & Schmitt, 2017). This story was one of only two that referenced phone calls or other direct efforts the president had made to engage with Saudi or Qatari leaders in addressing the crisis.

The next conversation between Trump and a Saudi leader took place two weeks later. On June 21, the White House (2017e) release stated, 'President Donald J. Trump ... [and] Crown Prince Mohamed bin Salman of Saudi Arabia discussed the priority of cutting off all support for terrorists and extremists, as well as how to resolve the ongoing dispute with Qatar...'

The president next spoke to a Saudi leader alone about one month later. According to that White House (2017h) statement, 'President Donald J. Trump ... [and King Salman bin Abdulaziz Al Saud of Saudi Arabia ... discussed recent diplomatic efforts to resolve the dispute with Qatar... In particular, the President emphasized the need to cut all funding for terrorism and discredit extremist ideology.'

It took another six weeks before the men spoke again. According to the White House (2017i), 'President Donald J. Trump ... [and] King Salman bin Abdulaziz Al Saud of Saudi Arabia... discussed the need to defeat terrorism, cut off terrorist funding, and combat extremist ideology... The two leaders also addressed the threat Iran poses to the region.'

The two men next spoke about six weeks later:

‘President Donald J. Trump spoke yesterday with King Salman bin Abdulaziz Al Saud of Saudi Arabia... President Trump... emphasized the importance of the Gulf Cooperation Council in countering Iran’s destabilizing activities in Syria, Yemen, Iraq, and elsewhere in the region. The leaders agreed on the importance of the partnership between the United States and Saudi Arabia...’ (The White House, 2017j)

They spoke again on November 4:

‘President Donald J. Trump ... noted that the King and Crown Prince’s recent public statements regarding the need to build a moderate, peaceful, and tolerant region are essential to ensuring a hopeful future for the Saudi people, to curtailing terrorist funding, and to defeating radical ideology...’ (The White House, 2017k)

The president also spoke with King Salman on December 20, shortly after a ballistic missile attack in Saudi Arabia. The subsequent statement from the White House was not included in this study because it offered no indication that the two leaders spoke about Qatar.

The president did speak with the Qatari leadership on three occasions. The first conversation took place on June 7. According to the White House (2017a) statement,

‘President Donald J. Trump spoke today with Amir Sheikh Tameem bin Hamad Al Thani of Qatar. The President emphasized the importance of all countries in the region working together to prevent the financing of terrorist organizations and stop the promotion of extremist ideology.’

The president did not speak to only the Qatari leadership again for more than three months, specifically on September 7. According to the White House (2017b) statement, ‘President Donald J. Trump ... [and] Amir Tamim bin Hamad Al Thani of Qatar... discussed the continued threat Iran poses to regional stability.’

The men met face to face about two weeks later, when each was in New York for the United Nations General Assembly gathering. The White House (2017d) statement noted:

‘President Donald J. Trump met today with Emir Tamim bin Hamad Al Thani of Qatar... The leaders also discussed the importance of resolving Qatar’s ongoing dispute with its neighbors ... in order to promote regional stability and counter the threat of Iran. The President ... stressed the importance of taking additional steps to follow through on commitments from the Riyadh Summit to cut off funding for terrorists, discredit extremist ideology, and defeat terrorist groups.’

According to these statements, the White House delivered a consistent, albeit simple, message to Qatari officials: The Qatars were supporting the wrong side in this dispute, and they needed to consider the potential ramifications of that decision.

Two other White House statements require attention. On July 2, the president spoke to three regional leaders. According to the White House (2017f) statement,

‘President Donald J. Trump spoke separately today with King Salman bin Abdulaziz Al Saud of Saudi Arabia, Crown Prince Mohamed bin Zayed Al Nahyan of Abu Dhabi, and Emir Tamin bin Hamad Al Thani of Qatar. On the calls, President Trump addressed his concerns about the ongoing dispute between Qatar and some of its Gulf and Arab neighbors. He reiterated the importance of stopping terrorist financing and discrediting extremist ideology...’

A similar round of phone calls took place two months later. According to the White House (2017c) statement,

‘President Donald J. Trump spoke separately today with Crown Prince Mohamed bin Salman Al Saud of Saudi Arabia, Crown Prince Mohammed bin Zayed Al Nahyan of the United Arab Emirates, and Amir Tameem bin Hamad Al Thani of Qatar. The President underscored that unity among the United States’ Arab partners is essential to promoting regional stability and countering the threat of Iran. The President also emphasized that all countries must follow through on commitments from the Riyadh Summit to defeat terrorism, cut off funding for terrorist groups, and combat extremist ideology.’

This series of phone calls generated the second story from *The New York Times* directly connected to an effort by the president to solve the crisis. The newspaper reported on September 10 that the president’s attempt “to break the stalemate that has divided the wealthiest countries in the Middle East ended in failure on Saturday, when leaders from Qatar and Saudi Arabia, after speaking by phone for the first time in months, exchanged dueling, contradictory statements” (Walsh, 2017c).

In summation to RQ1, the president participated in addressing the Saudi-Qatari crisis in its initial weeks, although the statements suggest he did little more than frame the conflict as one side was good and the other was evil. The Trump administration did not acknowledge any sort of crisis, a common Western-endorsed theme to international events, as noted by Cozma & Kozman (2018) and others, opting instead for a simplified assessment that the U.S. had Saudi Arabia were doing what the world needed: isolating and weakening Iran. This frame is consistent with Iyengar’s (1991) contention that framing allows for powerful actors, especially world leaders, to dictate who is causing problems

and who should solve them. The White House statements, which almost always lacked detail beyond the basic information, did not stray from the president's contention that Saudi Arabia was fighting the good fight and Qatar needed to see Iran as a dangerous enemy to its regional neighbors. The summary statements (called readouts), however brief they are, of his phone calls or face-to-face meetings, indicate President Trump repeatedly affirmed support for Saudi Arabia to continue its pressure on Qatar, and its ally Iran, believing regional and world stability could follow. Put more bluntly, the public statements affirm the president viewed the Saudis and their allies as the good guys in this conflict and the Iranians as the bad guys. Over time, the lack of public statements about communication with Saudi, Qatari and regional leaders suggest the president's interest in the crisis appeared to wane. It is possible that his failed attempt at ending the crisis in September caused him to distance himself from further detailed involvement.

RQ2: *The New York Times'* reporting – in its news coverage and editorials – chafed at the president's decision to solidly support Saudi Arabia, which, the paper noted, had not been an open and tolerant society for decades. The newspaper also questioned the White House frame that the regional conflict was merely between a benevolent actor and a malevolent actor. The newspaper's reporting also discussed how the president's position had limited any U.S. effort to resolve the dispute.

Of the thirty-six stories or editorials reviewed in this study, two frames dominated the newspaper's discourse.

Frame 1: The president's support for the Saudis did not indicate a full grasp of the situation in the Middle East, and his appreciation for the Saudi royal family contributed to his blind spot. Four examples of this theme are highlighted here.

- 'Mr. Trump, by strongly embracing the Saudis, pulled the gloves off a brawl that had long threatened to turn ugly. But it could also end up hurting American efforts to build broader coalitions in the region, and weaken an ally that has provided a vital base for the American military in its campaign against the Islamic State' (Barnard & Kirkpatrick, 2017);
- 'Despite the convenience of this narrative [that paints Qatar as destabilizing the region because of its support for the Islamic State]... the more heinous sin for which Doha is being punished is its willingness to acknowledge that Iran occupies a position as an important regional power. [Nevertheless, the Trump administration] is obsessed with the twin threats of Iranian influence and "radical Islamic terror" (Barrett, 2017);

- ‘President Trump, who received a rapturous welcome in Riyadh [in May], welcomed the blockade of an American ally, a stunning policy reversal that seemingly happened overnight. On Twitter, he seemed to imply that the blockade had been his idea. But forcing hands can be risky’ (Fisher, 2017);
- ‘Mr. Trump sent his secretary of state, Rex Tillerson, to the region to sort out the mess. But among the monarchs of the Middle East, an underling’s voice stood no chance of undoing the damage already done by his master’s tweets’ (Nasr, 2017).

Frame 2: The president’s endorsement of the Saudi position vis- -vis Qatar was not shared by some of the most prominent people in his administration, and the difference of opinion often was on public display. Four examples illustrating this theme are mentioned here.

- ‘Secretary of State Rex W. Tillerson and Defense Secretary Jim Mattis initially tried on Monday [June 5] to smooth over the rift, with Mr. Tillerson offering to play peacemaker and Mr. Mattis insisting [the Saudi decision] would have no effect on the campaign against the Islamic State’ (Landler, 2017);
- ‘Mr. Tillerson called for a “calm and thoughtful dialogue” to resolve the deepening dispute among Sunni Muslim states in the Persian Gulf. Barely an hour later, Mr. Trump’s comments were anything but that. He accused Qatar of being a “funder of terror at a very high level” and demanded that the tiny, energy-rich nation cut off that money flow to rejoin the circle of responsible nations’ (Landler & Gardiner, 2017);
- ‘Mr. Trump has said he is backing Saudi Arabia and the United Arab Emirates because Qatar is “a funder of terror at a very high level.” But his stance toward Qatar, which is host to the largest American air base in the region, has differed sharply from the positions of the Pentagon and State Department. The secretaries of defense and state have stayed neutral, urging unity against the common enemy of the Islamic State’ (Kirkpatrick, 2017);
- ‘The State Department on Tuesday issued a blistering critique of Saudi Arabia and other Persian Gulf countries for enforcing a two-week embargo against Qatar... The statement seemed to put President Trump and Secretary of State Rex W. Tillerson further at odds about who is to blame for the dispute, which threatens a host of American diplomatic and security priorities in the gulf’ (Gardiner, 2017).

In summation to RQ2, *The New York Times* concluded President Trump was unable to look past his affinity for the leadership in Riyadh, preventing him

and members of his administration from coming up with concrete proposals that might have been ended the conflict. The newspaper routinely noted the president either could not or would not accept the complexity to the dispute. His stance reduced American prestige in the region and neutered any opportunity for key members of his administration to come up with solutions to the crisis.

RQ3: *The New York Times* infrequently discussed Al Jazeera and the Saudi demand that it be closed; however, when the newspaper referred to the news channel, it always did in positive ways. The Saudi demand that Al Jazeera be shuttered was dropped on July 19, 2017 (Gladstone, 2017), mere weeks after it was ordered, thus reducing the amount of time the newspaper had to address this issue.

In one of its most forceful defenses of the news agency, *The New York Times'* editorial board wrote the following:

Saudi Arabia is hardly innocent when it comes to spreading Islamist extremism or supporting terrorist groups. In reality, by attacking Al Jazeera, the Saudis and their neighbors are trying to eliminate a voice that could lead citizens to question their rulers. Al Jazeera was the prime source of news as the Arab Spring rocked the Middle East in 2011 (*The New York Times* Editorial Board, 2017).

In other stories, the newspaper acknowledged that Al Jazeera was ‘influential’ (Walsh, 2017a), ‘the region’s most powerful megaphone’ (Blinken, 2017), and used by Qatar ‘to project soft power, promote allies and needle the Saudi royal family’ (Fisher, 2017). The newspaper noted Al Jazeera’s firm determination that it would not allow the Saudis to ‘silence the freedom of expression in the region’ (Hubbard, 2017).

In short, *The New York Times* affirmed whenever it could that Al Jazeera was an important bulwark against state-sponsored journalism within the Arab and Middle Eastern worlds, and it played an important role in ensuring its regional and broader audiences understood what was taking place throughout 2017.

Conclusion

There was a clear disconnect between the frames posited by President Trump and *The New York Times* when it came to telling American audiences about the dispute between Saudi Arabia and Qatar. According to the president, Saudi Arabia was an essential American ally in reining in terrorism, which Trump insisted was financed by Iran. According to the newspaper, Trump could not see the Saudi-Qatari dispute through the lens of two important Middle Eastern actors fighting to advance their prestige within the region. Instead, the newspaper’s

stories claimed the conflict served one purpose: isolating and weakening Iran while supporting a nation that rarely evinced Western values.

Recognizing how Trump railed against the 2015 Iranian nuclear deal (Begley, 2016), in which Iran promised to derail its nuclear ambitions in exchange for the lifting of billions of dollars' worth of sanctions against it, it comes as no surprise to Americans that Trump would view Iran as a dangerous regional and international force. In Trump's simplified global view, Iran had to be dealt with, and any nation that adopted this viewpoint was an immediate ally.

The New York Times repeatedly pushed back against this narrative. It reported that prominent voices within and outside the administration noted that Qatar was an important regional ally and home to America's largest military force in the region fighting the Islamic State. It added that Saudi Arabia seemed empowered to bully Qatar, with which it often sparred, because leaders in Riyadh seemed confident the president would do nothing to stop them. The newspaper noted more than once that Saudi Arabia was not a beacon of freedom and would want to tamp down such messages emanating from Doha, Qatar's capital city, and through Al Jazeera.

Berry (1990, p. 1) argued that U.S. news media agencies will refrain from criticizing a president's foreign policy plans until it becomes apparent the policy will not succeed. Arguing that 'journalists do not want a failing policy to continue' and will label a 'failure as a failure', Berry's hypothesis is American media believe in deference to the president. The results of this study suggest *The New York Times'* reporters afforded President Trump – just six months into his term – no such respect; within days of determining the Saudis should be supported for leading the blockade against Qatar, America's leading newspaper identified what it considered to be the futility and simplicity of what the president wanted. The newspaper questioned frames and stereotypes designed to present the Saudi-Qatari conflict as simple black and white, evil and good. It remained vigilant, or biased in eyes of any critics, in outlining both Saudi Arabia and Iran as nations that don't align with Western values. It validated that Sunni Islam's most powerful nation and Shia Islam's most powerful nation had competing visions for the region that the president refused to acknowledge. Using Berry's hypothesis, a case could be made that *The New York Times'* editors and reporters was conducting a kind-of shadow foreign policy by characterizing the president's program as failed before it had any chance to be analyzed.

Perhaps the most eye-opening report examined in this study came on July 5, 2017. *The New York Times'* reporter Thomas Erdbrink examined how the crisis was being viewed by leaders in Iran. Erdbrink wrote, 'While Iran and Qatar share one of the largest gas fields in the world and have diplomatic relations, Qatar is of little or no strategic value to Iran' (Erdbrink, 2017). If it is true that the Iranians relished the

positive public relations that came from framing the Saudi Arabia and Qatar dispute as a large Sunni-majority state attempting to weaken a much smaller nation, while noting President Trump was apparently quite happy to add to the bullying, then the winner of the Saudi-Qatari conflict was quite obvious: Iran.

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CONTEMPORARY DEBATE

The review of ‘mining’ in Russian media

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Abstract

In 2017, there was a sharp increase in the number of publications on the subject of ‘mining’ in Russian non-core media, which indicates the increased interest among non-professional audiences. This study relates the practice of mining crypto-currencies to the category of ‘unobtrusive’ issues. It gives the media the role of translator, which shapes public opinion. The purpose of this work is to identify the context in which the discussion about the ‘mining’ in non-core Russian media is immersed. Based on different sources, we conducted a quantitative content analysis and used joint mentions of categories on the topic of ‘mining’ to build the network analysis. Moreover, interviews with ‘miners’ were used for more correct interpretation. The results showed that the non-core Russian media pay close attention to the category of ‘regulation’ of ‘mining’, which is most often mentioned with the Central Bank and the President. Besides, the geographical specifics of ‘mining’ are focused mostly on Moscow, Moscow region, the cities of Siberia and some foreign countries (the USA, China). The analysis also showed that the presence and tightness of category links in the subject of ‘mining’ have common features with the concentration of Bitcoin nodes.

Keywords

Mining, cryptocurrency, bitcoin, discussions in the media, economics in the media, network analysis, network of mutual mentions.

Introduction

‘Mining’ has already been called the gold rush of the 21st century: the media fix an acute shortage of ‘shovels’ – video cards in electronics stores (Kodachigov,

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2017). According to CoinDesk (www.coindesk.com), the rate of Bitcoin, the most popular cryptocurrency, in July 2010 was \$ 0.06, in the beginning of December 2017 it already reached \$ 18,000. Google trends for the dynamic of the Bitcoin popularity showed that the statistics of queries on the Internet of the word ‘bitcoin’ since late November 2017 jumped from 30 points to 100.

Satoshi Nakamoto, the creator of Bitcoin, in his work, explaining the principles of the functioning of this technology as an electronic means of payment, paid particular attention to stimulation. Due to the decentralization, the motivation for supporting the network is provided by remuneration in the form of a cryptocurrency: ‘the constant addition of the constant of the number of new coins is analogous to the resources used by gold diggers to add gold to circulation. In our case, this is CPU time and electricity’ (Nakamoto, 2009: 4). The ‘miners’ are people whose task is to maintain the system, which is expressed in the duty of confirming transactions, adding new blocks to the Blockchain, and introducing new bitcoins (or any other cryptocurrency). ‘Miners’ receive cryptocurrency as a reward when they manage to decipher a special mathematical function – a hash; the production process itself is called ‘mining’.

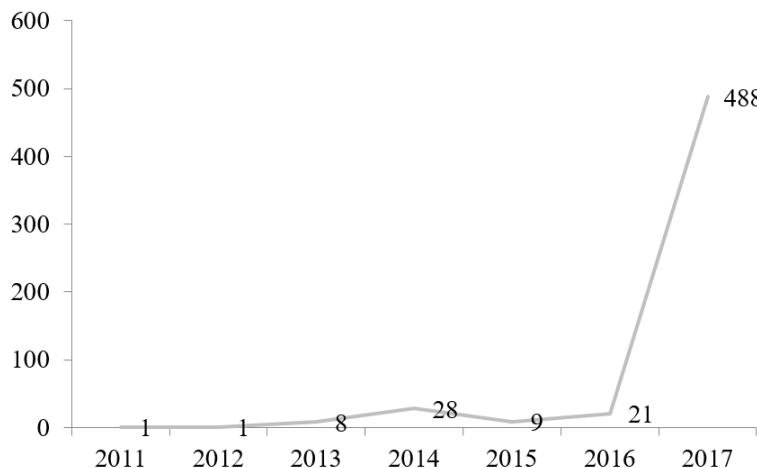
The subject of the analysis, the review of ‘mining’ in non-core media, emerged as a result of interviews with ‘miners’. We found out that the scenarios for obtaining primary information on both the Blockchain area and the cryptocurrency, in general, and on ‘mining’, in particular, can be divided into three categories: media, family and work colleagues (business partners). In addition, the tendency of the ‘miner’ to self-education is also expressed in the collection of information, literally ‘bit by bit’, from a variety of sources, including the media.

Following the research conducted by the NAFI Research Centre, in 2017 only 1% of the Russian population had experience in using cryptocurrencies. Since 2015, this figure has increased from 0% to 1%. The experience of using cryptocurrency is a broader concept than the mining process, so it can be assumed that mining is occupied by an even smaller part of Russia’s population.

However, it is worth noting that despite a slight increase in the experience of using cryptocurrencies in two years, 2017 year is characterized by a sharp leap in media materials at the request of ‘Mining’ among all Russian media, including television, print media, Internet sources, radio air: if in 2016 there were only 21 of them, in 2017 the number increased to 488 (*Figure 1*) (Requested in a Factiva resource), that makes the interest in ‘mining’ in Russia the specificity of 2017.

Figure 1

Materials of the media on the request of 'Mining' 2011-2017



Despite the fact that the 'mining' at the end of 2017 is not yet defined in the Russian legislation, the fact of investing in equipment for 'mining', the ability to generate income and entrepreneurial activities allows us to connect this practice not only with the development of technology, but also with economic activities that generate economic discussions.

Economic discussions in the media affect the behavior of people and their perception of reality (Kazun, 2017: 98-99). However, even if there is a desire for the population to be aware of the economic situation, only 38% of Russians believe that economic news is fairly objective, according to the research of VCIOM (Russian Public Opinion Research Center) 'Media consumption today', which was conducted in 2017. Moreover, the real state of affairs in the economy, their media coverage and public opinion on these issues do not always coincide.

Studies also show that due to the complexity of translating of objective economic indicators into subjective assessments the economy is a complex topic for discussion (Holbrook, Garand, 1996: 351–375). In this situation, the mass media take on the complex role of the translator, which should, in an understandable form, bring the news to the reader. However, economically focused topics can be ignored by the media, as information can be incomprehensible to the audience, and journalists often do not have the necessary knowledge (Manning, 2013). An example of such fragmentation of economic news is the extremely low media attention to the situation in the markets of debt instruments and derivatives at the threshold of the financial crisis of 2008 (Tett, 2009).

It would seem that in the case of ‘mining’ the incompleteness of information should not arise. There are a number of online publications that specialize in cryptocurrency and blockchain technologies, such as Forklog, DeCenter, Cointelegraph and others. According to the rating of Medialogy (www.mlg.ru), www.forklog.com, the online resource, ranks eleventh in the top-20 most cited media of the financial sector for 2017. In top-15 economic channels Telegram on views, four are devoted to the topic of cryptocurrencies.

However, the discussion on the cryptocurrency has already gone beyond the framework of a purely professional community and often seeps into the agenda of popular media. Focusing on a wide audience, the media are forced to adapt information and select the most interesting stories. In our work, we concentrate on non-core media, on those sources of mass information that do not specialize in the materials of cryptocurrency and blockchain technology. Due to the fact that most of the population has no personal experience in this area, materials about ‘mining’ can be classified as ‘unostentatious’ issues. In this case, the media are almost the only source of information on this issue and directly affect the formation of public opinion (McCombs et al., 1981).

The purpose of our work is to identify the people and institutions involved in the discussion about ‘mining’ in non-core Russian media and to reveal the general context in which the discussion is immersed, provided that the majority of the Russian population does not have personal ‘mining’ experience. We highlight the most popular categories covering the topic of ‘mining’ in non-core media and focus on the correlation of the received categories, on their links and mutual mentions.

Methodology

In our study, we used the resource Factiva. Around 1,500 Russian-language materials on mining were downloaded during the period from January 1, 2011 to December 12, 2017. Then, using the Yoshikoder program, we identified categories (see Appendix, *Table 1*) and carried out quantitative content analysis or frequency allocation of mentions. The frequency of mentions is sorted in descending order, which made it possible to emphasize the most popular words in network analysis.

In the study, we used media materials from all regions of Russia, not limited to a specific locality, as we assume that ‘mining’ is a new practice for Russia, which is concentrated not only in Moscow, but also in other regions of the country. We focused on television news releases and information messages in print media, online sources and radio air.

In addition to the quantitative method of estimating the frequency of mentioning the selected categories with Yoshikoder, we used the network analysis. To visualize network analysis, we applied Gephi software, which creates the image in terms of the pairwise correlations. The main focus of network analysis is the comprehension and interpretation of social reality as an integral picture through interconnected multiple nodes (words, schemes, frames) (Kaplan, 1973: 66). Network analysis allows the viewer to see which provisions have the received categories, whether their positions are similar and how categories are ‘embedded’ in the overall network (Hanneman, 2005: 4). Categories can be identified as public themes, political candidates and consumer brands (McCombs, 2001: 69). Over the past few years, the network analysis method has been used to study the interaction between news groups (Choi, 2002), the personalities of television shows, television channels and websites (Fine, 1981).

People create connections in social networks between each other with the help of the likes (Xiaolong, 2014: 91). Similar to ‘mutual likes’ a network connecting events and personalities is modeled through the mutual mentions in the media. Thus, network analysis focuses on the relationship between categories, rather than on individual actors and their attributes (Hanneman, 2005: 4).

In our study, the categories are presented by neutral words: countries, individuals, state structures, and by emotionally colored words. To find ‘emotions’ in the text, we compiled a dictionary of positively and negatively colored words with the help of quantitative content analysis (Thelwall, 2010: 2547). The dictionary included three emotionally colored categories: legalization, regulation and violation. In addition, we had the opportunity to confirm or deny certain types of communication through the materials of personal interviews with those who are engaged in the mining of cryptocurrency – ‘miners’.

Results

The most frequently published articles in the Russian media about the cryptocurrency contain information relating to Russia, which is predictable. Events in the country (or with its participation) generally attract media attention because they can influence the population. Hence, this news is wittingly more interesting. However, other countries such as the United States, Japan and China are often mentioned in the discussion about cryptocurrencies in Russian media (*Table 1*).

Table 1

Frequency of mentions of the countries in articles about ‘mining’

Country (group of countries)	Frequency
Russia	466
USA	245
Japan	104
China	77
Switzerland	38
CIS	22
Hong Kong	13
Korea	11

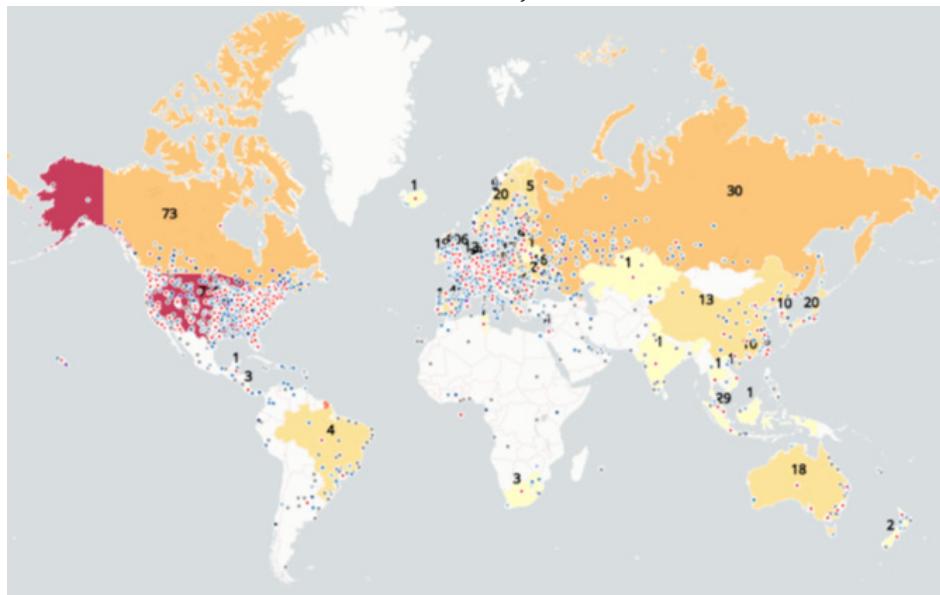
The presence or absence of a foreign country in the news agenda can be explained in three ways: national characteristics (the size of the country and its economic and political power of influence in the international arena), connectivity (geographical, demographic and other affinity with the country) (Sheafer et al., 2013: 1256–1276). Finally, by events, for example, natural disasters, wars, conflicts. Thus, the presence of the United States, Japan and China in Russian articles on ‘mining’ may be explained by the significant influence of these countries in this area of study while, for example, CIS countries have regular contacts with Russia.

In addition, some of the identified countries were also mentioned in one of the interviews in the question of the right regulation of ‘mining’: ‘... countries are heterogeneous, and one of them will ban, the others will not. For example, Japan has allowed, as well as Australia; in the United States some people are thinking whether to allow or prohibit’ (Oleg, ‘Miner’).

In another interview, China was mentioned during a talk about purchasing of equipment for ‘mining’. In addition, both informants noted that everything is produced exclusively in China. They buy it either through the intermediary or through intermediaries.

Figure 2

The presence of Bitcoin network connections in the world, 2015



Source: <https://timeknows.carto.com>

As one can see in *Figure 2*, countries such as the USA, Russia, Japan and China, and also European countries, partly Australia and Latin America are concentrating the Bitcoin nodes. The counting data is based on four types of nodes: Wallet, ‘Miner’, Full Blockchain and Network Routing. Thus, despite the trait of over-territoriality, the cryptocurrency still has a geographic specificity. And the media pay special attention to countries that have significant influence in this area, as well as to countries where significant changes take place in the legal regulation of the cryptocurrency market. In general, the mass media are more likely to focus on changes of the situation (Soroka et al., 2015), which explains the attention of Russian media to countries introducing new bans on such activities, or, on the contrary, resolving some of its aspects.

Another point is the frequency of mentions of Russian cities (*Table 2*). We assumed that ‘mining’ is a specificity of Central region of Russia. However, this phenomenon is not only specific to the capital region. According to content-analysis of media, Irkutsk, St. Petersburg and Novosibirsk are mentioned quite often.

Table 2

Cities of Russia and frequency of mentions

City	Frequency
Moscow and Moscow region	245
Irkutsk	50
St. Petersburg	27
Novosibirsk	23

Similar conclusions about the involvement cryptocurrencies discourse of various regions of Russia can be arrived at and based on the statements of informants:

1) 'I'm sure there is a lot of concentration in Moscow region. Because it is possible to steal electricity and therefore, that there are a lot of abandoned warehouses, mini-factories, these are other premises. For example, in the Vladimir region. Well, very much in Siberia, because it's just cold, you do not need to spend additional money on air conditioning' (Eugene, 'Miner').

2) 'I think there are many in Moscow. Well, in the regions, too. Now the Irkutsk region is known' (Oleg, 'Miner').

Figure 3

The presence of Bitcoin network connections in Russia, 2015



Source: <https://timeknows.carto.com>

We can find out that there is a concentration in the Central and Siberian federal districts.

Moreover, according to the results of content analysis, it is possible to identify top-3 personalities by frequency in the news of Russian media: Dmitry Marinichev (Internet ombudsman), Satoshi Nakamoto (creator of Bitcoin) and Vitalik Buterin (creator of Etherium, the second most popular cryptocurrency in the world (*Table 3*).

Table 3

Personalities and frequency of mentions

Personality	Frequency
Marinichev	195
Nakamoto	80
Buterin	63
Nabiullina	45
Latypov	38
Massukh	38
Nikiforov	35
Radchenko	35
Vinogradov	33
Smerkis	32
Gref	30
Trutnev	24
Medvedev	19
Oskyn	8
Sydorenko	8

The interview with the ‘miners’ confirms the involvement of the Internet ombudsman Marinichev in the discussion about the ‘mining’ in the Russian media:

- 1) ‘... there is an ombudsman <...> our Internet in Russia, here, he is very hard engaged in “mining” himself’ (Eugene, ‘Miner’).
- 2) ‘Marinichev, adviser to the President in the sphere of Internet rights or whatever it is, I do not know <...> In my opinion, he has a “mining” equipment there (in the southeast of Moscow, – note). Of course, I do not know, I have inaccurate data. <...> This is from the media’ (Oleg, ‘Miner’).

Their opinions on ‘mining’ are also expressed by the political institutions and the Central Bank. *Table 4* demonstrates that the largest number of references

refers to the Central Bank, the next position in the rating belongs to the Government, then to the Ministry of Finance.

Table 4

Political institutes and the Central Bank

Title	Frequency
CB	217
Government	141
Ministry of Finance	126
President	114
The State Duma	53

Table 5 shows the number of mentions of various media in the articles on ‘mining’ where the absolute leader is RBC.

Table 5

Media and frequency of mentions

Media	Frequency
RBC	258
Vedomosti	149
Meduza	14
Kommersant	63
Novaya gazeta	3

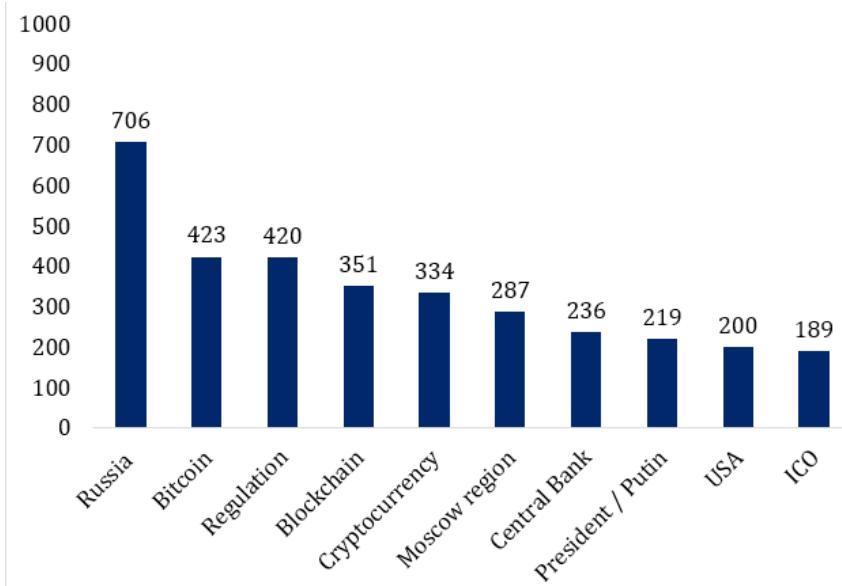
It is worth noting that it was RBC, the only Russian media, that was listed by one of the informants as the direct source of information on the topic of ‘mining’ and the sphere of cryptocurrencies. The attention of certain media sources to the ‘mining’ can be explained by the complexity of the topic.

Network of mutual mentions

The answer to the question about what categories the discussion about ‘mining’ in Russian media are more popular is in *Figure 4*.

Figure 4

The most popular categories on the subject of ‘mining’

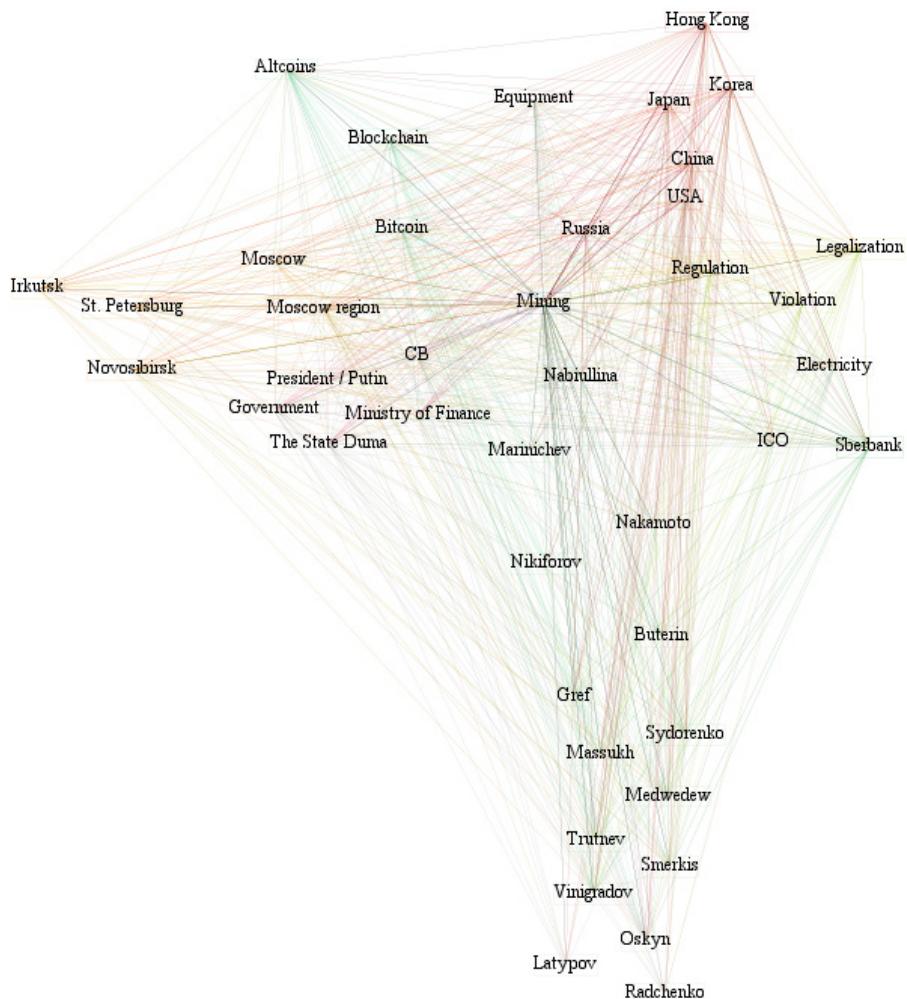


Based on this diagram, we can conclude that the geographic (Russia, Moscow region, the USA) and decentralized technologies (Bitcoin, Blockchain, Cryptocurrency, ICO) contexts are quite common.

Moreover, to analyze the connection of key categories, we have built a network of mutual mentions of the topic of ‘mining’ in Russian media (*Figure 5*). A similar method has already been used in a number of studies (Guo & Vargo, 2015; Guo et al., 2015; Kazun, 2017; Vu et al., 2014). The categories that are closest to ‘mining’ mentioned together with the topic of cryptocurrency more often.

Figure 5

A network of mutual mentions of the topic of ‘mining’ with key categories in the materials of television news releases, information messages in print media, Internet sources and radio air



The figure is made by the authors using the Gephi software

As it was noted earlier, the ‘mining’ is still outside the legal field (the beginning of December 2017), but the frequency of the category related to regulation (which includes regulation, law, legislation, control, tax, taxation) means the propensity of the discussion regulation in media.

In contrast, there is a thought among ‘miners’ that ‘mining’ as well as the whole Blockchain sphere cannot be *a priori* adjusted: ‘We can adopt a law on how the moon should move. But saying this to the moon is a bit redundant. It will move as it did. No one can influence the movement of the moon. No one can adjust this movement. The same is here’ (Alexandr, Blockchain specialist and ‘miner’).

There are also several reasons why states want to take control of digital currency. There is a risk that people may become victims of fraudsters (scammers) and Ponzi schemes. Also, the cryptocurrency provides opportunities for money laundering, hiding income from the tax service and making transactions with illegal goods (Turpin, 2014).

In addition, the media pay a lot of attention to the Central Bank in this case. The explanation is that this institute has the monopoly on money issue. The fundamental characteristic of Bitcoin is full decentralization – the principle of a peer-to-peer network, which in fact means no influence on Bitcoin from the public or private level. This makes Bitcoin independent from issuing centers (Butenko, 2014). These characteristics can also argue the importance of the figure of the Russian president, and his greatest connection with the category of regulation (269 mutual mentions).

The discussion about the “mining” is relevant for the Central Bank and the Ministry of Finance, therefore, we considered their mutual mentions with emotional categories (legalization, violation, regulation). The Central Bank is more immersed in the discussion about mining than the Ministry of Finance (236 and 151 mutual mentions with mining, respectively). For the Central Bank, regulation is the most popular category with which it has the highest percentage of mutual mentions (8.95% of the total), violation (1.32%) is in the second place, legalization (0.64%) is the least popular. For the Ministry of Finance, regulation is also the most popular category (8.64%). However, despite the obvious urgency of the issue of the ‘mining’ legal status, the relationship between emotionally colored categories and the most interested in this issue state structures is almost imperceptible.

From interviews with the ‘miners’ it was found out that the equipment is most often supplied from China, but the number of mutual mentions showed that the equipment category has a closer connection with the USA and Hong Kong (64 and 35 mutual mentions respectively) than with China (2 mutual mentions).

In addition, the discrepancy with the materials of the interview is observed in a situation with regional specifics, which is interesting with such a phenomenon as ‘cryptotourism’. It describes the location of ‘mining’ equipment for the

production of cryptocurrencies in the most profitable regions for mining. For example, Irkutsk and Novosibirsk regions attract ‘miners’ due to cheap electricity, which is confirmed by the materials of the interview. However, the analysis of the number of mutual mentions showed that the phenomenon of ‘mining’ is more closely connected with Moscow region and Moscow (287 and 188 mutual mentions respectively) than with St. Petersburg (35 mutual mentions).

Conclusion

Over the past year, the phenomenon of ‘mining’ has become one of the most high-profile events in the technological and economic spheres. The words ‘bitcoin’, ‘cryptocurrency’ have long gone beyond the profile of economic publications and leaked into the socio-political sources of information that set the agenda.

Because of the content analysis of the media, we identified the most popular categories in the subject of ‘mining’. Further, the most mentioned countries and cities of Russia are identified. It is worth noting that certain people and organizations are involved in the subject of the extraction of cryptocurrency, both governmental structures and private entrepreneurs. In addition, it is important to note that the category of ‘regulation’, which includes the words ‘taxes’, ‘laws’ and ‘control’ is the third by number of mentions, which means close attention to this topic in the socio-political debate around the phenomenon of ‘mining’.

Network analysis showed that the discussion in the media on some issues is different from the information received from the ‘miners’. So, the equipment, which comes mainly from China (as informants said), as a category in the media is practically not connected with it. The same is observed in the context of the regions of Russia.

In this study, quantitative analysis of the frequency of references was used to identify the categories required for the research. That is, the topics for analysis were taken from real data. Moreover, for a more substantive interpretation, we used interview materials with ‘miners’. They are the direct carriers of this practice and experts, since their activities are the object of media publications. This allowed us to look at the situation from various sides. The research makes it possible to understand the involvement and influence of different persons and institutions in a cryptocurrency sphere that could allow adopting strategies and laws in this digital financial issue.

In our study, we used non-core Russian media to analyze the ongoing discussion about mining, provided that the majority of the Russian population has no experience in interacting with cryptocurrency. In the future it is worthwhile to consider publications that specialize on the cryptocurrency and the process of

its extraction in order to recreate the full picture of the relationships in the new phenomenon that swept the society.

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Appendix

Table 1

List of informants

#Nº	Name	Gender	Age	City	Mining	Interview location	Date
11	Evgeniy	Male	23	Moscow	primary activity	skype	31.10.2017
22	Oleg	Male	42	Moscow	concurrent activity	café, Moscow	01.11.2017
33	Alexandr	Male	32	Moscow	concurrent activity	office of the informant, Moscow	12.04.2017

ARTICLES

Media web-sites environmental communication: Operational practices and news coverage

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Abstract

In contemporary world, it is estimated that there are 1,838,596,056 sites across 214,036,874 unique domain names and 7,290,968 web-facing computers. The huge power consumption of these online services has serious consequences regarding the environment. The web-sites, along with the web tools, need electrical power to operate. Thus, environmental problems such as global warming, air pollution, natural resource depletion, and acid rain are worsening. Consequently, this study researched five hundred news web-sites including well-known international news organizations in order to understand if they choose to cover environmental news, if they take action to protect the Earth's habitat by operating through renewable sources, by using the black colour in their graphic design or energy saving mode, and by organizing actions in favour of the environment. The findings of this original research revealed that almost none of the prominent news web-sites of the world seem to care about changing their web-sites in order to become environmentally friendly.

Keywords

Environmental news, web-sites, global warming, online journalism.

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Introduction

The field of environmental communication

Environmental communication is a new field of study which includes the spread of environmental information and the communication of different agents, policies, and practices regarding environmental issues. From its creation it was related mostly to Environmentalism, and, as a result, it was a limited field of research. Nevertheless, throughout the years there has been a significant transformation as it started to include a far broader spectrum of agents (e.g. states, companies, transnational organizations, citizens, etc.) and communities which were having a positive or negative impact on the environment. This interaction between the aforementioned agents and the environment was also influenced by the cultural and news media products (Flor, 2004; Pezzullo & Cox, 2018).

Web-sites have become a common tool for promotion, reading articles, etc. As a result, people think that it is a 'green' medium because of the simple fact that it often replaces paper. However, that is not the case (Frick, 2016). The web-sites often have countless pages to load in order to allow the user to navigate. Moreover, if the page has smaller files, then the server does not need to load unnecessary data on the page – such as photos and videos (Frick, 2016). These small energy savings accumulate over time and the goal of all should be to use less energy and lower carbon footprint. The servers that store the files that make up the web pages require power 24 hours a day so if we want a more sustainable web-site, the server hosting provider should operate with 100% renewable energy. Unfortunately, few amounts of power come from clean or renewable resources (Frick, 2016).

Therefore, environmental communication has become a more complex process due to the plethora of communication forms such as personal or interpersonal, verbal or non-verbal and visual, etc. Furthermore, during the last years phenomena such as the acid rain, global warming, climate change and others have provoked new communication actions that aim at promoting solutions to the current important environmental issues. Actually, everyone that actively promotes environmental concerns or solutions is participating in the process of environmental communication. Thus, countries have changed their policies so as to alter their citizens' environmental consciousness. This goal is linked with the ideas and opinions that are being passed down from one generation to the other. These are some of the reasons why this study tried to identify the way the news web-sites of international news organizations take part in environmental communication (Pezzullo & Cox, 2018).

Environmental communication seems to be a field that began during the 1980s in the United States of America and it was associated with the rhetorical

theory. The first scholars of the field via rhetorical methods explored the formed groups that were trying to protect the natural habitat along with the endangered animals and plants. Researchers had as an ultimate goal to attract public attention and inform it in favour of the environment. According to a broad consensus of scholars, Christine Oravec conducted the first research of the environmental communication discipline. The study about Yosemite Valley was published in 1981 and raised environmental awareness. The aforementioned study became also a starting point for other researchers to investigate more closely the impact of media organizations and products as well as the environmental consequences derived from humanity (Milstein, 2009).

In addition, cases such as the Chernobyl nuclear disaster in 1986 resulted in paying more attention to the regulations, the policies, and the communication strategies of dealing with the impact of environmental disasters and events. Additionally, the interpretation of the media products as a part of the field of journalism and mass communications led also to exploring the beliefs of the citizens towards the environment. Nowadays, the field of environmental communication is perceived as a crucial part of communication studies (Milstein, 2009). Thus, there is a specific division with the same name in the International Communication Association (<https://www.icahdq.org/group/envirocomm>). Moreover, in 2011, the International Environmental Communication Association was established (<https://theieca.org/>).

Additionally, unions of countries decided also to take action in favour of the environment. A prominent initiative for the sake of the environment was the climate summit, which took place in Paris (12 December 2015). According to Parker and Karlsson (2018): ‘At the COP21 climate summit in Paris, 196 parties to the United Nations Framework Convention on Climate Change (UNFCCC) adopted an historic climate accord, the Paris Agreement. The Agreement aims to hold global warming to “well below” 2°C above pre industrial levels and to pursue “efforts to limit” it to 1.5°C. The negotiations succeeded in bringing together long-divided protagonists from the developing and developed world in support of a new climate deal’. Despite the importance of this accord for the environment and the future of the planet, the new administration of the United States of America (USA) decided that the agreement cannot accomplish its goal. As a result, the President of the USA in the beginning of summer 2017 announced that the USA will no longer be a member of the agreement (Parker & Karlsson, 2018).

Two years ago the European Union via the European Commission had issued the so-called ‘Climate Adaptation Surgery’, which was supposed to aim at changing the way European countries act regarding the environment (European

Commission, 2016). It is worth mentioning that it is taken as an initiative from the European Union and not individually from a member-state. Thus, it was one of the first steps of the EU in changing the environmental behaviour of the member-states at a more concrete level. Additionally, the policies like the aforementioned one, that is promoting the adaptation of the states towards the environment is somewhat a new notion. Nevertheless, all the policies are inseparably linked with the wills of the influential political actors, changing in the long run not only the resources but also the way that authority is being distributed (Remling, 2018). Finally, in the 2030 Agenda for Sustainable Development of the General Assembly of the United Nations around seven Sustainable Development Goals aim to protect the environment (United Nations, 2019).

Sustainability is an example of thinking about a future in which environmental, social and economic parameters are based on pursuing growth and improving the quality of life (UNESCO, 2012). There is a label from the European Union that promotes European environmental and ethical objectives (European Commission, 2019). On many web-sites it has been noticed that they have an icon for print friendly the article (Print friendly, 2019). The ISO 14020 series is designed to assist businesses with measuring and communicating their efforts to minimize their environmental impacts. Energy Star is a program with a primary goal of increasing energy efficiency and indirectly decreasing greenhouse gas emissions (Energy Star, 2019). A recent research showed also a combined Design for Environment and Life Cycle Assessment methodology for implementing eco-design in companies (Sanyé-Mengual et al., 2014). Hewlett Packard is working to reduce energy used in construction, to develop materials with less environmental impact and to design easily recyclable equipment (Hewlett-Packard, 2009).

Sustainable Development and the cope with the environmental problems have to have an international perspective for providing solutions not only in the economic field but also at an environmental level. This can happen by the managerial strategies of the companies and the technological environmental initiatives. In addition, there is a need for emphasizing on the importance of not causing any more damage to the environment in various ways (Petersen, 2007). Thus, media companies need also to participate in providing environmental solutions and to declare their environmental commitment. According to Henriques and Sadorsky (1999) companies have many ways of proving their environmental commitment:

‘(1) having an environmental plan, (2) having a written document describing its environmental plan, (3) communicating its environmental plan to shareholders or stakeholders, (4) communicating this plan to employees, (5)

having an environment, health, and safety (EHS) unit, and (6) having a board or management committee dedicated to dealing with environmental issues'.

Information and technology is an area that is related also to the field of environmental communication. Therefore, the news organisations have to pay more attention and be aware of the environmental problems that they cause. The next section focuses on this relation and its impact on the environment, as it has become more important in the last years due to the recent technological breakthroughs. That is one of the reasons why this study decided to focus on examining the operation of news web-sites, as this important topic seems not to have been researched from a communication perspective.

Information technology and environmental communication

New technologies are becoming an essential part of improving our everyday life, but in the meantime, they cause various environmental problems. The large consumption of online services has serious consequences regarding the environment. The web-sites along with the web tools need electrical power in order to operate. Thus, environmental problems such as global warming, air pollution, natural resource depletion, and acid rain are worsening. The main cause of global warming is climate change, which is mainly related to the greenhouse effect (Antonopoulos & Veglis, 2013). Netcraft (2018) revealed that in the contemporary world there is an enormous number of web-sites. Specifically, it estimates that they are 1,838,596,056 sites across 214,036,874 unique domain names and 7,290,968 web-facing computers. Despite these services, mobile phones, smartphones, and other devices have created a new reality in relation to power consumption and greenhouse emissions. Environmental problems have led global political actors to take action (Parker & Karlsson, 2018).

Internet services are contributing also to the climate change phenomenon. By consuming large sums of energy, they produce greenhouse gases (e.g. carbon dioxide). The finding of efficient solutions will provide humanity with a healthier habitat. As a result, the notion of 'green web-sites' has emerged. 'Green web-sites' are named the ones that use renewable sources of energy (Antonopoulos & Veglis, 2012) and follow climate-friendly policies (Antonopoulos & Veglis, 2013). This term came from the green colour, which is linked to nature and resembles the struggle in favour of the environment. Subsequently, the green parties around the globe use this specific colour in their logos. Overall, it is associated with computing, art, communication techniques, evangelicalism, etc. In addition, Internet services are dependent on Data centres, which are an essential part of the functioning of the World Wide Web. They offer the infrastructure for sheltering the Information Technology (IT) equipment and are responsible for

security issues and the online and offline presence of a web page because Data centres store the web-sites' existed information. The Massachusetts Institute of Technology (MIT) tries to reduce the power consumption and the greenhouse gases of its university campus. Even not so prestigious Universities follow the example of MIT. For instance, in Greece, the biggest university of the country, Aristotle University of Thessaloniki (around 70,000 students) aims to use renewable energy as much as possible (Antonopoulos & Veglis, 2013).

One of the main goals of Green Computing is to improve computing performance and reduce energy consumption and carbon footprints. The term green web-site refers to web-sites that are environmentally friendly aiming to environmentally sustainable computing. According to Murugesan (2008), the Green IT includes: design for environmental sustainability, energy-efficient computing, power management, data centre design, layout, and location, server virtualization, responsible disposal and recycling, regulatory compliance, green metrics, assessment tools, and methodology, environment-related risk mitigation, use of renewable energy sources and eco-labelling of IT products.

Taking into consideration these challenges, there were also the last years' actions that were derived from individuals, who wanted to promote and support environmentally friendly practices. The citizens' actions were linked with several green concepts. For instance, there were initiatives that had as fundamental values the element of innovation, the socio-environmental ethics, the anti-consumption perspective, etc. (Zapata Campos & Zapata, 2017). Today, the spread of participation seemed to be easier than before, as the digitization of the current world provided far more ways of communicating with each other. In addition, the daily use of social media made the scholars pay closer attention to these changes as they seemed to have a significant impact on society (Skoric & Poor, 2013).

This can be seen also to environmental actions. Green events around the world are being held to raise awareness about global warming. World Wide Fund for Nature's (WWF) earth hour is an environmental awareness movement that is related also to energy consumption and information technology (Earthhour.com, 2018). Anyone who wants to turn off the lights for an hour can participate in the Earth Hour. For 2019, the 30th of March 8:30 pm will be the day of the Earth Hour. During this day, many web-sites such as WWF, zara.com (*Figure 1* and *Figure 2*), HM.com (*Figure 3*) include this environmental initiative on their online presence. According to the report named 'Earth Hour 2018 Highlights: Connect2Earth' (2018): 'Close to 18,000 landmarks switched off their lights in solidarity with the planet as people across the globe generated over 3.5 billion impressions of #EarthHour, #connect2earth and related hashtags to show their concern for the planet. The hashtags trended in 33 countries'.

Figure 1

A post on the Facebook page of Zara Company regarding Earth Hour

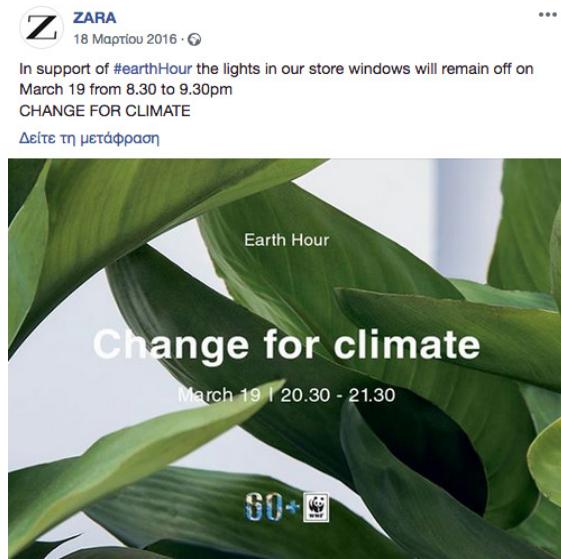


Figure 2

A tweet on the Twitter of Zara Company for the Earth Hour



Figure 3

A post on the Facebook page of H&M for the Earth Hour



Environmental issues also have an impact on information technology. That is why this research aimed to study whether the web-sites are environmentally friendly and fill the gap in the current literature. The method is based on experiential observation and comparison with the listing of the data by the researchers. This topic has not been covered by a communication perspective until today. This original study researched 500 news web-sites including well-known international news organizations in order to see if they choose to cover environmental news as to influence the public in favour of the environment. Moreover, it is demonstrated if they take actions to protect the Earth's habitat by operating through renewable sources, using the black colour in their graphic design or energy saving mode, etc. Overall, this paper aimed to investigate the notion of 'green web-sites' in the current news media world.

Methodology

During the last few years, climate change has become an important issue for public discourse. Therefore, the researches regarding environmental

communication have been advanced. Conducted surveys around the globe proved that the citizens recognize the need for taking action (Hansen, 2015; Swaffield & Bell, 2012). Moreover, global climate change has provoked more than US\$200 billion in annual losses globally in relation to environmental catastrophes (Ho et al., 2015). When there are so many web-sites and so many environmental problems, the aim of the companies should be to have environmentally friendly web-sites, as it has been proven that green technologies have an important impact in favour of the environment (Spiller et al., 2017). In order to research this topic, based on the aforementioned two sections, a lot of parameters needed to be taken into consideration such as (a) if the news web-sites have a special category for environmental news, (b) if they are powered by renewable sources, (c) if they use the black colour in their graphic design, (d) if they provide the option to the user to transform the colour of the web-site into black, and (e) if the server that hosts the web-site is environmentally friendly.

The researchers visited all the web-sites of the sample and through observation and searching collected the empirical evidence. The research is based on experiential observation and comparison with listing of the data by the researchers, without being registered at the web-sites. The browsers that were employed were Google Chrome and Firefox. The scale of evaluation in every question was limited into two choices, presence (Yes) or absence (No). This is a case study, which researched and evaluated 500 news web-sites based on the alexa.com (web traffic analysis company) ranking. The web-sites were taken from the ‘news’ category (<https://www.alexa.com/topsites/category/Top/News>), as according to Bolin and Hamilton (2018): ‘Climate change presents a substantial challenge for science communication. News media play a central role that can either be constructive, exposing their audience to different perspectives and evidence-based information, or manipulative and divisive’.

The evaluation took place from the 30th of April 2018 to the 15th of May 2018. Some limitations have been made to secure that the sample will be homogenized. The evaluated web-sites needed to have an English version to be included in the assessment process, so that the researchers could read the information on the web-sites and provide the appropriate evidence for the evaluation. Additionally, the web-sites needed to offer free access, so as the user to have the opportunity of navigating on the web page without the obligation of registering. During the research, also the servers needed to be examined. Thus, the web-sites had to write on the first page or on the so-called pages ‘about’, ‘privacy’, ‘terms’, etc. that they are environmentally friendly and use renewable

energy sources. Moreover, it was thought that it is important to investigate if the user has the capability of changing the background colour of a video to black for reducing the power consumption. As far as the research for environmentally friendly actions is concerned, they should have been organized by the examined medium rather than quoting/sharing them from other organizers. Lastly, in the news web-sites there are plug-ins that can understand if a user is active or not (mouse movement) in order to activate a screensaver (dark screen), which saves the consumed energy by turning off animations and other energy demanding operations of the web-site.

Specifically, the first research question is related to news coverage. It examined if the news media web-sites have a specific category for environmental issues because Carmichael and Brulle (2017) discovered that ‘the greater the quantity of media coverage of climate change, the greater the level of public concern’. The second research question investigated if news web-sites are powered by renewable sources. Success in using renewable sources is believed to improve the environmental conditions by reducing the carbon emissions, widening the access to electricity and leading to larger financing of ‘greener’ technology (Bhattacharya et al., 2015). Moreover, it was examined whether the news web-sites use the black colour in their graphic design or if they provide the option to the user to transform the colour of the web-site into black (Antonopoulos & Veglis, 2013).

It is a fact that black colour can lower the power consumption of a web-site. By knowing this, there was also an investigation in relation to the inactivity of the user and the energy saving mode. Specifically, there are plug-ins that can understand if a user is active or not. Therefore, if the user is inactive then a dark screen emerges in order to turn on the energy saving mode that deactivates simultaneously some animations and operations of the web-site to reduce the power consumption (Antonopoulos & Veglis, 2013).

These kinds of processes are related to the interactivity of the web-site, which is defined as ‘the state or process of communicating, exchanging obtaining and/or modifying content (e.g., ideas, entertainment, product information) and/or its form with or through a medium (e.g., computer, modem, etc.) which responds to both the communicator’s and the audience’s communication needs by including hypertext links, reciprocal communication and so on’ (Míguez-González & Fernández-Cavia, 2015). Finally, the behaviour of the news organizations in association with their participation in environmental events or actions to protect the environment was examined, as these kinds of actions can affect significantly national environmental beliefs (Dalton, 2015).

Hence, the following five research questions were asked (Antonopoulos & Veglis, 2013; Frick, 2016):

RQ1. Do the examined news web-sites have an environment category?

RQ2. Is the server of the web-site environmentally friendly?

RQ3. Is the user allowed to change the background colour into black when he/she is watching videos?

RQ4. Do the examined web-sites, in the event of user inactivity, have a screensaver?

RQ5. Has the examined media company that owns the web-site ever organized actions in favour of the environment?

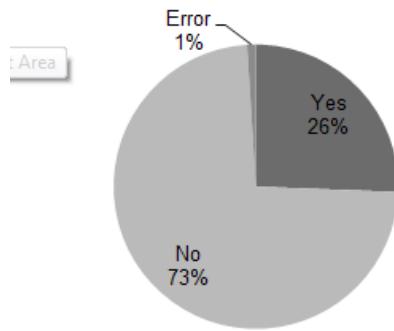
Results

Two of the 500 web-sites were not examined for this scientific paper, as they did not have an English version. Apart from these facts, a news web portal was not working, and there were two of them with the same Uniform Resource Locator (URL). As a result, in all the research questions of the study there is a one percent error (1% error), which is due to these five cases. More specifically, the first case is the ranking number 117 (bbc.co.uk/news/business) because it is the same with number 7 (bbc.co.uk). The second case is the ranking number 190 (nj.com/news) because it is the same with number 76 (nj.com). The third and fourth errors were the media web-sites with ranking number 235 (spiegel.de). Finally, the web-site number 420 (andhrabhooki.net) did not have an English version and the web-site Bendbulletin.com with ranking number 479 was not accessible.

Regarding the first question, the evaluation revealed 128 'Yes' (26%), 367 'No' (73%), and 5 (1%) 'Error'. It is noteworthy the fact that they used different words in the menu such as Environment, Climate, Earth, Energy, and others. On the Today.duke.edu there was no headline on the main menu or on the first page for environmental news, but via a search within the content of the web-site, it was discovered that there were 4,869 tags with the word 'Environment'. On the Telegraphjournal.com, the user could only navigate by signing up. Therefore, the research questions 2, 3, 4, and 5 were explored and evaluated depending on the pages, which were free and open for navigation (*Figure 4*).

Figure 4

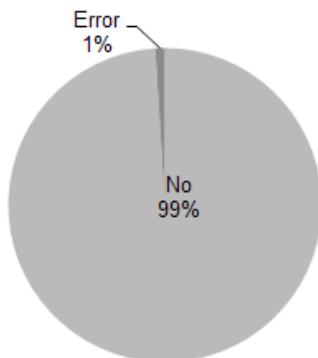
The percentage out of the 500 web-sites that have a specific category for environmental issues/news



The percentage of the 'Yes' answers for the second research question was zero (0%). The 'No' answer was 495 (99%) in total, excluding again the five web-sites that are counted as an error. However, there were also four other web-sites that did not include any information on their page about their server. In order to provide a proper answer to this query, a search was conducted on the World Wide Web for the following web-sites: News.google.com, News.yahoo.com, My.yahoo.com, and Metafilter.com. The final outcome was that the aforementioned services use environmentally friendly servers, as there was this text on their page: 'The site is currently being served by Amazon Web Services' (Figure 5).

Figure 5

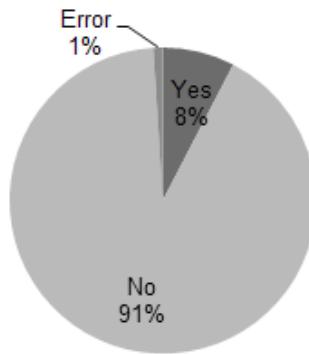
The percentage out of the 500 web-sites that have an environmentally friendly server



For the third question of the survey, in 457 (91%) web-sites the user was not allowed to change the background colour into black when he/she was watching videos. There were only 38 (8%) web-sites that were offering the feature of the black background colour. However, 31 web-sites had a permanent black background in the videos and 5 became black in a pop-up window when the user was watching videos. Consequently, only two were the web-sites that were actually offering the user the chance to change the background colour into the black during a video (*Figure 6*).

Figure 6

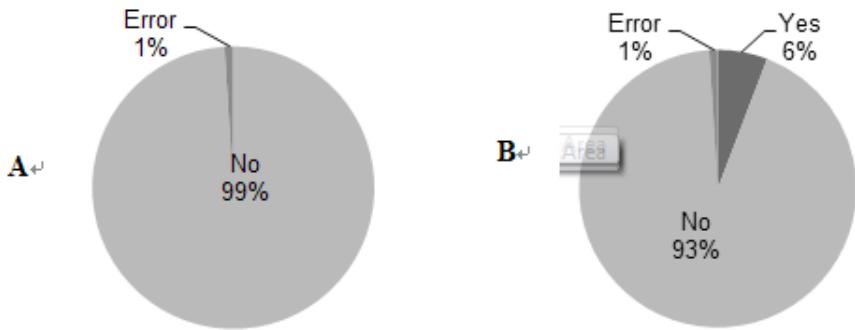
**The user is allowed to change the background colour
when they are watching videos**



For the fourth question of the survey, the positive answers for the existence of a screen saver were zero (0%). Therefore, all the answers 495 (99%) were negative. As far as the last research question is concerned, only 29 (6%) of the web-sites had taken initiatives and organized actions in favour of the environment. On the contrary, the majority of them, 466 (93%), had not created an environmentally friendly event. It is impressive though that from the 13 web-sites, which were created by university departments, almost all of them (11) had organized environmental events (*Figure 7*).

Figure 7

The examined web-sites, which in the case of user's inactivity have a screensaver (A), and the web-sites that have organized actions in favour of the environment (B)



Finally, it should be mentioned that the current study examined some of the most prominent web-sites of international news organisations in the world. For instance, the sample included web-sites such as *The Guardian* (United Kingdom), *The Hindu* (India), *The New York Times* (United States of America), *Al Jazeera* (Qatar), *China Daily* (People's Republic of China), *Fox News* (United States of America), etc.

Discussion

News organizations and news stories are important for shaping the opinion of the public, as they can influence people by focusing on specific incidents in order to promote their narratives. *Fox News* has affected public discourse regarding climate change in a certain direction (Bolin & Hamilton, 2018). Moreover, Carmichael and Brulle (2017) proved that there is a strong correlation amongst the environmental news and the public because the public concern is proportional to news coverage. Subsequently, it is significant for news outlets to have a special category for environmental news. However, this research (Figure 8) demonstrated that the majority of the examined news organizations do not have a special section for environmental news. From the sample of 500 web-sites, only the 128 had a unique category for environmental news, demonstrating that environmental news does not seem to be essential for them (RQ1).

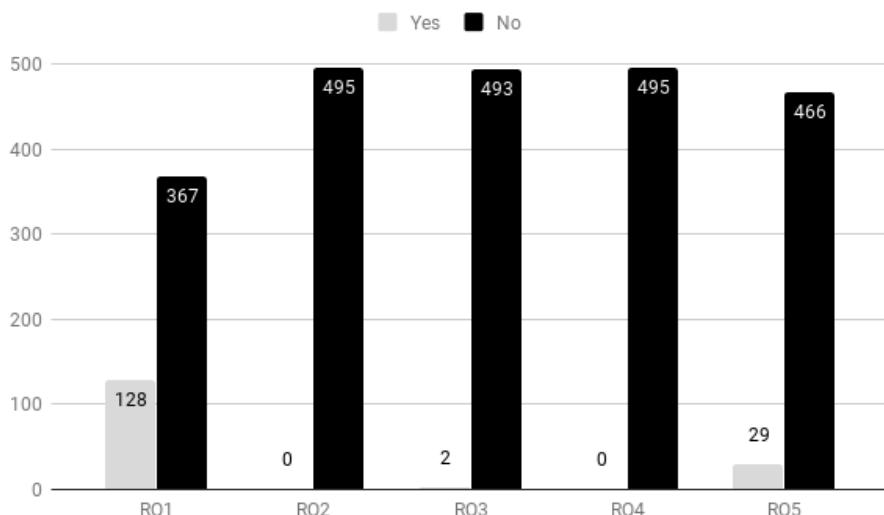
As far as the second research question of this study is concerned (RQ2), almost none of the web-sites use environmentally friendly servers (Antonopoulos & Veglis, 2012). After an extensive search, it was found that only four web portals (News.google.com, News.yahoo.com, My.yahoo.com, and Metafilter.com), are

using environmentally friendly servers (Amazon Web Services). Consequently, it was demonstrated that the most prominent web-sites of the world do not take into serious consideration the consequences that the online services have for the environment. The use of renewable sources is critical, as they are believed to improve the environmental conditions by reducing the carbon emissions, widening the access to electricity and leading to larger financing of ‘greener’ technology (Bhattacharya et al., 2015).

The third research question of the study (RQ3) revealed that there is also a major problem with the use of the black colour in the graphic design when users are watching videos. Again, almost none of the web-sites used the black colour (91%). From the 38 (8%) with the background colour only two were the ones that provided the option of altering the colour of the web-site to black. Meanwhile, all the examined web-sites did not even have screensavers in case there was an inactive user (RQ4). According to Veglis and Antonopoulos (2013), black colour can reduce the power consumption of a web-site. Additionally, there are plug-ins that can understand if a user is active or not in order to activate a screensaver (dark screen), which saves the consumed energy by turning off animations and other energy demanding operations of the web-site.

Figure 8

The overall results of the research



Nevertheless, the fifth research question (RQ5) of this study proved that, at least, some of the web-sites had organized events and actions to protect the

environment (6%). The majority of these web-sites (11 out of 13) were created by universities, which indicated that universities as creators of web portals can play a crucial role in promoting or holding environmental events. This finding seems to differ from the will of the citizens towards the environment, as during the last years, individuals throughout the world have recognized the need to act and protect the natural habitat (Swaffield & Bell, 2012). Therefore, initiatives such as the fossil fuel divestment (FFD) movement have emerged (Mangat et al., 2018).

Conclusion

The operation of the news web-sites in relation to the environment has not been examined extensively until today. World Wide Web services have become numerous. Subsequently, their operation should be taken into consideration if the globe wants to protect the environment, as they produce also greenhouse emissions. The notion of 'green web-sites' is associated with the climate-friendly policies and aims to improve the natural habitat of Earth. Renewable sources, the use of black colour, and the highlight of the environmental news are some of the easiest and cheapest ways to contribute positively to climate issues. However, even the most prominent international news organizations of the world do not seem to take into serious consideration their role regarding environmental issues. Thus, the majority of them do not focus on such stories. Furthermore, they do not try to operate via renewable sources or just to try to reduce their power consumption. Overall, almost none of the popular news web-sites of the world seem to care about changing their web-sites in order to become environmentally friendly.

At this point, it should be mentioned that this study examined only the top web-sites of the world according to the 'news' category of alexa.com. Another study that is based on a different traffic web-site company might provide different results. Finally, future studies can focus more on other web-sites categories in order to investigate if the above-mentioned findings represent the overall situation of the web-sites' operation around the world.

Declaration of interest statement

No potential conflict of interest was reported by the authors.

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Impact of social networking sites on sleeping habits: A case of university students in Bangladesh

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Abstract

This study discusses the influences of social networking sites (SNSs) on the sleeping habits of students from two public universities in Bangladesh; until now, there hasn't been any study, which has looked into this issue in the context of students in Bangladesh. Primarily, the study is qualitative in nature, skillfully supplemented by quantitative data, collected through interviews (about 200) and focus group discussion (FGDs) (with about 48 participants). The findings of the study suggest that most of the students addicted to using social networking sites, sleep late into the night, indicating thereby that SNSs do have an impact on the traditional 'sleeping time', which in turn could be detrimental to the health and study of university students in Bangladesh.

Keywords

Social networking sites (SNSs), public university, sleeping habit, students, Bangladesh.

Introduction

Social networking sites (SNSs) have become a way of life today for the young populous around the world (Livingstone, 2002); in fact, they have attained a status of fundamental and inevitable medium for social interaction over the last decade for people, especially the youth, regardless of their caste, creed, social strata, etc. Social networking sites (SNSs) help nations and continents to connect, cutting across boundaries in ways, which until a few years ago seemed unthinkable, even to the most advanced researchers and academicians. Today, SNSs have more influence on our lives than we could ever imagine in contemporary years. According to a study on employer health benefits, conducted

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by the Kaiser Family Foundation and the Health Research & Educational Trust (Kaiser/HRET, 2013), children from the age of three are able to operate mobile phones, frequently using mobile and internet technologies to play games online. It is estimated that on an average, teenagers in Western societies spend up to 7.5 hours on social media per day (Kaiser/HRET, 2013); as a matter of fact, teenagers today, are often referred to as the ‘Facebook generation’, implying that they use these SNSs excessively (Giannotti et al., 2012). However, the negative impact of social media on the mental and physical health of youth has been largely ignored in contemporary studies; in limited studies that are available, it has been found (Durlofsky, 2013; Flint, 2013) that youth across continents are suffering more from depression and insomnia due to the excessive use of social media (Kirk-Patrick & Steijn, 2014).

Kirk-Patrick & Steijn (2014) go on to state that SNSs are playing a significant role on the lifestyles of the youth, as they’re oblivious to the negative impact of social media. Students form the largest social media user groups (Rahman, 2016) both across Western and Eastern societies, depending heavily on SNSs for their daily activities and communication (Rahman, 2016; Woods et al., 2016). Further, initially they hook onto these networks for various reasons, including chatting, gossiping, expressing views, cooperating, sharing ideas and information, entertainment, etc.; in fact, it is a source of refreshment for them (Ito et al., 2009). Just like the impact of ICT on students, guardians, academicians and researchers are anxious about the impact of SNSs on students’ behavior and lifestyle. SNSs offers a new horizon to the researchers and academics to examine student’s development and interaction through it. By analyzing this context, the present study focuses on the impact of SNSs on the sleeping habits of the university students of Bangladesh.

Rahman (2016) conducted a study entitled ‘Youth participation in social networking sites (SNSs) in Bangladesh: A study on the changing patterns of communication, interpersonal relationship and its impact on personal life’ from Bangladesh’s perspective. The findings of the study indicate that university students report significantly worse quality of sleep, including inconsistent sleep schedules and sleep deprivation, than the general population; additionally, they also suffer from greater amount of daytime sleepiness, as there is a significant drop in their normal sleeping hours at night, which go on to affect their normal cognitive functioning (Rahman, 2016). Orzech et al. (2011) conducted a study entitled ‘The state of sleep among college students at a large public university’ from an American’s perspective; they found that students tend to sacrifice night sleep to participate in social and academic commitments contributing constantly to changing sleep routines. All these factors in amalgamation do affect several

crucial aspects of a university student's life, including the mood, functioning of the immune system, and even substance abuse (Orzech et al., 2011).

Though very few studies have been conducted about the relationship between students sleeping disorder and social media usage from the Western society's perspective (Shochat et al., 2014), there is hardly any study in the context of third world countries like Bangladesh; the present study therefore is an attempt to shed some light on this knowledge gap.

Problem statement

A study conducted by Levenson et al. (2016) found that 67% of young Americans aged between 19-29 are not getting ample time to sleep, tending thereby to impact their work activities during the day. Based on the same hypothesis, Rahman (2016) conducted a similar study for Bangladesh and found that almost fifty percent social media users of university students mentioned that Facebook has a negative effect on their sleeping behavior (Rahman, 2016). The present study is an attempt to uncover whether Facebook negatively influences the sleeping time of public university students of Bangladesh.

Levenson et al. (2016) conducted a study to investigate whether social media is related to sleep disorders of university students and found a highly positive correlation between the two; in concurrence to Levenson et al. study, there have been other studies too, which have affirmed that social media is indeed one of the most influential culprits in rising sleep disorders of university students, but these studies have been limited to the Western populous (Exelmans & Van den Bulck, 2016; Levenson et al., 2016). Another study conducted by Christakis et al. (2011) between two student groups of Facebook users in the USA found that 90% of university students are virtually addicted to social media; further, their study affirmed that about 4% of total respondents surveyed have problematic or even addictive social media habits, affecting hazardously their sleep patterns and day-to-day lives. Exelmans & Van den Bulck (2016) found that nine out of ten Americans between the age of 13 and 64 use social media before sleeping. Additionally, other researchers have also concurred with the fact that excessive use of Facebook is strongly associated with loss of sleep, irregular sleep-wake patterns, decreased quality of sleep, and increased fatigue during the daytime (Exelmans & Van den Bulck, 2016). Woods & Scott's (2016) study gave another dimension to this speculation – their study found that there is a strong relationship between social media use and anxiety, depression and low self-esteem, especially among adolescents and young adults.

Unfortunately, there is hardly any study found about the heavy uses of social media and sleeping disorder from Bangladesh's perspective. The purpose of the

study is to determine whether social media use significantly affects sleeping patterns of university students, and whether social media impacts the usual sleeping time of the university students of Bangladesh.

Literature review

Shochat et al. (2014) propose that although the youth are spending a lot of time for learning and education, there is a large gap in research examining the interrelation of sleep and academic functioning and performance. Different studies (Brown et al., 2006, Chen et al., 2014; Hershner & Chervin, 2014) suggest that there is indeed a connection between the quality of sleep and students' academic performance. Giannotti et al. (2002) found that due to the lack of proper sleeping habits, students suffer from depression and fatigue, as well as face difficulties with attention deficiency, concentration, decision-making abilities, memorizing and learning.

Orzech et al. (2011) found that there is a significant relationship between daytime sleepiness, decreased attention and concentration, which in turn, negatively impacts learning and memory recall in students. On the other hand, Milner & Cote (2008) and Gomes et al. (2011) discussed how irregularities in the sleep schedule could affect a student's quality of sleep by delaying the body's natural circadian rhythm and homeostatic sleep drive.

Pantic (2012) conducted a study on 324 Serbian high school students and found that excessive use of SNSs could cause depression in different severities; out of the total respondents, 65% were found to have minimal depression, 29% had mild depression, and 6% had moderate depression. He concluded thereby that there is indeed a positive and significant correlation between the severity of depression vis a vis the time spent on SNS, wherein the degree of depression increased proportionately with the time spent on social networks. The study thereby clearly denotes that heavy dependency on SNSs does influence the level of depression among high school students.

Facebook is one of the most commonly used social media platforms; a study on Facebook users and their moods, conducted by the University of Michigan (2013), has shown that the more time people spend on Facebook, the more their happiness decreases. Interestingly, the aforementioned study clearly indicated that if a person spends more time on Facebook in daytime, his/her attitude worsens, and depression symptoms tend to creep in within some time. The findings of the study also suggest that after receiving negative comments or seeing other people post/pictures of good times or new purchases, may cause reduction of the students' self-esteem, which eventually could build up and lead to severe depression.

Most of the heavy users of social media keep their smartphones next to them while sleeping (Rahman, 2016); this, not only acts as their alarm clocks, but also helps them in responding to important messages or calls at night; Bangladesh also is no exception in this regard (Rahman, 2016). According to a survey among the general populous within the USA, 50% sleep with their phones and invariably wake up in the middle of the night to check their messages (Levenson et al., 2016), causing thereby serious sleep deprivation.

Yet in another study conducted by the Centre for Behavioral and Preventative Medicine, Miriam Hospital, USA (2013), one sees that extensive use of social media does result in lower academic performance in the long run, especially if the use of SNSs reduce the amount of sleep. As a matter of fact, this study had 483 first-year college female students who on an average were spending 12 hours a day on social media for chatting, commenting, browsing, posting, listening to music, etc.; this, in turn naturally impacted their grades. Thus, based on this finding, one could certainly confirm that extensive use of SNSs are well and truly associated with bad academic performance (Kirk-Patrick & Roxanne, 2014).

By and large, the findings of the aforementioned studies indicate that there is a strong co-relationship between the social media usage habit and sleeping disorder, especially among students; however, as these research works have been limited to the Western context, the present study proposed to investigate the impact of Facebook on students' sleeping time in the context of Bangladesh.

Objectives

The main objective of the study is to find out the impact of SNSs on the sleeping time of public university students in Bangladesh. In line with the main objective, the proposed study has some specific objectives. These are:

1. To uncover the patterns of change in the sleeping time of public university students of Bangladesh.
2. To uncover the reasons of falling asleep late at night of the university students of Bangladesh.
3. To dig out a relationship of SNSs use late at night and sleepiness in class time of the university students of Bangladesh.
4. To uncover the relationship between heavy uses of SNSs and loneliness/depression on typical days.

Methodology

Case-oriented qualitative research strategy (Ragin, 1997) has been applied to fulfill the objectives of the study. According to Yin (1994), the case study method

is pertinent when an issue of research fulfills three most important criteria: first, minimum two questions in the form of what, why, and how have been posed. Second, the issue is a contemporary phenomenon. Third, the research will have no or little control over the respondents. From this perspective, the case study method has been chosen as being suitable for the present study.

The nature of the study is inductive. According to Goddard & Melville (2004), the inductive approach starts with observations, and at the end of the research, theories or generalizations are formulated as a result of observations (Goddard & Melville, 2004). Neuman (2003) affirms that beginning with detailed observations of the world inductive research moves towards more abstract generalizations and ideas (Neuman, 2003). Thus, an attempt has been made in this research to make a generalization about the impact of SNSs on the sleeping habit of public university students of Bangladesh, based on the findings of some specific target groups.

In order to find the impact of SNSs on student sleeping habits, two groups of students, namely SNSs user group (students who are using SNSs including Facebook) and SNSs non-user group (students who are not using any SNSs) have been created. To select the respondents, simple random sampling method has been applied. At first, the respondents were asked if they use SNSs including Facebook; the ones who responded in the affirmative were categorized in SNS user group, and those who said that they did not use SNSs, were categorized in non-user SNS group. This process continued until the entire targeted respondents were classified in one group or the other. Differences of sleeping habits between the two groups of students, along with problems relating to their sleeping habits helped the researcher determine the impact of SNSs on the sleeping habits of the university students of Bangladesh.

Two public universities (i.e. The University of Dhaka and the University of Rajshahi) were selected on the basis of purposive sampling. The main objective of selecting these two universities was solely for the purpose of having a representative sample; additionally, the University of Dhaka was selected as it is the oldest and largest university of Bangladesh, with student strength of about forty-five thousand. The University of Rajshahi was selected as it is the second oldest and largest university of Bangladesh, having almost thirty-seven thousand students (UGC, 2018). Both these reputed and oldest universities have students from all across the globe encompassing different religions, sex, race and ethnic identities (Rahman, 2016); thus, it is expected that both universities were just right in being able to represent public universities of Bangladesh today.

The researcher has chosen only Facebook for this study, as it is the most accepted and widely used social media platform used extensively by Bangladesh

users (CNN, 2018; The Daily Star¹, 2018). The total number of respondents was 200 (50x2x2). Hundred students (50 from each group) from each university have been selected based on simple random sampling method. Responses were voluntary. While selecting the sample, equal participation from both male and female students were ensured.

Both primary and secondary data have been used to look for an answer to the research questions. Primary data relevant to the objectives of the study, were collected through structured interviews (both open-ended and close-ended) and focus group discussions (FGDs); secondary data were collected from different published and unpublished sources, i.e. published articles, books, periodicals, books, book chapters; manuals, unpublished dissertations and Internet browsing were used. To select secondary data sources for the present study, the qualification, reputation and experience of the researchers or research organizations has been considered. In order to evaluate the secondary data source for the present study, who presents the data and for what purpose it has been presented were considered. The source of the data presented, and the purpose for which the data has been presented have also been considered in order to use the secondary data.

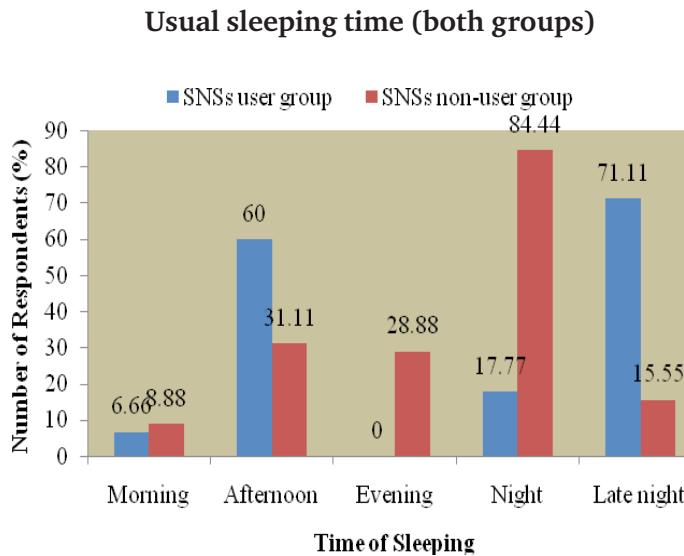
Two sets of questionnaires were used to collect data from two different groups. According to the suggestion of Berger (2000), both open-ended and close-ended questions were included in the questionnaires. Four FGDs (two FGDs in each university with the user and non-user group) have been arranged with the respondents to cross-section the findings of the survey. The total participants in four FGDs were 48 (12 students in each FGD, $12 \times 2 \times 2 = 48$).

Findings and analysis

The findings of the study (see *Figure 1*) indicates that, most of the students who are using SNSs sleep late at night in comparison to students who are not. 71.11% students from the user group prefer to sleep at late night, whereas only 15.55% respondents from the non-user group prefer to sleep late at night. On the other hand, 84.44% students from the non-user group prefer to sleep at night, whereas only 17.77% respondents from SNSs user group prefer to sleep at night. It indicates a significant difference in sleeping time between the user group and the non-user group.

¹A highly circulated English daily in Bangladesh.

Figure 1



Source: interview data, 2018

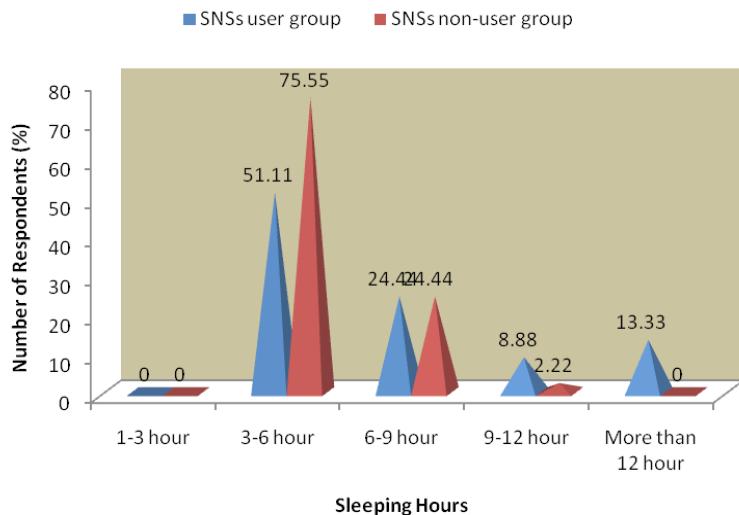
Now the question is why a large number of students, heavily reliant on SNSs like to sleep late at night; Motahar Alam, a fourth-year student of the Department of Sociology, University of Dhaka, Bangladesh explains the same in the following way:

'Usually I sleep late at night because during the whole day I am engaged with my academic activities, cultural groups. In the evening I concentrate on my study. After 10 p.m. I join Facebook because most of my friends join Facebook after 10 p.m. The whole day I wait for this time as I get all types of information, entertainment from Facebook. I also get some academic information from my Facebook group. Normally, I go to bed at 3 a.m.-3.30 a.m.' (FGD, 2018).

According to Figure 2 (below), 51.11% students of SNSs user group sleep 3-6 hours in a day, whereas 75.55% SNSs non-user students sleep 3-6 hours. On the other hand, equal percent of students from both groups (24.44%) sleep 6-9 hours in a day. The result indicates that students who are not using Facebook sleep more in comparison with the students who are using Facebook.

Figure 2

Usual sleeping hours (both groups)



Source: interview data, 2018

Table 1 describes that, among 71.11% users who sleep late at night, 53.33% stated that they sleep late as they were using Facebook to socialize and connect; and 8.88% responded that they sleep late at night because of their studies. On the other hand, among the 15.55% non-users, 71.42% ensure that they sleep late because of study and 28.57% admit that they enjoy movie at night, and that is the reason for them to sleep late.

Table 1

Reasons of sleeping late (both groups)

Reason	SNSs user group		Reason	SNSs non-user group	
	Number	Percentage (%)		Number	Percentage (%)
Studying	04	8.88	Studying	05	71.42
Gossiping	03	6.66	Gossiping	00	00
Facebooking	24	53.33	Enjoying TV	02	28.57
Enjoying TV	06	13.33	Others		0.00
Others	0	0.00			

Source: interview data, 2018

The result clearly indicates that there is indeed a correlation between sleeping late at night and browsing Facebook, especially among SNS users. Ahsan Mamun, a third-year student of the Department of English, University of Rajshahi talks about his reason of sleeping late at night:

'Generally, I used to go to bed at 12 a.m. in my childhood. After entering the University of Rajshahi, I have been living alone without my family. I have also been engaged in Facebook since my first year at the university. I don't like to spend time on Facebook in the afternoon or in the evening because of my studies and private tuition. That is why I like to join Facebook at midnight most of all. My bosom friend also spends time on Facebook after 12 p.m. As I don't read any newspapers, I get all necessary information regarding society and politics from Facebook. Because of browsing Facebook from midnight to late night I go to bed very late. I know this is not a good habit but now I am habituated with this routine. We (me and my friends) not only chat or gossip through Facebook, but also discuss different academic and socio-political issues through Facebook' (Interview data, 2018).

As shown in *Figure 3*, 60% users confirm that Facebook adversely affects their sleeping time, and thus they think it is appropriate to change their 'Facebooking' habit. On the other hand, 40% students who are using Facebook, think that it does not make any difference to their sleeping time; their take is that it depends on individual users on how s/he will handle new media.

Figure 3

Negative impact of Facebook on sleeping time (SNSs user group)



Source: interview data, 2018

Hasanur Kabir, a third-year student of the Department of Finance and Banking, University of Dhaka is one of those respondents who belong to this group. Being the topper of the class, while being a heavy user of Facebook, Hasan's feeling is different from other heavy users of Facebook. He expresses his feelings in the following way:

'I use Facebook heavily, but I can prioritize my work. I also use Facebook late at night, but it does not have any negative impact on my sleeping time. I sleep

four to five hours at night and 2 hours in the afternoon. I was never late for my early morning classes or felt sleepy in the classroom' (FGD, 2018).

Researchers claim that, SNSs influence youth to stay at home rather than go outside as they can communicate with their friends from home. It has been found in a study that always staying at home make people lonely, which has an effect on sound sleep at night (Rahman, 2016). According to *Table 2*, 71% students of SNSs user group feeling loneliness on typical days whereas 26% students from SNSs non-user group feeling loneliness on typical days. This finding also indicates a close relationship between late-night sleeping and felling loneliness on typical days.

Table 2

Feeling loneliness on typical days (both groups)

Group	Number	Percentage (%)
SNSs user group	71	71%
SNSs non-user group	26	26%

Source: interview data, 2018

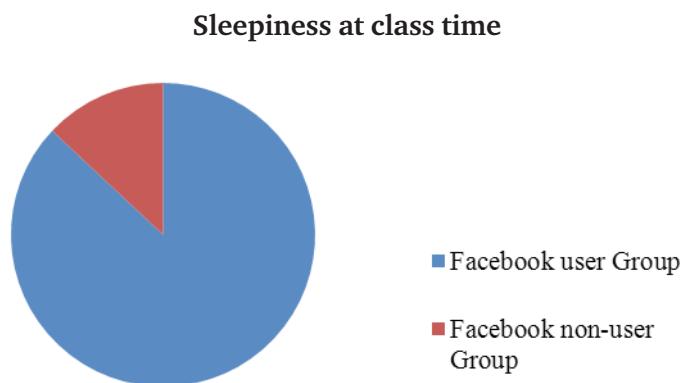
According to a study of 'Tempur' (a mattress company) (2010), people's sleeping patterns are significantly related with the reasons of insomnia (Kirk-Patrick & Steijn, 2014). Ahsanul Haq (19), a third-year student of Department of Statistics, University of Rajshahi tends to feel very lonely on typical days and tried to illustrate the reasons of his loneliness. He said:

'I feel very lonely and depressed most of the days. I don't know the reason but when I browsed Facebook, I suffered from loneliness much more. Especially, when I found my friends posting their photographs with their girlfriends or found my friends enjoying quality time in restaurants and posting it depressed me a lot. I know because of the poverty of my family I don't have enough money to attend the party with my friends or enjoy quality time with my girlfriend. It hurts me a lot' (Interview data, 2018).

This finding correlates the findings of the study conducted by the University of Michigan (2013). But it is really tough to generalize this finding for the overall SNSs user students who are feeling loneliness or suffering from depression, because with heavy use of SNSs, some other social issues may be related with their loneliness or depression. Further research will be essential for the in-depth analysis of the issue.

The study revealed that there is a significant interrelation between the usage of SNSs and sleepiness at class time. According to *Figure 4*, 87% of heavy Facebook student users feel sleepy at class time, whereas 13% students from Facebook non-user group feel sleepy at class time. It indicates that students who are using Facebook late at night feel sleepier in class. This finding corroborates with findings of other research works in Western societies where it has been found that social media has an effect on the sleeping time.

Figure 4



Source: interview data, 2018

The findings of the present study reflect that there is a relationship between sleepiness at class time and late-night use of SNSs. We can consider here the story of Mohitul Alam, a third-year student of the Department of Accounting and Information System, University of Dhaka. Mohit says:

'I like to chat with my friends through Facebook. Some of my friends are living in the United States. The time difference between the United States and Bangladesh is almost twelve hours. So, when my friends return from their work it is almost late night here. That is why most of the time I go to bed at late night after chatting with them. Unfortunately, almost every day early morning I have classes in my department. Sometimes because of deep sleep I don't hear the alarm and miss the class. Sometimes I get up and attend the class but because of sleepiness I am unable to concentrate on the lecture' (FGD, 2018).

The results indicate that indulging with different SNSs like Facebook negatively affects the traditional sleeping schedule of students, which in turn could be detrimental to their health and study in the long run. The findings of Charlotte Kirk-Patrick & Roxanne Steijn (2014) research support the

aforementioned assumption partially. They found in their study that 3 million Facebook users of the UK had spent a week each in social media site when they had been in bed. That means average 21 minutes per day for a person. This has an impact of suffering from a sleep disorder such as insomnia. Dr. Hastings (2012) said about the impact of SNSs on sleep:

'From a sleeping point of view, this news isn't good at all as it's having a huge negative effect on people's sleep. The youth don't realise what impact using computers, mobile phones and other gadgets before falling sleep is having on their night's sleep. Being exposed to bright light from computers and mobile phone screens while in bed completely delays the brain and body's ability to get to sleep. As a result, people aren't able to fall sleep as quickly as they should <...> A lot of people think that when they go to sleep their brain is turned off <...> The brain simply engages in a different activity where it stores memories and gets rid of information that's not needed. If people aren't getting enough sleep each night, their long-term memory is most definitely being affected and using social networking sites and technology before they go to bed is worsening this'.

Researchers argued that computer-mediated communication (CMC) has bought some changes in every aspect of social lives, political culture, private lives or communal interaction (Nee, 2009; Tuffeckci, 2008). Researchers found that SNSs like Facebook has a significant impact on the regular life of the students (Acquisti & Gross, 2006). A survey recently conducted at a high school in Cheshire, UK (2014), revealed that students use an average of 3-4 hours on SNSs every night, keeping in mind that they will miss something in their absence in social media. This is why students are getting tired and bored in the school activities, the study revealed.

Adan (2011) also found in his study that students who sleep less than 6 hours a day feel less interest in classes and studies. Some researchers of University of Pittsburgh (2018) found that youth who spend a lot of time on social media are more likely to suffer sleep disturbances. Thus, they summarize the findings of the study:

'We already know about the link between technology and sleep problems but not about the nature of social media and its unique association with sleep disturbances. Social media could affect sleep because of the light emitted from the screen, because the content is emotionally engaging or because people just get caught up doing it and go to bed later – or it could be a combination of all three'.

The scientific explanation of the relationship between SNSs and sleeping disorder could be found from Helen Driver (2018), a sonologist and assistant professor at Queen's University in Kingston, UK, wherein she says:

'The explosion of **social media** and people staying on devices for longer and taking them to bed with them is a huge problem. The blue light emitted from your phone or tablet is over stimulating, despite special screens and other gimmicks that promise to minimize the effect'.

She also added: 'If you look at how a normal day goes, dawn is bluer light and dusk – when you should be going to bed – is warmer red light, which is less alerting' (Loney, 2018). And it's not just the light from your phone that is a sleep liability; it's the interactive nature of all devices and the overstimulation that comes with them.

This finding and analysis of the present study reflects other findings of the research works conducted in Western society perspective and clearly indicates the relationship between SNSs use in late night and sleepiness at class time.

Conclusion

In conclusion, it could be said that, SNSs have a definite effect on the sleeping habits of the university students of Bangladesh. It evidently influences the occurrence and severity of all types of sleeping disorder. Even though there are other factors that influence their sleeping habits, SNSs may certainly be a primary cause (Kirk-Patrick & Steijn, 2014). Other factors, such as biological, environmental, psychological, and genetic ones, combined with SNSs, can impact the sleeping habits of the university students of Bangladesh. On the other hand, it has been found in this study that SNSs are negatively influencing students' sleep patterns, which also affect their academic engagement severely. Further, the result of the study indicates that SNSs impact negatively the sleeping habits of the university students of Bangladesh, which is indeed a critical factor causing sleeping disorders.

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Editorial Scope

The journal “World of Media” is affiliated with the National Association of Mass Media Researchers (NAMMI).

The journal “World of Media” has been published since 2009. It represents a review of original research in the field of media and journalism studies conducted by Russian authors from diverse cities and institutions.

“World of Media” is published in the English language.

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“World of Media” is aimed at promoting the development of media and journalism studies in both national and global contexts, and stimulating a wider public interest in the journalism theories, methods, findings and applications generated by research in communication and allied fields. Only those articles that are deemed to be of the highest standard and present original research conducted in one of the aforementioned fields are accepted for publication. Articles must not be under consideration by another publication at the time of submission.

This journal seeks to publish original research articles of the highest standard in the fields of:

- Media studies
- Journalism studies
- Communication theories
- Intercultural communication
- International communication
- Media policy and regulation
- Media sociology
- Media psychology
- Regional studies
- Digital media
- Media communication

While the manuscript is open to all methodological approaches, all submissions are expected to be theoretically grounded.

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Submitted papers should be no longer than 5 000 words, accompanied by a short abstract, up to 200 words, and contain normally 5-7 key words. The title page should include the title of the paper, the name of the author(s), full title and the affiliation of the author(s) (full name of the institution and department, city, country, e-mail address). Abstract, keywords, title, information about the author(s) should be written in English.

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