

# The evolution of the ISIS' language: a quantitative analysis of the language of the first year of Dabiq magazine

MATTEO VERGANI<sup>1</sup>, ANA-MARIA BLIUC<sup>2</sup>

## Abstract

In this article we investigate the evolution of ISIS by analysing the text contained in Dabiq, the official ISIS' internet magazine in English. Specifically, we used a computerized text analysis program LIWC (Linguistic Inquiry and Word Count) to investigate the evolution of the language of the first 11 Issues of Dabiq. First, our analysis showed that affiliation seems to be an increasingly important psychological motive for the group. Secondly, ISIS has been increasingly using emotions, which are an important mobilizing factor in collective action literature, in a strategic manner. Thirdly, ISIS language presents an increasing concern with females. Last but not least, our analysis shows that ISIS has been increasingly using internet jargon (net-speak), which shows how the group tries to adapt itself to the internet environment and to connect with the identities of young individuals.

ISIS is of particular concern as it seems to be more successful at recruiting foreign fighters than other jihadist groups (such as al-Qaeda). This aspect is difficult to quantify because reliable it is hard to access data about the exact number, demographics and affiliation of the foreign fighters who joined those organizations. Yet according to reports by the European Union there is a concerning increase in recruitment rates and patterns, with ISIS being more successful at recruiting young individuals from Western countries than any other jihadist group (Archick, Belkin, Blanchard, Hemud, & Mix, 2015). Scholars suggested that the majority of newly recruited jihadists prefer ISIS to other jihadist groups (Karmon, 2015; Klausen, 2015; Peresin, 2015; Peresin & Cervone, 2015; Turner, 2015) and journalists reported that existing members of al-Qaeda even abandoned the group to join ISIS (Dilanian, 2015; Miller, 2014). Moreover, a 2015 report from the International Centre for the Study of Radicalisation and Political Violence based at London King's College stated that the number of jihadist foreign fighters in Syria

<sup>1</sup> Itstime – Catholic University (Milan) and Monash University (Melbourne).

<sup>2</sup> Monash University (Melbourne).

and Iraq from 2011 to 2014 has surpassed the total number of jihadists who went fighting in Afghanistan against the Soviets, when al-Qaeda emerged.<sup>3</sup>

ISIS seems also particularly able to connect with Western foreign fighters, and more in general the conflict in Syria and Iraq has been attracting relevant numbers of foreign fighters from the EU, the US and Australia: according to the King's College report Western jihadists in Syria and Iraq are about 4,000. This may be explained by many factors among which the ease to reach the conflict zone, the expected good living conditions (which appear from the images that circulate in the social media of glamour jihadists eating Nutella, using new technologies and posting tourist-like pictures), the desire for adventure, and other factors (Klausen, 2015; Peresin & Cervone, 2015). News reports announced the birth of a unit, the Anwar al-Awlaki Battalion<sup>4</sup>, exclusively composed of English-speaking foreign fighters<sup>5</sup>.

We argue that part of ISIS' success can be investigated by examining the psychological aspects of the group, which can be researched by looking at the structures of the language. In this article we would like to address the following question: has ISIS' language evolved since its declaration on June 29, 2014?

## 1. Methods

We decided to investigate our research question using a rich source of data: the text contained in Dabiq, the official ISIS' internet magazine in English. Dabiq is in fact one of the few original sources of data that directly comes from ISIS. Specifically, we used a computerized text analysis program LIWC (specifically we used the new version LIWC2015) (Linguistic Inquiry and Word Count) to investigate the evolution of the language of the first 11 Issues of Dabiq. LIWC is a software developed in the early 1990s by Pennebaker and colleagues, and further revisions undertaken in 1997 and 2007 to streamline the dictionaries were included (Tausczik & Pennebaker, 2010). The program automatically opens and analyses text files calculating the percentages of each LIWC category present in the dictionary in the chosen unit of analysis, which in our research was the article. We believe that LIWC is particularly appropriate to investigate ISIS language because it captures aspects of the structure

<sup>3</sup> <http://icsr.info/2015/01/foreign-fighter-total-syriairaq-now-exceeds-20000-surpasses-afghanistan-conflict-1980s/> (Accessed on 17/07/2015)

<sup>4</sup> Anwar al-Awlaki was a senior figure of al-Qaeda in the Arabic Peninsula (AQAP) killed in 2011, famous for being a recruiter and media specialist for the jihadist organization. The fact that ISIS named the English-speaking battalion after him highlights one more time the intertwined stories of the two groups.

<sup>5</sup> See for example: <http://www.ibtimes.com/isis-creates-english-speaking-foreign-fighter-anwar-al-awlaki-brigade-attacks-west-1791400> (Accessed on 17/07/2015).

of the language that can reveal implicit motives, emotions and objects of interest, which emerge from the analysis of relevant quantity of text. We acknowledge that Dabiq is a propaganda tool for ISIS, and therefore we have to analyse and interpret its content with caution and appropriate methods: we argue that LIWC offers a unique tool of analysis that unveil latent psychological dimensions and goes beyond the traditional content analysis of the manifest content of the communication.

We considered in our analysis the first 11 Issues, from July 2014 to July 2015 (Table 1).

**Table 1: The issues of Dabiq that we considered in the analysis.**

Issue (date)	Date	Number of words
1	July 2014	10105
2	July 2014	12585
3	October 2014	14045
4	October 2014	20261
5	November 2014	12914
6	December 2014	28397
7	February 2015	35786
8	March 2015	30652
9	May 2015	32705
10	July 2015	43224
11	September 2015	34288

First of all, table 1 shows that the publication of Dabiq Issues has become less frequent: the first 6 Issues were published in the first 6 months (between July and December 2014), and the last 5 Issues in the following 9 months (between January and September 2015). Moreover, the intervals between Issues have changed: the first two were published in the same month (July 2014), and the second two again in the same month (October 2014). Yet the last four Issues have been regularly published once every two months between March and September 2015. The number of words per Issue has been generally increasing over time.

We decided to use only a few LIWC dictionaries to analyse the text of Dabiq, which we believe relevant to understand the propaganda of a group like ISIS. Specifically we analysed:

- Group motives that can explain the mobilization strategies to achieve collective action through the mobilization of political identities (achievement, affiliation, power),
- Emotions expressed in the language (anger, anxiety, emotional tone),
- Concerns about particular objects of interest (death, females, religion),
- Language jargon (netspeak).

## 2. Results

The following figures (Figure 1 to Figure 10) present the visualization of the analyses. The horizontal axes shows each Issue of Dabiq from number 1 to number 11, and the vertical axes indicates the percentage of words per each Issue that capture the relevant object of the analysis. For example the vertical axes of Figure 1 shows the percentage of words expressing the achievement motive, Figure 2 the percentage of words expressing the affiliation motive, and so on. Higher scores indicate higher percentages. The bigger the circles are, the higher the percentage of words for that specific Issue of the magazine. The line plotted in the graphs indicate the smoothed conditional mean.

Figure 1: Achievement motive.

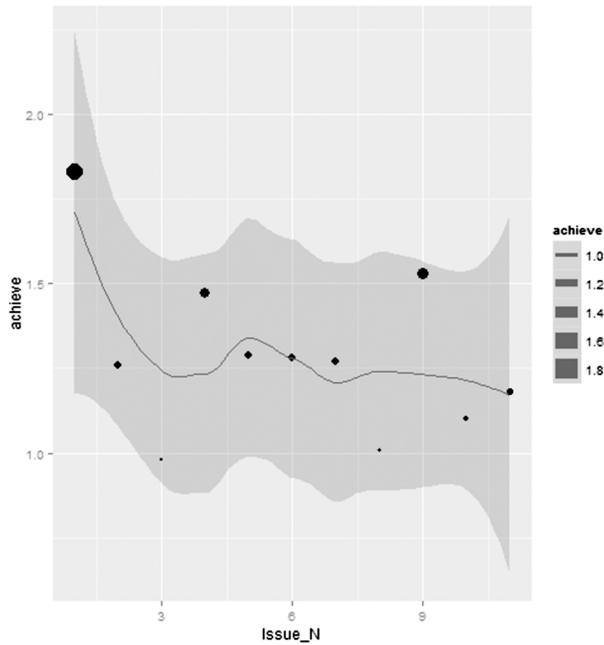


Figure 2: Affiliation motive.

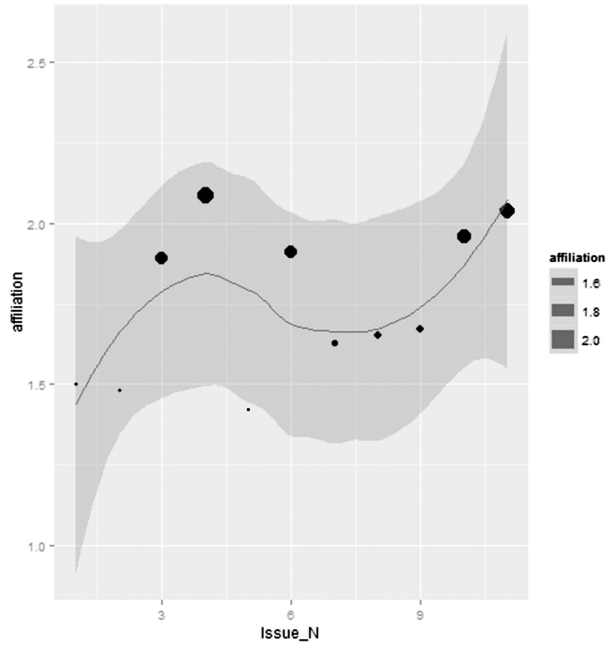


Figure 3: Power motive.

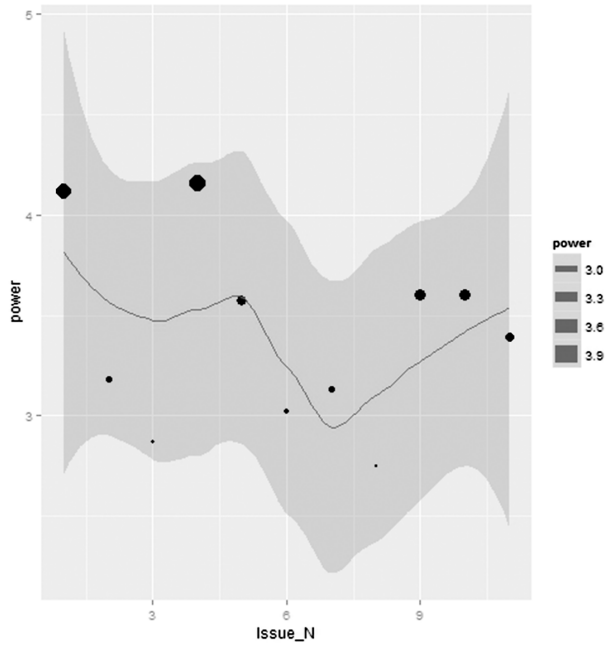


Figure 4: Anger.

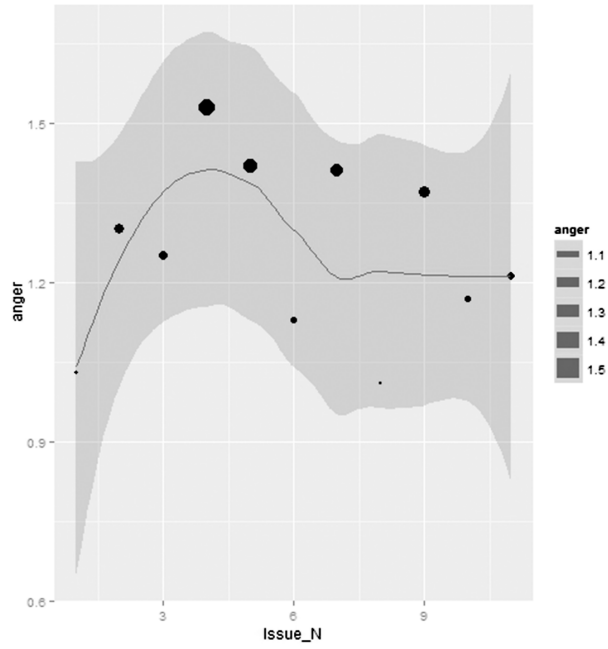


Figure 5: Anxiety.

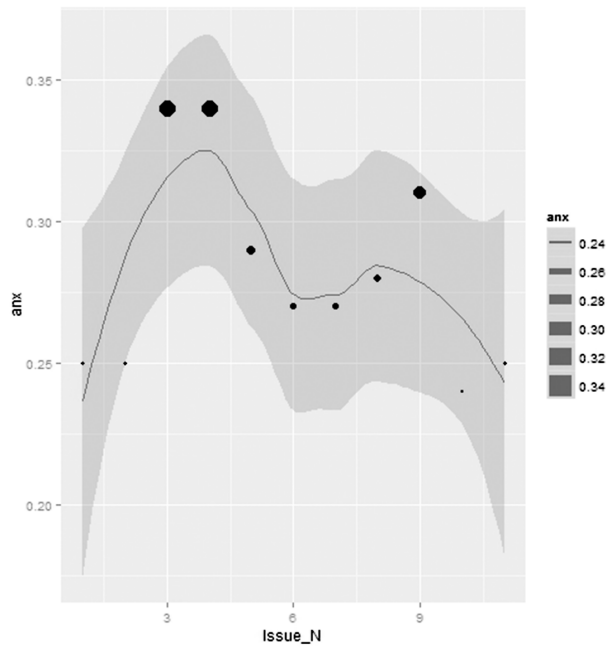


Figure 6: Emotional tone.

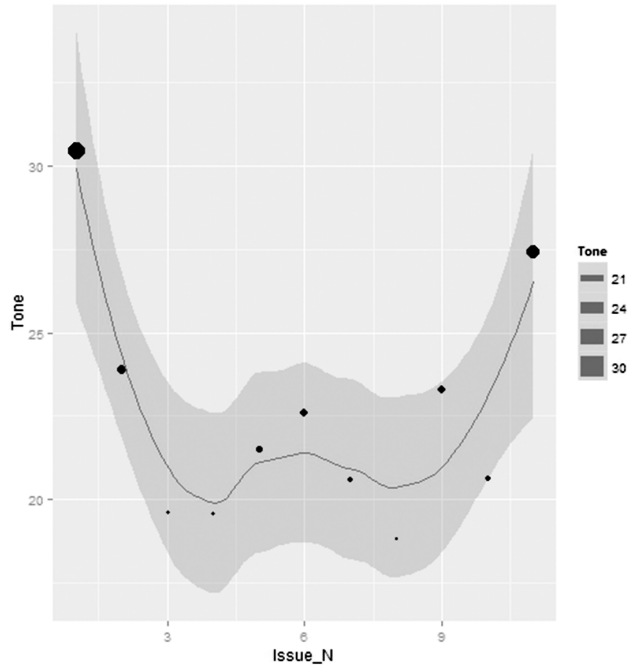


Figure 7: Death concern.

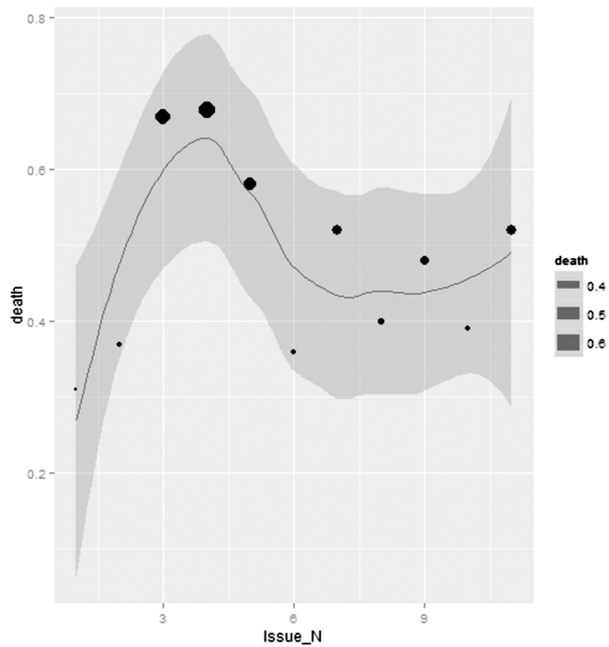


Figure 8: Females concern.

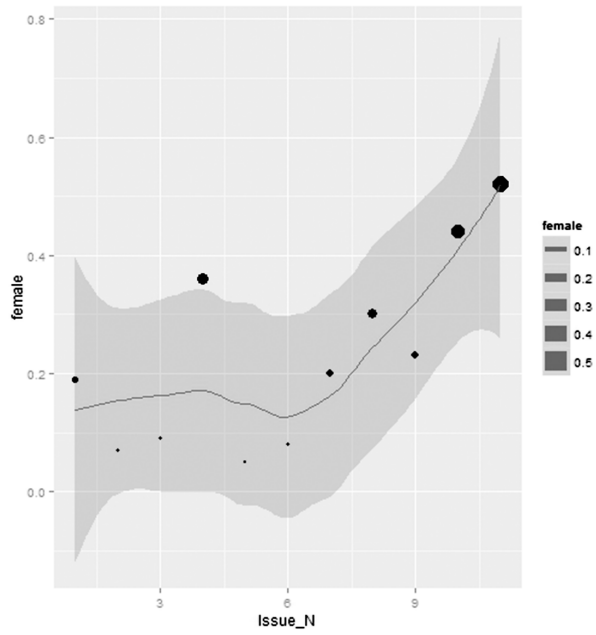


Figure 9: Religion concern.

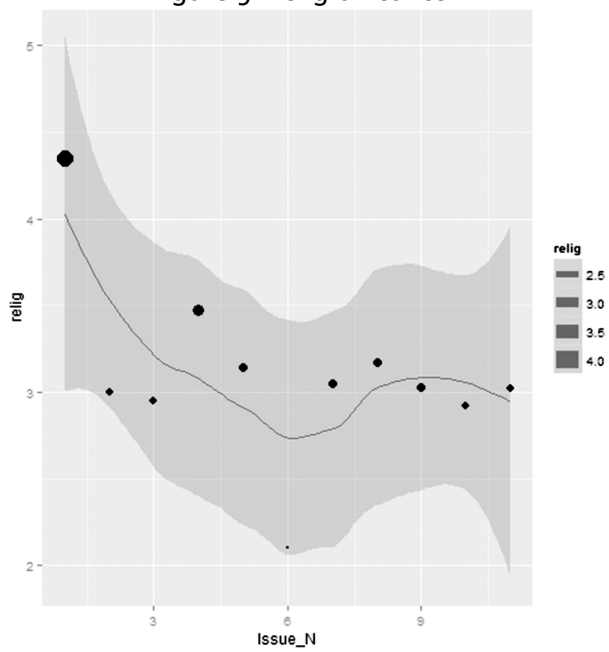
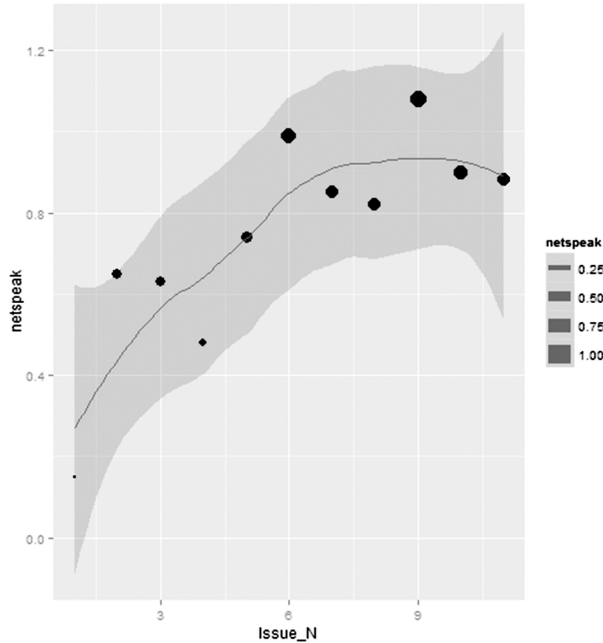




Figure 10: Netspeak.



Achievement, affiliation and power are defined in LIWC2015 as core drives and needs, yet previous literature defined them as motives (i.e. individual or group tendencies or strivings towards a goal) that are associated with aggression and the language of terrorist groups (Smith, 2008; Smith, Suedfeld, Conway, & Winter, 2008). Figures 1, 2 and 3 show the presence of those motives in each Issue of Dabiq from the 1st to the 11th. The achievement motive tended to decrease, especially after peak in the first Issue. Power fluctuated and in the last three Issues stabilized at a level not distant from the first issues. Affiliation also fluctuated, but also showed an increase over time.

Anger, anxiety and emotional tone indicate the amount of emotions, with a focus on negative emotions, expressed by the language of Dabiq. Emotions are important factors that explain collective action and influence political behaviour: for example anger is known in the collective action literature as a mobilizing emotion (Van Zomeren, Postmes, & Spears, 2008) especially linked to violence and aggression (Skitka, Bauman, Aramovich, & Morgan, 2006), anxiety is associated to isolation and risk aversion (Huddy, Feldman, Taber, & Lahav, 2005). More in general, emotional language is considered to be effective in mobilizing individuals, especially in the radicalization literature (Cottee & Hayward, 2011). Figures 4, 5 and 6 show that anger fluctuated, had peaks in Issue 4, 5, 7 and 9, and it appears to have stabilized in the last two issues at

average levels. Anxiety, after a peak in Issue 3 and 4, and high levels in Issue 9, returned to the low levels of the first two Issues. The general emotional tone however showed a clear “u” shape: it started with higher level in Issue 1, it decreased over time and it came back to higher levels in the last few Issues.

Concerns with death, females and religion capture three important ideological aspects of the propaganda of ISIS. The concern with death has been indicated as one of the most important aspects of the group, which has been called “death cult” in many different occasions (Lentini, 2015). Figure 7 shows that the concern with death, after a peak in Issue 3, 4 and 5, has stabilized to lower levels: it doesn’t therefore seem to be an increasing concern with the language of Dabiq. The concern with females is very important because the public debate has been increasingly focusing on the strong capacity of ISIS to recruit women: the stories of young women leaving their countries to become “jihadi brides” have been increasingly reported in the media (Wahid, 2015). This important focus on women mobilization is confirmed by the increase in concerns with females that appears in Figure 8. The concern with religion, which is undoubtedly the most important aspect of ISIS ideology, at least in its selective and biased version, is captured in Figure 9, which shows how this concern, after a peak in Issue 1, has remained steady in all the subsequent Issues.

Finally, we wanted to capture the change in the jargon used by ISIS, and especially the informal language typical of the internet (for example abbreviations like “btw”, “lol”, “thx”). We found very interesting the increase showed in Figure 10, which suggests that ISIS language has been adapting to internet jargon, which probably makes it more effective in establishing a communication with the youngest generations of potential recruits.

### 3. Discussion

We believe that the brief analysis of the language that we conducted in this pages shows a mobilizing strategy of ISIS. Firstly, the analysis of ISIS core motives shows that affiliation seems to be the most important for ISIS. Specifically affiliation captures the concern with maintaining group cohesion and group identity, which may have been one of the most important challenges during his first year, due to the multiple jihadist groups competing for the leadership of the jihadist movement both at a global level (e.g. al-Qaeda) and at a local level (e.g. al-Nusra front).

Secondly, the analysis suggests that ISIS uses emotions, which are an important mobilizing factor in collective action literature, in a strategic manner. The evolution in the use of emotions may suggest that, after 1 year of existence, ISIS was coming back to a language that was similar to the first issues of Dabiq:

more emotional, but less focused on anxiety (which is a paralyzing emotion). This might suggest that ISIS needs to attract new recruits, and that ISIS needs to come back to use a more “mobilizing” language after an attempt of institutionalizing and rationalizing the language in Issues 2 to 10.

Thirdly, the most interesting aspect emerging from the analysis of ISIS concerns is the increasing concern with females. This is consistent with the current literature: Peresin and Cervone’s study of Western women joining ISIS in fact concluded that the number of those women, more than 200, “is much higher than in any previous jihadist mobilization of Western foreign fighters” (Peresin & Cervone, 2015). We believe that this is especially important because it shows that ISIS needs to attract not only fighters but also women in order to create a society that is not only composed by warriors but also by families, where people can live an “ordinary” life. This is a cornerstone of ISIS’ “utopian” narrative, which is a very important radicalization factor (C. Winter, 2015a, 2015b).

This is not to say that death or religion are not issues of interest for ISIS. For example religion in absolute terms is more present than the other two concerns, which is consistent with what we know of ISIS. Although we acknowledge that the interpretation of Islam proposed by groups like ISIS is established upon selectively literal interpretations of the Qur’an that are not shared by the greatest majority of Muslims (Lentini, 2013), we also believe that religion (in its selective and distorted version) is the key source of legitimacy for a jihadist group like ISIS, and arguably the core motive of recruits who join the group. Although we know from previous research that individuals who join jihadist organizations usually do not come from a strong religious background, and their understanding of religion is limited (Rinehart, 2006), we agree with Ganor when says that religious intransigence is a key factor in explaining ISIS’ success in recruiting young Western foreign fighters because of the group claims to be the only real interpreter of the Prophet’s original will (Ganor, 2015). Also, existing studies on ISIS affiliates’ Twitter use showed that religious discourses, jihadist dogmas and images of religious leaders are prominent among foreign fighters (Carter, Maher, & Neumann, 2014; Klausen, 2015). Also, previous research suggested that ISIS feels more comfortable than other terrorist groups broadcasting high level of graphic violence (Klausen, 2015) and the group has been using and showing off indiscriminate violence with more ease than other jihadist groups like al-Qaeda: ISIS is for example less restrained in sentencing anyone who does not believe in its extreme version of Islam to takfir (excommunication) and death (Hashim, 2014), and it has conducted extremely violent campaigns against Muslims, which have been criticized by charismatic senior al-Qaeda members such as bin Laden, al-Zawahiri, Ghadan, and al-Libi (Turner, 2015). Death reminders are therefore an important part of the group’s communication.

Last but not least, our analysis shows that ISIS increased its use of the internet jargon. We believe that this suggests how ISIS is able to adapt itself to the internet environment, where it has demonstrated an impressive capacity to connect with the identities of young individuals all over the world as the cases of terrorist plots involving individuals as young as 14 demonstrate (Cooper, 2015; Mitchell, 2015).

We believe that the analysis of ISIS language with LIWC categories is particularly interesting because it offers insights about the motives, emotions and concerns of the terrorist group, which can also reveal some aspects of the motives, emotions and concerns of the target audience. Research in the field of psychology of political leadership showed that the success of a leader depends on a match between the personal characteristics, the historical context and the followers' psychological characteristics (D. G. Winter, 1987). The psychological structures of a text can generate identification in the audiences that recognize themselves in such structures and motives: for example the fact that ISIS is more concerned about females, means that ISIS is trying to connect with females and with people concerned with females. Also, the fact that ISIS uses more internet language means that the groups wants to connect with people who use the same language.

To conclude we presented a general overview of the development of ISIS language that does not want to offer a deep understanding of the meaning that is hidden behind each of the LIWC dictionaries that we used. Further research should investigate more deeply the meaning of LIWC categories, using a comparative perspective to compare the language used by different terrorist groups. However we believe that this paper offers preliminary findings that can be used to generate new research questions and stimulate debate among scholars who are studying terrorist groups such as ISIS.

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