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Valeri's Knights and Prophecies

Have they been fulfilled?



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Several predictions on Internet usage for psychological and physical battle purposes have been made after the Internet became a world-wide phenomenon. Several key predictions, without the benefit of hindsight, were made by Valeri and Knights before serious terrorism was introduced to the USA (2001) and to Europe (Madrid 2004, London 2005) and before social media was conceived.

This research evaluates some of their predictions in light of massive social media and network attacks that took place in 2011-2012. Additionally, the research examines how predicted modes of operations influence governments and nations that were attacked.



Valeri's Knights and Prophecies

- **Valeri and Knights**
- **Research Question**
- **Methodology**
- **Data**
- **Analysis & Discussion**
- **Conclusions and future work**



Valeri and Knights

- Without the benefit of hindsight, Valeri and Knights (2000) made several predictions on how the Internet may be used for carrying out **offensive information warfare (OIW)**.



OIW definition

- Offensive Information Warfare (OIW) is
 - “the set of activities carried out by individuals and/or groups with specific **political** and strategic **objectives** aimed at the **integrity, availability** and **confidentiality** of data collected, stored and transferred inside information systems connected to the Internet.”

Valeri and Knights (2000)



Main Assertions

- OIW will **NOT** be used by terrorists and their supporters to attack INFRASTRUCTURE because this will be very difficult.
- **OIW will be used to:**
 - Attack less protected social institutions (e.g., finance industry, government websites) to...
 - Demoralize the population at large, inflict fear of major financial and physical damages,
 - instill doubt in the ability of the government to protect
 - instill doubt in the ability of the economy to function



Main Assertions

- Let's rephrase it:

Terrorists will favor manipulation and exploitation of data within information systems with the specific aim of **undermining the perception of trust among general users** rather than cyber-attacking critical infrastructure.



The Research Question

- Have some (or all) aforementioned predictions been fulfilled?
 - If so, how?
 - If not, why (were they wrong? World not ready yet?)



Methodology



Methodology

- Used data related to two recent regional conflicts
- Specific activist and terrorist groups were chosen based on their size and exposure in these two conflicts



Methodology

- Conducted a non-exhaustive search for manipulated photos.
- Collected data by filtering out key terms using Twitter during and after the event over a two-week period.
 - For pictures, we searched Facebook pages; used hashtags for Tweet-deck search
 - Searched the web using reputable search engines
 - harnessed the snowball effect where one piece of information lead to another



Methodology

- For data related to cyber-attacks we tracked Twitter announcements and several news media websites.
 - The collective known as ***Anonymous*** was the most vocal, thus getting attention not only from researchers, but from the media as well.
- Data analysis using qualitative methods.



Data



Data Needed

Target Group 1	Target Group 2
Low reliance on Web for e-finance / e-Gov	High reliance on Web for e-finance / e-Gov
High central control over infrastructure	Low central control over infrastructure
Was attacked by various groups	Was attacked by various groups
Propaganda attacks	Propaganda attacks
Cyber attacks	Cyber attacks

Where do you find them?!?

Finding target groups



Who are the target groups?



Who are the target groups?



Map of the Gaza Strip



- The Gaza strip is a self-governing entity having a border with Egypt on the southwest and with Israel
- From 2007, the Gaza Strip is de-facto governed by Hamas, a terrorist organization per the definition of the EU and the US.



OIW Activities

Syria / Rebels

- 2012 conflict between various rebels and the Assad regime
- Rebels use social media:
 - To belittle, mock or vilify Syria's military and regime
 - Self-encouragement and support of other rebel factions

Israel / Hamas

- 11/2012 Operation Pillar of Defense – clash between Gaza's Hamas and Israel
- Hamas use social media to:
 - Belittle, mock & vilify Israel
 - Plea their alleged suffering to Western governments and NGOs



OIW Activities

Syria / Rebels

- Rebels disseminate video clips and pictures of alleged Assad atrocities.
- Anonymous launches an attack against Syria's Internet
- Syria slows down, then shuts down Internet
- Syria shuts down cellular services for three days

Israel / Hamas

- Hamas uses Syrian pictures to claim Israel is committing war crimes (Propaganda)
- Anonymous launches an attack against Israeli institutions
- IDF uses Facebook and YouTube to post information (text & visuals) in English, Arabic and other languages
- Israeli institutions demonstrate their resilience against cyber attacks

OIW Examples – Syrian Rebels

- Syrian rebels' Omawi News presence on social media

جيش أهل السنة الإلكتروني

<http://www.facebook.com/Sunnaforce>

اتحاد أهل السنة

<http://www.facebook.com/sunna.arab>

المجاهد

<http://www.facebook.com/E.Mujahid>

أموي مباشر - Omawi Live

<https://www.facebook.com/OmawiLive>

جيش أهل السنة الإلكتروني (كتيبة الفاروق)

<http://www.facebook.com/Omarforces>

محدث: جميع عناوين وارقام المتطوعين لحمله جمع التبرعات لاهلنا في سوريا

<http://q8fun.com/6045.html>

- Syrian rebel's Ugarit on Facebook



The screenshot shows a list of Facebook pages related to 'Ugarit News'. Each entry includes a profile picture, the page name, location, category, and engagement statistics.

- Ugarit News | أوعاريت الإخبارية**
Damascus, Syria · Media/News/Publishing
116,265 like this · 17,953 talking about this
- Ugarit News Blog | مدونة أوعاريت الإخبارية**
Media/News/Publishing
19,743 like this · 7,581 talking about this
- Ugarit News | أوعاريت الإخبارية**
Media/News/Publishing
734 like this · 22 talking about this
- Ugarit News - Aleppo | أوعاريت الإخبارية - حلب**
Media/News/Publishing
3,396 like this · 331 talking about this
- Ugarit news**
News/Media Website
50 like this

OIW – Free Syrian Army



Syria - Free Syrian Army Front Line Clashes (December 2012)

by Syria Baynetna · 8 months ago · 14,180 views

HD



Syria - Free Syrian Army Heavy Clashes (December 2012)

by Syria Baynetna · 8 months ago · 46,370 views

The 2011--2012 Syrian uprising is an ongoing internal conflict in Syria, a part of the wider Arab Spring, that began in January ...

HD



1 week with the "free syrian army" - Feb 2012 - Arte reportage 2 of 2

by sefraus · 1 year ago · 28,473 views

http://www.youtube.com/watch?v=Q5qkeh4h_98&feature=plcp Suite aux vetos chinois et russe a l'ONU contre une resolution ...



4 7 2012 - Free Syrian Mujahid Army Attack

by FreeSyrien0 · 1 year ago · 13,644 views

Assad is killing the syrian people, islam will bring justice, we will give every one his rights,

OIW – Free Syrian Army



OIW Examples - Hamas

- Syrian dead boy portrayed as a Palestinian killed by Israel
- Victim of Hamas portrayed as a killed by Israel



OIW examples - Hamas

- Israeli Injured Baby Portrayed by Hamas as Palestinian (with an Israeli response on the right)



LIES, LIES, LIES...

BECAUSE WHEN YOUR TRUTH IS SO TWISTED, YOU HAVE TO MAKE UP SOMETHING.

THIS PHOTO, PRESENTING AN INJURED PALESTINIAN CHILD IS A SICK TWISTED LIE.

THIS IS AN ISRAELI CHILD, INJURED YESTERDAY, WHEN A HAMAS ROCKET HIT HIS HOUSE.

BUT WHEN YOU'RE TELLING SO MANY LIES, THE TRUTH DOESN'T MATTER ANY MORE.

SHOW THE WORLD THE TRUTH

- Same family died twice
 - On top – a cynical comment on FB by an Israeli

תראו איזה מזל נאחחסססס, אותה משפחה נהרגה גם בסוריה מהפגזות של אסד וגם אותהההה משפחה נהרגה אתמול בעזה מהפגזות של צה"ל.

פשוט מזל נאחחססס לההרג פעמיים בשתי מדינות, שונות יש למשפחה הזאת מאנחוסססס נראה לי, איפה אורן זרףףףף שיריד להם את העין הרע.





OIW - Anonymous

Presence

- Multiple Twitter Accounts
 - Leading 5 have over 2M followers
- YouTube clips
 - Hundreds, some with 2M views
- TOR (dark web) presence
- Facebook
 - Several pages

Activities

- 11/2012 launched cyber-attacks on Israeli institutions
- 11/2012 launched cyber-attacks on Syrian internet



OIW - Anonymous

Attacks against Israel

Anonymous
@YourAnonNews

Dear Israel, you shut down internet. We'll shut you down.

14 Nov 12

Anonymous Press
@AnonymousPress

#OpIsrael 40+ Israel'i government & military websites have been taken down inlast 3hrs #FreeGaza #Anonymous #FreePalestine V @anonnewsint

15 Nov 12



Attacks against Syria

Anonymous Declares War On Syrian Government Websites In Retaliation For Internet Blackout

The Huffington Post | By Meredith Bennett-Smith
Posted: 11/30/2012 12:31 pm EST Updated: 11/30/2012 2:44 pm EST

Anonymous
@YourAnonNews

Government Of #Syria Cuts Country's Internet Access - #Anonymous Goes on the Warpath!
securityweek.com/syrian-governm... #OpSyria #YAN

5:09 PM - 30 Nov 2012

149 RETWEETS 20 FAVORITES

Anonymous
@YourAnonNews

Anonymous is attacking Assad due to the internet outage. Anonymous is not attacking Assad in support of the Free Syrian Army.
#OpSyria

5:04 AM - 30 Nov 2012

290 RETWEETS 58 FAVORITES



Self-Inflicted OIW ?

According to CNET, Syrians on Twitter reported that phone lines also were down and that all 84 of Syria's IP address blocks have become unreachable, **effectively removing the country from the Internet.**

The Syrian government said that **terrorists were behind the outages**, but CloudFlare, a firm that helps accelerate Internet traffic, said it would have been extremely difficult for any type of sabotage to cause such a comprehensive blackout, according to Reuters.





Effects of OIW

Evaluation if some of the predictions made by Valeri and Knights have been fulfilled
Assessment if OIW had significant influence on attacked governments

Effects of OIW

OIW	Syria	Israel
Cyber Attack	No effect due to two main factors: Government's disinterest and little e-finance activity in Syria	No effect due to the resilience of the Israeli finance systems. Defacing of websites is seen as superficial damage
Propaganda	No effect due to government's disinterest in its public image abroad	Several key government decisions influenced by propaganda IDF creates a counter-propaganda unit.

Prediction Accuracy

OIW	Prediction	Materialization	Accuracy
Cyber Attacks	Attacks on websites and information systems is preferred over attacks on infrastructure	Millions of daily attacks against Israeli web sites during 11/2012. Attacks against official Syrian websites	
Propaganda (images and videos)	Propaganda used to: [a] vilify the other side [b] boost morale	Hamas used a large number of pictures from the Syrian conflict and portrayed the victims as Gazans suffering from Israel's cruelty. Hamas used social networks to spread false claims, in Arabic, about its victories "against the Zionist enemy" FSA used predominantly FB and YouTube to vilify Assad and claim victories to boost rebels' morale	



Conclusions

And Future Work



Conclusions

- Valeri & Knight's predictions have materialized and have been shown to have been accurate




Future Work

- Reputable traditional media sources have demonstrated over time that they are not always trustworthy, as they promote, sometimes even voluntarily, OIW actions
 - This is an aspect we did not cover here and needs further research.



Future Work

- Further ramifications analysis towards the intended targets.
 - Once someone is aware that the information was propaganda, how would it make them feel towards the group who posted it?
 - Recipients may feel cheated to a degree that their sympathy is replaced by hostility.



Q & A

For additional information:

Read the paper (to be published soon) or

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