The Technological Evolution of Psychological Operations Throughout History

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Abstract

Psychological operations or PsyOps is a multi-disciplinary capability that requires technology in the social sciences, as well as in areas of design, Information and Communication Technology (ICT), electronics, broadcasting and printing. It has been a part of warfare since early history. Over the ages, many of the tools and methodologies regarded as the vehicles of PsyOps delivery and employed to achieve both PsyOps effects and effectiveness, have both changed and stayed the same. This research proposes an evaluation framework for PsyOps. The purpose of this research is to investigate historical PsyOps and determine the evolutionary trend of these PsyOps with regards to growth in technology. Furthermore, this research also investigates the role that social media plays within the domain of PsyOps and how social media impacts PsyOps.

Keywords

Psychological Operations, PsyOps, Measurement of Effect, Measurement of Effectiveness, Social Media, Target Audience Analysis.

1. Introduction

Psychological Operations (PsyOps) is defined as "planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behaviour of foreign governments, organizations, groups, and individuals" (U.S. Army Special Operations Command, 2015). PsyOps include actions that are undertaken that alter the perceptions of opposing forces and in so doing makes them less inclined to engage militarily, and to behave more favourably towards the objectives of the protagonists. PsyOps is the dissemination of information to foreign audiences in support of specific policy and national objectives. PsyOps can be employed to achieve military or political goals – which are often the same – and are a vital part of a broader set of political, military, economic, and ideological tools, used by country's to meet national imperatives and mandates (Chatterji, 2008).

The attitudes and behaviour of a target audience – who may or may not be supporters of the PsyOps originator – may have an enormous impact on the ultimate outcome of a conflict. This makes it incumbent that political and military manoeuvres have a thorough and complete understanding of the population and its leadership with the aim of shaping perceptions and affecting their will to succumb and accept the desired outcome. It is furthermore important to note that throughout history all forceful military campaigns, has always had a psychological dimension.

Other than kinetic weapons such as artillery and gunfire, which is primarily used during declared war or in reaction to kinetic attack, PsyOps can be applied throughout the conflict continuum from peacetime to conventional warfare. PsyOps is classified as a non-kinetic weapon, which implies that it does not make use of force, although warning of physical attack or exploiting the consequences of a physical attack are included in PsyOps campaigns. PsyOps thus involves the use of nonviolent tactics in sometimes-violent situations. The aim is always to 'persuade' rather than physically coerce. It relies on cognitive factors such as logic, fear, desire or other mental factors to promote specific emotions, attitudes or behaviours, with the objective of convincing the opposing forces to take action that are favourable to the protagonist (U.S. Army Special Operations Command, 2015).

The focus of this research is to analyse the evolution of the use of PsyOps throughout history from a technological perspective. The research proposes an effort-analysis framework to aid the analysis of PsyOps used in various operational settings. This paper specifically focuses on the technological criteria of this framework, but all the criterions are included for further analysis in future research. The technological evolution depicts an evolution towards a more connected society with a greater access to information. This evolution is critically discussed with regards to the advantages and disadvantages.

Section 2 proposes the evaluation framework and describes the criteria of the framework. Section 3 analyses historical PsyOps in various operational settings with the use of the evaluation framework. Section 4 critically discusses the evolutionary trends of PsyOps with regards to the technological perspective. Finally, section 5 concludes the research with a summary and a discussion on future work.

2. Evaluation Framework

The essence of this study is the identification of PsyOps missions through history and the analysis thereof in terms of the lessons to be learnt from it. During the analysis of these operations an effort-analysis framework was developed and employed as illustrated in Table 1.

Products & Technologies (2.1)
Target Audience Analysis (2.2)
Effect (2.3)
Effectiveness (2.4)
Lessons Learnt (2.5)

Table 1: PsyOps Evaluation Framework

The operations described in this research was analysed for illustration of the application of the framework criteria identified in Table 1. Measurements of Effect (2.3) and of Effectiveness (2.4) are included in the framework to evaluate the PsyOps in terms of its level of success. The individual framework criteria are described below.

2.1. Products & Technologies

This identifies the PsyOps products or media that were used in each mission. These products may be traditional PsyOps products (non-Internet based) or newer emerging technologies that have become more prominent in recent times.

2.2. Target Audience Analysis

Target Audience Analysis is a detailed, systematic examination of PsyOps intelligence/information, aimed at selecting target audiences that may be effectively influenced towards accomplishing the PsyOps Mission. Target Audience Analysis is the process by which potential target audiences are identified and analysed in terms of their group (or individual) characteristics and dynamics, which depend on a number of internal and external conditions, as well as historical events and norms that have developed over time; for accessibility (by PsyOps media), and for susceptibility. The latter refers to the degree to which they may be influenced.

The key in the Target Audience Analysis process is to identify target audiences whose changed behaviour will positively affect the outcome of the supported commander's mission. Social and behavioural intelligence, collecting intelligence on the composition and exact nature of the target audience and the analysis thereof is of utmost importance in PsyOps planning and is also the first step in considering and developing PsyOps products for a specific context.

2.3. Measurement of Effect

Measurement of Effect is defined as:

 Recording of the achievement of the intended effect (impact/outcome) of PsyOps. Recording of the change that has occurred. These changes may be attitudinal, behavioural, or material; it may be intended or unintended, expected or unexpected, related or unrelated to the goal.

2.4. Measurement of Effectiveness

Measurement of Effectiveness is defined as the recording of the success and usefulness of each PsyOps product used in an operation. This may refer to the physical attributes of the product e.g. the paper or specific design of a printed leaflet, or the dissemination procedure e.g. the timing and weather conditions of a leaflet drop; the timeslot of a radio broadcast, etc.

2.5. Lessons Learnt

During the identification and description of the various PsyOps operations and where possible, lessons from the field were included in the analysis framework. This criterion may also be used to include a summary of the deductions made from the analysed operation/event.

3. PsyOps Examples from History

PsyOps missions support national security objectives at the tactical, operational and strategic levels. Strategic PsyOps advance broad or long-term objectives. Global in nature, they may be directed toward large audiences or at key communicators. Operational PsyOps are conducted on a smaller scale. They are employed by commanders to target groups within the theatre of operations. Their purpose can range from gaining support for operations to preparing the battlefield for combat. Tactical PsyOps are more limited, used by commanders to secure immediate and near-term goals. Both tactical and theatre-level PsyOps may be used to enhance peacetime military activities of forces operating in foreign countries.

3.1. World War I: 1914-1919

Most authorities consider World War I as the start of modern PsyOps, due in large part to the availability of mass communication media like the radio, modern printing presses, and the innovative means of delivering messages to the target audience. Some of the means of media transmission were the new airplanes, special artillery rounds, leaflet mortars, hand grenades, and even specially modified leaflet balloons. The British Foreign Office created a War Propaganda Bureau in 1914, which concerned itself with the distribution of leaflets, pamphlets, and other material in Allied and neutral countries. Thousands of leaflets were produced most calling upon the various minorities in the enemy armies to desert (Friedman, 2015). When the Germans threatened to put leaflet-dropping pilots before a firing squad, the British mastered the art of dropping the leaflets and newspapers from unmanned balloons.

Products & Technologies	Pamphlets, Leaflets, Newspapers, Radio.
Target Audience Analysis	Opposing Forces from both sides.
Effect	The products used by both sides seem to have had effect in varying amounts (each specific product identified to be analysed in further research). The example mentioned regarding leaflet drops from unmanned balloons is evidence that the German firing squad threat was effective.
Effectiveness	The use of emerging mass media of the day by Britain proved to be effective especially the use of radio, modern printing presses, and the innovative and expedient means to deliver the message to the target audience. Leaflets designed by the German forces were largely ineffective and were described as mostly all text with little colour and nothing to catch the eye of the enemy or invite him to pick it up. The language (translation to English) was also poor and therefore not convincing.
Lessons Learnt	PsyOps made use of the emerging mass communication media like radio, modern printing presses, and the innovative and expedient means to deliver the message to the target audience.

Table 2: PsyOps Evaluation Framework - World War I

3.2. World War II (1939-1945)

PsyOps were used extensively by all sides during World War II. Radio broadcasts became a major means of passing propaganda to the enemy with Japan using the notorious 'Tokyo Rose' to broadcast music, propaganda, and words of discouragement to Allied forces. The Germans used Mildred Gillar, better remembered as 'Axis Sally'. An innovative use of psychological warfare is attributed to a radio broadcast by the BBC, just prior to the anticipated German invasion of England. The BBC started a regular radio program, easily heard and often listened to by the Germans, with a series of English language lessons for the would-be invaders, broadcast in flawless German. The messages were rather crude and simplistic but it proved effective.

The Americans used deception and PsyOps operations to convince the German high command that the upcoming Allied invasion of Europe would occur at the beaches near the Calais, rather than the narrow sand strips and cliffs of Normandy. The operation was called Pas de Calais. Through imaginative employment of PsyOps the Allies created the fictitious 'Army Group Patton,' which was poised to strike across the English Channel. This ruse convinced the German strategists and planners that the Allied assault would be spearheaded at Calais by an army under the command of Lieutenant General Patton, whom many considered the Allies' best combat command. As a result, the heaviest concentration of German combat power in France was positioned at the Calais Beach for the invasion.

Products & Technologies	Radio, Leaflets, Deception, Newspapers.
Target Audience	Own forces – Information to assist your own troop to improve group morale.
Analysis	Opposing forces - General population to boost morale especially true in Stalingrad.
Effect	The allied forces won the war. The Russians staved off the Germans at the Battle of Stalingrad.
Effectiveness	The radio campaign by the Allied forces against the Axis nations proved effective especially the programming prior to D-Day. The programming was regular, easily heard, listed to by the opposing forces and broadcast in flawless German. The Russians used emotional and spiritual messages that helped the Russians at the battle of Stalingrad.
Lessons Learnt	The use of language is extremely important. Improving your own force by learning the language of the enemy, fear mongering, deception, morale and comradery, emotional patriotism. Deception worked exceptionally well. Upping group morale using patriotic techniques worked well.

Table 3: PsyOps Evaluation Framework - World War II

3.3. Bosnia and Kosovo (1992-1995)

PsyOps was widely employed in Bosnia and Kosovo from both sides of the conflict, the most famous PsyOps being the 'landmine awareness' campaign and Superman comic. The idea for the landmine awareness comic book was sparked by a comment by First Lady Hillary Clinton during her visit to Bosnia. She reviewed a mine awareness colouring book for young children, and asked what was being done for the older children (Collins, 2006). The Superman comic for landmine awareness was subsequently printed in both the Cyrillic alphabet used by Serbians and the Roman alphabet used by Croats and Muslims. Half a million Superman books were shipped to Bosnia and Kosovo. Superman was chosen to spread the message because 'he is a citizen of the world.'

Early in the war, Serbian forces made the capture of various radio and television transmitters a high-priority military objective, seizing control of as much of the local electronic media as possible. The Bosnian-Serbian leaders tended to direct their media message toward the people of former Yugoslavia, not internationally.

While the Bosnian-Muslim, or Bosniac, side initially had fewer tools with which to wage media war, they were just as cognisant, if not more so, of the importance of perception management. Whereas the Serbians channelled their efforts toward the people of the country, the Bosniacs took great care to influence the international audiences. They judged their survival to depend on massive intervention on their behalf by the international community. The Bosniacs' effort to portray themselves as

hapless victims was assisted by the fact that nearly all the international media correspondents assigned to Bosnia stayed in Sarajevo.

Products & Technologies	Comics, Television, Radio, International news media.
Target Audience Analysis	Serbian forces: The general populace. Bosnian-Muslim Psyops: International audiences.
Effect	In general the Serbian forces achieved the desired effect, creating fear and
	paranoia among Bosnian-Serbians and channelling those emotions into a virulent hatred of other ethnic groups, while establishing the conviction among Bosnian-Serbians that they were struggling for their very survival.
	International intervention and support materialised.
Effectiveness	The Bosniacs exploiting the international media correspondents to send their message to international audiences via television and radio proved very effective.
Lessons Learnt	The Bosnian War was a struggle for perception, with the ground war a supporting effort. Some have pointed to Bosnia, and the central role of the media, as providing a glimpse of conflicts in the future. Targeting an international audience helped the Bosniacs highlight their situation internationally and to subsequently obtain international support/intervention.

Table 4: PsyOps Evaluation Framework - Bosnia Kosovo

3.4. Kuwait (2011)

The 'Orange movement' in Kuwait, initially set-up by youth citizens, was a protest against patriarchal and family-business ties system of government. Younger members of society who felt excluded from political decision-making process had initiated a campaign using mostly Twitter to express their demands and expectations (Matyasik, 2014). Political opposition had further facilitated social demands by calling to mass non-violent protest, which for several days took over streets of major cities in Kuwait. The government facing unprecedented social activity had chosen a way of concession instead of violence and repressions. In 2005 the parliament had approved amendments to electoral law and for the first time in history of Kuwait allowed women to vote and run for parliament. Shortly after, the first woman has been appointed as a cabinet member. In following years, even though a political system is still very conservative and corrupted, new political system alterations have been implemented. Citizens had acquired far more opportunity for free debate and new, more democratic laws have been introduced. One of the most useful and active social media portals had been Twitter channel: 'Egyptian advice for Kuwaitis', where social activists from different countries were exchanging views, solutions and experiences.

Products & Technologies	Social Media, Twitter.
Target Audience Analysis	Younger members of society who felt excluded from political decision-making process.
Effect	Citizens have acquired far more grater space for free debate and new, more democratic laws have been introduced.
Effectiveness	Used as a tool to enhance and coordinate civil protest.
Lessons Learnt	Collaboration: One of the most useful and active social media portals had been Twitter channel: 'Egyptian advice for Kuwaitis', where social activists from different countries were exchanging views, solutions and experiences.

Table 5: PsyOps Evaluation Framework - Kuwait

3.5. Israel and Palestine (2012)

Israel armed forces operation 'Pillar of Defence' aimed at Hamas, had been announced not during a press conference but on Twitter. A concept behind the operation was based on two pillars – typical military operations coordinated along with full coverage of activities by using social media like Twitter, YouTube, Flickr and other popular social websites. In the first days of the operation a high-ranking leader of Hamas had been assassinated by an air strike and a movie from that attack had been posted on YouTube within next few hours.

Unprecedented use of the social media brought new dynamics to the conflict and increased accessibility of information. Every action taken by Israeli military forces had been immediately announced on social media sites gathering huge public attention. Social media also became popular as a forum for opinion exchange between Israel and Hamas. The war was not only taking place on the battlefield but at the same time in digital sphere.

Products & Technologies	Twitter, YouTube, Flickr.
Target Audience Analysis	The Palestinian population targeted by the Israeli Defence Force via Twitter. The international community targeted by Palestinian activists.
Effect	It was easy for the population to access the information and stay up to date on what was happening during the war.
Effectiveness	Unprecedented use of the social media brought new dynamics to the conflict and increased accessibility of information. Every action taken by Israel military forces had been immediately announced on social media sites gathering huge public attention. Social media also became popular as a forum for opinion exchange between Israel and Hamas.

Lessons	The use of social media allowed the public to discuss the moral and ethical background
Learnt	of the war. The actions performed during the war could also be analysed and it allowed
	a better control over military activities.
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Table 6: PsyOps Evaluation Framework – Israel and Palestine

4. Discussion: The evolution of PsyOps

During the early 1900's it was mostly leaflets, pamphlets, newspapers and radio that were used for PsyOps. Throughout the inventions of new technologies and products, it has been shown that PsyOps always shifted to using these updated technologies in an effort to reach the broadest population group. During the Bosnia and Kosovo war, the technologies used shifted from pamphlets and leaflets to the inclusion of comics and television. Similarly, since the widespread global adoption of social media, more recent operations have made use of Twitter, Facebook, YouTube and Flickr.

In 1989 large scale and prolonged pro-democracy demonstrations broke out in Mainland China, based largely in and around Tiananmen Square in the Chinese capital Beijing. The demonstrations lasted seven weeks and were eventually violently put down by the Chinese authorities. The entire protest became known as 'Tiananmen Square' or the 'Tiananmen Massacre.'





Figure 1: The 'Tank Man' of Tiananmen Square vs. the Tank Man of Iran (Atlanta-Journal, 2011), (Saul, 2014)

One iconic photograph (Figure 1) was that of a lone protestor who emerged from the crowds and defied the tanks in the Square by standing in front of them. Fast-forward to Iran in 2009 when large-scale protests broke out in what was widely considered a flawed election process. The protests were accompanied by a widespread government clampdown on both the protesters and the media. Mainstream media found it increasingly difficult to get any news reports out of the capital, Teheran and eventually the only source of news became social media and in particular, Twitter. The cartoon in Figure 1 depicts a lone protestor blockading a row of tanks. It mimics the images of the tank man from Tiananmen Square with the difference being that the figure in the cartoon is holding a mobile phone and is sending a tweet. The evolution from the iconic photograph to the cartoon depicts the evolution of PsyOps.

While the impact of social media services seems to be largely positive, many commentators and researchers have voiced some reservations as to the actual influence and ramifications of this adoption both in advocacy campaigning and socio-political protests. In the 2009 post-election unrest in Iran the much-vaunted role of the microblogging service Twitter has come under close scrutiny, with researchers noting that the role of Twitter in these protests was, if nothing else, uncertain.

4.1. The Dawn of Internet Freedom

Social media also holds the potential to be used as a tool for increased repression, with Gapper (2009) noting that "every Twitter follower and Facebook user who signs up for updates about popular protests in Iran or China, or uploads videos, signals his or hers revolutionary sympathies." While the ability to use pseudonyms on the Internet creates an environment for individuals to engage in public debate while retaining their anonymity, the Internet paradoxically also presents new tools and mechanisms for government and private companies to monitor Web activity and gather vast amounts of people's personal information, their patterns of communication, and also about their activities on the Internet. Irrespective of medium of communication, people are always more willing to engage in controversial debates in the public sphere if anonymity is guaranteed, and violations of privacy serve only to stifle the free flow of information and ideas. Traditional tools such as proxy servers, which have the ability to circumvent state censorship, can be easily shut down with impunity, but social services that are more embedded in society are harder to censor, if at all (Shirky, 2010).

The United Nations (2011) lists several countries who continue to block access to social media services with China being identified as the country having deployed the most sophisticated and wide-ranging filtering technologies that, for example monitor and block access to websites which contain terms such as 'democracy' and 'human rights'. As a counter measure to the global 'Occupy Movement' China's largest microblogging service, Sina Weibo filters for phrases that use the Chinese word for 'occupy' suggesting wariness in the ruling party that similar protests do not start occurring in China. Even with its well-established history of online censorship microblogging sites such as Sina Weibo have proven to be particularly problematic to the Chinese government who have expressed an intention to clamp down on 'Internet rumours' on microblogging sites (HarvardLaw, 2011).

4.2. Social Media in PsyOps

Military doctrine includes the possibility of exploiting the wide audiences of social media to conduct PsyOps with the primary intent to influence the 'sentiment' of large masses, as well as specific groups or individuals (e.g., emotions, motives, objective reasoning). The use of new-generation media and large-diffusion platforms such as the mobile and social media gives governments a powerful instrument to reach critical masses instantly (Infosec Institute, 2013).

The large diffusion of social media makes them ideal for many activities of interest for PsyOps missions. Modern social media networks are actively used by governments all around the world with the US, China and Russia being the countries most active in this field. Social media networks are privileged channels that can be adopted for PsyOps. Social media gives governments a powerful instrument to reach critical masses instantly.

Different cyber technologies such as web sites, virtual reality, blogs, video games, chat bots and of course social network platforms can be used to modify the sentiment on specific topics,. The mission for PsyOps professionals is to take advantage of these cyber technologies exactly like their adversaries do in order to influence individuals to support their cause; and the changing of attitudes and behaviours. The propaganda operations of cyber terrorists are also examples of the use of social media to recruit individuals and provide instruction on the operation to their followers.

In terms of strategic perception management of the masses, political and geopolitical campaigns using impressive amounts of data to induce information, fake or not, can be used to influence common sentiment of specific topics. Social media networks are flooded with particularly crafted content and numerous discussions are opened to involve an increasing number of users. The discussions are structured with ad hoc comments and posts are used to sensitise and influence the user's perception of events.

In the military context, PsyOps are an essential component of information warfare, having the specific goal of influencing human and automated decision processes, as well as the attitudes and behaviours of identified groups towards achieving the overall mission objectives. The use of social networks in this context also has a myriad of possibilities in terms of anonymity of the originator as well as specific distribution of material to chosen target audiences – from large scale, specific geographical regions or political parties, to individuals. Modern cyber technologies provide efficient instruments to anonymize connections, making it impossible to distinguish government operations from voluntary contributions.

The principal advantages of using social media for PsyOps are:

- Social media can reach a wide audience instantly and speed is an essential factor in PsyOps.
- Social media can reach individuals difficult to reach in other ways, thanks to the high penetration level of the Internet technology.
- The information being presented can be easily modified and changed in the cyber domain to address the target audience.
- Flexible and persuasive technologies are interactive and make it possible for an attacker to tailor operations for highly dynamic situations.
- Cyber and persuasive technologies can grant anonymity.

- Automated PsyOps on social media are more persistent and efficient than humans.
- Social media is a cheap means of dissemination.

There are also various disadvantages in conducting PsyOps using social media as a military option:

- Impossibility of limiting the availability of information published to selected audiences, unless it is sent directly to the target audience as e-mail.
 This causes a further effort to minimise the negative impact of operations on unintended target audiences.
- Target audience has to be able to access the Internet.
- The PsyOps messages have to appeal to the target audiences much more than in most other media; this requires a great effort by the originators.

5. Conclusion

This paper proposed an effort-analysis framework that can be used to analyse current and historical PsyOps. The analysis of PsyOps used in various operational settings can produce valuable information towards future PsyOps planning for operations or technology development. This paper investigated a limited number of historical PsyOps, with the aid of the framework, to illustrate the evolutionary trend of PsyOps throughout history. This evolutionary growth of technology within PsyOps indicated that there is continuous uptake of new technologies as they become popular amongst the public. It however, also illustrates that the non-Internet based "traditional methods" should not be disregarded in the current technological era. This paper specifically discusses the advantages and disadvantages that social media poses to PsyOps as the focus is on the technological aspect of the effort-analysis framework. In future research the other four criterions may be the focus of analysis with regards to the evolutionary aspect of PsyOps throughout history.

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