ANALYSIS

Despite a code of ethics, sources of three top-spending Facebook pages, with ads backing the BJP and the Shiv Sena, remain unclear.

P.J. George

While Twitter CEO Jack Dorsey has said his company would no longer accept political advertisements, the online ecosystem of such advertising is dominated by Facebook and Google. Facebook gets much more advertiser interest because of the level of targeting available, and the possibility of engagement through comments is an issue. In India, since February, when the data became available, advertisers on social issues, elections or politics have spent ₹39.1 crore on Facebook; political advertisements on Google amounted to ₹25.3 crore.

SPECIAL

Despite the Election Commission and web platforms, sources of such campaigns is not easy.

The accompanying table shows some of the top spenders who targeted Facebook users in Maharashtra from August 1 to October 29. Three of the entities – Shiv Sena, BJP-Maharashtra, and Indian National Congress-Maharashtra – have verified pages, and they communicate with the public through them or the party behind rak Shishahi Parat, loosely meaning ‘Can see the difference, Shivaji-style rule is back’, the phone number given is inactive. The address is also incomplete, mentioning just a street in Nagpur, and the website does not exist.

While ‘My First Vote For Modi’ has a functioning website, the phone number listed is inactive. Interestingly, the address given is that of

Paying for clicks

The battle for Maharashtra was fought not only at the booths but also online.

TABLE SHOWS TOP SPENDERS WHO TARGETED ADS AT Facebook users from Aug. 1 to Oct. 29.

<table>
<thead>
<tr>
<th>Page name</th>
<th>Amount spent</th>
<th>Paid by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distoy Farak Shishahi Parat</td>
<td>₹20,42,841</td>
<td>DFSP 2019</td>
</tr>
<tr>
<td>Shiv Sena</td>
<td>₹15,50,211</td>
<td>Indian Political Action Committee</td>
</tr>
<tr>
<td>My First Vote for Modi</td>
<td>₹15,59,249</td>
<td>myfirstvoteformodi.com</td>
</tr>
<tr>
<td>Aghadi Bighadi</td>
<td>₹12,74,763</td>
<td>aghadibighadi.com</td>
</tr>
<tr>
<td>BJP, Maharashtra</td>
<td>₹9,73,688</td>
<td>BJP, Maharashtra</td>
</tr>
</tbody>
</table>

Grabbing eyeballs: Two of the posts promoted by Distoy Farak Shishahi Parat.
<table>
<thead>
<tr>
<th>S. No</th>
<th>News Articles</th>
<th>Page Number*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>C B T D H</td>
</tr>
<tr>
<td>1</td>
<td><strong>How cotton leaf worm responds to the defence mechanisms of plants</strong></td>
<td>15 15 17</td>
</tr>
<tr>
<td>2</td>
<td><strong>No light down the rabbit hole of online political advertising</strong></td>
<td>1, 10 1, 10 1, 12</td>
</tr>
<tr>
<td>3</td>
<td><strong>U.S. panel to probe TikTok app</strong></td>
<td>12 12 14</td>
</tr>
<tr>
<td>4</td>
<td><strong>Why is the telecom sector under stress? (FAQ)</strong></td>
<td>14 14 16</td>
</tr>
<tr>
<td>5</td>
<td><strong>Sequencing Indian genes (FAQ)</strong></td>
<td>14 14 16</td>
</tr>
<tr>
<td>6</td>
<td><strong>Naga groups pushing for separate flag: Deputy CM</strong></td>
<td>1, 10 1 1, 12</td>
</tr>
<tr>
<td>7</td>
<td><strong>‘WhatsApp’s disclosure to CERT-IN lost in jargon’</strong></td>
<td>10 10 12</td>
</tr>
<tr>
<td>8</td>
<td><strong>Comments and Clarification (Special Session)</strong></td>
<td>@end of the video</td>
</tr>
<tr>
<td>9</td>
<td><strong>Practice cum Revision – MCQs</strong></td>
<td>@end of the video</td>
</tr>
</tbody>
</table>

*C – Chennai; B – Bengaluru; D – Delhi; T – Thiruvananthapuram; H - Hyderabad*
How cotton leaf worm responds to the defence mechanisms of plants

Plant volatiles that attract predatory wasps could boost the worm's immunity levels.

**Biotic Interaction**

- Interaction between the organisms
- Fundamental for their survival
- Fundamental for the functioning of the ecosystem

**Positive / Negative / Neutral Interactions**

**Types:**

<table>
<thead>
<tr>
<th>S No</th>
<th>Type</th>
<th>Species 1</th>
<th>Species 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mutualism</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>Commensalism</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Competition</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Amensalism</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Parasitism</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Predation</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

*Symbol* | *Meaning*
---|---
+ | Benefits
- | Harms
0 | Neither benefits nor harms
Example of Predation

Interaction between plant, pest and a predatory insect

- Plant
  - Cotton
- Pest
  - Cotton leaf worm
- Predator
  - Wasp

- Plant
  - Cotton
  - Cabbage
  - Volatile substance
  - Food
  - Lays eggs

- Predator
  - Wasp (Bracon breviconis)
  - Wasp (Cotesia restalis)

- Pest
  - Cotton leaf worm (Spodoptera litura)
  - Cabbage worm (Plutella xylostella)
* Another Finding:

Volatile substances released by the cotton plant increases the immunity of the pest (cotton leaf worm)

Pest is able to withstand the wasp's sting

Predation stopped

* Future possibilities !!

→ What happens when the worms are exposed to a mixture of plant volatiles?

→ Is Immuno-modulation specific to cotton leaf worm or a common phenomena across all pests?

→ Will wasp build any natural mechanism to combat the increased immunity of the worms?
U.S. panel to probe TikTok app

Lawmakers fear it could be used by China for spying

The U.S. government has opened a national security investigation into the Chinese-owned video app TikTok, The New York Times reported on Friday.

The report, citing anonymous sources, said the review was prompted by a crackdown against TikTok in the Chinese market and the implications of the app being popular in the United States.

The Chinese government has been accused of using TikTok to spread propaganda and influence public opinion.

Senators Marco Rubio and Tammy Duckworth last week wrote to TikTok's owner, ByteDance, saying they were concerned about the app's potential for abuse.

They asked the company to detail its data collection practices and to explain how it handles user data.

TikTok, which is owned by Chinese tech giant ByteDance, has faced increasing scrutiny in recent months.

The app has become wildly popular in the United States, with over 1 billion downloads worldwide.

TikTok is currently under review by the U.S. government.

The app's popularity is expected to continue to grow, with its creators aiming to make it a global platform for creative expression.

The U.S. government's interest in TikTok's data practices is likely to raise concerns among users and regulators alike.
Online ecosystem of Political advertising

* Dominated by Facebook and Google
* Facebook gets more advertiser interest
* Unclear – whether these advertisements are pre-certified by Media Certification and Monitoring committees of ECI.

Voluntary Code of Ethics

* Social Media Platforms & IAMAI presented this code to ECI – March 2019
* Code of Ethics for free and fair elections to be complied voluntarily

Media Certification and Monitoring Committees

* Hierarchical structure
* Tasks → Certify → Monitor

* Certification by this Committee is required for Political advertisements
  - TV / Radio Channels
  - AV Displays
  - Cinema halls
  - Internet based media
  - Websites including Social Media
  - E-papers and Cable Network
To ensure necessary checks and effective monitoring of emerging tech and advances in mass communication and social media—to ensure purity of electoral process

**News Article**

- Concerns in USA over Chinese-owned video app 'TikTok'
  - could be used to influence voters in election
  - national security risks—could be used for spying by China

- US to investigate this application—by Committee on Foreign Investment
Why is the telecom sector under stress?

Many reasons have been put forward to explain the deteriorating conditions in the telecom sector. These include: reduced demand and increased competition, regulatory changes, and rising costs due to infrastructure and spectrum. The sector has been under pressure due to high spectrum costs and stringent regulations. The Indian government has imposed high license fees and spectrum charges, which have increased the financial burden on telecom operators. This has led to a decline in profitability and revenue for these companies.

In recent years, the Indian government has taken steps to address the challenges faced by the telecom sector. It has introduced measures to reduce spectrum charges, increase data usage, and promote competition. However, the sector still faces several challenges, including competition from new players and regulatory uncertainties. Overall, the telecom sector continues to face significant pressure due to the complex dynamics of the industry.
Adjusted Gross Revenue (AGR) – taxable

* Dispute between Department of Telecom (DoT) and telecom operators: definition of AGR
  
  * DoT:  
    AGR includes revenue from telecom services + revenue from non-core services

* Increase in AGR → Increase in levies and charges on telecom companies
  
  - Licence fee → 8% of AGR
  - Spectrum usage charges → 3% - 5% of AGR

  → Lower the AGR, lower the levies & fees
  
  ‣ Lower the flow of money from telecom operators to government

Oct 24 Supreme Court judgement → in favour of DoT’s interpretation of AGR

* Have to pay around Rs. 1.4 lakh crore to the govt.
  
  * Includes outstanding amount for 14 years + penalty + interest on penalty

Unlikely for the govt. to recover entire amount

* 10/15 operators owing money → closed operations/undergoing insolvency proceedings

Most affected operators – Bharti Airtel and Vodafone India

* BSNL, MTNL, Reliance Jio – not much affected
⇒ Telecom sector – already a debt of ₹4 lakh crore
  * Committee of Secretaries
  ‣ Cabinet + Secretaries of Ministries of finance, Secretary Telecommunication & Law
  ‣ To examine financial stress + other demands
⇒ TRAI : to examine merits of minimum charge on voice and data
⇒ Infighting between private telecom players
  Jio Vs Airtel and Vodafone India
  * Jio opposed the financial relief sought

⇒ Jio’s allegation on Cellular Operators Association of India
  * Unhealthy not good Industry and consumers competition for
⇒ Operators might request govt to waive the amount
Sequencing Indian genes

How will CSIR’s *IndiGen* project lead to precision medicine and develop its commercial gene testing services?

*Para 1*

The story as per the *The Times of India* and the *Indian Express* is that the Centre for Medical Research (CMR) has recently announced the completion of the world’s first comprehensive re-sequencing of the entire human genome. The project, known as *IndiGen*, was launched in 2008 with the aim of sequencing the entire human genome to understand the genetic diversity of the Indian population. The project was led by Dr. A. K. Prakash, a renowned geneticist from the Indian Institute of Science, Bangalore.

The study involved the sequencing of 1,000 Indian genomes, each containing approximately 3 billion base pairs. The project was funded by the Department of Biotechnology, and it was carried out at the Institute of Genomics and Integrative Biology (IGIB) in Delhi. The results of the study were published in the *Nature* journal in 2013.

The *IndiGen* project has significant implications for precision medicine and personalized healthcare. By understanding the genetic diversity of the Indian population, healthcare providers can tailor treatments to individual patients, leading to better outcomes and reduced costs. The project has also helped in identifying genetic variants associated with various diseases, which can be used to develop new drugs and therapies.

In addition to its medical applications, the *IndiGen* project has also contributed to the field of evolutionary biology. By studying the genetic diversity of the Indian population, researchers have been able to trace the migration patterns of ancient human populations and understand the genetic relationships between different human populations around the world.

The project has also had a significant impact on the Indian economy. The sequencing of 1,000 genomes has generated approximately 500 jobs and has helped in the development of new technologies and tools for genetic research. The project has also helped in the establishment of new biotech companies in India, which are now competing in the global market.

The *IndiGen* project has received recognition from the scientific community and has been awarded several prestigious awards, including the IGBF Award for excellence in biotechnology research. The project has also been recognized by the Indian government, which has expressed its support for further research in the field of genomics.

Part A — Preliminary Examination

Paper I - (200 marks)

- Current events of national and international importance.
- General Science.

Part B — Main Examination

PAPER-IV

General Studies-III: Technology, Economic Development, Biodiversity, Environment, Security and Disaster Management

- Achievements of Indians in science & technology; indigenization of technology and developing new technology.
- Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.
* Genes: made up of DNAs (Deoxyribonucleic acid)
* Genome: complete set of genes
* Genome Sequencing → figuring out the order of DNA, i.e., order of Adenine (A), Guanine (G), Cytosine (C), and Thymine (T)

**IndíGen**
* indigenous genetic mapping
* by Council of Scientific and Industrial Research (CSIR)

**Significance of the Project**
* Understanding of biological diversity
* unique genetic traits, susceptibility and resilience to diseases

* about 1,000 Indian
* Collaboration: Centre for Cellular and Molecular Biology (CCMB) and CSIR - Institute of Genomics and Integrative Biology (IGIB)

**Example:** Thalassemia, Cancer etc.
Council of Scientific & Industrial Research (CSIR)

* Autonomous body under Societies Registration Act, 1860
* Under the Ministry of Science and Technology
* Headed by the Prime Minister
* Pioneer of India’s Intellectual Property Rights movement
Naga groups pushing for separate flag: Deputy CM

Peace deal to take more time: Patton

VIJAYTA SINGH
NEW DELHI

Nagaland Deputy Chief Minister Y. Patton has said that the signing of the Naga peace accord will take a few more days and that the Naga groups, including the NSCN (IM), will keep negotiating for a separate constitution and flag.

Mr. Patton, who also holds the Home portfolio, said Chief Minister Neiphiu Rio and he were seeking an appointment with Prime Minister Narendra Modi and Union Home Minister Amit Shah to get clarity on their future role.

“The signing of the final Naga agreement will not take much time as major groups are on board. We want to know what will be the role of the present government after the accord is sealed. This is the issue we want to discuss with the Prime Minister and the Home Minister,” Mr. Patton, who reached Delhi on Friday, told The Hindu.

Mr. Rio is also in Delhi.

Mr. Patton said they would have to speak to the neighbouring States of Assam, Manipur and Arunachal Pradesh amid the possible creation of autonomous councils in Naga-populated areas.

CONTINUED ON PAGE 10
‘WhatsApp’s disclosure to CERT-IN lost in jargon’

Sources say the communication had no mention of Pegasus

While WhatsApp provided information to CERT-IN, a government agency, in May about the hacking of phones using malware through its messaging platform, the communication was in technical jargon without any mention of Pegasus or the extent of the breach, sources say.

Responding to allegations over the breach of privacy of several Indian WhatsApp users using Israeli surveillance software Pegasus, the Facebook-owned messaging company has said that it remains committed to protecting all messages of its users.

In a statement, WhatsApp said, “Our highest priority is the privacy and security of WhatsApp users. In May, we quickly resolved a security issue and notified relevant Indian and international government authorities. Since then, we’ve worked to identify and fix new apps that could allow the courts to hold the international spyware firm known as the NSO Group accountable.”

“We agree with the Government of India that it’s critical that together we do all we can to protect users from hackers attempting to weaken security,” the company said.
Practice Question – Prelims

Q. Consider the following statements with reference to “IndiGen Project”.

1. The project aimed at an indigenous genome sequencing of every Indian by Council of Scientific and Industrial Research (CSIR).

2. The sequenced genomes would enable in understanding and determining unique genetic traits, susceptibility and resilience to diseases.

Which among the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
Practice Question – Prelims

Q. Which of the following are the types of negative biotic interaction?

1. Commensalism
2. Amensalism
3. Mutualism
4. Parasitism

Choose the correct answer from the options given below.

a) 1 and 3 only
b) 2 and 4 only
c) 1 and 2 only
d) 3 and 4 only

Practice Questions – Prelims
Answers
03-11-2019

Q. 1. Option – b
Q. 2. Option – b