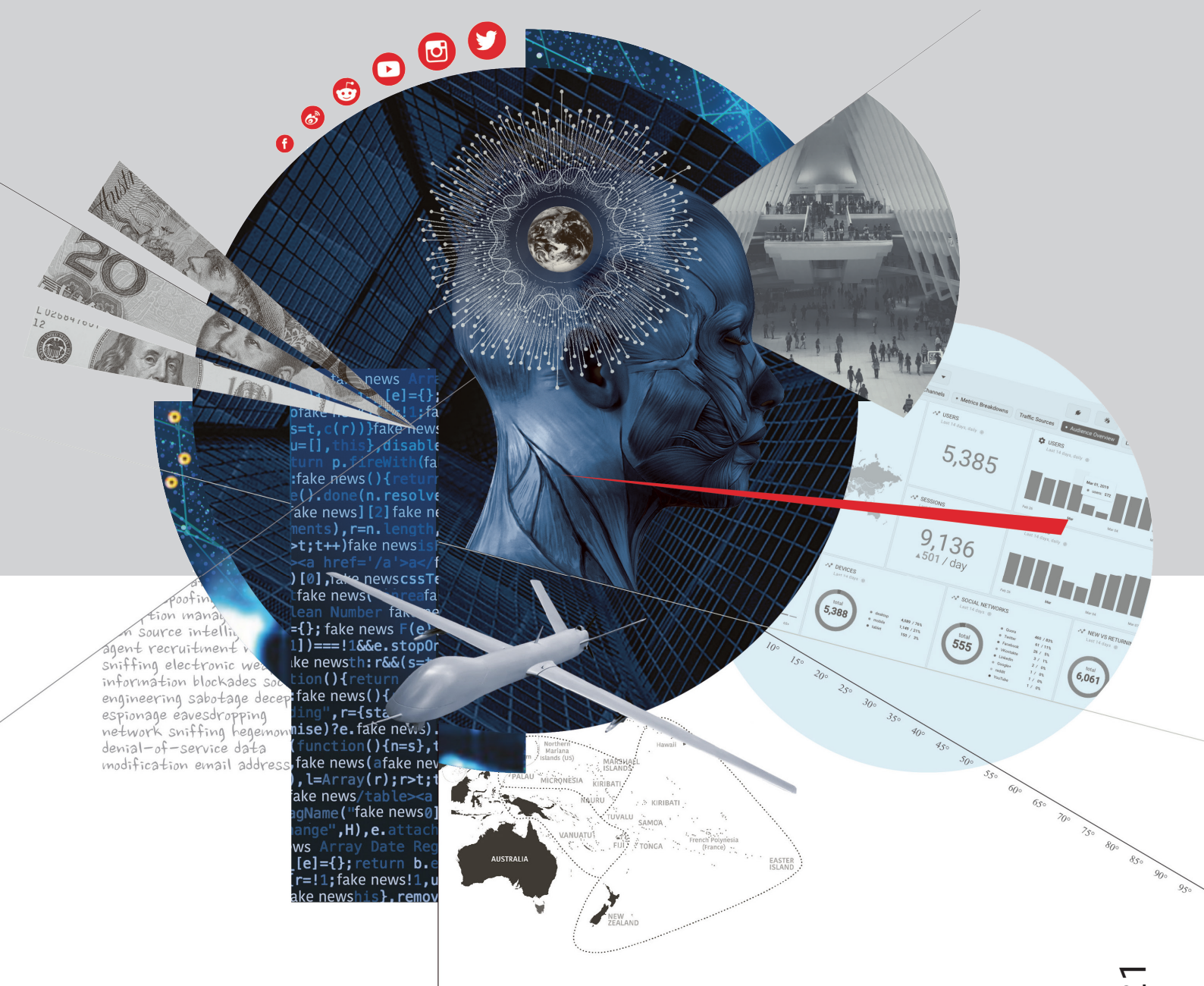# Understanding Mass Influence

A case study of Cambridge Analytica as a contemporary mass influence campaign

JULY 2021

This project report is jointly submitted by the parties set out below as part of a Standard Collaborative Project pursuant to Defence Science Partnering Multi-Party Collaborative Project Agreement (Agreement No. MyIP10379) dated 11 February 2021. The ownership and use of Intellectual Property subsisting in the Report is subject to the terms of that Agreement.

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BACKGROUND

Introduction

This report is a case study of Cambridge Analytica (CA) conducted as part of the Joint Influence Activities' (JIA) collaborative research project on influence operations actors. The purpose of the case study is to provide insight into the attributes that make an effective influence operations actor and any factors of their operations that could inform emerging Defence information warfare (IW) capability. We present our findings in accordance with the themes stipulated by JIA: Governance and Ethics, Persuasive Technology, Systems and Technology, and Campaign Awareness and Sensemaking. Under each theme, we identify the primary attributes of CA's influence operations and assess the enablers of CA's influence campaigns. Although CA was a private corporate entity, we nevertheless find that an assessment of the core attributes of its business model and technology raises important considerations for Defence, and Defence's approach to IW capability design.

The Cambridge Analytica Story

CA was a political campaigning firm that operated between 2013 and 2018. It was a subsidiary of Strategic Communications Laboratories (SCL) Group, a company that had engaged in information operations (IO) globally since the early 1990s.[1] Although legally separate, SCL Group, CA and another subsidiary, SCL Elections, overlapped to the point that government investigations questioned whether the companies were one and the same. These investigations deemed SCL Elections and CA to be, in practice, the same company (see Theme 1 of this report – 'Governance and Ethics').[2]

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[1] DCMS, "Disinformation and Fake News: Final Report," vol. HC1791 (London, 2019), https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/1791/1791.pdf.

[2] DCMS, "Disinformation and Fake News: Final Report," vol. HC1791 (London, 2019), https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/1791/1791.pdf; ICO, "SCL Elections Prosecuted for Failing to Comply with Enforcement Notice," January 9, 2019, https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2019/01/scl-elections-prosecuted-for-failing-to-comply-with-enforcement-notice/; Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns" (UK, 2018), https://ico.org.uk/media/action-weve-taken/2259371/investigation-into-data-analytics-for-political-purposes-update.pdf; In the Matter of Cambridge Analytica LLC, No. 9383 (Federal Trade Commission December 18, 2019).

CA was established primarily to influence the United States electorate to favour the Republican Party but, also, likely designed to engineer broader societal change. Indeed, the company was founded on the ideas of far-right media mogul Steve Bannon and investment from right-wing donor Robert Mercer, and was never intended to make a profit. The company's political campaigns were directed toward advancing far-right politics, not only in the US but states worldwide. As the timeline on page 4 shows, over the period 2013-2018, SCL Group, SCL Elections and CA conducted operations in Nigeria, Trinidad and Tobago, Kenya, Malaysia, the Philippines, the US and, potentially, the United Kingdom.[3]

The company's official role was to develop communications strategies to help clients reach voters more effectively.[4] In practice, this involved conducting information influence campaigns online by microtargeting individual voters and spreading disinformation. As detailed in Theme 2 of this report, 'Persuasive Technology', CA's microtargeting strategy relied on data analytics and personality profiling. Legal and ethical problems associated with this, particularly CA's collection and application of personal identifiable data, instigated a scandal, after which CA and SCL Group entered administration. The companies are now defunct. However, they reportedly reincarnated as a 'new' political consultancy company, Emerdata. The timeline on page 4 provides an overview of key campaigns and events defining the CA saga.

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[3] DCMS, "Disinformation and 'Fake News': Interim Report" (London: House of Commons, July 24, 2018), https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/363/363.pdf; Brian Ekdale and Melissa Tully, "African Elections as a Testing Ground: Comparing Coverage of Cambridge Analytica in Nigerian and Kenyan Newspapers," *African Journalism Studies* 40, no. 4 (2019): 27–43; Cambridge Analytica, "CA Political," 2016, https://twitter.com/hindsightfiles?lang=en; Carole Cadwalladr, "Revealed: Graphic Video Used by Cambridge Analytica to Influence Nigerian Election," the Guardian, April 4, 2018, http://www.theguardian.com/uk-news/2018/apr/04/cambridge-analytica-used-violent-video-to-try-to-influence-nigerian-election; Matthew Rosenberg, Nicholas Confessore, and Carole Cadwalladr, "How Trump Consultants Exploited the Facebook Data of Millions," *The New York Times*, March 17, 2018, https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html; SCL Group, "Kenya: Proposal for TNA/Jubilee Alliance," 2014, https://twitter.com/hindsightfiles?lang=en.

[4] Cambridge Analytica, "CA Political"; Natasha Lomas, "Cambridge Analytica's Nix Said It Licensed 'millions of Data Points' from Acxiom, Experian, Infogroup to Target US Voters," *Techcrunch*, June 7, 2018, https://techcrunch.com/2018/06/06/cambridge-analyticas-nix-said-it-licensed-millions-of-data-points-from-axciom-experian-infogroup-to-target-us-voters/.

Cambridge Analytica: A Timeline

Stephanie Meek and Carmen Jacques

During this period, SCL changed its methodology. It moved from traditional Target Audience Analysis that used analog data to a remote data-centric methodology that utilised digital data.

Campaign
The 2010 St Kitts and Nevis Prime Ministerial Election

The 2010 Trinidad & Tobago Election (Caribbean)

Campaign
The 2013 Kenyan Presidential Campaign

The Trinidad and Tobago General Election (Caribbean)

Campaign
US Republican Primaries

UK Leave.EU Referendum

The 2015 Nigerian General Election

Campaign
The 1994 South Africa General Election

Campaign
Orange Revolution in the Ukraine

Campaign
The 2007 Nigerian Presidential Election

Campaign
The 2017 Kenyan Presidential Elections

1994 | 1999 | 2004 | 2006 | 2007 | 2009 | 2010 | 2011 | 2013 | 2014 | 2015 | 2016 | 2017

Campaign
The 1999 Indonesia Legislative Election

Campaign
Latvian 2006 Election

Campaign
St. Vincent and the Grenadines (Caribbean)

Campaign
The 2011 Saint Lucia General Elections (Caribbean)

Campaign
The 2014 US Midterm Elections

US Midterm Elections – For America Campaign

Campaign
The 2016 US Presidential Election

The 2016 Saint Lucia General Elections (Caribbean)

In the fall of 2013, Steve Bannon, the editor of Breitbart News, introduced Wylie and Nix to Robert Mercer, the billionaire founder of Renaissance Technologies, who agreed to invest twenty million dollars in a new S.C.L. venture, named Cambridge Analytica, that would seek to influence the upcoming congressional elections.

After announcing its shutdown, Cambridge Analytica was shortly acquired by a holding company called Emerdata Limited. The company, who was incorporated in the U.K. in 2017 by former directors of Cambridge Analytica and prominent members of the Mercer family, acquired most of the SCL companies prior to their bankruptcies, with the purpose to bring them under a single ownership structure for the purpose of refinancing them.

Campaign
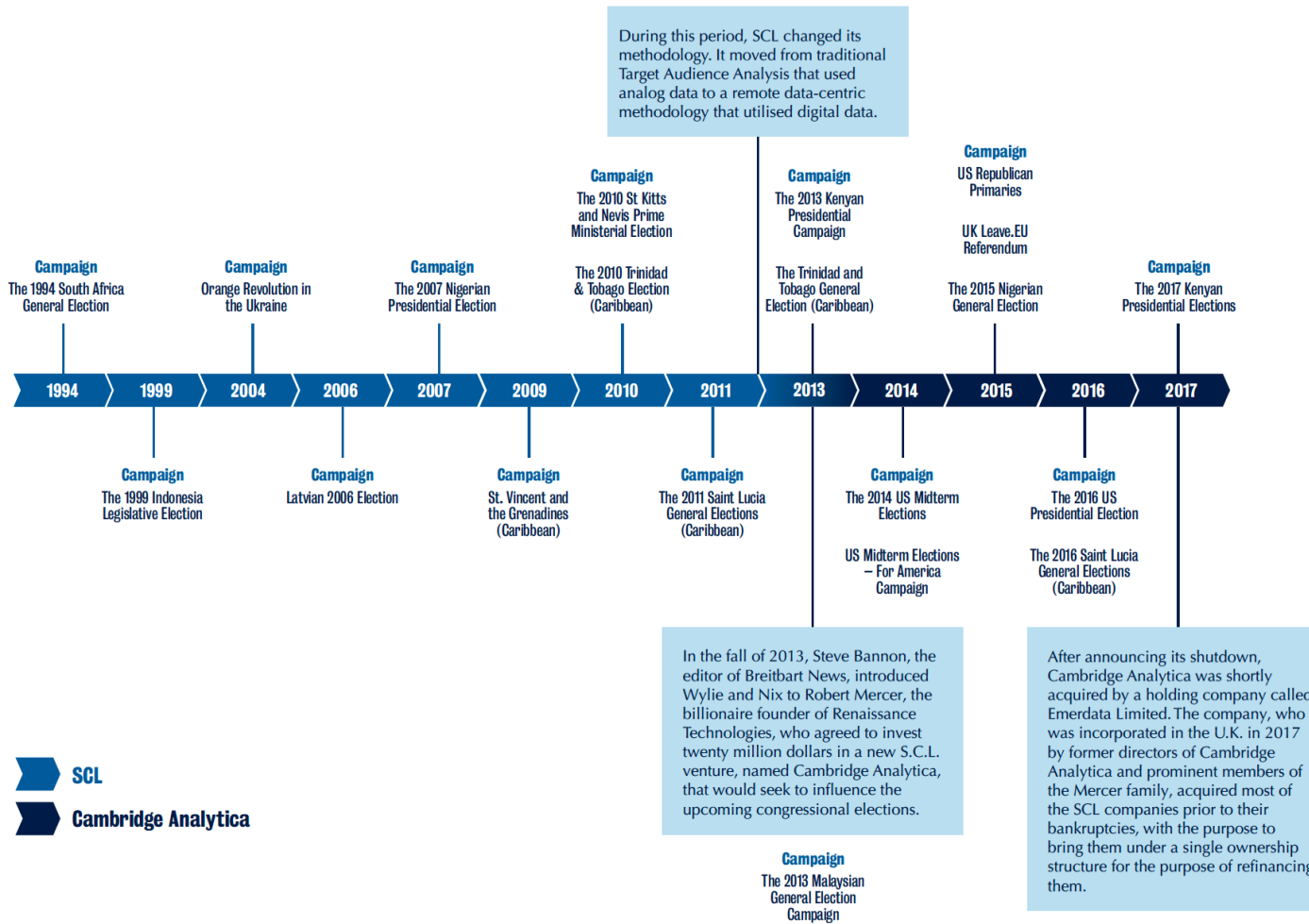The 2013 Malaysian General Election Campaign

SCL

Cambridge Analytica

Figure 1: Cambridge Analytica Timeline

METHODOLOGY

This case study forms part of a JIA project which involved multidisciplinary researcher collaboration across participating Australian universities and the Department of Defence. Accordingly, our approach to the case study reflects conceptual eclecticism to best achieve JIA's objectives and utilise the spectrum of multidisciplinary expertise provided.

Rapid Review Protocol

We approached the CA case study using a rapid review protocol. This is a targeted approach which involves identifying relevant literature and the most relevant information for a specific purpose.[5] It is a style of review commonly found in policy development because it delivers a sharp synthesis of information within a limited timeframe. It involves deploying targeted methods of identifying and evaluating relevant literature based on a project's aims, and the calculated exclusion of literature at the literature search stage.[6]

Narrowing the Scope of Literature

As per the rapid review protocol, we narrowed the scope of the literature for review by preparing a needs assessment which reflected JIA's requirements and goals. Namely, to understand the enablers of CA's operations in terms of successful and unsuccessful attributes and practices. This informed the initial research questions we used to guide the literature discovery process, and allowed the exclusion of grey literature that fell outside the relevant timeframe and subject. Then we conducted a preliminary literature scan to refine our research questions and define key issues. To source directly relevant conceptual literature and crosscheck our search parameters, we consulted experts in the fields of computer science, psychology, law and political science, as well as Defence representatives with expertise in IW priorities.

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[5] Andrea C Tricco et al., "A Scoping Review of Rapid Review Methods," *BMC Medicine* 13, no. 1 (2015): 1–15.
[6] Rebecca Ganann, Donna Ciliska, and Helen Thomas, "Expediting Systematic Reviews: Methods and Implications of Rapid Reviews," *Implementation Science* 5, no. 1 (2010).

Framing Findings

We framed findings based on the needs assessment. Consequently, we framed our results around the JIA-specified themes, Governance and Ethics, Persuasive Technology, Systems and Technology, and Campaign Awareness and Sensemaking, that emphasised the strengths and weaknesses of CA's operations. Our findings were also informed by the broader project purpose to provide initial scoping groundwork to inform the development of Australian IO capability. One of the challenges encountered in this research was a shortage of reliable open-source information on CA's operations. To mitigate this problem, we assessed evidence using the triangulation method, whereby more than once source provided support for key findings.

ABBREVIATIONS

JIA: Joint Influence Activities

CA: Cambridge Analytica

NSA: Non-state actor

IO: Information operations

IOA: Information operations actor

AIQ: AggregateIQ

DCMS: Digital, Culture, Media and Sport Committee

ICO: Information Commissioner's Office

SCL: Strategic Communications Laboratories

IW: Information warfare

US: United States

UK: United Kingdom

OCEAN: Openness, Conscientiousness, Extroversion, Agreeableness, Neuroticism

FINDINGS

1. GOVERNANCE AND ETHICS

Melissa-Ellen Dowling

Summary

- The primary strengths of CA's business model derived from the company's ability to map and exploit the regulatory environment relevant to its operations.
- The primary weakness of CA's business model is that it lacked mechanisms to foster and maintain its legitimacy. This made the business unsustainable in a liberal democratic operating environment.

Introduction

Awareness of CA's governance structure is necessary to understand organisational enablers and disablers of CA's IO. This theme is structured in two parts: firstly it describes and analyses CA's organisational structure; secondly it evaluates CA's business model based on legality and ethics. The benchmark for what constitutes 'ethical' conduct in this case study is the extent to which CA adhered to or deviated from norms and laws with respect to core values of liberal democracy, privacy and consent. We find that CA's organisational structure and business model lacked sufficient legitimacy to sustain the company in a liberal democratic operating environment.

Organisational Structure

CA was a non-state actor (NSA) engaged in IO that was able to operate non-kinetically and with an asymmetric warfare advantage over state actors. As a private business, CA operated on a corporate model which was characterised by complex incorporation arrangements across international jurisdictions.

This section provides an overview of CA's corporate structure, including the relationship between relevant parent-subsidiary companies and ownership, and a description of CA's human resources. Despite apparent attempts to structure the company and its operations

for optimal liability aversion and high-risk ventures, we find that the structure was largely ineffective. The mains reasons for this are: (1) corporate porosity diminished liability protections that are ordinarily conferred under company law with respect to CA and SCL Elections, (2) corporate porosity compromised SCL Group which was tarnished by CA's operations, (3) outsourcing provided unreliable liability protection and made CA appear unwilling to be accountable and adhere to the law, (4) jurisdiction likely offered CA only sparse protection, and (5) complex structure and outsourcing practices weakened the perceived legitimacy of CA and rendered its business unsustainable. Accordingly, we recommend that information operations actors (IOAs) adopt simple and transparent organisational structures, and optimise in-house capabilities to avoid outsourcing key functions.

Corporate Structure

Although CA was legally incorporated as a subsidiary of SCL Group in December 2013,[7] there is strong evidence that a high degree of porosity characterised the practical relationship between the companies. Indeed, the UK's Digital, Culture, Media and Sport Committee (DCMS) struggled, in its words, to "untangle the complex web of relationships" between SCL, CA and other related companies such as AggregateIQ (AIQ).[8] The DCMS Committee agreed with the UK Information Commissioner's Office (ICO) that SCL and CA displayed an unusual degree of 'permeability' despite evidence from Alexander Nix, CA's chief executive officer, that the entities were separate aside from shared executives.[9] Neither the ICO investigation, nor the DCMS inquiry, unequivocally concluded that CA and SCL Group functioned as one company, though it was strongly implied.

Officially, CA was a subsidiary of SCL Group that was incorporated in Delaware (US). SCL Group was the parent company of CA and four other legally distinct subsidiaries (SCL Elections, SCL Social, SCL Commercial and SCL Defence). It also had contractual, but not incorporation, ties to AIQ (Canada).[10] SCL Group was incorporated in London (UK), as was

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[7] In the Matter of Cambridge Analytica LLC,.

[8] DCMS, "Disinformation and 'Fake News': Interim Report" (London: House of Commons, July 24, 2018), 34, https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/363/363.pdf.

[9] DCMS, "Oral Evidence: Fake News Christopher Wylie," § Digital, Culture, Media and Sport Committee (2018), http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/digital-culture-media-and-sport-committee/fake-news/oral/81022.html.

[10] While the ICO concluded that a purely contractual relationship existed, the DCMS enquiry signalled that the relationship between AggregateIQ and SCL appeared to go beyond the scope of a traditional contractual

SCL Elections. Parliamentary and legal investigations indicate that CA was the trading arm of SCL Elections.[11] Former SCL and CA employees have described how they were never "privy to the full company structure" and noted that it was "very complicated" – either by design or disorganisation.[12] Despite the apparent opacity of the corporate structure of CA, figure 2 represents an approximation model of SCL Group's organisational structure.

Figure 2: SCL Group corporate structure.[13]

The primary indicators of porosity are:

- Staff worked across CA and SCL and were employed by the SCL Group not CA.[14]

relationship. See: Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns." DCMS, "Disinformation and Fake News: Final Report," HC1791:56.

[11] SCL Elections, not CA, entered into a contract with GSRApp on behalf of CA. See: In the Matter of Cambridge Analytica LLC, at 5. See also: Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns"; Green v SCL Group Ltd and others [2019] EWHC 954 (Ch) (April 17, 2019).

[12] DCMS, "Oral Evidence: Fake News Brittany Kaiser HC363," § Digital, Culture, Media and Sport Committee (2018), http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/digital-culture-media-and-sport-committee/disinformation-and-fake-news/oral/81592.pdf.

[13] Ann Marlowe and Wendy Siegelman, "SCL Group Companies and Shareholders," May 9, 2017, https://wsiegelman.medium.com/scl-companies-shareholders-e65a4f394158.

[14] DCMS, Oral evidence: fake news Brittany Kaiser HC363. Christopher Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World* (London: Profile Books, 2019). DCMS, "Disinformation and Fake News: Final Report."

- Shared intellectual property (IP) rights and data transfer between CA and SCL.[15]

  CA could transfer data and IP to SCL. However, there is contradictory evidence regarding whether CA had access to SCL's IP, such as the BDI method or database.[16]

- Overlap of some shareholders and executives.[17]

  For example, Nix was the Chief Executive of CA as well as a director of SCL Group.[18]

- Interchangeability and/or conflation of the company names in government and legal investigations.[19]

Further, despite CA and its associated companies' incorporation in the specified jurisdictions, the family of businesses had offices globally, and operated internationally and transnationally (see timeline on page 4 for campaigns).

Human Resources

Given CA's emphasis on digital data-centric approaches to microtargeting the company gathered a diverse range of skills across its staff (see table 1).[20] Nevertheless, CA still contracted out key functions to third parties.[21] The use of contractors indicates that the company did not have sufficient internal capacity to orchestrate sophisticated IO. This need to outsource corresponds with evidence that CA predominantly recruited staff with experience in political consulting.[22] While outsourcing enabled CA to operate as an IO entity, it potentially compromised the integrity of its operations. Conversely, employing

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[15] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*; DCMS, "Oral Evidence: Fake News Alexander Nix HC 363," Pub. L. No. HC 363, § Digital, Culture, Media and Sport Committee (2018), http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/digital-culture-media-and-sport-committee/disinformation-and-fake-news/oral/79388.pdf.DCMS, "Disinformation and Fake News: Final Report," HC1791:48.

[16] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*. DCMS, "Oral Evidence: Fake News Alexander Nix HC 363," Pub. L. No. HC 363, § Digital, Culture, Media and Sport Committee (2018), http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/digital-culture-media-and-sport-committee/disinformation-and-fake-news/oral/84838.pdf.

[17] DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.

[18] DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018; In the Matter of Cambridge Analytica LLC, at 3.

[19] Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns"; Green v SCL Group Ltd and others [2019] EWHC 954 (Ch). 'Cambridge Analytica and SCL Elections' In the Matter of Cambridge Analytica LLC,. DCMS, "Disinformation and Fake News: Final Report," HC1791:84.

[20] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*; DCMS, Oral evidence: fake news Brittany Kaiser HC363; B. Kaiser, *Targeted: The Cambridge Analytica Whistleblower's Inside Story of How Big Data, Trump, and Facebook Broke Democracy and How It Can Happen Again* (Harper, 2019); DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018; SCL Group, "Kenya: Proposal for TNA/Jubilee Alliance," 2014, https://twitter.com/hindsightfiles?lang=en.

[21] DCMS, Oral evidence: fake news Brittany Kaiser HC363; Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns."

[22] DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.

contractors might have been a way for CA to avoid liability. Or the use of 'consultants' and contractors may have been potentially necessary due to CA's relatively small staff, given its global reach. At peak operating capacity, CA likely had between 80-120 staff worldwide.[23] However, if CA and SCL shared staff[24] this figure would be much higher and CA's operating capacity would have been far greater.

CA STAFF AREAS OF EXPERTISE	
Statistics	Data science and computer science
Sociology	Law
Marketing	Public relations
Business	Political science
Creative arts	Copywriting
Psychology	Finance

Table 1: CA staffing

Recruitment occurred both via advertisements and networking. Figure 3 is a screenshot from a historic version of CA's website and demonstrates standard recruitment strategies.[25]
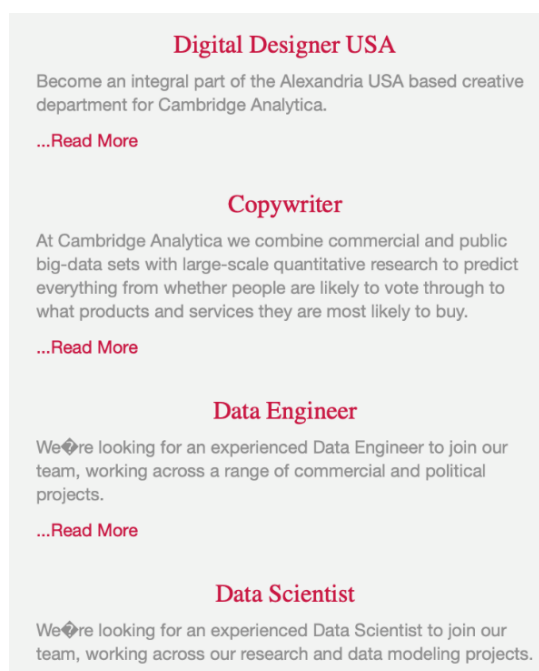
Figure 3: CA Historic Recruitment Advertisement.[26]

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[23] DCMS.
[24] DCMS, Oral evidence: fake news Brittany Kaiser HC363; DCMS, Oral Evidence: fake news Christopher Wylie.
[25] "Cambridge Analytica: Better Audience Targeting," Wayback Machine, 2016, https://web.archive.org/web/20210320164149/https://cambridgeanalytica.org/.
[26] "Cambridge Analytica: Better Audience Targeting."

Porosity, Outsourcing and Jurisdiction Differentiation

Three core characteristics of CA's organisational structure stand out in terms of enabling and/or disabling the company's operations: (1) porosity (2) outsourcing (3) jurisdiction differentiation. CA and SCL Group suffered a loss of legitimacy which prompted insolvency. Despite this, entering administration offered both companies an effective shield.

Porosity and Parent-Subsidiary Liability

Although CA's porosity practices that defined its relationship with SCL were assets in terms of sharing human and technological resources (IP, data and staff), porosity was more of a weakness than an advantage. As former CA staffer turned 'whistleblower' Christopher Wylie reported, the intention behind SCL Group's complex company structure could have been merely to comply with US political campaigning law and, therefore, enable its US operations.[27] Alternatively, the complex corporate structure could have been an engineered attempt to engender legal protections and enable high-risk operations. Despite a lack of evidence supporting the latter, companies often use complex structures like SCL Group's to gain limited liability to protect the parent company via the corporate veil.[28] Sometimes, companies use this to engage in opportunistic conduct and reduce the risk to the parent.[29] Regardless of CA's intention behind the complex corporate structure, SCL Group nevertheless benefitted legally from its technical separation from CA. Company law in the relevant jurisdictions for the CA case treats parents and subsidiaries as separate legal entities, which suggests that CA's corporate structure should have protected SCL Group.[30] In the UK and Australia, courts are reluctant to pierce the corporate veil and tend to do so only in cases of fraud, or where the parent is effectively in complete control of the subsidiary.[31] US courts are more prone to pierce the veil when there is a "lack of separation" between

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[27] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.

[28] Although, the principle of limited liability was designed to protect investors not parent companies. See: J. Dine and M. Koutsias, *The Nature of Corporate Governance*, Corporations, Globalisation and the Law Series (Edward Elgar Publishing, 2013), 39.

[29] C.A. Witting, *Liability of Corporate Groups and Networks*, International Corporate Law (Cambridge University Press, 2018). Glen Wright, "Risky Business: Enterprise Liability, Corporate Groups and Torts," *Journal Of European Tort Law* 8, no. 1 (2017): 54–77.

[30] Radu Mares, "Liability within Corporate Groups: Parent Company's Accountability for Subsidiary Human Rights Abuses," in *Research Handbook on Human Rights and Business* (Cheltenham: Edward Elgar Publishing, 2020), 446–71.

[31] Helen Anderson, "Piercing the Veil on Corporate Groups in Australia: The Case for Reform," *Melb. UL Rev.* 33 (2009): 333.

companies.[32] It is the prima facie assumption in these jurisdictions that parents and subsidiaries are separate legal persons. To impose liability on SCL, it would have been necessary to determine which company was "carrying on the business" in issue[33] – hence the significance of CA and SCL's relationship.

The complex structure not only served to allow CA to operate under the radar but it also masked the Mercer family's involvement in an influence operations firm. CA was reportedly 90% owned by the Mercer Family Foundation as a result of an upfront $15-$20 million investment.

Based on the limited legal actions brought against CA, the degree of porosity between two of the branches of the SCL Group – CA and SCL Elections – was sufficient to impose liability on SCL Elections.[34] In fact, the prosecuting body, the ICO, referred to them as the same company: "SCL Elections Ltd also known as Cambridge Analytica".[35] Consequently, the degree of practical porosity that characterised CA's structure diminished any potential limited liability that might have otherwise existed. Note, though, the overarching parent company, SCL Group, avoided liability for any of the conduct associated with the CA scandal, which demonstrates that the corporate structure served its apparent protective purpose, up to a point.[36] The relationship between IOA entities is not only significant in a corporate context but is a matter that any IOA, including a state-based IOA, would need to carefully address to achieve optimal liability protection through organisational design.

Outsourcing and Principal-Contractor Liability

Likewise, CA outsourcing to third-party contractors or consultants such as AIQ, Sam Patten and Black Cube might have provided some protection against liability (irrespective of whether this was CA's intent). However, this is difficult to verify without access to the contracts, or more examples of legal action against CA and its contractors.

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[32] Anderson.

[33] Dine and Koutsias, *The Nature of Corporate Governance*, 46. "Smith, Stone & Knight Ltd vs Birmingham Corporation [1939] 4 All ER 116." (n.d.).

[34] BBC, "Cambridge Analytica Parent Firm SCL Elections Fined Over Data Refusal," *BBC*, January 10, 2019, https://www.bbc.com/news/technology-46822439.

[35] ICO, "SCL Elections Prosecuted for Failing to Comply with Enforcement Notice."

[36] Director liability is not explored in this case study since it is beyond the relevant scope of the project.

Nevertheless, in CA's Nigerian campaign, all parties avoided legal action entirely for the production and dissemination of a violent, and potentially defamatory, video about the opposition candidate (reportedly used to target voters by AIQ for CA), along with unethical intelligence work (allegedly undertaken by Black Cube for CA).[37] CA removed itself from the campaign by purportedly hiring Sam Patten to run it as a 'consultant'.[38] Similarly its use of a complex corporate structure, and the use of contractors and consultants to perform 'risky' IO tasks, seemingly enabled CA to act with disregard for the rule of law and democratic process, and undertake projects that it otherwise might have deemed too risky.[39]

Conversely, the US Federal Trade Commission (FTC) held CA liable for deceptive acts and practices relating to the acquisition and use of data obtained via GSRApp (which produced the user app *thisisyourdigitallife*), even though GSRApp was legally a separate company that CA hired to harvest data. Nonetheless, the FTC determined that CA and SCL Elections (always referred to together in the case) played a "significant and direct role in the development and implementation of the GSRApp"[40] and, therefore, mandated that CA and SCL Elections cease misleading users as to the harvesting of their data via the app. Here, CA as the principal was liable for the actions of its contactor due to the strong element of control over the contractor's conduct.

Insolvency and Liquidation

CA's insolvency also played an important role in curtailing liability and enabling its reincarnation as Emerdata. By the time legal action commenced, and the extent of CA's misconduct had become evident, CA had entered administration. The ICO initiated proceedings against CA but acknowledged that harsher punitive measures could not be imposed due to CA's liquidation.[41] Consequently, while CA escaped significant legal penalty, Facebook was subject to legal action for its part in facilitating CA's data harvesting. In

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[37] DCMS, Oral evidence: fake news Brittany Kaiser HC363; Carole Cadwalladr, "Revealed: Graphic Video Used by Cambridge Analytica to Influence Nigerian Election," the Guardian, April 4, 2018, http://www.theguardian.com/uk-news/2018/apr/04/cambridge-analytica-used-violent-video-to-try-to-influence-nigerian-election.Cadwalladr.

[38] DCMS, Oral evidence: fake news Brittany Kaiser HC363.

[39] See e.g. Mares, "Liability within Corporate Groups: Parent Company's Accountability for Subsidiary Human Rights Abuses."

[40] In the Matter of Cambridge Analytica LLC, at 5.

[41] Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns," 8. See also: https://ico.org.uk/media/action-weve-taken/2618383/20201002_ico-o-ed-l-rtl-0181_to-julian-knight-mp.pdf.

Australia, Facebook, rather than CA, was under legal investigation, and the UK ICO was able to impose greater fines on Facebook than on CA, largely because of CA's insolvency protection.[42] CA's evasion of liability enabled the company to reincarnate and continue its activities as Emerdata. The SCL Group, despite its limited liability protection, entered administration shortly after CA and following liquidation, several of its executives transitioned to Emerdata.[43]

Legitimacy

Ultimately, even though SCL Group was legally separate from CA, it was not apparently perceived as separate by the public, and the relationship between SCL Group and CA led to SCL's demise. This suggests that while legal structure is important to an extent, it does not necessarily protect IOAs from poor practice in respect of norms of privacy, consent and democracy.[44] The SCL Group and CA suffered a widespread loss of perceived legitimacy for their illegal data harvesting methods and unethical influence campaigns.[45] SCL Group, even though legally separate from CA's activities, paid the price of association and reportedly suffered financial losses that led to the administration of SCL Group, along with CA.[46]

CA's ties to SCL Group also raised suspicions in the media about the extent to which the companies shared military technology, though both companies had ceased operating by that stage.[47] Ethical issues regarding the potential use of IW tactics against one's own domestic population, and evidence of dealings with Russian officials, also delegitimised CA and, via extension, cast SCL Group under suspicion. Clearly, perceived legitimacy is important for corporate actors but would be indispensable for democratic state IOA's which must maintain widespread public trust to operate. A state-based IOA, therefore, needs to

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[42] Australian Information Commissioner v Facebook Inc (No 2), No. 1307 (FCA September 14, 2020); Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns."

[43] Green v SCL Group Ltd and others [2019] EWHC 954 (Ch).

[44] See 'business model' for analysis on privacy and consent and ethics pertaining to democratic standards.

[45] Karlsson-Vinkhuyzen, "Legitimacy," in *Handbook on Theories of Goverannce*, ed. Christopher Ansell and Jacob Torfing, 2016.

[46] Reuters, "Cambridge Analytica and British Parent SCL Elections Shut down after Facebook Scandal Drives Clients Away," First Post, May 3, 2018, https://www.firstpost.com/world/cambridge-analytica-and-british-parent-scl-elections-shut-down-after-facebook-scandal-drives-clients-away-4454535.html.

[47] Emma Briant and Kaiser, Brittany, "Propaganda Machine: The Military Roots of Cambridge Analytica's Psychological Manipulation of Voters," January 2020, https://www.democracynow.org/2020/1/7/cambridge_analytica_data_manipulation_john_bolton.Jesse Witt and Alex Pasternack, "Before Trump, Cambridge Analytica Quietly Build Psyops for Militaries," Fast Company, September 2019, https://www.fastcompany.com/90235437/before-trump-cambridge-analytica-parent-built-weapons-for-war.

operate in a way that fosters legitimacy (see business model p. 17). The key is transparency and simplicity, rather than develop an operational structure that signals (whether intentional or not) evasion of the rule of law and avoidance of accountability.

Integrity of Data Holding Practices

CA's corporate permeability also raised questions around the integrity of its data holding practices. There are strict laws on the transfer of personal data (see e.g. UK *Data Protection Act 2018*). Investigations into whether CA exposed data to 'external' companies like AIQ formed a large part of the ICO's investigation and generated condemnation. Despite contradictory witness statements, both the ICO and the DCMS found strong evidence of data transfers between SCL, CA and AIQ.[48] Nevertheless, the evidence proved inconclusive and CA had entered into administration which restricted otherwise available legal remedies.

Jurisdiction Differentiation

Jurisdiction did not become a significant issue regarding CA's operations – probably because the company went into administration before further action could be brought. It is therefore difficult to arrive at conclusions on the enabling effect of CA's jurisdiction differentiation arrangements.[49] However, the two main characteristics of CA's structure in terms of jurisdiction are: (1) jurisdiction differentiation between SCL Group companies and (2) jurisdiction differentiation between CA's jurisdiction of incorporation and CA's jurisdictions of operation.

Hypothetically, had CA not become insolvent, it might have been subject to Australia's *Privacy Act 1988* (Cth) because, like Facebook (which was deemed subject to the Act by the Federal Court), it "carried on business" in Australia.[50] In the UK, any UK company, even one operating offshore, is bound by UK data protection legislation – hence SCL Elections' liability in the ICO action. It is unclear from the evidence whether the differentiation between CA's parent and sibling companies had any legal protection effect.

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[48] See 'business model' for an overview of the problems of CA's treatment of data.
[49] Also because laws vary across jurisdictions on privacy, data, and political campaigning.
[50] Australian Information Commissioner v Facebook Inc (No 2).

Overall, CA's organisational structure shielded SCL Group from liability but ultimately did not protect the companies from a loss of legitimacy which precipitated insolvency. Further, while CA's use of outsourcing enhanced its capability to conduct its influence operations, its outsourcing practices did not always provide reliable liability protection for its high-risk activities and potentially damaged the perceived legitimacy of CA's operations.

Business Model

Self-described as a 'political consultancy' firm, in practice, CA's business model centred on engineering the preference formation and articulation processes of democratic decision-making on behalf of its clients. It primarily relied on the performance of manipulating input and output mechanisms of elections and, thus, intended to operate as an entity for achieving mass influence. CA's purpose and operations design, therefore, relied on both building and appearing to build influence operations capability. Indeed, marketing the company's ability to alter voter behaviour was a fundamental client recruitment strategy.[51] This section (1) outlines the business objectives that framed CA's business model, (2) provides an overview of CA's business model, (3) identifies the strengths and weaknesses of the model and (4) assesses the transferability of its model to democratic state IOAs. It evaluates CA's business model on the premise that a business model "should deliver consequences that enable an organization to achieve its goals" and, therefore, requires an understanding of what the goals are, who the clients are, and the resources and processes deployed to translate goals into outcomes.[52]

We find that CA's business model was unsustainable because the company failed to prioritise legitimacy in its business design – an omission which allowed it to act unethically by contravening norms of democratic society and, in turn, damage democracy. However, we also find that democracy was an enabler of CA's operations.

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[51] Kaiser, *Targeted: The Cambridge Analytica Whistleblower's Inside Story of How Big Data, Trump, and Facebook Broke Democracy and How It Can Happen Again*; DCMS, Oral evidence: fake news Brittany Kaiser HC363; DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.
[52] Ramon Casadesus-Masanell and Joan Ricart, "How to Design a Winning Business Model," *Harvard Business Review* January-Febraary (2011).

CA's Business Objectives

CA's primary purpose was to influence electoral outcomes in line with its client's goals. CA's clients were politicians or other individuals or entities with a vested interest in a particular candidate's victory.[53]

Officially, CA's function was much like other political consultancies: to assist candidates to improve communications with the electorate.[54] In its promotional material, CA declared its ability to "turn millions of data points into targeted voter engagement strategies".[55]

CA as a campaign consultancy allegedly operated similarly to an advertising agency in that its role primarily concerned political branding.[56] Aligning with this, an archived version of its website homepage describes its work as achieving "data-driven behavio[u]r change".[57] However, given its intended interference in democratic processes, CA's business model was only comparable to advertising agencies at a superficial level. Influencing political processes was at the core of its work and this purpose consequently informed every aspect of CA's business model.

CA's Business Design and Strategy

CA's business objective was to "influence voting behaviour".[58] Accordingly, CA's business model was premised on the manipulation of election outcomes via influencing preference formation (e.g. deciding who to vote for) and articulation (e.g. casting a ballot) in decision-making processes. Across its campaigns, CA aspired to:

- Prevent opposition articulation of preferences

- Promote client supporters' articulation of preferences

- Persuade swing voters to reshape their preferences

This aspect of its business model is not particularly unique to CA in its role as a political campaigning firm. In fact, even aspects of the psychographic profiling were not unique to

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[53] Green v SCL Group Ltd and others [2019] EWHC 954 (Ch).
[54] DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.
[55] Cambridge Analytica, "CA Political," 2016, https://twitter.com/hindsightfiles?lang=en.
[56] DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.
[57] "Cambridge Analytica: Better Audience Targeting."
[58] Green v SCL Group Ltd and others [2019] EWHC 954 (Ch).

CA's model.[59] CA differentiated its business by emphasising its 'unique' data analytics capabilities. CA's unique selling point was as a data analytics firm that could, with allegedly "over 5000 points of data" on every individual voter,[60] identify and target swing voters more effectively than political consultancies not driven by digital data analysis. The core capability embedded in its business model was (a) ability to identify swing voters and (b) ability to target swing voters. As Nix explained, CA's work was primarily about "identifying the people that sit in the middle – the persuadable or swing voters", before implementing influence tactics.[61] The distinctive features of CA's business model were:

(1) CA's creation of "vast databases", and use of a combination of demographic and psychographic data in large quantities;[62] and

(2) CA's use of that data to microtarget individual voters.

CA itself also promoted its use of combined demographic and psychographic data as a key component of its business, and as something that differentiated it from its competitors.[63] It emphasised targeting voters as distinct individuals rather than generalising and using demographic indicators alone. Figure 4 is reproduced from CA marketing materials and illustrates CA's self-identified unique selling-point.

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[59] Jeff Chester and Kathryn C Montgomery, "The Role of Digital Marketing in Political Campaigns," *Internet Policy Review* 6, no. 4 (2017): 1–20.
[60] "Cambridge Analytica: Better Audience Targeting."DCMS, "Disinformation and Fake News: Final Report."
[61] DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.
[62] Green v SCL Group Ltd and others [2019] EWHC 954 (Ch).
[63] Cambridge Analytica, "CA Political."

Demographic View

By combining geographic, demographic and psychographic data like personality traits, behavioral triggers and voting intent, Cambridge Analytica can create a granular and highly targetable votergraphic view of current and prospective voters.

Votergraphic View

Figure 4: Cambridge Analytica's microtargeting model depicted in marketing materials.[64]

Databases were tailored to each campaign and, thus, could not be used for another campaign within the same state. In Nix's words, "you have to take these data and contextualise them into the campaign that you are working on. Everything that we did for (Ted) Cruz in that regard was centric around Cruz".[65] However, it might be possible to generate two sets of databases – one that is predominantly raw data, and another processed dataset specific to a campaign.

Table 2 (p. 21) is a partial business model canvas prepared from triangulating evidence of CA's business operations. The canvas is unavoidably abstract and incomplete due to the lack of CA's transparency and the limited evidence available but, nevertheless, illustrates some of the company's core business attributes.

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[64] Cambridge Analytica, 4.
[65] DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.

CAMBRIDGE ANALYTICA: BUSINESS MODEL CANVAS

KEY PARTNERS	KEY ACTIVITIES	VALUE PROPOSITIONS	CLIENT RELATIONSHIPS	KEY RESOURCES
AIQ GSRApp BlackCube Sam Patten	Macro: harvest data + identify persuadable voters + persuade those voters Micro: campaign support, donor fundraising, digital support, creative support, issue research, message testing, training materials	'Over 5000 points of data on every US voter' 'Turn millions of data points into targeted voter engagement strategies' (see CA Political (2016))	Work for clients with conservative ideological preferences Private actors State actors (SCL Group)	Data: Facebook, Experian, InfoGroup, gun licence registry, etc. Ripon platform Human Resources

CHANNELS	COST STRUCTURE	REVENUE STREAMS		
Facebook Twitter Snapchat Websites Online forums	Unknown	Investments Client contracts (unknown division of specific streams)		

Table 2: Overview of CA's business model

CA's business model was:

(1) Founded on accessible data

(2) Designed to leverage a loosely regulated digital domain

(3) Reflective of its client base and shareholders

However, CA's business model was also:

(4) Designed to interfere with democratic decision-making processes

(5) Reliant on illegal data harvesting

Strengths of CA's Business Model

Accessible Data Sources

Despite the illegality of some of CA's data harvesting methods (detailed below in 'weaknesses' pp. 23-4), it nevertheless based its business model on the ability to access data. CA was aware that it would be able to gain both psychographic and demographic data, and, accordingly, made data collection and analytics central to its business. Aside from Facebook data, CA purchased data through data brokers such as Infogroup, Experian and Data Trust, and legally utilised other sources of data, such as gun licence registries.

Leveraged a Loosely Regulated Digital Domain

CA leveraged the loosely regulated digital domain to access data and circulate political messages online. As its exploitation of lax Facebook policies demonstrates, CA harnessed

regulatory loopholes to collect data and post political content to social media platforms. It did this on the basis that attribution of both information and disinformation is a key challenge defining cyberspace. The attribution 'problem' for CA was not a problem but an enabler.[66] It meant that it could post inflammatory content with impunity knowing that tracing the content back to the company would be 'virtually' impossible. In short, CA developed a solid awareness of its operating environment with respect to technology and effectively leveraged that awareness to its advantage.

Reflected Ideological Preferences of Shareholders

CA's business model strongly reflected and responded to its client and shareholder needs, and their political preferences. Consequently, although fiscal benefit was important, CA was also driven by ideological objectives. Indeed, CA was founded with a view to bolstering support for the US Republican Party. As said, it was formed in consultation with Steve Bannon, and its majority shareholding had right-wing political preferences. As also stated, one of the company's largest investors was Republican donor Robert Mercer.[67] Extending to SCL Group, shareholders reportedly included former UK Tory ministers.[68] CA's campaign history also strongly reflects its client bases' right-wing ideological preferences (e.g. campaigns supporting Ted Cruz, Donald Trump, Goodluck Jonathan and TNA/Jubilee Party). There is also evidence CA did some preliminary work for the UK Independence Party (UKIP), although the ICO found that CA did not work on the Brexit referendum campaign.[69]

CA was therefore an ideologically driven actor, rather than a purely profit-oriented business. This would have shaped its business model and informed its strategies, goals and preferred clients. This means that CA had to operate based on particular parameters, just as a state IOA would (although the conditions would vary). Certain conduct would fall within or outside the IOA's cognitive schema. Note though, that in terms of the 'everyday' operations

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[66] Lorraine Finlay and Christian Payne, "The Attribution Problem and Cyber Armed Attacks," *AJIL Unbound* 113 (2019): 202–6; Nicholas Tsagourias, "Cyber Attacks, Self-Defence and the Problem of Attribution," *Journal of Conflict and Security Law* 17, no. 2 (2012): 229–44.

[67] Matthew Rosenberg, Nicholas Confessore, and Carole Cadwalladr, "How Trump Consultants Exploited the Facebook Data of Millions," *The New York Times*, March 17, 2018, https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html.Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.

[68] Holly Watt and Hilary Osbourne, "Tory Donors among Investors in Cambridge Analytica Parent Firm," *The Guardian*, March 22, 2018, https://www.theguardian.com/politics/2018/mar/21/tory-donors-among-investors-in-cambridge-analytica-parent-firm-scl-group.

[69] Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns."

of CA, profit was still a driving factor. Indeed, winning new, wealthy clients was a key part of CA's business design.[70]

In the same way as CA, as a business, had to adhere to its shareholders' preferences, a state-based IOA operating in a liberal democracy would need to adhere to the electorate's preferences and conform to the ideological constraints of the liberal system.

Strong Pre-Campaign Sensemaking Processes

CA's business model integrated robust pre-campaign sensemaking processes to ensure a solid foundation for data analytics and effective execution of its 'communications strategy' (i.e., its targeted political messaging). This was a key strength of CA's business model because it meant that the operations were founded on actionable knowledge, and information that CA had the staff and skills to interpret this in line with its goals. See 'Campaign Awareness and Sensemaking' section for more detail on CA's sensemaking practices.

Weaknesses of CA's Business Model

Designed to Interfere with Democratic Decision-Making Processes

CA's business necessitated interference in democratic processes and thereby undermined democracy.[71] CA's manipulation of decision-making processes degraded the integrity and legitimacy of the electoral process and outcomes, and compromised core democratic goods. Its business model also did not preclude collaboration with known malign foreign entities (MFEs) such as Russia and, thus, potentially rendered CA as a vector for foreign interference. By eroding the legitimacy of democratic processes, CA concurrently diminished its own legitimacy as a business. There is, therefore, a double-layered legitimacy problem with respect to CA: (1) its own legitimacy deficiency that derived from public lack of acceptance of its operations and (2) its erosion of the legitimacy of democratic decision-making processes. Its conduct in relation to (2) affected (1), but its disregard for preventing (1) enabled (2). To create a sustainable business in a liberal democratic environment CA needed to incorporate practices that ensured it acquired and maintained legitimacy in in the

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[70] DCMS, Oral evidence: fake news Brittany Kaiser HC363.
[71] William A Gorton, "Manipulating Citizens: How Political Campaigns' Use of Behavioral Social Science Harms Democracy," *New Political Science* 38, no. 1 (2016): 61–80.

eyes of the public. Maintaining legitimacy was not a priority for CA and this produced an unsustainable business model. In fact, CA's business had low legitimacy precisely because its fundamental activities undermined the legitimacy of democratic decision-making.

At its core, legitimacy concerns the justification and acceptance of decisions and/or authority.[72] However, regarding democratic processes, legitimacy can also be conceptualised in relation to the quality of inputs into decisions (such as electing a president). According to Schmidt, legitimacy is connected to the degree that input processes are "acceptable to and accepted by the citizenry, such that citizens believe that these are morally authoritative".[73] In a democracy, legitimacy is associated with a combination of key democratic goods: public participation, enlightened understanding, pluralism, trust, freedom of information, and the rule of law. With a business model designed to disrupt and diminish those democratic goods, CA had adopted a model that was not compatible or sustainable in a liberal democratic system. Indeed, its operations were detrimental to democracy.[74] Its business model predisposed CA to engage in conduct contrary to that considered acceptable in a liberal democracy and contrary to public expectations, which led to a loss of legitimacy and, in turn, the company's liquidation.

Figure 5 depicts the ways in which CA violated some of the core axioms of liberal democracy. The boxes represent the axioms (pluralism, enlightened understanding, rule of law and participation) and the blue text describes actions by CA that violated the associated liberal democratic axioms.

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[72] Karlsson-Vinkhuyzen, "Legitimacy," 197.

[73] Vivien A Schmidt, "Democracy and Legitimacy in the European Union Revisited: Input, Output and 'Throughput,'" *Political Studies* 61, no. 1 (2013): 2–22.

[74] Adrien Chen, "Cambridge Analytica and Our Lives inside the Surveillance Machine," *The New Yorker* 21 (2018): 8–10; Jonathan Heawood, "Pseudo-Public Political Speech: Democratic Implications of the Cambridge Analytica Scandal," *Information Polity* 23, no. 4 (2018): 429–34.; Gorton, "Manipulating Citizens: How Political Campaigns' Use of Behavioral Social Science Harms Democracy."
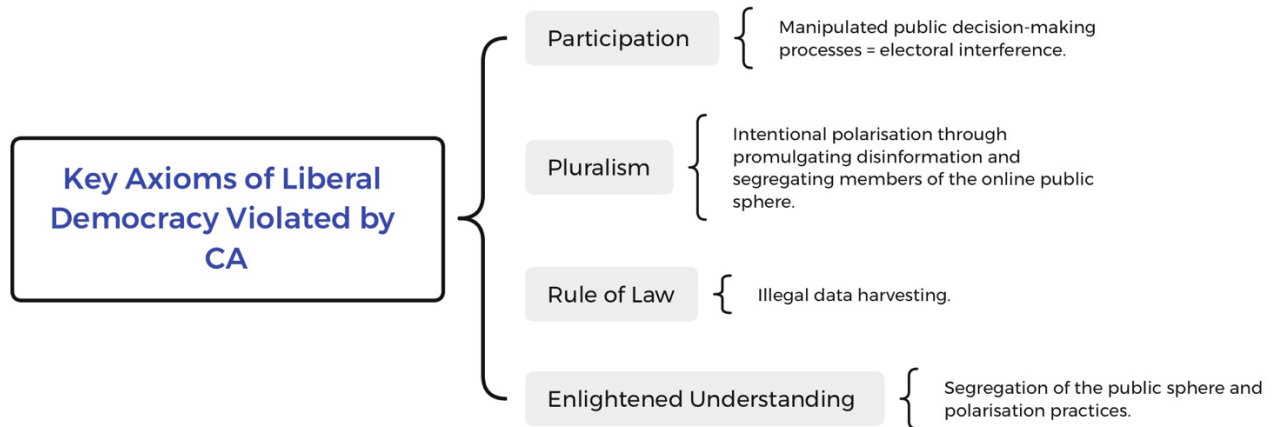
Figure 5: Ways in which CA violated axioms of liberal democracy.

Promulgated Disinformation and Inflammatory Information

Across their campaigns, CA created fake forums and posted disinformation, and other misleading and inflammatory material, on social media platforms.[75] CA favoured negative campaigning wherein discrediting a client's opposition and exacerbating division formed the dominant tactic to consolidate partisanship.[76] Consequently, CA's business model was inclined to foment polarisation and erode pluralism by segregating members of the online public sphere.[77]

CA's model necessitated segregation of the public sphere so that voters' online content primarily reflected messages that aligned with CA client interests and reduced access to diverse content.[78] CA made it difficult for voters to gain exposure to ideas and perspectives

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[75] DCMS, "Disinformation and Fake News: Final Report"; Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*; Kaiser, *Targeted: The Cambridge Analytica Whistleblower's Inside Story of How Big Data, Trump, and Facebook Broke Democracy and How It Can Happen Again*; Emma L. Briant, "We Need Tougher Action against Disinformation and Propaganda," *Brookings* (blog), July 15, 2020, https://www.brookings.edu/blog/techtank/2020/07/15/we-need-tougher-action-against-disinformation-and-propaganda/; "'Cambridge Analytica Planted Fake News' - BBC News," accessed April 17, 2021, https://www.bbc.com/news/av/world-43472347; "Cambridge Analytica and Facebook: The Scandal and the Fallout So Far - The New York Times," accessed April 17, 2021, https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html.

[76] Richard R Lau and Ivy Brown Rovner, "Negative Campaigning," *Annual Review of Political Science* 12 (2009): 285–306; DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018.

[77] Simone Chambers, "Truth, Deliberative Democracy, and the Virtues of Accuracy: Is Fake News Destroying the Public Sphere?," *Political Studies* 69, no. 1 (2020): 147–63.

[78] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.

beyond those pushed by CA. It accordingly corrupted the public sphere.[79] The consequences
of this were the potential for a decline in democratic goods: reduced pluralism, tolerance,
and enlightened understanding.

Pluralism is essential for democracy because it encourages polity members to hold several
salient identities. This means that interests are distributed across groups which prevents
binary structures forming, and facilitates equal political access for all individuals and groups
in society.[80] Polarisation as encouraged by CA diminishes crosscutting ties between groups
which can foster a "latent conflict" environment and exclusion from the political process.[81]
Democracy relies on inclusion and equality to function.[82] Voters would not be able to
understand others' views and interests if they were not exposed to them due to being
virtually locked in online communities via filter bubbles, a tactic deployed by CA. Exposure
to a range of views is essential for a functioning democracy premised on the peaceful
contest of ideas. Consequently, polarisation is damaging to core democratic goods because
it facilitates the construction of "exclusive identities" and "crystalliz[es] interests into
opposite factions".[83]

Furthermore, CA also deprived targets of gaining an enlightened understanding of matters
that could affect their interests and choices.[84] Enlightened understanding is fundamental for
the formation of political preferences because it generates "understanding of possible
government actions and policies", and encourages cognitive synthesis of such actions with
the electors' interests.[85]

Although CA's business model and associated strategies fundamentally contradict and,
indeed, degrade democratic axioms, the democratic system itself was an enabler of CA and

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[79] Gorton, "Manipulating Citizens: How Political Campaigns' Use of Behavioral Social Science Harms
Democracy," 71.

[80] G. Maddox, *Australian Democracy in Theory and Practice* (Sydney: Pearson Education Australia, 2005).

[81] Deepa Narayan, "Bonds and Bridges: Social Capital and Poverty" (World Bank, 1999),
https://documents1.worldbank.org/curated/en/989601468766526606/107507322_20041117172515/additio
nal/multi-page.pdf.

[82] Robert A Dahl, *On Democracy* (Yale university press, 2008).

[83] Delia Baldassarri and Andrew Gelman, "Partisans without Constraint: Political Polarization and Trends in
American Public Opinion," *American Journal of Sociology* 114, no. 2 (2008): 408–46.

[84] Dahl, *On Democracy*.

[85] Robert A. Dahl, "What Political Institutions Does Large-Scale Democracy Require?," *Political Science
Quarterly* 120, no. 2 (2005): 196, http://www.jstor.org/stable/20202514.

CA's polarisation strategy. Democratic political systems, characterised by freedoms of expression and information, allow for the largely unrestricted promulgation of ideas and information. Disinformation is notoriously difficult to regulate due to political rights and freedoms, as well as the cyber attribution problem.[86] In this respect, CA's degradation of democracy was only possible because of democracy's inherent yet indispensable vulnerabilities.[87] Although gaining enlightened understanding relies on freedom of expression, CA exploited such freedom to deliberately curtail elector agency and freedom of choice.[88]

Note that the extent to which CA managed to silo the public sphere is not verifiable without systematic empirical research. Nonetheless, a business model that mandates conduct that creates silos in the public sphere is unsustainable in a liberal democratic system, whether the intended effect eventuates or not.

Distorted Participatory Processes

CA's business model revolved around manipulating democratic processes of public participation in politics. Public participation is one of the most crucial components of liberal democracy.[89] Trust and legitimacy are improved because public involvement in decision-making imbues policy with a sense of public ownership. In turn, this facilitates compliance with policy.[90] Public involvement in politics contributes to other core features of the democratic system such as pluralism, equality and inclusion, and is important for ensuring a truly 'representative' representative government, and maintaining responsible government wherein the executive remains accountable to the citizenry.

CA's business depended on *covertly* interfering with the organic formation and articulation of preferences, and shaping both the inputs (votes) and outputs (election results) of decision-making. Consequently, the business model was inherently incompatible with liberal

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[86] See e.g. Melissa-Ellen Dowling, "Democracy under Siege: Foreign Interference in a Digital Era," *Australian Journal of International Affairs*, 2021, 1–5.
[87] Laura Rosenberger and Lindsay Gorman, "How Democracies Can Win the Information Contest," *The Washington Quarterly* 43, no. 2 (2020): 75–96.
[88] Dahl, "What Political Institutions Does Large-Scale Democracy Require?," 196.
[89] Dahl, *On Democracy*; C. Tilly, *Democracy* (Cambridge: Cambridge University Press, 2007); Carole Pateman, "Participatory Democracy Revisited," *Perspectives on Politics* 10, no. 1 (2012): 7–19; Mark Bevir, *Democratic Governance* (Princeton University Press, 2010).
[90] A.H. Birch, *The Concepts and Theories of Modern Democracy* (London: Routledge, 2001).

democracy and predestined from conception to suffer a crisis of legitimacy.

Irrespective of its tangible and 'actual' effect, which might have been overinflated,[91] a widespread perception that CA affected the outcome, or corrupted the participatory process, degrades the system's legitimacy, and has a strong potential to diminish trust in institutions, government and the entire system of liberal democracy.[92]

Case Study: Nigeria 2015

In CA's Nigerian campaign, the use of a violent Islamophobic video depicted the opposition candidate, Muhammadu Buhari, enforcing Sharia law. The video portrayed Buhari and Sharia law as violent and barbaric – what, according to the video, Nigeria would become if Buhari were elected president.[93] The content was framed around the idea of binary identities and pitted the 'Other' Muslims against Christians. The Christian incumbent, Goodluck Jonathan, did not finance the campaign but CA's undisclosed client supported a Goodluck Jonathan victory. The video content reflected CA's trademark negative campaigning tactics and was evidently designed to provoke fear, and capitalise on existing social fissures to further polarise the Nigerian community by leveraging Christian and Muslim identities. Consequently, by aiming to foment polarisation, CA intentionally sought to depreciate the democratic good of pluralism.

The video was intended to supress voter turnout – in particular, CA sought to prevent Buhari sympathisers from voting. In the Nigerian campaign, the role of the content was not to sway preferences, but to prevent the articulation of existing preferences that would potentially jeopardise a Goodluck Jonathan victory. If CA's efforts to supress votes were unsuccessful (note: Buhari was elected), CA's interference in the electoral process nevertheless degraded the quality of democracy.

Curtailed Voter Agency

Despite being transparent concerning which campaigns they were supporting, CA's business model necessitated a high degree of deception in its operations to ensure that targets would not recognise the information they were consuming constituted political campaigning.[94] As such it crossed the line into "covert psychological manipulation" designed to limit targets' choices.[95] Behavioural change would be exponentially more difficult if the targets were cognisant of influence efforts (see 'persuasive technology'). Ethical persuasion is arguably only achieved if the target is informed and chooses to be persuaded; hence, CA's

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[91] G. Kefford, *Political Parties and Campaigning in Australia: Data, Digital and Field*, Political Campaigning and Communication (Springer International Publishing AG, 2021), 2.Joanne Hinds, Emma J Williams, and Adam N Joinson, "'It Wouldn't Happen to Me': Privacy Concerns and Perspectives Following the Cambridge Analytica Scandal," *International Journal of Human-Computer Studies* 143 (2020): 102498.

[92] Melissa-Ellen Dowling and Tim Legrand, "Countering Foreign Interference Series" (Canberra: Department of Defence, 2021).

[94] See e.g. Heawood, "Pseudo-Public Political Speech: Democratic Implications of the Cambridge Analytica Scandal."

[95] Vian Bakir, "Psychological Operations in Digital Political Campaigns: Assessing Cambridge Analytica's Psychographic Profiling and Targeting," *Frontiers in Communication* 5 (2020): 12.

deceptive *modus operandi* removed choice and curtailed agency.[96] Even low-level deceptive persuasive techniques such as 'nudging' have been criticised for being unethical due to limiting choice (see 'persuasive technology').[97] This means that CA's reliance on deception correlates with de-legitimacy in a liberal democratic context premised on freedom of choice. Although users were to some extent complicit in their own manipulation,[98] the covert character of CA's operations suggests such complicity was unavoidable and diminished autonomy.[99]

Furthermore, microtargeting that exploited individuals' apparent psychological weaknesses potentially reduced targets' agency and capacity to fully control their political preferences, and their articulation of them. This is particularly pertinent given CA's use of persuasive technologies to exploit psychological vulnerabilities in individuals and capitalise on their fear. If corrupted preferences are formed (based on deception rather than informed choice or enlightened understanding) and articulated in a democratic process, then the output (e.g. Brexit or election of a president) might be (a) perceived as illegitimate by the relevant population and/or (b) actually illegitimate if not reflective of organic interests. This raises the possibility that CA eroded democratic and national sovereignty, and, thus, constituted a national security threat.

Vector of Foreign Interference

CA's business model rendered CA as a potential vector of foreign interference. The business design, premised on a dangerous combination of the acquisition of profit along with the advancement of right-wing ideologies enabled, even encouraged, CA to cultivate clients with links to known MFEs with an interest in interfering in Western democratic processes.

Although it is difficult to unequivocally establish CA's ties to Russia's Internet Research Agency (IRA), there is some evidence collusion occurred.[100] As the IRA case study in this

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[96] Bakir, "Psychological Operations in Digital Political Campaigns: Assessing Cambridge Analytica's Psychographic Profiling and Targeting."

[97] Bakir. Daniel M Hausman and Brynn Welch, "Debate: To Nudge or Not to Nudge," *Journal of Political Philosophy* 18, no. 1 (2010): 123–36.

[98] Hal Berghel, "Malice Domestic: The Cambridge Analytica Dystopia," *Computer* 51, no. 5 (2018): 84–89.

[99] Ken Ward, "Social Networks, the 2016 US Presidential Election, and Kantian Ethics: Applying the Categorical Imperative to Cambridge Analytica's Behavioral Microtargeting," *Journal of Media Ethics* 33, no. 3 (2018): 133–48.

[100] DCMS, Oral Evidence: fake news Christopher Wylie.

report shows, the IRA was a Russian state-sponsored organisation. Collusion with the IRA may have made strategic sense to CA as its aim in the US campaign intersected with Russia's: to engineer a Republican presidential victory. Further, both organisations displayed an apparent disregard for distorting the democratic process and, thus, CA was unlikely to have an aversion to IRA methods. Despite uncertainty in this, it is nevertheless clear that CA's business model made it an attractive and viable opportunity. Ironically, the profit/ideological core of CA's design enabled CA to damage, or potentially damage, the political system that enabled it to exist and flourish in the first place.

CA also had ties to Russian company Lukoil, which has verifiable connections to the Russian government and is reportedly a known entity of political interference. Lukoil's reputation for interference led the US to place the company on its sanctions list.[101] Evidence of a substantive relationship between CA and Lukoil is sparse but it is confirmed that at a minimum CA staff delivered a pitch to Lukoil executives. Although we cannot determine the extent of the collusion, the fact that CA pitched to Lukoil demonstrates the absence of an ethical code of practice in CA's model. There should have been policies in place internally to prevent CA from conducting business with known MFEs. CA's willingness to engage with MFEs reflects a lack of respect for democracy that endangered political legitimacy and the liberal democratic system more broadly.

In a US Senate inquiry, Wylie testified that the Facebook data collected via the *thisisyour digitallife* app for CA was likely accessed by Russian intelligence through its developer's (Kogan's) involvement in Russian projects.[102] However, few other sources corroborate this. Thus, it remains unconfirmed whether the Russian government acquired any of the data. Nonetheless, a risk of this occurring was present due to CA's use of contractors and loose data control mechanisms.

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[101] Carole Cadwalladr and Emma Graham-Harrison, "Cambridge Analytica: Links to Moscow Oil Firm and St Petersburg University," the Guardian, March 17, 2018, http://www.theguardian.com/news/2018/mar/17/cambridge-academic-trawling-facebook-had-links-to-russian-university; Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.
[102] Christopher Wylie, "Written Statement to the United States Senate Committee on the Judiciary: In the Matter of Cambridge Analytica and Other Related Issues" (Senate Judiciary Committee, May 16, 2018), https://www.judiciary.senate.gov/download/05-16-18-wylie-testimony.

Although it is unclear whether and to what extent collusion and/or data sharing occurred with MFEs, the possibility that it could have taken place reveals there were shortcomings in CA's business model. However, such shortcomings are unlikely to arise for state-based IOAs which, by virtue of being state-based and devoid of a profit component, should inherently preclude malign foreign collusion.

Illegal Data Harvesting

CA's operations relied on illegal data harvesting, which was one of the most significant legal and ethical problems with its work.[103] Illegal data harvesting disregarded the rule of law – a key principle of liberal democracy designed to ensure there are checks and balances on the use of power. CA's unique selling point as a business was its combination of demographic and psychographic data. Although CA lawfully purchased demographic and consumer data from data brokers, its operations depended on collecting personally identifiable psychographic data. While privacy and data protection laws differ across jurisdictions, in Western liberal democracies data must generally be (1) collected with user consent (2) used for a purpose that the user could reasonably expect and (3) sufficiently 'de-identified'. As the UK ICO and the US FTC confirmed, CA's collection of Facebook data breached each of these.[104]

CA collected data via the *thisisyourdigitallife* app without user consent.[105] The most overt breach of consent was in CA's collection of data of the 'Facebook friends' of users of *thisisyourdigitallife* (see 'Organisational Structure' for the relationship between GSRApp, the developer of *thisisyourdigitallife,* and CA). However, even users who had 'agreed' to the terms of use for *thisisyourdigitallife* did not consent to their data being used for political campaigning.[106] Nor did they consent to the app or CA collecting identifiable data.[107] As the FTC found, the app expressly stated it would not collect identifiable information but did in

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[103] Margaret Hu, "Cambridge Analytica's Black Box," *Big Data & Society* 7, no. 2 (2020): 1–6.

[104] In the Matter of Cambridge Analytica, No. 9383 (Federal Trade Commission USA 2019); Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns."

[105] Note that there are both legal and philosophical debates concerning consent and CA, especially regarding the distinction between legal consent and moral or informed consent. See e.g.: Brian Tarran, "What Can We Learn from the Facebook—Cambridge Analytica Scandal?," 2018. However, this section focuses on the legal consent arguments raised directly in relation to CA's data in legal action brought against the company.

[106] Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns"; Ivan Manokha, "Surveillance: The DNA of Platform Capital—The Case of Cambridge Analytica Put into Perspective," *Theory & Event* 21, no. 4 (2018): 891–913.

[107] In the Matter of Cambridge Analytica.

fact collect significant amounts of identifiable information, including names and user IDs.[108]

The ICO emphasised the purpose component of the issue, stating that "CA processed the

personal data in circumstances where none of the conditions for lawful processing in

Schedule 2 of the DPA1998 were satisfied. As far as consent is concerned, people had not

given valid and effective consent for their personal data to be processed by CA, or for that

data to be processed for the purposes of political campaigning".[109] The app misrepresented

both the kind of data that would be harvested and the use to which that data would be put.

CA's business model depended on the acquisition of illegal data: for CA, data needed to be

both personal and identifiable to enable microtargeting. It also would have defeated CA's

covert influence purpose if targets were cognisant that they were in fact targets of

unlabelled political campaigning.

CA could not have collected the psychographic data were it not for Facebook's role as an

intermediary. Facebook as a platform enabled CA to collect data via the third-party

thisisyourdigitallife/GSRApp. Facebook was held liable by the ICO and continues to face legal

action for disclosing the personal information of users.[110] Facebook's Graph Application

Programming Interface (API) that existed when CA first began harvesting Facebook data

relied on app developers to self-assess whether their app complied with Facebook's app

regulations. Facebook strengthened its regulation of data collection in April 2014 and

required app developers to transition to a new API. Part of the new API regulations meant

that any apps requesting personal data would need to undergo a manual review process.

Under the new rules, Facebook rejected GSRApp's application for review since the data it

requested from users was not to "improve user experience". Despite this, Facebook allowed

the app to continue collecting data under the old API, as per its API transition grace period

of one year.[111]

Furthermore, Facebook could not control the transfer of user data to third parties beyond

the app. This represents one of the greatest challenges of digital data sharing – users remain

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[108] In the Matter of Cambridge Analytica.

[109] Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns."

[110] Australian Information Commissioner v Facebook Inc (No 2); Information Commissioner's Office,
"Investigation into the Use of Data Analytics in Political Campaigns."

[111] Australian Information Commissioner v Facebook Inc (No 2).

ignorant of the "downstream uses of data". This means that even if users consent to the initial collection of their data, they lose control over what happens to it from the point of sharing.[112] It was also one of the most significant enabling factors of CA's operations. Facebook was therefore a key enabler of CA's collection of psychographic data and CA built into its model these enabling factors – it knew the data was accessible under the conditions that existed at that time.

The enablers of CA's data harvesting also draw attention to the broader problem of governing "virtual worlds".[113] Data disclosure and host responsibility for user content have become two of the most prominent regulatory debates regarding the digital domain because a variety of actors, including CA, Facebook and the IRA, have exploited this lack of governance in the online realm. Leveraging the loosely regulated digital domain could empower state-based IOAs but they would need to ensure any exploitation of the lack of digital governance remained consistent with liberal democratic values. Otherwise, it would compromise the actor's legitimacy and operational capability.

Transferability of CA's Business Model to State-Based Influence Operations Actors

As the preceding analysis demonstrated, it is neither possible nor advisable for a democratic, state-based IOA to adopt CA's business model given the incompatibility of such a model with a liberal democratic system. However, some elements of the CA business model could be borrowed and adapted to inform IOA capability. Aspects of the model a state-based IOA could adopt and adapt include:

- A design that necessitates adherence to the electorate's (for CA: shareholder) needs and interests.
- Operational capability designed and based on data that is accessible in terms of ease of acquisition and cost-effectiveness. Consider the data sources available to Defence compared to those that were available to CA.
- Triangulation of data-points from a range of sources.

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[112] Melissa De Zwart, "Contractual Communities: Effective Governance of Virtual Worlds," *UNSWLJ* 33 (2010): 605.
[113] De Zwart, 715.

- Development of a unique selling point that differentiates the IOA from competitors. Although it would not be a 'selling point' for a non-profit actor, creating a model that has a solid point of distinction would likely enable the IOA to outperform state and non-state competitors. Further research on both domestic and foreign IW capabilities is required to devise such a model.

- Implement strong situation awareness processes that effectively map the pre-operation environment as well the dynamic intra-operational phase.

- It might be legally possible for a state-based IOA to leverage the loosely regulated digital domain. Although it could not do so to the extent that CA did due to ethical concerns that might reduce the IOA's legitimacy. If the model was built around lax digital regulation, it would also need to consider the rapidly changing nature of regulation in the area so to not construct an IOA model that would soon become obsolete. It would also, of course, need a comprehensive understanding of what would constitute acceptable leveraging of the domain, and what would corrode its integrity and sustainability in a liberal democracy.

Key Findings

- A complex corporate structure shielded SCL (the UK parent company) and the Mercer family from transparency (and potentially liability) regarding CA's operations.

- Outsourcing is not a reliable means of limiting liability and can compromise operational integrity. However, it can increase the pool of expertise and improve capability.

- CA's business model was founded on the acquisition and use of accessible data.

- CA consistently operated according to the ideological preferences of shareholders which increased the prospects of business sustainability.

- CA understood its online operating environment and on that knowledge was able to leverage a loosely regulated digital domain to its advantage.

- Although the complex corporate structure protected SCL legally, the practical porosity between SCL and CA precipitated both companies' insolvency due to perceptions of legal and ethical misconduct.

- CA's business model was unsustainable in a liberal democratic operating environment because its purpose necessitated degradation of liberal democratic norms.

- CA's 'unique selling point' that differentiated it from other firms relied on illegal data harvesting.

Recommendations

- Devise a code of practice that guarantees protection of liberal democratic principles. This is especially important for a state-based IOA because it must retain legitimacy to exist in a democratic system.

- Implement stringent data harvesting procedures that ensure data is collected with (1) consent and (2) without otherwise contravening the *Privacy Act 1988* (Cth) or other relevant legislation.

- Design and operate with a transparent and simple organisational structure that will (1) guarantee data remains within the relevant entity and (2) promote public perception of integrity and legitimacy of the entity and its operations.

- Build in-house capacity for software development, intelligence and creative products to reduce the need to outsource key functions. This will avoid creating the appearance of evading accountability.

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2. PERSUASIVE TECHNOLOGY

Matteo Farina

Summary

- Features of technology that are relevant to understand CA's political operations

- Difference between persuasion, manipulation and coercion

- Psychological profiling, personality traits and political affiliation

- The Five Factor Model (FFM)

- Social media platforms as a source of data for psychological profiling

Persuasive Technologies

CA heavily relied on technology for its political campaigns. On one hand, CA utilised technology to harvest data from social media platforms and other data sources to build profiles of voters. As stated in one of its political brochures, CA used technology to create:

> an enriched voter file, developed using a comprehensive range of election, consumer, lifestyle, social media, personality and other datasets. We create advanced models that predict voter behavior in a number of different areas, ranging from likelihood to turn out on Election Day to how they might vote on a specific ballot initiative or their propensity to donate.[114]

On the other hand, CA used technology to reach specific groups or individuals with personalised messages aimed at persuading them.[115] CA claimed that "[it] put the right

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[114] Cambridge Analytica, "Ca Political an Overview of Cambridge Analytica's Political Division," (2015).

[115] Emma L. Briant, "Cambridge Analytica and Scl – How I Peered inside the Propaganda Machine," *The Conversation* (2018); Carole Cadwalladr, Emma Graham-Harrison, "Revealed: 50 Million Facebook Profiles Harvested for Cambridge Analytica in Major Data Breach," *The Guardian* 2018; Angela Chen and Alessandra Potenza, "Cambridge Analytica's Facebook Data Abuse Shouldn't Get Credit for Trump," The Verge, https://www.theverge.com/2018/3/20/17138854/cambridge-analytica-facebook-data-trump-campaign-psychographic-microtargeting; Ellen Emilie Henriksen, "Big Data, Microtargeting, and Governmentality in Cyber-Times. The Case of the Facebook-Cambridge Analytica Data Scandal" (2019); Matthew Hindman, "How Cambridge Analytica's Facebook Targeting Model Really Worked – According to the Person Who Built It," *The Conversation* 2018; Michael Wade, "Psychographics: The Behavioural Analysis That Helped Cambridge Analytica Know Voters' Minds," ibid.; Christopher Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World* (Profile Books, 2019); Carole Cadwalladr and Emma Graham-Harrison, "How Cambridge Analytica Turned Facebook 'Likes' into a Lucrative Political Tool," *The Guardian* 2018.

message in front of the right person at the right time".[116] In other words, it seems that CA used technologies for:

- Analysing psychological data and identifying key target voter groups
- Developing, testing and refining campaign specific messages for the target voter groups
- Assisting deployment of messaging through different media channels to target specific voter groups.[117]

Therefore, it is likely that CA heavily relied on technology for its political operations because: (1) technology has changed the way in which people communicate with each other and access information;[118] (2) technology affects politicians and how they interact with voters;[119] (3) technology is "persistent, ubiquitous, allow[s] anonymity, can store huge volumes of data, can use many modalities, [and] can scale;"[120] (4) technology is interactive and *personalisable*,[121] it can be used to deliver messages that are relevant to individuals, and might influence their attitudes and behaviours.[122] In other words, a message generated by a computer might be tailored to suit a person's needs, interests, passions, etc., thus, making it more relevant to him or her;[123] (5) technology might be persuasive, it could be "designed to change a person's attitude, behaviour or both".[124]

Whether technologies affect peoples' attitudes and behaviours is still an open question. Nevertheless, in order to understand the role of technology in CA's campaigns, the following

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[116] Analytica, "Ca Political an Overview of Cambridge Analytica's Political Division."

[117] Unknown, "Cambridge Analytica - Select 2016 Campaign-Related Documents," https://archive.org/details/ca-docs-with-redactions-sept-23-2020-4pm/page/n11/mode/2up.

[118] Paul Foley, "Does the Internet Help to Overcome Social Exclusion," *Electronic Journal of e-government* 2, no. 2 (2004); Wallace Chigona et al., "Can Mobile Internet Help Alleviate Social Exclusion in Developing Countries?," *The Electronic Journal of Information Systems in Developing Countries* 36, no. 1 (2009).

[119] Brian L. Ott, "The Age of Twitter: Donald J. Trump and the Politics of Debasement," *Critical studies in media communication* 34, no. 1 (2017).

[120] B. J. Fogg, *Persuasive Technology Using Computers to Change What We Think and Do*, The Morgan Kaufmann Series in Interactive Technologies (Amsterdam: Morgan Kaufmann Publishers, 2003).

[121] Ryan Calo, "Digital Market Manipulation," *George Washington Law Review* 82, no. 4 (2013).

[122] Fogg, *Persuasive Technology Using Computers to Change What We Think and Do*.

[123] Ibid.

[124] Naomi Jacobs, "Two Ethical Concerns About the Use of Persuasive Technology for Vulnerable People," *Bioethics* 34, no. 5 (2020).

section will discuss the difference between persuasion, manipulation and coercion.

Persuasion, Manipulation and Coercion

Susser et al.[125] clearly stated that CA used online manipulation for its political operations. More precisely, they claimed that "Since 2016, when the Facebook/Cambridge Analytica scandal began to emerge, public concern has grown around the threat of "online manipulation"".[126] Online manipulation is a specific form of manipulation; manipulation, persuasion and coercion are part of the influence continuum. Persuasion is positioned at one end of this continuum, coercion at the other end, with manipulation in the middle, as shown in Figure 6, below.
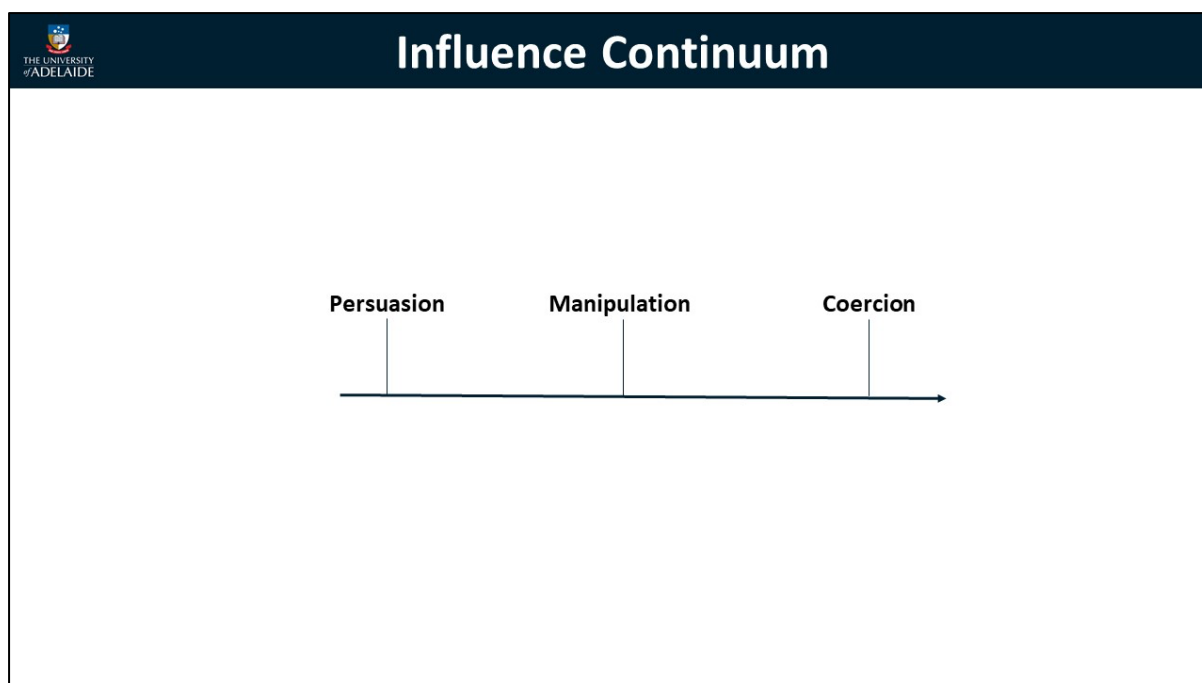
Figure 6: The Influence Continuum.

Persuasion is intentional and transparent.[127] It is also characterised by freedom of choice and lack of harm. In other words, persuaders do not force their beliefs, attitudes, values or intentions on others. Persuasion can be rational or non-rational.[128] Rational persuasion is

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[125] Daniel Susser, Beate Roessler, and Helen Nissenbaum, "Technology, Autonomy, and Manipulation," *Internet policy review* 8, no. 2 (2019).
[126] Ibid.
[127] Ruth R. Faden, Tom L. Beauchamp, and Nancy M. P. King, *A History and Theory of Informed Consent* (New York: Oxford University Press, 1986).
[128] Richard E. Petty and John T. Cacioppo, *Attitudes and Persuasion: Classic and Contemporary Approaches* (Dubuque, Iowa: W.C. Brown Co. Publishers, 1981).

when an individual uses reason and argument to influence another person, whereas non-rational persuasion takes advantage of emotions, peer pressure, authority and other means to influence people.[129] Both rational and non-rational persuasion are devoid of harm.

Coercion, on the other hand, limits the options of individuals and forces them to take certain actions.[130] While persuasion is acceptable, coercion is not. Although positioned at opposite ends of the influence continuum, persuasion and coercion share an important similarity: both are overt. That is, if an individual is trying to persuade or coerce someone, the person normally knows. However, when coerced, individuals are not free to act due to threats that could cause them unwanted and avoidable harm. Coercion can also occur among countries. The Australian Defence Glossary uses the term *grey zone* to refer to coercive activities that might be undertaken by a nation to force another country to take actions that could avoid a potential military conflict.[131]

Manipulation, the form of influence apparently used by CA during its political campaigns, is covert; that is, individuals do not generally know they have been manipulated. Manipulation is an intentional form of influence that exploits individuals' vulnerabilities (such as dark triad and personality traits) and affects their decision-making processes.[132] As shown by CA's operations, manipulation can take different forms. It may consist of direct intervention using identity-based reasoning to inflame and exploit group dynamics, disinformation often spread through Facebook groups that were polarised or primed, hyperbolae and mobilisation of rage (affect heuristic) and alleged release of hacked kompromat.[133] Manipulation, like persuasion, is non-coercive, but unlike persuasion it is not rational. Furthermore, manipulation is generally deceptive and affects the options available to people.[134] In other words, individuals do not normally know they have been manipulated and that their freedom of choice has been compromised. For example, as shown above in the timeline (p. 4), it seems that in 2015 CA utilised manipulation during a campaign that supported president Goodluck Jonathan during the Nigerian presidential

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[129] Jacobs, "Two Ethical Concerns About the Use of Persuasive Technology for Vulnerable People."
[130] Susser, Roessler, and Nissenbaum, "Technology, Autonomy, and Manipulation."
[131] Department of Defence, "Defence Strategic Update," (2020).
[132] Christopher Wylie, *Mindf*Ck: Inside Cambridge Analytica's Plot to Break the World* (Profile Books, 2019).
[133] *Ibid*.
[134] Ruth R. Faden, Tom L. Beauchamp, and Nancy M. P. King, *A History and Theory of Informed Consent* (New York: Oxford University Press, 1986).

elections. CA collected data about the Nigerian population and used Israeli hackers to access medical and financial information about the opposition candidate, Muhammadu Buhari.[135] Then, it developed a manipulative campaign based on fear, a very powerful emotional trigger,[136] targeting a specific segment of the Nigerian population, Buhari's supporters, in order to suppress their votes. As shown in Figure 7 below, CA used social media platforms to disseminate anti-Islamic videos that depicted Buhari as an Islamic fundamentalist who supported the radical terrorist group Boko Haram.

Figure 7: A screenshot taken from one of the videos developed by CA for the 2015 Nigerian presidential elections.[137]

These videos contained explicit images of people who were dismembered with their throats cut;[138] these ads claimed that if elected, Buhari would enforce Sharia law and force women to wear veils.

In summary, although there are different types of influence, it seems that CA mainly used manipulation in its political operations. However, there is little evidence to indicate that persuasion, manipulation and coercion lead to behavioural changes. Nevertheless, it also appears CA used psychological profiling for manipulating people. Therefore, the following section will focus on the way in which CA created psychological profiles of millions of people.

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[135] Carole Cadwalladr, "Revealed: Graphic Video Used by Cambridge Analytica to Influence Nigerian Election," *The Guardian* 2018; "Cambridge Analytica's Ruthless Bid to Sway the Vote in Nigeria," *The Guardian* 2018.
[136] Rebecca Adler-Nissen, Katrine Emilie Andersen, and Lene Hansen, "Images, Emotions, and International Politics: The Death of Alan Kurdi," *Review of International Studies* 46, no. 1 (2020); J. Blumenthal-Barby, "Between Reason and Coercion: Ethically Permissible Influence in Health Care and Health Policy Contexts," *Kennedy Institute of Ethics journal* 22, no. 4 (2012).
[137] Carole Cadwalladr, "Revealed: Graphic Video Used by Cambridge Analytica to Influence Nigerian Election," *The Guardian* 2018.
[138]

Psychological Profiling, Personality Traits and Political Affiliations

When talking about CA and its manipulative campaigns Woolley claimed:

> Among the groups I discovered were working to manipulate public opinion using social media, several stood out. The strategies they claimed to have refined for reaching out to voters ranged from simply using paid advertising on a site like Facebook to engaging in downright deceit by using coordinated fake political campaigns to spread disinformation. [...] [CA] had used Facebook and credit agencies to gather data on 230 million Americans. [CA used] social media to successfully politically target individuals using information they had willingly shared over the same online websites [...]. They said they could use massive swathes of this user data to construct both political and psychological profiles [...]. This data could then be amalgamated and refined in order to send out individualized and hyper-manipulative political ads.[139]

As mentioned above, CA collected a huge amount of demographic as well as behavioural data to create psychological profiles of large groups of people. Then it used this data to develop personalised messages to manipulate individuals. In fact, it seems individuals are more likely to be influenced by messages that are tailored to their psychological characteristics.[140]

CA focused especially on *persuadables*, people who were more likely to be influenced by its political campaigns.[141] CA targeted *persuadables* with messages that reflected their psychological characteristics. As it will be discussed in the following sections, CA relied heavily on social media messages for its political campaigns. It seems that these messages were highly effective. They exploited *persuadables'* cognitive biases and apparently affected their political preferences. CA used psychological profiles because they describe individuals' personalities in terms of a few basic dimensions. Moreover, these dimensions were used to develop tailored content to shift political opinion at scale.[142]

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[139] Samuel Woolley, *The Reality Game: How the Next Wave of Technology Will Break the Truth and What We Can Do About It* (Great Britain: Endeavour, 2020).

[140] Sandra C. Matz et al., "Psychological Targeting as an Effective Approach to Digital Mass Persuasion," *Proceedings of the national academy of sciences* 114, no. 48 (2017).

[141] Cambridge Analytica, "Ca Political an Overview of Cambridge Analytica's Political Division," (2015).

[142] Jacob B. Hirsh, Sonia K. Kang, and Galen V. Bodenhausen, "Personalized Persuasion: Tailoring Persuasive Appeals to Recipients' Personality Traits," *Psychological science* 23, no. 6 (2012).

As mentioned above, psychological profiling is based on the idea that personalities can be described in terms of a few basic dimensions. Moreover, these dimensions appear to be connected to people's political preferences.[143] That is, political affiliations might depend on individuals' deep psychological needs. In other words, political leanings are apparently influenced by basic personality traits[144]; "a person's personality motivates them to develop certain political attitudes".[145] For instance, it appears individuals displaying a high need for order and a low need for equality are more likely to vote for conservative parties, whereas individuals with a low need for order and high need for equality are more likely to vote for liberal parties.[146] Similarly, Openness to Experience, a psychological trait discussed in the following section, is negatively correlated to conservatism. That is, people who are open to new experiences are less likely to be conservative and therefore more likely to be liberal.[147] This is demonstrated in Figure 8 below.
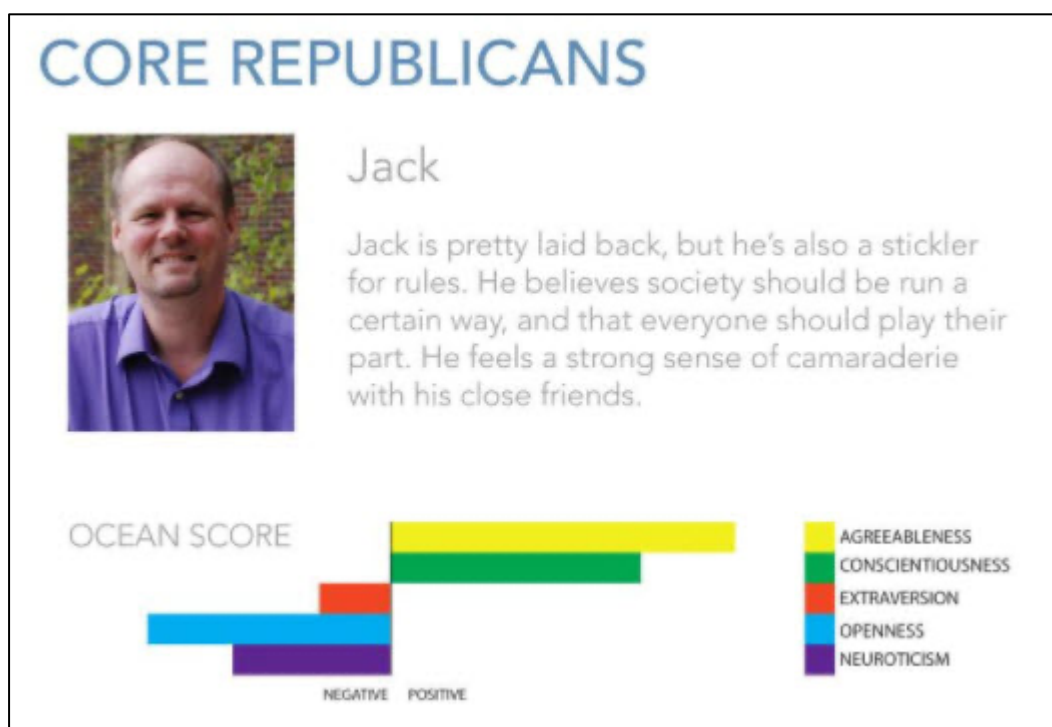
Figure 8: Jack's psychological profile.[148]

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[143] Jacob B. Hirsh et al., "Compassionate Liberals and Polite Conservatives: Associations of Agreeableness with Political Ideology and Moral Values," *Personality and Social Psychology Bulletin* 36, no. 5 (2010).
[144] Ibid.
[145] Brad Verhulst, Lindon J. Eaves, and Peter Hatemi, K., "Correlation Not Causation: The Relationship between Personality Traits and Political Ideologies," *American Journal of Political Science* 56, no. 1 (2012).
[146] Hirsh et al., "Compassionate Liberals and Polite Conservatives: Associations of Agreeableness with Political Ideology and Moral Values."
[147] Verhulst, Eaves, and Hatemi, "Correlation Not Causation: The Relationship between Personality Traits and Political Ideologies."
[148] Unknown, "Cambridge Analytica - Select 2016 Campaign-Related Documents".

This was taken from one of CA's brochures and shows that personality traits might be predictors of political leanings. Jack, the man portrayed in Figure 8, scores low in Openness to Experience (Openness) and high in both Agreeableness and Conscientiousness. Furthermore, he is "a stickler for rules" and believes "that society should be run a certain way, and that everyone should play their part"[149]. More importantly, when viewed together, Jack's personality scores, combined with his statements, indicate he might be a core Republican. Thus, personality traits might be predictors of political attitudes.[150]

However, previous research in psychology, behavioural genetics and political science has suggested that this might not be the case. In other words, political ideologies might not be the results of personality traits only. That is, personality traits might not determine peoples' political ideologies, instead political attitudes might depend on multiple factors.[151] For example, some research suggests that there might be a set of genes that could affect both personalities and political views. Although there is no clear mechanism to explain how these genes might result in the expression of specific personality traits and political leanings, the literature claims that:

> Genes encode protein messengers that execute a series of physiological processes culminating in behaviors, personality traits, and attitudes in conjunction with environmental stimuli. Thus, the same set of genes may result in myriad distinct behavioral phenotypes, two of which are political attitudes and personality traits.[152]

In summary, although it is unclear whether or not political preferences depend on personality traits only, psychological profiling might be a predictor of political behaviour. Therefore, CA used this type of profiling for its political campaigns.[153] The following paragraph will focus on the Five Factor Model (FFM), the psychological model utilised by CA to profile individuals for its campaigns.

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[149] Ibid.
[150] Verhulst, Eaves, and Hatemi, "Correlation Not Causation: The Relationship between Personality Traits and Political Ideologies."
[151] Ibid.
[152] Ibid.
[153] Jamie Bartlett, *The People Vs Tech: How the Internet Is Killing Democracy (and How We Save It)* (London: Ebury Press, 2018); Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World.*

The Five Factor Model (FFM)

It will be described in more detail in the Systems and Technology section but CA was mainly interested in the Five Factor Model (FFM) because it could be applied to digital data to computationally and accurately predict the personality traits of large groups of individuals.[154] The FFM examines human nature; it is a model of personality that identifies common dimensions of individuals' personalities.[155] More precisely, the FFM is a hierarchical organisation of personality traits in terms of a few basic dimensions.[156] This model is a version of trait theory.[157] Trait theory claims that despite their origin, whether it is genetical or environmental, personality traits characterise individuals. Therefore, although personality traits are not the only factors that determine behaviours, they definitely impact on the way in which people think, feel and act.[158]

The FFM focuses on five basic dimensions of human personality.[159] As shown in Figure 8 above, these dimensions are: Extraversion, Agreeableness, Neuroticism, Conscientiousness and Openness to Experience. Extraversion describes people's interpersonal, affective and temperamental attitudes. Agreeableness describes individuals' attitudes towards maintaining positive social relationships. Neuroticism represents individuals' differences in experiencing and managing distress. Conscientiousness is the dimension that measures peoples' approach to life, whether they are organised or spontaneous. Finally, Openness to Experience refers to individuals' willingness to experience new and different things, their imagination, curiosity, aesthetics and interest in culture.[160]

Some studies argue that the FFM transcends cultural differences and may be universal; they state that "the structure of individual differences in personality is uniform across several

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[154] Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns," (2018).

[155] Robert R. McCrae and John P. Oliver, "An Introduction to the Five-Factor Model and Its Applications," *Journal of Personality* 60, no. 2 (1992).

[156] Ibid.

[157] Robert R. McCrae and Paul T. Costa, "Toward a New Generation of Personality Theories: Theoretical Contexts for the Five-Factor Model," in *The Five-Factor Model of Personality: Theoretical Perspectives*, ed. Jerry S. Wiggins (New York: Guilford Press, 1996).

[158] Ibid.

[159] Ibid.

[160] Ibid.

cultures and may in fact be universal".[161] This claim about the universality of the FFM is based on the following assumption:

> If [...] personality traits represent variations in basic human ways of acting and experiencing, the structure might be universal. Universality might be attributed to species-wide bases of traits, or it might represent a purely psychological consequence of the shared human experiences of living in groups, using abstract thought, or being conscious of our own mortality.[162]

However, other studies suggest that the FFM may not be universal.[163] This model is not identifiable in all cultures. Moreover, the FFM seems to mainly describe developed countries and Western, Educated, Industrialised, Rich and Democratic (WEIRD) populations.[164] For example, the FFM does not seem to be applicable to small-scale, indigenous societies like the Tsimane, a Bolivian population of horticulturalists who apparently have personalities that are primarily composed of two dimensions only.[165] More importantly, personality profiles are only a small component of market segmentation (or Target Audience Analysis). Other factors include cognitive processes, social identities, norms, networks and interactions, power dynamics and social movements.

Thus, although CA used the FFM for psychological profiling, apparently the model is not perfect. As suggested, the FFM does not seem to be universal. In addition, it might not capture the complexity of personality traits. Previous research has shown that personality traits are indeed very complex.[166] They appear to be similar to a gene atlas, consisting of multiple facets which are interconnected. Moreover, as demonstrated in Figure 9, these facets are made up of blends of different personality domains.[167]

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[161] Robert R. McCrae and Paul T. Costa, "Personality Trait Structure as a Human Universal," *The American Psychologist* 52, no. 5 (1997).

[162] Ibid.

[163] Michael Gurven et al., "How Universal Is the Big Five? Testing the Five-Factor Model of Personality Variation among Forager-Farmers in the Bolivian Amazon," *Journal of Personality and Social Psychology* 104, no. 2 (2013).

[164] Ibid.

[165] Ibid.

[166] Ted Schwaba et al., "A Facet Atlas: Visualizing Networks That Describe the Blends, Cores, and Peripheries of Personality Structure," *PloS one* 15, no. 5 (2020).
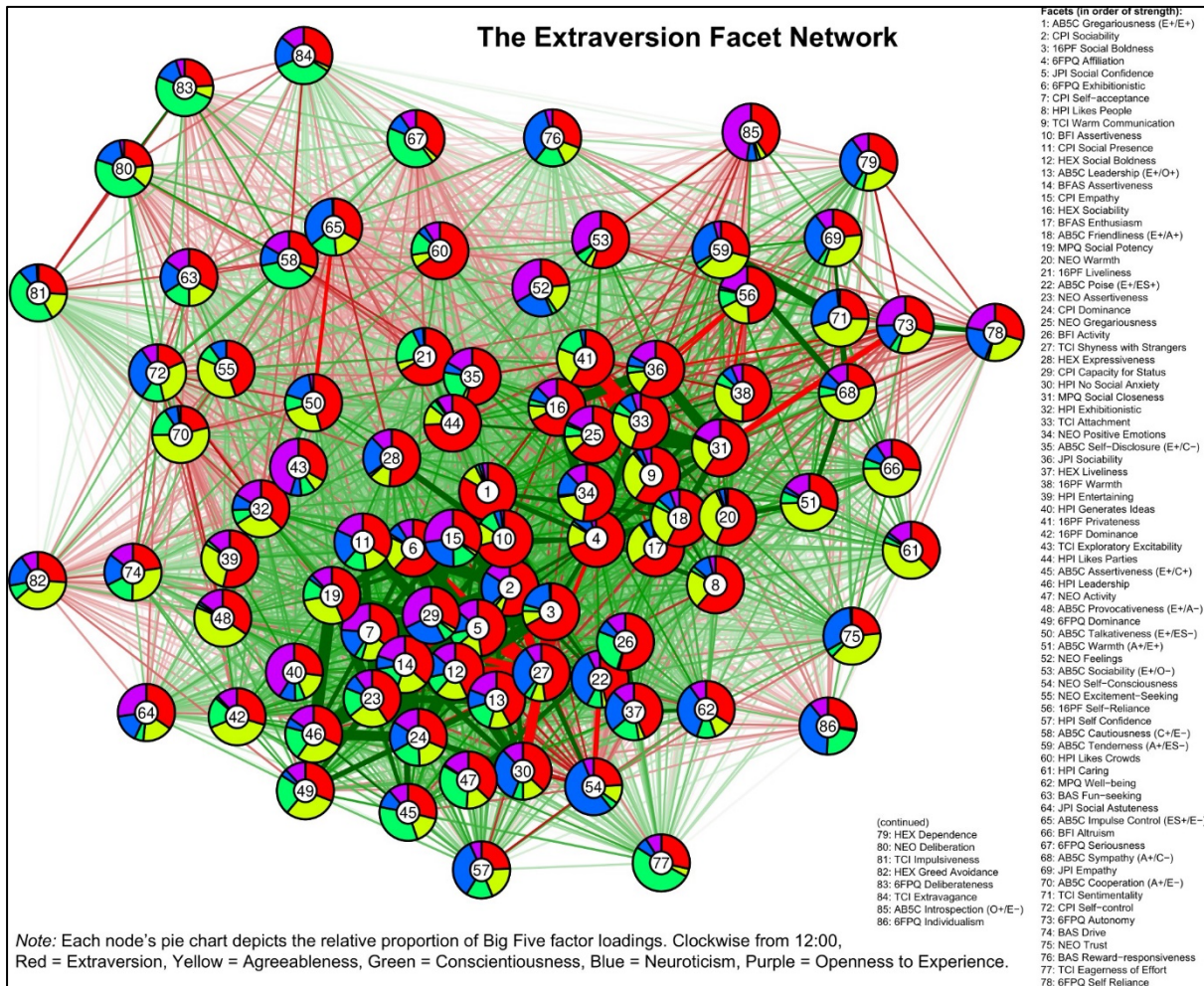
[167] Ibid.

Figure 9: The Extraversion Facet Network.[168]

Figure 9 shows the Extraversion facet network. This dimension consists of 86 facets. Every facet is made up of a blend of Extraversion, Agreeableness, Neuroticism, Conscientiousness and Openness to Experience.[169] This research suggests that if the model used to profile personalities is too simplistic, it might lead to inaccurate predictions. Therefore, if CA utilised a model that did not consider the complexity of personality traits, this model might have affected the way in which they assessed personalities, thus potentially affecting the classification of individuals and CA's political campaigns. Moreover, if CA used profiles that were inaccurate, they might have targeted people with the wrong political ads, thus potentially affecting their operations. For instance, CA might have targeted the wrong

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[168] Ibid.
[169] Ibid.

dimension of personality; if they wrongly profiled a persuadable voter[170] who scored high in Openness to Experience and sent them multiple conservative messages about order and tradition, these messages might have had the opposite effect. As will be described in the Systems and Technology section, these messages might have triggered a backlash.[171] That is, this voter may have lost interest in the candidate who targeted him with the wrong messages. As a result, he or she may have voted for another candidate.

Similarly, if CA utilised a model that did not take into consideration that some personality traits are stable while others are variable, this might have affected its psychological profiles. Previous studies have shown that some personality traits change over time depending on situations.[172] Several models, such as the Personality Dynamics model, capture this diversity in personality traits. However, it is unclear whether CA used a dynamic system approach for profiling. Thus, as mentioned, if the model used was too simplistic and did not consider that personality traits are made up of both stable and dynamic traits, it could have affected their profiles. If the profiles were inaccurate, the message generated to influence individuals might not have been effective, thus potentially impacting the outcomes of CA's political campaigns.

In summary, although CA used a model for psychological profiling and targeting individuals, we do not know whether the model captured the complexity of human personality. Moreover, there is little evidence to suggest the CA model considered the way in which different types of information spreads on social networks.[173] Information diffusion models depend on complex parameters of social networks, such as edge weights, network structure and vulnerabilities of nodes towards specific information.[174] In other words, the diffusion of information within social networks seems to be affected by both behavioural and sociological factors, such as the level of trust among members of a network and the status of

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[170] David W. Nickerson and Todd Rogers, "Political Campaigns and Big Data," *The Journal of economic perspectives* 28, no. 2 (2014); Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.
[171] Michael A. Bailey, Daniel J. Hopkins, and Todd Rogers, "Unresponsive and Unpersuaded: The Unintended Consequences of a Voter Persuasion Effort," *Political behavior* 38, no. 3 (2016).
[172] Joanna Sosnowska et al., "New Directions in the Conceptualization and Assessment of Personality—a Dynamic Systems Approach," *European Journal of Personality* 34, no. 6 (2020).
[173] Yayati Gupta et al., "Modeling Memetics Using Edge Diversity," *Complex Networks VII* Springer, Cham (2016).
[174]

the person trying to spread the information. For example, individuals within a restricted and, perhaps, peripheral group within a social network tend to interact more frequently with each other and share certain information. These people might also talk to influential (high betweenness) members of the network, thus potentially affecting the spread of the information across the entire network.[175] Therefore, identifying restricted groups as well as key individuals might be extremely important for effective information diffusion within social networks.

Furthermore, as demonstrated in Figure 10 below, information does not necessarily spread in a linear way within social networks.
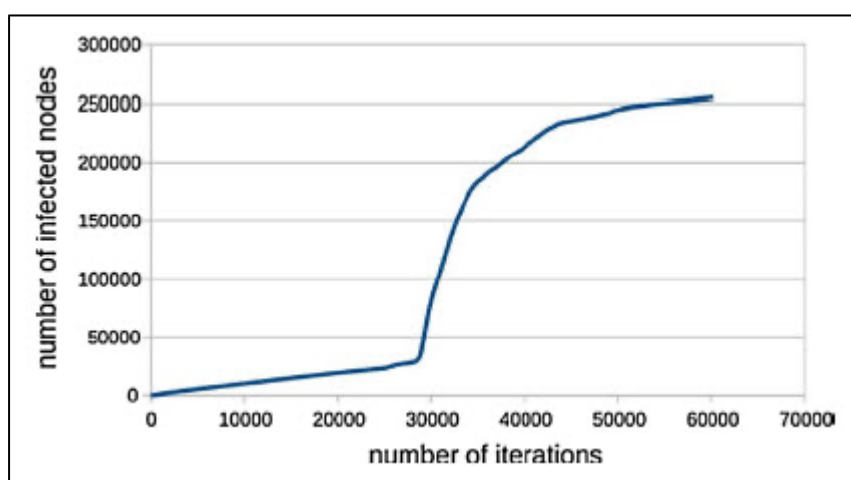
Figure 10: Possible information spread model on a social network.[176]

Figure 10 shows how information apparently spreads on social networks, depending on the network structure. The spread of information might remain constant to a point and then grow exponentially. Therefore, although CA used modeling to psychologically profile individuals and subsequently target them with personalised messages, there seems to be no evidence to suggest that CA's modelling considered the way in which information spreads on social networks. This might have impacted CA's political operations and potentially limited their effectiveness.

After describing the FFM model utilised by CA to psychologically profile individuals, this section went on to discuss some of the complexities involved. These complexities might have

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[175] Ibid.
[176] Gupta et al., "Modeling Memetics Using Edge Diversity."

affected CA's operations. It seems that CA gathered data for its psychological profiles mainly through social media platforms. Therefore, the following section will look at how people manifest their personalities online, and how it is possible to use social media data to draw conclusions about people from their psychological profiles.

Online vs Off-line Personality and Social Networking Sites as Loci for Mining Data for Psychological Profiles

There is ongoing debate about the authenticity with which individuals present themselves online. Some studies claim that individuals express their true personalities online[177], while others argue that individuals tend to display an idealised version of themselves, particularly on Online Social Networking (OSN) sites.[178] Research suggesting that social media profiles reflect actual personalities is mainly based on the idea that people who share a virtual friendship are also friends in real life. Thus, individuals tend to express their true personality online because friends may challenge what they post on social media websites.[179] However, there are other studies which suggest that a curation effect is often present on social media. In other words, individuals tend to present themselves in a more favorable way on these platforms.[180]

Despite the fact people might present a true or curated version of themselves on OSN sites, CA used these platforms to collect data to create psychological profiles of millions of individuals. Recent studies have shown that there is enough data on OSN sites to predict

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[177] Mitja D. Back et al., "Facebook Profiles Reflect Actual Personality, Not Self-Idealization," *Psychological Science* 21, no. 3 (2010); Tamsin C. Marriott and Tom Buchanan, "The True Self Online: Personality Correlates of Preference for Self-Expression Online, and Observer Ratings of Personality Online and Offline," *Computers in Human Behavior* 32 (2014).

[178] Roselyn J. Lee-Won et al., "Who Puts the Best "Face" Forward on Facebook?: Positive Self-Presentation in Online Social Networking and the Role of Self-Consciousness, Actual-to-Total Friends Ratio, and Culture," *Computers in Human Behavior* 39 (2012); Hui-Tzu Grace Chou and Nicholas Edge, ""They Are Happier and Having Better Lives Than I Am": The Impact of Using Facebook on Perceptions of Others' Lives," *Cyberpsychology, Behavior and Social Networking* 15, no. 2 (2012).

[179] Back et al., "Facebook Profiles Reflect Actual Personality, Not Self-Idealization."; Cliff Lampe, Nicole B. Ellison, and Charles Steinfield, "A Face (Book) in the Crowd: Social Searching Vs. Social Browsing" (paper presented at the Computer supported cooperative work, New York, NY, USA, 2006).

[180] Chou and Edge, ""They Are Happier and Having Better Lives Than I Am": The Impact of Using Facebook on Perceptions of Others' Lives."; Lee-Won et al., "Who Puts the Best "Face" Forward on Facebook?: Positive Self-Presentation in Online Social Networking and the Role of Self-Consciousness, Actual-to-Total Friends Ratio, and Culture."

peoples' personalities using the FFM[181] (see the Systems and Technology section for more detail). OSN sites are part of peoples' daily lives. In 2020, more than 3.6 billion people used social media websites worldwide.[182] Facebook has 2.7 billion monthly active users, making it the most popular OSN in the world.[183] Furthermore, Facebook data seems to be particularly useful in measuring basic personality traits.[184] More importantly, Facebook allows researchers access to a diverse and extremely large pool of individuals. Data collection via this platform is relatively simple and inexpensive. In addition, and discussed further in the Systems and Technology section, Facebook data contains an extraordinary amount of demographic information about users, including their full name, profile picture, age, gender, relationship status, geographical location, place of origin, and work and education history. Facebook data is also computational.[185] Moreover, it occurs in the *natural environment*, that is, it is not gathered in a laboratory for the purpose of research. It is collected in a natural setting, i.e. Facebook, where, as mentioned, people are said to express their true selves.[186] Facebook is also rich in behavioural data, in photos and videos, comments, status updates, Likes, group memberships, events attended, lists of favourite music, movies, TV shows, books and sports, etc. It also features lists of Friends with information about the relationship – whether the Friends are siblings, colleagues and so on.[187]

Linguistic data, such as status updates and comments, appears to be particularly useful for predicting people's personalities.[188] Research has claimed that it is possible to infer personality facets without psychometric tests. In other words, analysts seem to be able to

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[181] Shuotian Bai, Tingshao Zhu, and Li Cheng, "Big-Five Personality Prediction Based on User Behaviors at Social Network Sites," *arXiv preprint* 1204, no. 4809 (2012).

[182] J. Clement, "Number of Social Network Users Worldwide from 2017 to 2025," https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/.

[183] H. Tankovska, "Number of Monthly Active Facebook Users Worldwide as of 4th Quarter 2020," https://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/.

[184] Samuel D. Gosling et al., "Manifestations of Personality in Online Social Networks: Self-Reported Facebook-Related Behaviors and Observable Profile Information," *Cyberpsychology, Behavior, and Social Networking* 14, no. 9 (2011); Michal Kosinski et al., "Manifestations of User Personality in Website Choice and Behaviour on Online Social Networks," *Machine learning* 95, no. 3 (2013); Michal Kosinski, David Stillwell, and Thore Graepel, "Private Traits and Attributes Are Predictable from Digital Records of Human Behavior," *Proceedings of the national academy of sciences* 110, no. 15 (2013).

[185] Michal Kosinski et al., "Facebook as a Research Tool for the Social Sciences," *American Psychologist* 70, no. 6 (2015).

[186] Ibid.

[187] Ibid.

[188] Gregory Park, H. et al., "Automatic Personality Assessment through Social Media Language," *Journal of personality and social psychology* 108, no. 6 (2015).

predict basic facets of personality by simply analysing the language individuals use on social media websites.[189] For example, people who score highly in Neuroticism tend to use more first-person singular pronouns such as "I" and "mine" in social media posts, whereas individuals with high levels of Extraversion prefer to use words associated with positive emotions, such as "great" and "happy" on their OSN sites.[190]

However, as shown in Figure 11 below, Facebook posts do not consist of language only, they are multimodal. In other words, posts can include photos only, videos only, hyperlinks only, or combinations of linguistic and visual material, such as photos, videos, hyperlinks and text.[191]
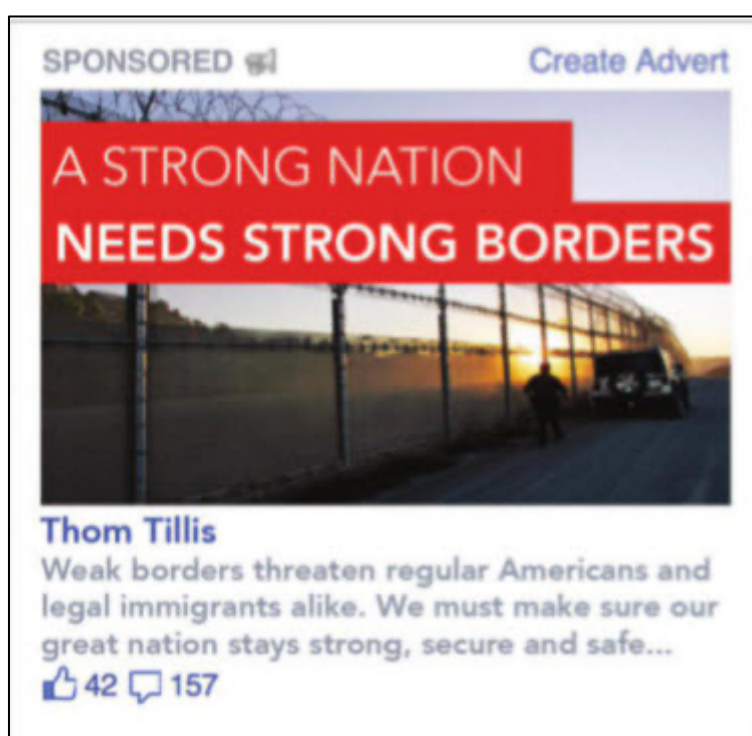
Figure 11: A Thom Tillis Facebook ad.[192]

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[189] Nadeem Ahmad and Jawaid Siddique, "Personality Assessment Using Twitter Tweets," *Procedia Computer Science* 112 (2017); Andrew H. Schwartz et al., "Personality, Gender, and Age in the Language of Social Media: The Open-Vocabulary Approach," *PloS one* 8, no. 9 (2013); Hansen Andrew Schwartz et al., "Toward Personality Insights from Language Exploration in Social Media," *2013 AAAI Spring Symposium Series* (2013).
[190] Park et al., "Automatic Personality Assessment through Social Media Language."
[191] Matteo Farina, *Facebook and Conversation Analysis* (London: Bloomsbury, 2018).
[192] Unknown, "Cambridge Analytica - Select 2016 Campaign-Related Documents".

Figure 11 features a screenshot of a Facebook message developed by CA for the campaign of Thom Tillis, an American Republican Senator.[193] The post is multimodal, with a photo and text. The visual and textual components are closely aligned; they target a specific group of voters, people interested in immigration and national security. The photo features a security fence on an American border with the caption: "Weak borders threaten regular Americans and legal immigrants alike. We must make sure our great nation stays strong, secure and safe…".

The post seems to function as a 'telling', or Facebook narrative.[194] As shown in previous research,[195] "tellings", especially when they occur in the opening posts of Facebook interactions, secure more responses from users than other message types. This is especially true if they are multimodal; that is, "tellings" consisting of visual as well as textual components are apparently more successful in engaging Facebook users than those made up of textual elements only. This post was considered a success; it secured 157 responses and 42 Likes from other Facebook users. It is almost certain CA knew that individuals were more likely to respond to Facebook messages comprising images and text than to posts featuring textual messages only. Thus, CA chose to use these types of contributions in political campaigns.

CA apparently also used Facebook "tellings" because these messages are more likely to appeal to peoples' personalities, demographics and priority issues.[196] For example, the "telling" in Figure 11 seems to exploit a cognitive bias against illegal immigrants. The visual component is particularly important in this. Images generate emotions, which in turn might affect political discourses.[197] Therefore, CA selected the image to explicitly target voters interested in immigration and national security.

In summary, after discussing how individuals present themselves online, this section focused on OSN sites as a source of data for psychologically profiling individuals. Although it

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[193] Ibid.

[194] Matteo Farina, "Facebook First Post Telling," *Journal of pragmatics* 90 (2015); *Facebook and Conversation Analysis*.

[195] *Facebook and Conversation Analysis*.

[196] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.

[197] Adler-Nissen, Andersen, and Hansen, "Images, Emotions, and International Politics: The Death of Alan Kurdi."

seems it may be possible to use social media data to infer individuals' personalities, it is still

unclear whether personality traits are good predictors of political behaviour.

Key Findings

- CA claimed the ability to covertly manipulate both individuals and groups.

- CA had the capacity to access large datasets from multiple sources to profile millions of individuals and target them with personalised content.

- The model used by CA for profiling target audiences was simplistic.

- CA's model did not consider that political leanings might not depend on personality traits only.

- CA's model did not consider how individuals express themselves online and how information spreads across online social networks.

Recommendations

- Consider using multidisciplinary teams of experts to analyse and develop effective, contextually nuanced persuasive technologies.

- Explore the use of complex psychological models that might computationally and effectively predict indicators of behavioural change.

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3. SYSTEMS AND TECHNOLOGY
Matteo Farina

Summary

- *Thisisyourdigitallife* app

- CA's data, techniques and approaches

- Ripon

- Efficacy of CA's systems and technology

Systems and Technology

As discussed in the previous sections, CA used systems and technology for its political campaigns. On one hand, systems and technology enabled CA to collect and analyse large amounts of personal data to create psychological profiles of individuals. On the other hand, CA utilised systems and technology to microtarget voters with personalised messages and political ads.[198] Whether these messages were effective is an open question.

This section will firstly describe the systems and technology used by CA to collect and analyse individuals' data. Then it will discuss the efficacy of these methods and techniques.

Systems and Technology Used by CA to Collect and Analyse Data

Although, as it will be discussed in the following section, there is an ongoing debate among researchers about the effectiveness of using OSN sites for political campaigns[199], CA heavily relied on these websites for collecting data about large groups of individuals and used the data during its operations.[200]

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[198] Samuel Woolley, *The Reality Game: How the Next Wave of Technology Will Break the Truth and What We Can Do About It* (Great Britain: Endeavour, 2020); Ken Auletta, *Frenemies: The Epic Disruption of the Advertising Industry (and Why This Matters)* (London: Harper Collins, 2018).
[199] Michael A. Bailey, Daniel J. Hopkins, and Todd Rogers, "Unresponsive and Unpersuaded: The Unintended Consequences of a Voter Persuasion Effort," *Political behavior* 38, no. 3 (2016); Robert M. Bond et al., "A 61—Million—Person Experiment in Social Influence and Political Mobilization," *Nature (London)* 489, no. 7415 (2012); David E. Broockman and Donald P. Green, "Do Online Advertisements Increase Political Candidates' Name Recognition or Favorability? Evidence from Randomized Field Experiments," *Political Behavior* 36 (2014); Andrew M. Guess, Brendan Nyhan, and Jason Reifler, "Exposure to Untrustworthy Websites in the 2016 Us Election," *Nature human behaviour* 4, no. 5 (2020); David W. Nickerson and Todd Rogers, "Political Campaigns and Big Data," *The Journal of economic perspectives* 28, no. 2 (2014).
[200] Information Commissioner's Office, "Investigation into the Use of Data Analytics in Political Campaigns," (2018).

It seems CA started its political operations in 2014 after receiving a $20 million donation from US billionaire Robert Mercer.[201] CA wanted to collect multiple datasets to create profiles of millions of individuals and use them for political campaigning. CA was particularly interested in Facebook data. This was because in 2013 academics at the Psychometric Centre at Cambridge University demonstrated that algorithms could use Facebook data to accurately predict the psychological profiles of individuals on an unprecedented scale.[202] The academics gathered a large amount of Facebook data using an application (app) called *myPersonality*. This app used the FFM, described in the Persuasive Technology section, to predict individuals' personality traits. The *myPersonality* app matched scores obtained by individuals using a psychometric test with predictions made by an algorithm utilising what people liked on Facebook, or the so-called Likes. Likes are records of digital behaviour, that is, the residue of online human actions. Moreover, Likes are a form of naturalistic data. They do not occur for the purpose of research. In other words, Likes have a high level of ecological validity. They are not collected in a laboratory as a result of a researcher's question. Therefore, they appear to be good predictors of individuals' personalities.[203] Surprisingly, predictions made by the *myPersonality* app were highly accurate. Apparently they were more accurate than human predictions. For example, by taking a sample of 10 Likes from an individual the algorithm could predict their personality traits with more accuracy than a colleague. If the sample included 150 Likes, the computer could infer an individual's personality with more accuracy than a family member, and with 300 Likes the algorithm's predictions were more accurate than those made by partners.[204]

Furthermore, as shown in Figure 12 below, in addition to personality traits, the *myPersonality* app could also accurately infer a range of people's personal attributes. It

[201] Ziad Ramley, "Cambridge Analytica: A Timeline of Events," https://medium.com/@ziadramley/cambridge-analytica-a-timeline-of-events-326ab3ef01a9; Wylie, *Mindf*Ck: Inside Cambridge Analytica's Plot to Break the World*.

[202] Michal Kosinski, David Stillwell, and Thore Graepel, "Private Traits and Attributes Are Predictable from Digital Records of Human Behavior," *Proceedings of the national academy of sciences* 110, no. 15 (2013); Angela Chen and Alessandra Potenza, "Cambridge Analytica's Facebook Data Abuse Shouldn't Get Credit for Trump," The Verge, https://www.theverge.com/2018/3/20/17138854/cambridge-analytica-facebook-data-trump-campaign-psychographic-microtargeting; Michal Kosinski et al., "Manifestations of User Personality in Website Choice and Behaviour on Online Social Networks," *Machine learning* 95, no. 3 (2013).

[203] "Manifestations of User Personality in Website Choice and Behaviour on Online Social Networks."

[204] Wu Youyou, Michal Kosinski, and David Stillwell, "Computer-Based Personality Judgments Are More Accurate Than Those Made by Humans," *Proceedings of the National Academy of Sciences - PNAS* 112, no. 4 (2015).

could predict ethnicity with 95% accuracy, gender with 93% accuracy, religious views with 82% accuracy and political affiliations with 85% accuracy. These predictions, especially those on political views, were particularly valuable to CA.
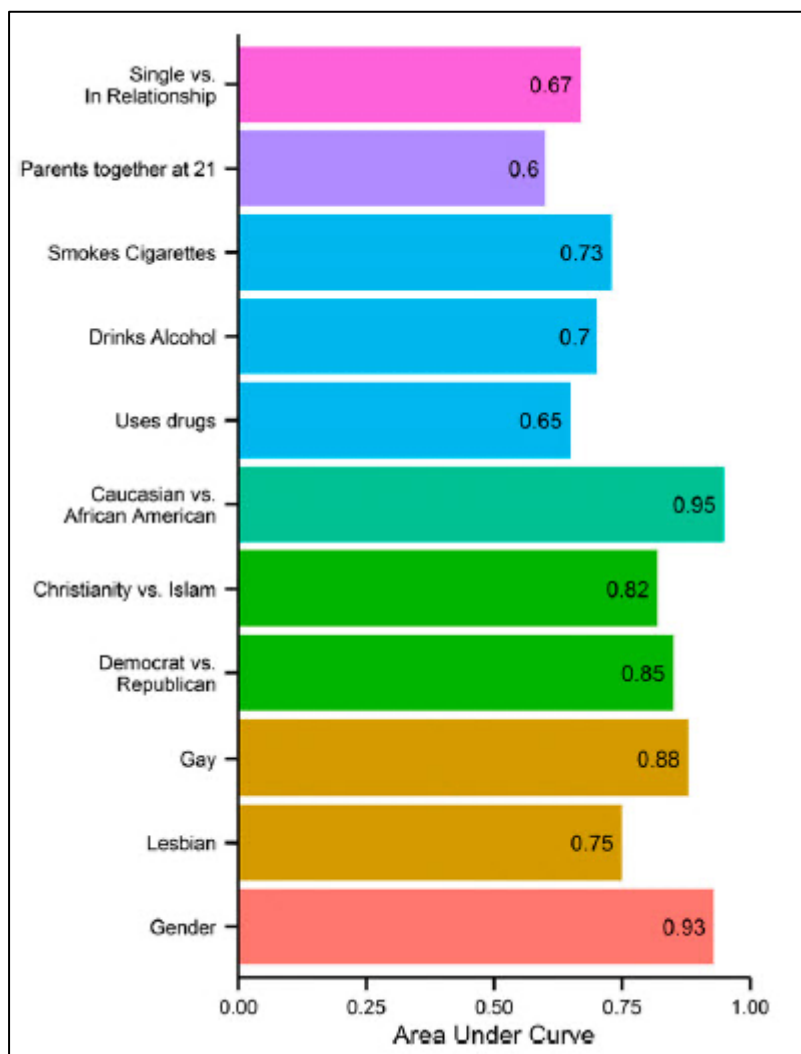

Figure 12: Accuracy of the *myPersonality* app.[205]

Figure 13 below illustrates how the *myPersonality* app worked. Apparently, this app used simple mathematical concepts for its predictions. Firstly, it created a matrix to identify associations between Facebook users and what they liked (e.g. art, a specific brand of cars, etc.). Then, it used Singular-Value Decomposition (SVD) to reduce the number of variables to be analysed (step 2). Finally, as shown by step 3, personality traits and personal attributes were predicted utilising either a linear regression model or logistic regression.[206] According

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[205] Kosinski, Stillwell, and Graepel, "Private Traits and Attributes Are Predictable from Digital Records of Human Behavior."
[206] Ibid.

to the researchers at the Psychometric Centre at Cambridge University the *myPersonality* app could make accurate predictions from a relatively limited number of Facebook Likes, normally an average of 68.
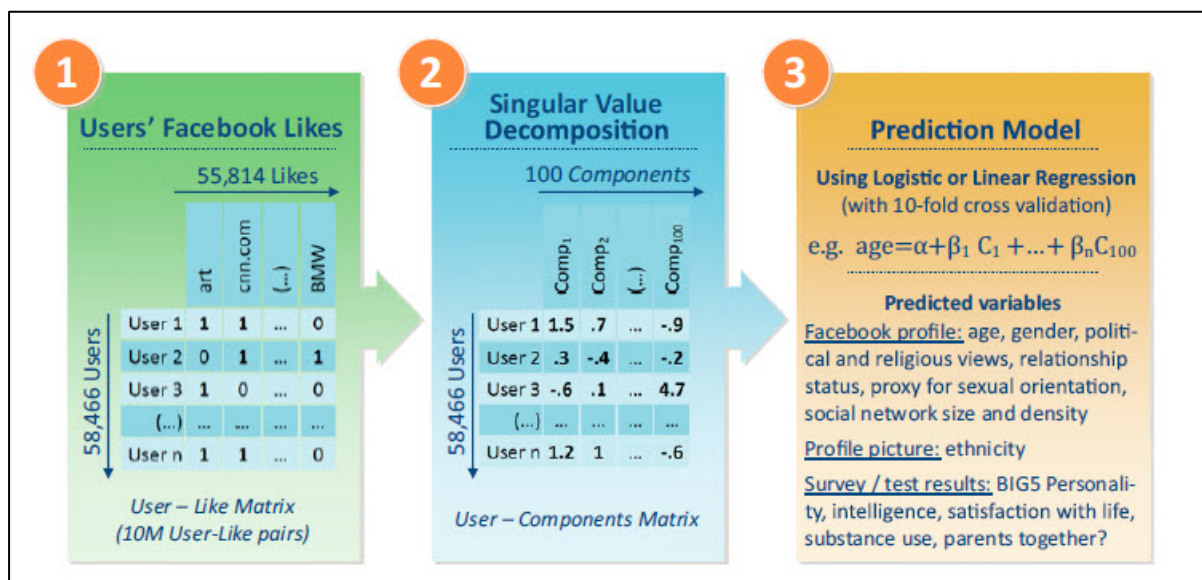

Figure 13: The *myPersonality* app.[207]

The *myPersonality* app was apparently developed in 2013. At that time academics and app developers had access to the first version of the Facebook Graph Application Platform Interface (API), API Version 1, to easily collect large amounts of Facebook users', and more importantly, their Friends', data. However, in 2014, when CA tried to gain access to Facebook data, Facebook introduced API Version 2. API Version 2 limited access to Friends' data.[208] Developers and academics also could no longer collect Friends' data, and could only access the data of people who agreed to use the *myPersonality* app. In order to overcome this issue, CA contacted academics at the Psychometric Centre at Cambridge University. CA wanted access to the data previously gathered by the researchers using the *myPersonality* app and created using Facebook API Version 1. When they refused access, one of the academics, Dr Aleksandr Kogan, accepted an offer to create an app based on another app he had previously created utilising Facebook API Version 1. It seems Dr Kogan's app was very similar to the *myPersonality* app.[209] Dr Kogan's app was called *CPW Lab*.[210] According to

[207] Ibid.
[208] Office, "Investigation into the Use of Data Analytics in Political Campaigns."
[209] Matthew Hindman, "How Cambridge Analytica's Facebook Targeting Model Really Worked – According to the Person Who Built It," *The Conversation* 2018.
[210] Office, "Investigation into the Use of Data Analytics in Political Campaigns."

publicly available papers on CA, it appears that Dr Kogan changed the name of the *CPW Lab* app to *thisisyourdigitallife* to give CA access to Facebook users' and their Friends' data. As a result, CA gained access to information on about 87 million Facebook users. More precisely, through the *thisisyourdigitallife* app, CA collected the following user information:

- name
- gender
- date of birth
- current city of residence
- photographs in which users were tagged
- pages liked
- posts on the user's timeline
- news feed posts
- Facebook Friends lists
- email addresses
- Facebook messages

Furthermore, CA gathered the following information on Friends of Facebook users who had agreed to use the *thisisyourdigitallife* app:

- name
- gender
- date of birth
- current city of residence
- photographs in which Friends were tagged
- pages liked[211]

Apparently Dr Kogan also combined the results of personality tests undertaken by people on Facebook with information from their profiles and other data sources, to build a model that could predict how they might vote.[212] In summary, although it is unclear from publicly

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[211] Ibid.
[212] Ibid.

available scientific papers that CA used more sophisticated machine learning algorithms for its predictions, it seems the company used an apparently standard statistical methodology for its predictions in large datasets.

Finally, at the time the *CPW Lab* app was developed Facebook allowed app developers and academics to collect personal information about its users. However, this data could not be used for political campaigning. This suggests CA illegally used Facebook data for its political operations. Indeed, as stated by an investigation undertaken in 2018 by the British Commissioner's Office:

> Facebook users who accessed the app, together with friends […] were not aware: that their personal data would be provided to CA; that their personal data would be used for the purposes of political campaigning; that their personal data would be processed in a manner that involved drawing inferences about their political opinions, preferences and their voting behaviour. CA processed the personal data in circumstances where none of the conditions for lawful processing in Schedule 2 of the DPA1998 were satisfied. As far as consent is concerned, people had not given valid and effective consent for their personal data to be processed by CA, or for that data to be processed for the purposes of political campaigning.[213]

In summary, it seems that CA used Facebook data for its covert political operations. In other words, individuals did not know that CA was using information collected via Facebook to target them with manipulative political messages.[214]

Data, Techniques and RIPON

Before discussing the efficacy of CA's campaigns, this section will briefly describe the types of data and the techniques utilised by CA for its political operations. CA political operations heavily relied on different types of data. Indeed, as pointed out by former CEO Nix, "Cambridge Analytica buys personal data from a range of different sources, like land registries, automotive data, shopping data, bonus cards, club memberships, what magazines you read, what churches you attend".[215] Thus, in addition to the huge amount of social

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[213] Ibid.
[214] Ibid.
[215] Mikael Krogerus and Hannes Grassegger, "The Data That Turned the World Upside Down," Motherboard Tech by Vice, https://www.vice.com/en/contributor/hannes-grassegger-and-mikael-krogerus.

media data (demographic information as well as behavioural data) collected through the *thisisyourdigitallife* app, CA used data brokers, electoral rolls, and other databases to gather commercial and governmental information about individuals.[216] Purchasing records, people's addresses, phone numbers, voting records and social security numbers[217] were collected by CA to profile people.

After collecting the data, CA adopted different techniques to use the information in its political campaigns. On one hand, as indicated in the following quote from one of its promotional brochures, CA used traditional techniques such as market segmentation studies, interviews, focus groups, surveys, TV commercials, canvassing and direct mail: "This was done through a telecanvassing program and a large scale direct mail campaign that demonstrably increased their likelihood of voting, and voting Republican".[218] There is also evidence CA utilised traditional "analogic" tools in its political campaigns, see Figure 14 below.

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[216] Christopher Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World* (Profile Books, 2019).
[217] Cathy O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (Allen Lane an imprint of Penguin Books, 2016).
[218] Cambridge Analytica, "Ca Political an Overview of Cambridge Analytica's Political Division," (2015); O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy.*

Figure 14: Sample of a CA direct mail campaign.[219]

Figure 14 is a sample of a direct mail campaign organised by CA for one of its American clients, the Senate Majority Fund. The image suggests that CA utilised traditional marketing techniques in its campaigns. Take this quote from one of CA's promotional brochures:

> New campaign-specific issues and messages can be designed and tested through telphone [sic] and/or online surveys. [...] Telephone or online surveys can also be used on a ongoing weekly or monthly basis to update existing campaign data. If needed, supersample surveys of over 20,000 respondents can be undertaken to produce new customized models or completely refresh and remodel already purchased issue-specific data analytics.[220]

This quote clearly indicates that CA utilised traditional qualitative techniques such as surveys to prepare and test its political ads.

On the other hand, it also seems that CA used more sophisticated, data-intensive digital approaches in its political campaigns; these techniques include direct and indirect psychological profiling at scale using social media data, kompromat, hacking, mobilisation of rage and the use of psychologically based hyperbolic narratives that exploited cognitive biases, inflamed group dynamics and generated identity-based reasoning.[221] For example, one of CA's campaigns targeted American individuals with evangelical views. Evangelicals tend to believe that God is fair and rewards individuals who follow his rules. Therefore, if a person succeeds in life, it is because he or she follows God's rules. However, if someone does not follow God's rules, this person might not have success or a fulfilling life. CA used narratives such as the following to exploit the beliefs of this group and spread punitive ideas about minorities: "God is fair and just, right? Wealthy people are blessed by God for a reason, right? Because He is fair. If minorities complain about receiving less, perhaps there is a reason – because He is fair. Or are you daring to question God?".[222] Over time, these

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[219] Analytica, "Ca Political an Overview of Cambridge Analytica's Political Division."
[220] Ibid.
[221] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*; Carole Cadwalladr, "Cambridge Analytica's Ruthless Bid to Sway the Vote in Nigeria," *The Guardian* 2018; "Revealed: Graphic Video Used by Cambridge Analytica to Influence Nigerian Election," *The Guardian* 2018.
[222] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.

narratives might change the way in which individuals with evangelical views perceive minorities, potentially creating social tension.

CA apparently used both traditional off-line as well as more advanced online techniques for its political campaigning. These techniques were managed using RIPON. RIPON was CA's platform for the management of all aspects of a political campaign, including voter profiles, message design, psychographic data, online marketing, campaign scheduling, teams' management, and so on, as shown in Figure 15 below.

RIPON ▶

STRATEGY FEATURES

ENHANCED VOTERFILE: Electoral Roll for your region that has been rigorously cleaned, updated, and enhanced with additional contact and political data.

PSYCHOGRAPHIC PROFILING AND DIAGNOSTICS: Delve well beyond standard political messaging to understand the underlying psychological motivators of voting for each target segment.

BEHAVIORAL MICROTARGETING ™ | VOTERFILE SCORES: Accurate behavioral and political scores for every single voter based on advanced statistical modeling techniques.

PRETESTED MESSAGING: Preloaded arsenal of highly refined and scientifically tested messaging content optimized for each target voter category.

APPLIED INTERVENTION STRATEGIES: Easy to understand documentation on voter behavior research with clear and actionable recommendations on how best to engage with different types of voters.

CAMPAIGN ARTWORK: Use pretested artwork designed for each voter segment so that every campaign communication uses high-impact visuals with ad agency quality.

ONBOARDING NEW CAMPAIGNS: Help campaigns embed the engagement tool into their campaign and help complete data mapping for their tags and groups to meet individual campaign needs.

CAMPAIGN DATA IMPORT: Work with campaigns to help gather existing data, normalize it, and import it into their new system.

MANAGEMENT FEATURES

TURF CUTTING / CANVASSING: Narrow down your targeted lists to specific neighborhoods, walk routes, and streets for optimal canvassing. Add instructions for canvassers and print paper walk routes and lists.

ONLINE MARKETING / ADS: Create and optimize online advertising through banners, Google, Facebook, apps, and other websites.

MESSAGE MANAGEMENT AND WORK FLOW: Have suggested messages arrive at the campaign office for approval and sending after a central campaign review process.

SCHEDULING: Campaign scheduling tool with shared calendar and calendar/email integrations with formatted messages.

MANAGE MY TEAM: View your campaign team with a full hierarchy. See team and individual performance, adjust volunteer and user permissions, send e-mails and SMS (text) messages to volunteers, and see full metrics on their performance.

GAMIFICATION: Built in reward structures designed to create a meritocratic campaign and encourage volunteers to go the extra mile.

QUERY BUILDER: Build and run custom queries and searches. Save them for later or share with others.

GROUPS AND TAGS: Build static and dynamic lists to assign or tag electors; or for use in canvassing, emailing and phone banking.

ENGAGEMENT FEATURES
Features require additional tailoring to fit individual campaigns

PHONE BANKING: Create and schedule volunteer phone banks, choose phone bank volunteers, and assign target groups/locations.

AUTOMATED CALLING: Create automated phone calls with interactive voice response technology to allow for mass telephone messaging and surveys.

DIRECT MAIL: Create bulk mailings and prepare them for printing locally in office, through a local provider or through a trusted national bulk mail partner.

BULK EMAIL: Create individual or bulk email based on targeted groups. Send email through trusted national partners for optimal penetration and worry-free sending.

BULK SMS: Send single or mass SMS messages to target individual voters or groups of voters.

GET OUT THE VOTE: GOTV live performance metrics, real-time analytics, and visualization. Create campaign bus pickup lists, schedule reminder phone calls, mark off voters that have voted, and message through email, SMS, and social media.

SOCIAL BLASTS: Connect to Facebook, Twitter, and LinkedIn to post campaign messages through supporters and volunteers.

Figure 15: RIPON.[223]

[223] Analytica, "Ca Political an Overview of Cambridge Analytica's Political Division."

Ripon was apparently developed by the Canadian company AIQ.[224] Although this platform was probably updated several times to take advantage of advancements in the technology, CA ceased its operations in 2018. Therefore, it is highly likely that there are now more advanced systems and technologies for managing political campaigns.

In summary, CA collected a huge quantity of data and used multiple techniques in its political campaigns, however, it is not clear these campaigns were effective. The following section will discuss the approaches utilised by CA to measure the effectiveness of its political operations.

Efficacy of CA's Operations

When talking about its political campaigns in the US, CA stated they were effective: "The campaigns were victorious in three of five districts where CA Political worked, and the other two candidates performed above the expectations set by local staff and CA Political's modeled data. These victories ultimately gave the GOP [Republican Party] control over the Colorado State Senate".[225] CA claimed that its successes depended on psychographic profiles, which enabled it to target individuals with specific messages that would influence them, "our political messaging specialists help your campaign craft messages that speak directly to your target voters' unique personalities, helping you to forge a connection with supporters that will produce real electoral results".[226]

Although apparently successful, it seems that CA used rudimentary techniques to measure the efficacy of its political operations. As indicated in the quote below:

> The online advertisements produced for our client performed extremely well. Average click-through rates (CTRs) in North America are generally between .08% and .1%, and CA Political's most successful banner advertisements for For America averaged .33% across all eight states. This is especially impressive when one considers that this was achieved at a time of heavy online political advertising. Overall, CA Political was successful in increasing turnout amongst previously low-turnout voter audiences: post-election analysis of voter turnout revealed an average increase of 8%.[227]

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[224] Reuters, "Whistleblower Says Canadian Company Worked on Software to Find Republican Voters," Reuters, https://www.reuters.com/article/us-facebook-cambridge-analytica-election-idUSKBN1H31CK.
[225] Analytica, "Ca Political an Overview of Cambridge Analytica's Political Division."
[226] Ibid.
[227] Ibid.

Click-through rates and unspecified post-election analyses, probably based on telephone or online surveys, appear to be very basic indicators of the efficacy of political campaigns. Surveys, for example, are subject to participants' recall errors; that is, people might not accurately recall the name of the candidate they voted for. In addition, surveys are subject to biases in self-reporting. In summary, they are poor indicators for measuring the success of a political campaign.[228] Thus, as shown in the following quote, it seems CA did not use effective tools to measure the outcomes of its political operations: "Cambridge Analytica was unwilling to provide any proof of the effectiveness of its campaigns".[229]

Moreover, there seems to be little evidence to indicate that CA's political campaigns were effective. In other words, there is ongoing debate on the effectiveness of its operations. On one hand, some of the literature suggests that CA affected political elections. On the other, there are studies that indicate this was not the case. Research on OSN sites and their influence on real world voting behaviour suggests that messages posted on Facebook might affect voter turnout.[230] Although it does not seem to explicitly refer to CA, one of these studies demonstrates that when people are exposed to Facebook messages such as "I voted", followed by the names and profile photos of close Friends, they are 0.4% more likely to go to the polls and vote. Thus, although minimal, the effectiveness of Facebook messages might be extremely significant for political elections, especially when the results are close. Consider the 2000 US presidential elections when George Bush beat Al Gore in Florida by less than 0.01% of votes. In this instance, the right Facebook message might have changed the outcome.

In a sense, the idea that Facebook messages might affect people's actions is not dissimilar to claims made by communication studies about the impact of personalised social media messages on consumers' behaviour.[231] This literature claims that "persuasive appeals are more effective in influencing behavior when they are tailored to individuals' unique

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[228] Guess, Nyhan, and Reifler, "Exposure to Untrustworthy Websites in the 2016 Us Election."

[229] Krogerus and Grassegger, "The Data That Turned the World Upside Down".

[230] Bond et al., "A 61—Million—Person Experiment in Social Influence and Political Mobilization."

[231] Jacob B. Hirsh, Sonia K. Kang, and Galen V. Bodenhausen, "Personalized Persuasion: Tailoring Persuasive Appeals to Recipients' Personality Traits," *Psychological science* 23, no. 6 (2012); Sandra C. Matz et al., "Psychological Targeting as an Effective Approach to Digital Mass Persuasion," *Proceedings of the national academy of sciences* 114, no. 48 (2017).

psychological characteristics".[232] In other words, similarly to what is argued by CA, messages that are in line with individuals' psychological profiles are more likely to be positively evaluated and, therefore, affect the way in which people behave.[233] If this is the case, as CA suggests, Facebook Likes might be used to obtain psychological profiles of millions of users and target them with personalised ads, which in turn could potentially affect their behaviour. There is a study that utilised this method of measuring the effectiveness of tailored messages on Facebook users.[234] Researchers developed 10 messages for the same beauty product. They targeted women who scored high and low in Extraversion, one of the personality traits described in the Persuasive Technology section. Extraversion reflects people's interpersonal and social skills. Individuals who score highly on Extraversion are energetic, active, talkative, sociable and outgoing, whereas people who score low are quiet, reserved and shy. As shown in Figure 16 below, different ads were designed to target these two different groups of women.
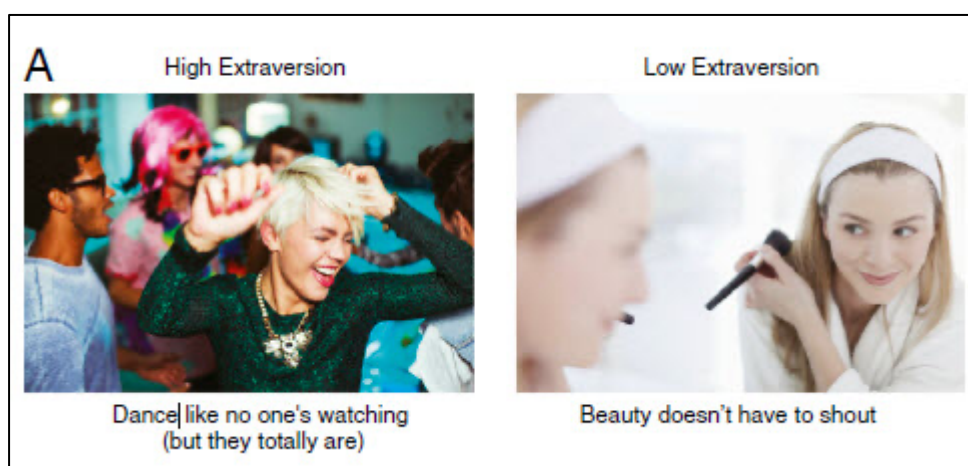

Figure 16: Examples of personalised ads.[235]

The message on the left was developed for extroverted women. It appealed to their outgoing nature and consisted of a textual contribution which said: "Dance like no one's watching (but they totally are)" and an image showing a woman dancing. The message on the right was aimed at introverted women. It was made up of an image of a woman doing her make up and a textual contribution that said: "Beauty doesn't have to shout". Both ads

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[232] "Psychological Targeting as an Effective Approach to Digital Mass Persuasion."
[233] Hirsh, Kang, and Bodenhausen, "Personalized Persuasion: Tailoring Persuasive Appeals to Recipients' Personality Traits."
[234] Matz et al., "Psychological Targeting as an Effective Approach to Digital Mass Persuasion."
[235] Ibid.

were posted on the Facebook pages of extroverted and introverted women over a period of a week. Apparently the campaign was very successful; it reached more than three million Facebook users, attracted 10,346 clicks, and resulted in 390 purchases.[236]

It seems that tailoring messages to personality traits is an effective marketing tool for affecting consumer behaviour. However, whether this technique is applicable to political campaigning, and therefore CA's operations, is still unclear. Some studies claim that political microtargeting is limited in its effect.[237] Indeed, the literature suggests that political microtargeting might have the opposite effect and trigger a reactance effect (or backlash) from voters. In other words, if an individual receives a message that conflicts with his or her political views, he or she might decide to reject a specific candidate.[238] Similarly, studies on the effectiveness of political microtargeting through Facebook claim that the technique has little effect on voter behaviour.[239] For example, one study pointed out that even when repeatedly exposed to Facebook ads, "voters [who] view the political candidates' online ads were no more likely to recall candidates' names, did not significantly update their opinions of the candidates, and sometimes did not recall viewing the ads at all".[240] This corresponds with other studies on political microtargeting through social media, which indicate that "not all of these targeting campaigns have proven to be effective. Some, no doubt, are selling little more than snake oil".[241]

Moreover, when discussing CA, many journal articles argue that the company had limited impact on political elections: "there is little evidence to support claims that Cambridge Analytica helped swing the elections"[242]. Similarly, when analysing CA's role in Donald Trump's 2016 presidential campaign, Chen and Potenza claim that, "Even if Cambridge

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[236] Ibid.
[237] Bailey, Hopkins, and Rogers, "Unresponsive and Unpersuaded: The Unintended Consequences of a Voter Persuasion Effort."; Nickerson and Rogers, "Political Campaigns and Big Data."
[238] Bailey, Hopkins, and Rogers, "Unresponsive and Unpersuaded: The Unintended Consequences of a Voter Persuasion Effort."
[239] Jamie Bartlett, *The People Vs Tech: How the Internet Is Killing Democracy (and How We Save It)* (London: Ebury Press, 2018); Broockman and Green, "Do Online Advertisements Increase Political Candidates' Name Recognition or Favorability? Evidence from Randomized Field Experiments."
[240] "Do Online Advertisements Increase Political Candidates' Name Recognition or Favorability? Evidence from Randomized Field Experiments."
[241] O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*.
[242] Jonathan Allen and Jason Abbruzzese, "Cambridge Analytica's Effectiveness Called into Question Despite Alleged Facebook Data Harvesting," NBC News, https://www.nbcnews.com/politics/politics-news/cambridge-analytica-s-effectiveness-called-question-despite-alleged-facebook-data-n858256.

Analytica did affect Donald Trump's election in 2016, everything we know about political microtargeting suggests that its role was insignificant". This paper also states that "Cambridge Analytica is a better marketing company than a targeting company".[243]

Many journal articles also indicate that CA's psychographic model was inaccurate, "the psychographic model proved unreliable".[244] More interestingly, it seems that even Dr Kogan, the researcher who designed the *thisisyourdigitallife* app for CA, claimed that the efficacy of his predictive model was overestimated, "the digital modeling Cambridge Analytica used was hardly the virtual crystal ball a few have claimed. [...] This soak-up-all-the correlation-and-call-it-personality approach seems to have created a valuable campaign tool, even if the product being sold wasn't quite as it was billed".[245]

In addition, when discussing the accuracy of the personality predictions obtained using Facebook data, Dr Kogan made clear:

> The accuracy of this data has been extremely exaggerated. In practice my best guess is that we were six times more likely to get everything wrong about a person as we were to get everything right about a person. I personally don't think micro-targeting is an effective way to use such data sets.[246]

In a paper published in 2018, in the middle of CA's scandal, Dr Kogan also said that the "correlation between predicted and actual scores … was around [30 percent] for all the personality dimensions".[247] This suggests that he probably understated the accuracy of his model to save his reputation.

As explained in another article[248], the low accuracy of CA's model might be due to a number of factors. Firstly, the idea that the power of Facebook Likes as accurate predictors of people's personal preferences weakens over time. In other words, people might like a TV

[243] Chen and Potenza, "Cambridge Analytica's Facebook Data Abuse Shouldn't Get Credit for Trump".
[244] Ibid.
[245] Hindman, "How Cambridge Analytica's Facebook Targeting Model Really Worked – According to the Person Who Built It."
[246] Matthew Weaver, "Facebook Scandal: I Am Being Used as Scapegoat – Academic Who Mined Data," The Guardian, https://www.theguardian.com/uk-news/2018/mar/21/facebook-row-i-am-being-used-as-scapegoat-says-academic-aleksandr-kogan-cambridge-analytica.
[247] Hindman, "How Cambridge Analytica's Facebook Targeting Model Really Worked – According to the Person Who Built It."
[248] Chen and Potenza, "Cambridge Analytica's Facebook Data Abuse Shouldn't Get Credit for Trump".

show at a specific point in time but do not feel so enthusiastic about it a few years later. Secondly, self-reported information through questionnaires is often unreliable. In fact, individuals taking the same personality questionnaire multiple times rarely provide the same answers twice. Finally, what persuades people is context dependent. In other words, what might work in summer might not work in autumn.

In summary, there is little evidence to indicate that CA's political operations were effective. This is not surprising, however, especially when we consider that predicting the outcomes of political elections is an extremely complex task. This is because forecasts depend on multiple variables, some of which are known, others which are unknown.[249] Moreover, it appears that these variables are interconnected, although sometimes it is hard to establish how they relate to one another. Furthermore, the value of these variables might change over time. For example, consider the value of a voter in a closely fought American election, "a swing voter in a swing state [...] is highly valuable. But if polls show the state tilting decisively to either blue or red, that voter's value plummets".[250]

Thus, it is impossible to say that CA's operations swayed elections. However, it is likely they played a role.

[249] Andrew Gelman et al., "Information, Incentives, and Goals in Election Forecasts," *Judgment and Decision Making* 15, no. 5 (2020).
[250] O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*.

Key Findings

- CA used large quantities of data to support its political operations.

- CA combined traditional as well as "quasi-experimental" data-intensive digital techniques to ground its political campaigns.

- CA provided its clients with a single platform for managing their campaigns.

- CA's influence operations relied on illegal data harvesting and use.

- It is impossible to say the degree to which CA's operations impacted the results of elections.

Recommendations

- Consider using systems and technologies that provide ongoing access to social media data to collect information and monitor individuals' activities.

- Consider the practical effect sizes of any influence campaign in the context of small electoral margins and volatile behaviour.

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4. CAMPAIGN AWARENESS AND SENSEMAKING

Melissa-Ellen Dowling

Summary

- CA took large amounts of qualitative and quantitative data and used it to develop psychological profiles that informed the design of targeted content for the purpose of shifting public opinion at scale.

- CA did not make any attempt to measure the impact of its influence operations and likely did not produce the large scale public opinion effects attributed to them by the company.

Introduction

CA needed to map its operating environment because the company's *modus operandi* involved identifying weaknesses in socio-political systems and leveraging those weaknesses to its advantage. CA could therefore not identify pressure points without developing and maintaining situational awareness. Through evaluating the strengths and weaknesses of CA's sensemaking practices, we find that CA's pre-campaign sensemaking practices were robust and enabled its operations, while post-campaign sensemaking did not occur systematically, which may have compromised the efficacy of CA's subsequent operations.

This section outlines CA's sensemaking processes in three stages, pre-campaign, intra-campaign and post-campaign, to identify the strengths and weaknesses of CA's sensemaking practices in light of one of the most utilised situational awareness models, Mica Endsley's three level situational awareness model. Mica Endsley's model is comprised of (1) perception of the elements of the environment, (2) comprehension of the situation, and (3) projection of future states.[251] We find that CA's practices were effective on levels one and two at the pre-campaign stage but struggled to address level three at all stages. Its pre-campaign practices were robust and enabled its operations, while post-campaign sensemaking did not occur systematically and may have compromised the efficacy of its business model.

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[251] Mica R Endsley, "Toward a Theory of Situation Awareness in Dynamic Systems," *Human Factors* 37, no. 1 (1995): 32–64; P.M. Salmon, N.A. Stanton, and D.P. Jenkins, *Distributed Situation Awareness: Theory, Measurement and Application to Teamwork*, Human Factors in Defence (CRC Press, 2017), 10.

CA's Sensemaking Processes

1. **Pre-campaign:** *mapping the operating environment for situational awareness*

CA mapped its target state's cultural and political traditions along with ethnic and economic tensions. Mapping was conducted via surveys, secondary research, interviews and focus groups.[252] This was a fundamental process to generate situational awareness as an organisational "cognitive product" that allowed identification of relevant environmental factors and cognisance of their importance and meaning to CA's operations.[253]

Case study: Kenya 2015
In 2015, CA began operations to support the TNA/Jubilee Party in upcoming presidential elections.[254] In its proposal report to its Kenyan client, CA outlined the mechanisms it had used and would use in the campaign to conduct Target Audience Analysis (TAA).[255]

Perception survey
CA proposed to conduct a "nation-wide county-level" perception survey to gauge public opinion on the TNA/Jubilee Party. The survey was aimed at identifying perceptions of how the incumbent TNA/Jubilee Party responded to what CA had identified as key political issues in Kenya: terrorism, crime, energy policy and primary education. It proposed to collaborate with local partners to conduct on-location focus groups and interviews in all Kenyan counties. CA specified that it would interview 47,000 respondents which it asserted would form a representative sample. Survey data and secondary research would form CA's assessment and enable it to generate a 'communications strategy' for the TNA/Jubilee Party.[256]

Audit of the Central Government Press Office
CA proposed to conduct a review of Kenya's Central Government Press Office to identify how effective its organisational structure was in facilitating communication between the government/TNA/Jubilee Party and the population. CA indicated that it would:

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[252] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*; Kaiser, *Targeted: The Cambridge Analytica Whistleblower's Inside Story of How Big Data, Trump, and Facebook Broke Democracy and How It Can Happen Again*; SCL Group, "Kenya: Proposal for TNA/Jubilee Alliance," 2014; Cambridge Analytica, "CA Political."

[253] Salmon, Stanton, and Jenkins, *Distributed Situation Awareness: Theory, Measurement and Application to Teamwork*, 8.

[254] This campaign was officially an SCL Elections operation. However, as explained in the report section on 'organisational structure', government investigations and legal action confirmed that SCL Elections and CA were in practice the same company. This therefore makes the distinction void for practical purposes and SCL Elections' Kenyan campaigning awareness practices were also CA's practices. SCL Elections was merely the trading company or 'public face' of CA. For clarity, we will refer to CA in this Kenya case study.

[255] A. Mackay, S. Tatham, and L. Rowland, *Behavioural Conflict: Why Understanding People and Their Motivations Will Prove Decisive in Future Conflict* (Military Studies, 2011).

[256] SCL Group, "Kenya: Proposal for TNA/Jubilee Alliance," 2014.

> examine the GPO organisational structure and processes in order to provide a framework for identifying how these elements can be improved so as to more effectively engage with the media and the general public. The evaluation will look at human resources, relationships with local and international media houses, messaging, outreach channels and other human and infrastructural capacities.[257]
>
> ### *Review of the organisational structure of the TNA/Jubilee Party*
> *Similarly to the audit of the Central Government Press Office, CA proposed to review the organisational structure of the TNA/Jubilee Party to optimise its structure for electoral success. According to CA's Kenyan proposal document, "this process will involve a thorough audit of existing party capacity as a basis for identifying a realistic and strategic plan for building Party capacity to deliver for the future".[258]*
>
> ### *Political analysis of political dynamics in Kenya and its border states*
> *It is clear from its campaign proposal that CA conducted extensive secondary research on Kenyan politics in order to identify the most salient areas to focus its campaign efforts. Its proposal also indicates that CA would conduct political analysis of the 2015 Tanzanian elections given the impact those elections would likely have on TNA/Jubilee's electoral success. CA also proposed to supplement secondary research with data collected locally.[259]*
>
> *Although a proposal to conduct these sensemaking processes does not unequivocally confirm that these processes were in fact used, it is nevertheless a strong indication that CA had such systematic processes in place. This is particularly the case since CA referred to its previous campaign work in Kenya which reportedly utilised similar strategies.*

CA deployed similar pre-campaign sensemaking processes to those outlined in the Kenyan case study across its operations. It had evidently tried and tested their approach in historic campaigns and recycled them. For example, in its 2014 US campaign, CA reportedly tested its scoping methods in the state of Virginia – selected as a microcosm of the US.[260] There, CA allegedly began by gathering information through unstructured conversations with Virginians, followed by more structured interviews and focus groups facilitated by sociologists and anthropologists. After that, CA harvested data through data brokers (Experian and Acxiom) and state government (gun licences, census data etc.).[261] Population

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[257] SCL Group.
[258] SCL Group.
[259] SCL Group.
[260] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.
[261] Wylie.

segmentation was another aspect of its pre-campaign research that increased CA's situational awareness.[262]

Through such early experiments, CA identified a shortcoming in its pre-campaign sensemaking approach: lack of psychographic data. From then, CA prioritised acquiring and interpreting electors' psychographic data as a means of understanding the operating environment and its targets.[263] This became the hallmark of CA's business model. Because CA had conducted extensive qualitative research on the culture and traditions of the US, it accurately predicted that it could gain access to psychographic data if people were paid to take an online survey. CA then interpreted the data and, through doing so, identified persuadable voters – its targets. Identifying persuadable voters was a key component of CA's early campaign awareness approach on which the entirety of its influence operations hinged. It enabled CA to reach consensus on its targets which reflects a functioning sensemaking process because a shared 'cognitive cause map' emerged, and drove, the company's mission and tactics.[264]

As in the Kenyan case, gaining an understanding of 'issue importance' was fundamental to CA's US operations because this enabled the company to tailor messaging on the issue in relation to the psychographic data. For example, CA's pre-campaign research revealed that the issue of national security was the most prevalent issue for its target voters. With that knowledge, CA was able to produce messages on national security that appealed to particular personality types.[265] From a sensemaking perspective, CA mapped the environment and through doing so identified a key feature of the environment that it was able to leverage.

Across its operations it is apparent that CA followed a particular sensemaking process and was committed to developing an actionable picture of its environment. The core phases of CA's sensemaking process were:

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[262] Wylie; Cambridge Analytica, "CA Political," 3–8; Kaiser, *Targeted: The Cambridge Analytica Whistleblower's Inside Story of How Big Data, Trump, and Facebook Broke Democracy and How It Can Happen Again*.

[263] Cambridge Analytica, "CA Political"; SCL Group, "Kenya: Proposal for TNA/Jubilee Alliance," 2014; Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*.

[264] Jörgen Sandberg and Haridimos Tsoukas, "Making Sense of the Sensemaking Perspective: Its Constituents, Limitations, and Opportunities for Further Development," *Journal of Organizational Behavior* 36, no. S1 (2015): S8.

[265] Cambridge Analytica, "CA Political," 20.

(1) Target audience analysis to understand the key issues and political dynamics.

    a. Qualitative research – secondary research, interviews, focus groups

    b. Quantitative research – data collection using a blend of online/off-line survey methods

(2) Data analytics to "segment the population into actionable groups".[266]

Following these steps, CA was able to target identified individuals and groups as part of its "communications strategy".[267]

As shown in the Kenyan case study, CA also conducted what it referred to as a "National Situation Analysis" for each campaign which involved evaluating its candidate's communications capabilities in order to identify gaps and shortcomings that CA could address.[268]

The available primary evidence suggests that CA had a strong understanding of the necessity of acquiring situational awareness in order to build an effective operational strategy. Accordingly, it is apparent that in its pre-campaign stage, CA prioritised understanding and mapping socio-political contexts of its operational environments.

2. **Intra-campaign:** *tracking public opinion and assessing influence campaign efficacy*

CA's intra-campaign awareness broadly had two key dimensions: (1) the need to remain aware of a dynamic socio-political environment and (2) the need to assess its role in affecting that environment and projecting "future states" in light of its actions in a fluid operational environment.[269]

CA had systems in place to maintain situational awareness of the socio-political environment throughout its campaigns. For example, CA monitored political polls and public opinion to acquire knowledge of its candidate's chances of electoral success. Its analysts produced 'intelligence reports' that detailed changes to the political environment. Such

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[266] Cambridge Analytica, "CA Political."
[267] Cambridge Analytica, 31.
[268] Cambridge Analytica, "CA Political."
[269] Endsley, "Toward a Theory of Situation Awareness in Dynamic Systems."

reports focused on popular perception and awareness of candidates, and also evaluated electorate composition and political ideology of key voter segments such as evangelicals.[270] In the US 2016 campaign case, CA had ostensibly developed a strong understanding of both political culture and political institutions in the relevant swing states.

CA's intelligence reports focused on mapping the attributes of the political environment which constituted CA's operating environment. The reports did not address CA's role in shaping or interacting with that environment. There is a lack of evidence of intra-campaign sensemaking processes in relation to CA's effect on the environment. Despite the lack of available evidence, it nevertheless appears that CA had methods to assess its role in relation to the changing political environment. For example, as figure 17 shows, CA used a control group (voters not messaged) to compare attitude shifts with the group that CA messaged.[271]
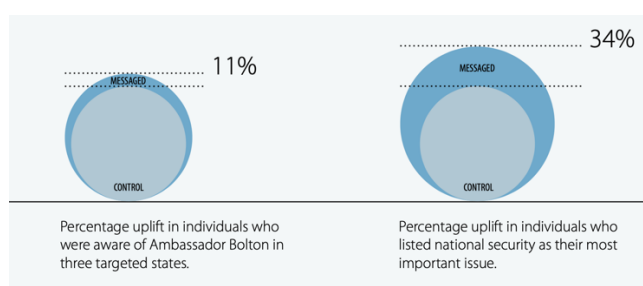

Figure 17: CA measuring campaign efficacy.[272]

Furthermore, CA might have developed correlations between its candidate's popularity and the resonance of its political messaging. The difficulty would have been determining whether CA's political campaigning and communications strategies were the causal factor. It would be difficult to measure with any degree of certainty the effect of its operations on the popularity of its candidate due to the innumerable quantity of variables that could have accounted for fluctuations in public perceptions of its candidate.

Despite the variable problem, it might have been possible for CA to understand its role in the operating environment by observing its targets' online/off-line engagement. Since one of CA's strategies was to gain traction digitally first, then encourage targets to physically

[270] Cambridge Analytica, "CA Intelligence Report," 2015, https://twitter.com/hindsightfiles?lang=en.
[271] Cambridge Analytica, "SCL Elections: John Bolton Super PAC," n.d, https://twitter.com/hindsightfiles?lang=en.
[272] Cambridge Analytica.

gather in 'real-world' locations,[273] it would have been possible for CA to measure location turnout and compare attendance with original targets. Despite other variables affecting attendance, it would nonetheless have been possible for CA to draw broad correlations between online influence and off-line event presence which, in turn, could have served as one indicator of 'successful' influence.

Digital technology would have proved both a challenge and a benefit to CA's intra-campaign sensemaking processes. Sensemaking consists of ways of interpreting the environment and devising courses of action based on those findings. However, technology introduces further complexity to that environment and process. As Persson and Nyce point out, "those who intend to use any technology (and to survive with the help of it) have to make sense of not only the (battle) environment but also their technologies".[274] CA therefore needed to understand not only the non-technological aspects of its dynamic operating environment, but also develop a strong understanding of the role of technology in the environment, and ways in which its technological capabilities could interact with the environment to influence political preferences. Conversely, technology perhaps enabled CA to more easily track its impact, and assess shifting attitudes and beliefs, through online forums it reportedly cultivated (note: for the problem of inauthentic online representations – see 'persuasive technology').[275]

3. **Post-campaign:** *evaluating influence campaign outcomes and assessing the environment post-campaign*

There is little evidence to suggest CA deployed systematic processes of post-campaign environment sensemaking. Part of the reason for this may have been that there is an apparent lack of mechanisms to measure influence efficacy in the post-campaign context – i.e. it would be difficult to establish causation between CA's operations, individual preference formation, behavioural change and electoral outcome. There would be too many unquantifiable and unidentifiable variables at play to determine a macro-level causal conclusion with respect to whether CA's operations led to a particular electoral outcome.

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[273] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*, 122.
[274] Per-Arne Persson and James M Nyce, "Technology and Sensemaking in the Modern Military Organization," 2002, 2.
[275] Wylie, *Mindf* Ck: Inside Cambridge Analytica's Plot to Break the World*, 121.

Despite this insurmountable problem, evidence suggests that it was only at the macro-level efficacy was assessed.

Key Strengths of CA's Sensemaking Processes

CA's pre-campaign sensemaking processes appeared to be robust. They enabled CA to identify socio-political vulnerabilities and subsequently exploit those vulnerabilities. A key strength of CA's pre-campaign sensemaking process was its deployment of a blended model – a qualitative and quantitative approach to situational awareness. A qualitative-quantitative model allowed for analysis of human factors which could then be cross-referenced with data to provide a holistic map of the operating environment. CA had developed strong mechanisms for two of the three situational awareness criteria outlined in Endsley's three level model of situational awareness: (1) perception of the elements of the environment and (2) comprehension of the situation. On the available evidence, it appears that this awareness and sensemaking practice was strongest in the pre-campaign stage, and to a lesser extent once a campaign was underway. However, it is possible that its sensemaking practices were just as robust intra-campaign but there is less open-source evidence for it.

Key Weaknesses of CA's Sensemaking Processes

Although CA *could* map the post-campaign environment, there is limited evidence that this occurred. A lack of systematic post-campaign sensemaking practices means that CA lacked the means to properly assess the efficacy of its campaigns. Available evidence suggests that CA adopted a simplistic approach, wherein if its sponsored candidate won an election or even gained a parliamentary seat, the CA campaign was deemed a success (see e.g. Nix 2018).[276] This approach neglected to account for the myriad other non-CA variables that would have influenced the outcome. However, CA did appear to have a control group, which would at least have enabled it to attempt to generate knowledge on the extent to which its operations were 'successful'. Nevertheless, CA likely fell short on the third criterion of Endsley's situational awareness model – projection of future states.

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[276] DCMS, Oral evidence: fake news Brittany Kaiser HC363; DCMS, Oral Evidence: fake news Alexander Nix HC 363, 2018; SCL Group, "Kenya: Proposal for TNA/Jubilee Alliance," 2014.

Although there is a scarcity of reliable information on CA's post-campaign sensemaking processes, the lack of evidence suggests that CA did not practice any systematic post-campaign sensemaking. While this would not affect the efficacy of the campaign, it could have been a detriment to its business model because CA might have repeatedly deployed ineffective influence techniques. However, the fact that CA tracked changes relative to a control group during campaigns reduced the risk of poor post-campaign sensemaking practice, because the company had some measure of the impact of its methods.

Key findings

- CA's pre-campaign sensemaking processes were robust which enabled CA to identify socio-political vulnerabilities and subsequently exploit those vulnerabilities as per its business objectives.

- CA took large amounts of qualitative and quantitative data and used it to develop psychological profiles that informed the design of targeted content for the purpose of shifting public opinion at scale.

- CA maintained situational awareness intra-campaign by tracking public opinion and through dynamic monitoring of attitude changes using a control group.

- During its campaigns, CA was unable to establish causal connections between CA's operations and changes to public opinion.

Recommendations

- Deploy a qualitative-quantitative situational awareness strategy for optimal operations environment mapping.

- Implement processes to monitor the changing environment and maintain situational awareness throughout an operation. Operating environments are dynamic. Since the purpose of IO is to alter perceptions, it is crucial to have real-time awareness of targets' attitudes in order to determine whether perceptions are shifting, and that this is likely the result of the operation.

- Use a control group throughout the operation to measure efficacy.

- Devise practices for monitoring the post-operation environment and indicators of operation efficacy. These practices should be correlative only, given the difficulty in

achieving causal certainty regarding the conduct of an operation and an electoral outcome.

Caveat: This theme relies heavily on leaked primary documents. While the balance of evidence points to the veracity of the sources, conclusions made based on these documents must be understood in that context.

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RECOMMENDATIONS

1. Devise a code of practice for the ethical use of persuasive technologies that guarantees the protection of liberal democratic principles and imbues influence operations entities with legitimacy. This is essential for a state-based IOA because that actor must retain legitimacy to operate in a liberal democratic system.

2. Implement stringent data harvesting procedures that ensure data is collected legally. While further investigation of legislative constraints is required, it is clear from the case study that data must be collected using methods that ensure there is consent from the user, and that data is stored and used in a way that protects users' privacy.

3. Employ multidisciplinary teams of experts to analyse target audiences and develop contextually nuanced content.

4. Develop indicators and metrics for influence at the macro, meso and micro levels, leveraging both the human and analytical sciences.

5. Develop a strategy for gaining access to social media and other online data underpinning next generation persuasive technologies.

6. Deploy a qualitative-quantitative situational awareness strategy for mapping and visualising the information and influence environment. A blended 'quant-qual' model will capture the most holistic picture of the environment, and enable cross-referencing between qualitative and quantitative findings to improve the accuracy of findings.

CONCLUSION

This report identified and assessed the strengths and weaknesses that characterised CA and its political operations with a view to deriving insights that can inform future Defence operations. The overarching strength of CA's business model was its ability to efficiently map and exploit the regulatory environment in which it operated, using a combination of traditional and "quasi-experimental" techniques. It accomplished this by gaining access to and exploiting large cohorts of data gathered from multiple sources which were utilised to profile, microtarget and influence individuals as well as public opinion. The report also identified key weaknesses of CA's operations that hindered its capacity to accomplish its aims more effectively. It finds that the business model adopted was unsustainable because its methods could not stand up to public scrutiny. In addition, the report shows how the simplicity of its profiling model, as well as its inability to measure the efficacy of its operations, cast doubt on the veracity of its claims to affect electoral outcomes.

Based on its key findings, this report recommends that the Department of Defence's emerging influence operations capabilities are: (i) founded on a code of practice which protects liberal democratic principles and ensures the legality of data collection procedures; (ii) guided by a strategy for accessing and collecting social media data that evolves with changing digital technologies; (iii) driven by multidisciplinary teams to analyse and develop indicators and metrics for influence operations at the macro, meso and micro levels; and, (iv) informed by combined qualitative-quantitative situational awareness strategies for mapping the outcomes of information and influence campaigns.