POLITICAL MARKETING DURING THE 4TH INDUSTRIAL REVOLUTION:

THE TRUMP CAMPAIGN AS A CASE-STUDY

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Abstract: This paper takes the 2016 presidential campaign ran by Donald Trump as a case-study to highlight the changes in political marketing brought about by the technologies of the 4th industrial revolution. We show how *Cambridge Analytica*, the company who advised Trump's marketing team, used data from Facebook usage combined with the five-factor model of personality psychology to create effective micro-targeting strategies, that reached voters in an individual basis with powerful results.

Key-words: Political Marketing; Industry 4.0; Big Data; 2016 US presidential elections; Five-factor model;

1 INTRODUCTION: THE TRUMP SURPRISE

If you would read any papers during the 2016 United States presidential elections, the majority would say without a doubt that Ms Hillary Clinton would be the 45º US President. The New York times published a 99% chance of the democrat win, while the Huffington Post said 98.2 percent. On November 9th 2016 the whole world (with maybe the exception of the Trump campaign) was surprised by a republican win with 304 Electoral College votes. The result is what Nassim Nicholas Taleb (2010) would call a "Black Swan", an unforeseen and unlikely event that has major implications to those involved.

This result has put many approaches to political communication in check. After the 2008 Obama's campaign, the internet was already a central issue for all political marketing strategies. However, it's use was limited as yet another tool to reach the electorate, through online media like YouTube videos and 140 characters' political speech on Twitter. As many

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other companies had realized by that time, the online community could create a lot of mobilization and instigate many followers. Trump's campaign took it a step further by gathering massive amounts of information (what is known as *big data*) about these followers and potential followers in a way that his public could be segmented, targeted and reached through a well-developed micro-targeting strategy.

It could be expected due to the changes on people's behavior that the internet should play an important role in political marketing. Kotler reminds companies that they should go where their customers are, not try to bring them to you. With Obama´s campaign we could see that happening. Different from previous presidential races, Obama´s internet presence has brought him a never before seen presidential online fundraising. As Cornfiel (2008) said, without the internet there would not be an Obama (GOMES et al, 2009).

Kotler (2017) says that connectivity reduces the costs of communication and interaction with public, as well as lower the barriers for new names to enter the game. It also made the consumer (or voters, as we can consider for our subject) an active part of the dynamics.

Although the internet is the main field of the events that will be addressed in this paper, we also follow an important mark into our history by approaching the *4.0 industry*. Where the offline world meets the online and, at a very fast pace, we can see the entire dynamic of world economy and culture changing. Everything is connected.

Which takes us back to the Trump phenomenon. Within a very short timeline, Trump went from TV star and entrepreneur to the most powerful man in the world. In March 2015 an exploratory committee was established for the Trump campaign; by 2016 he is already winning the Republican primaries and on November 9th 2016 Trump wins the presidential race. Unexpected?

We later found out some of the dirty details of president Trump´s campaign. *Cambridge Analytica*, the political consulting firm that engineered Trump's marketing strategy, was involved in a series of scandals, all revolving around unauthorized and unethical use of social media user's personal data, including access to private messages and sensitive information (ISAAK, HANNA, 2018). The company eventually ceased operations in May, 2018 due to the investigations, but their business methodology is like a genie that cannot be put back in the lamp. Their use of big data, tracking each individual's digital footprint to create a personalized profile based on the Big Five model of personality research is revolutionary and

bound to be copied and spread to other forms of marketing actions. Maybe the strategy of political marketing remains the same, but the tools and tactics have changed drastically.

In this paper, we intend to show how the 4th industrial revolution changed the dynamics of political marketing, using Trump's 2016 election as a case-study.

2 POLITICAL MARKETING AND THE 4.0 INDUSTRY

Marketing and politics are directly linked. In contemporary mass democracies, with a large number of voters and candidates, to be elected you have to be known. You have to reach out to the voters and show them that you are what they need, what they want. To put it in blunt marketing terms, the politician is the product, the voter is the consumer.

Kotler (2017) defines marketing as "meeting needs profitably". As he puts it, it's about knowing consumer's needs and fulfilling them. With political marketing, although you may apply many of the classical marketing strategies, there are some particularities that must be take into account. For instance, there's a *political climate* that develop around the many demands a country might have in any given moment in history. The balance of power between the political parties; approval and rejection of the incumbents; the country's economic performance; all that factor into who wins an election.

Political marketing is then defined by many authors as the *application of marketing concepts and strategies in a political campaign*, where a number of different actors play a part in the interactions and strategies. From the main party candidate through lobbyists, the media, government to voters (STRRÖMBÄCK & NORD, 2005). The mass media plays a particularly important role, since in modern days, everything we know about society (and politics), we know through media channels (LUHMANN, 2000). Since the emergence and widespread popularization of what Niklas Luhmann (2012) calls "electronic communication", namely radio and later television, the government and politicians started to communicate to their subjects directly. More information reached the population in less time and with richer details (first pictures in newspapers, than audio and video). King George VI talked to his people directly in Britain to announce the declaration of war against Germany in 1939. 52 years later, maybe there would not be the historical Berlin Wall Fall, if not for the television in West Germany showing the sharp contrasts with the socialist East (DELARBRE, 2001).

Marketing strategies have not always been considered as an important part of a political campaign. Lock and Harris (1996) were not certain that advertising could have that

much influence then, as they could not see a direct link between advertising and voting intention We will later on see, in 2016 Trump campaign that informed advertising can be powerful.

Which takes us to the recent changes the current generation is living. The world of connectivity, social media, artificial intelligence and big data. Classical political marketing was built over the old media, the paper journalism, made with typewriters and analog technology. History marks the revolutions of the industry as an important source of changes in society as we know it. The first industry revolution, as it is most known, is a concept that changed the entire dynamics of society, with the beginning of rural flight and the growth of urban population and cities.

Industry is the central organization from of modern economic production. The mass production comes side by side with social organization and it has reached and made a more globalized world. And an industry revolution is marked by these changes, as history shows us. The three revolutions came by the means of, respectively: steam power; mass production and assembly line; and programmable logic controllers (BRETTEL et al., 2014).

The next industry revolution is happening right now because of the "internet of things", allowing communication between humans and machines. Called Cyber-physical-systems (CPS), they are the combination of human, machine and product inputs, who interact constantly through a horizontal method. This communication allows the acquisition and processing of data, with tasks divided between humans and machines via interfaces (BRETTEL et al., 2014).

In this perspective, the needs that the industry 4.0 is meeting now is different from the ones during the second industrial revolution. If back then Mr. Ford would say that their consumer could want "any color so *long as it* is *black*", today the niche market, customization and individualization are the key. The production now is about the mass customization, the personalized production, with flexible process and sometimes modularized products that can attend to the heterogeneous target. This individualized production leads to an individualized communication between the brand and these customers.

Throughout researching about the 4.0 industry, the expression "Internet of Things", or just "IoT", will come up very often. It can be resumed as the use of the internet to control the physical-real world through the global network. Where the offline/online worlds collide. This is also how the CPS works, with connectivity, artificial intelligence and products, controlled by, or communicating with, humans. (VALENCIA et al. 2018)

Roblek, Mesko & Krapez (2016) classify IoT in 4 fields: 1)Smart infrastructure, where devices and connectivity are incorporated into buildings, from controlling your air conditioner by your phone, to applying technology into infrastructure operations, such as traffic control; 2) Health Care, with gadgets in your phone or smart watch that can measure your temperature and hearth rate, from speculated future where your device can diagnose diseases; 3) Supply chain/logistics, detailed and real-time information, product traceability and bullwhip effect; and 4) Security and privacy, information exposure and encrypted data.

Table 1. Differences Between Classical Knowledge Processes and the Internet of Things Knowledge Processes. (Roblek, Mesko & Krapez, 2016)

Classical knowledge processes	Internet 2.0 based knowledge processes	IoT knowledge processes
Classical Knowledge based on the data acquired from the intranet, CRM. Data are saved in Local servers.	Information is accessed and stored via clouds and plataforms such as Google and Facebook	Big data acquired direcly from the things and customers. Analyzed and saved in clouds
Local time and personal limited access	Business or private content is available on any deice, any place, any time	Real time. Content is available online. No limitation for sharin information between people or things
Organization limited networking: information sharing and discussion via email or internet	Internet 2.0 provides online relations between the customer and supplier. The discussion is limited to the matter of content and physical data entry	Information sharing and collaboration via wireless communication between people, between people and thing, and between things

Note. IoT= Internet of things. CRM=customer relationship management.

Table 1 shows us how the process of acquiring information has changed a lot through the years.

The acquirement of knowledge became more accessible by day due to increase connectivity. Along with that, big data analytics programs process information that is given by targeted groups for free at social medias (ZHONGA, XU, KLOTZ & NEWMAN, 2017)

Kotler says in Marketing 4.0 that connectivity has reduced barriers to new entries, reduced the cost of interacting with the public and has changed the part of the consumer, who is not just a passive receptor of the information, but an active part of the actions for segmentation and strategies. It is important to say, as Kotler reminds us, that the internet traffic increased 30 times from the 2000´s to 2014.

This is where Kotler brings us the concept of the “netizens”, the internet citizen who voices his opinion and starts a mobilization online that can be either in favor or against an action, brand, government of ideal. In Brazil, the world saw this phenomenon brought from the online world to the offline world with the 2013´s protests. What started as an online mobilization supporting the São Paulo protests against public transport fare increases, later drawn millions to the street around a number of issues and in favor of a lot of conflicting ideals.

Unplanned and unexpected, the riot was the biggest in Brazil since the 1992 protests against former president Fernando Collor de Mello.

3 THE TRUMP CAMPAIGN: MAKING DATA GREAT

Trump's campaign was not the first to use the internet and social media as a political strategy. It also wasn't the first to use data as a guide for branding and political action. What sets his efforts apart, and ultimately resulted in the *Cambridge Analytica* controversy, was the specific way in which they used the tools made available by the 4th industrial revolution.

We shall now delve into the innovative ways his campaign used data to get marketing results. But before we get into these specific models, we must make an important caveat: Trump's election victory was not just a matter of good marketing. Like any complex social event, it happened as the outcome of multiple causes. His public persona and personal branding, built over decades through (often failed) business enterprises and media appearances, were a major factor, worthy of their own case-studies in marketing strategies[3]. The historical timing of his bid, as well as the political substance of his message, resonated with a constituency that traditionally allied with the Democrats, but who found themselves increasingly alienated by the left's party focus on identity issues: a working-class, mostly white group of people that lost their jobs and income as a result of the reorganization of production processes that followed globalization (BRADLEE JR., 2018). These workers resented the transfer of manufacturing jobs to countries like China and India, that offered companies lowered costs and wages. They saw themselves as the losers of in a rigged global economic game, and felt deeply nostalgic about an "old America" where their lives were better. It's not hard to see how a candidate promising to "bring back manufacturing jobs" and wearing a *Make America Great Again* hat would look like an attractive option.

With that being said, the message needs to reach the right ears in the right way for it to have any political impact, and that was one of *Cambridge Analytica's* role.

Political marketing based on heavy sets of data gathered online is a recent phenomenon, as young as widespread internet access and the mass popularization of devices for connection (specially the smartphone). Facebook was launched in 2004 and the first iPhone

[3] Johnston (2016), in *The making of Donald Trump* tries a semi-biographical approach to this subject.

was released in 2007, so we're dealing with fresh technology with little over a decade of use. Tech companies were quick to realize the potential goldmines hidden in user's online usage data, in particular on social media platforms, because it provided them with a glimpse of a valuable resource: revealed preferences.

Social media usage constantly tracks user's likes and interests, creating a rich dataset of personalized information being updated into their systems by the users themselves. This kind of data uncovers sharper information than the kind obtained by surveys, for instance. Stimulated surveys are closer to artificial constructs designed by researchers to extract something from an audience, so they get a lower signal-to-noise ratio than the spontaneous traits manifested in your actual behavior online.

This allows platforms like Google and Facebook to know consumers in an individual basis, and provide personalized advertisement with better chance of success. It's a common experience for online shoppers nowadays to be bombarded with ads related to their recent searches in every website they visit. What is known as *micro-targeting* takes advantage of these possibilities.

As we mentioned before, Barack Obama's presidential bid in 2008 already adopted these practices of data mining, micro-targeting and social media integration:

> In the 2008 presidential election, Obama's targeters had assigned every voter in the country a pair of scores based on the probability that the individual would perform two distinct actions that mattered to the campaign: casting a ballot and supporting Obama. These scores were derived from an unprecedented volume of ongoing survey work. For each battleground state every week, the campaign's call centers conducted 5,000 to 10,000 so-called short-form interviews that quickly gauged a voter's preferences, and 1,000 interviews in a long-form version that was more like a traditional poll. To derive individual-level predictions, algorithms trawled for patterns between these opinions and the data points the campaign had assembled for every voter—as many as one thousand variables each, drawn from voter registration records, consumer data warehouses, and past campaign contacts. (ISSENBERG, 2012)

Obama's campaign ran surveys to gather data, which was assembled to assign individual scores in order to identify voters and potential voters. Correctly identifying likely voters could shape marketing messages to keep them engaged; to make sure they actually leave their houses and vote on election day; or to turn them into active supporters by recruiting them to message their friends, solicit votes door-to-door, and spread support through their networks.

So what changed in the way data was used from Obama's election to Trump's campaign that would make one of the minds behind it, Christopher Wylie, call it "Steve Bannon's psychological warfare tool" (CADWALLADR, 2018)? The answer was a blend of data gathered through dubious ethical procedures and its crossing with cutting-edge psychological theory.

Cambridge Analytica gets its name from the academic work of Michal Kosinski, who since 2008 works with psychological models at the Psychometrics Centre of Cambridge School. The company started from meetings of CEO Alexander Nix with data scientist Christopher Wyllie; investments from hedge-fund manager Robert Mercer; and overall supervision by Steven Bannon, who would later become Trump's number one advisor. The company was built on the idea of using Kosinki's research on data-based personality models, namely the *Big Five* or *Five-factor* model, to create a large, individualized database of the psychological profile of American voters.

The Five-Factor model is the most reliable and widely used metric for individual differences in personality psychology available at the moment. Its conceptual history follows a peculiar course in psychological research, since it's not derived from any particular theory, but rather a development that emerged more or less spontaneously from empirical research. Following what is called the "lexical hypothesis", which states that the most important markers of personality traits make their way into language, researchers observed a great amount of data on the words people use to describe themselves and others: organized; curious; shy; affectionate; combative; and many others. Through factorial analysis, these words would consistently sort themselves into five major factors: Extraversion; Agreeableness; Conscientiousness; Neuroticism; and Openness to experience (MCCRAE & COSTA, 1999; MCCRAE & JOHN, 1992). Table 2 shows three different methods used to observe how the aspects of the Big Five clump together:

Table 2: Examples of Adjectives, Q-Sort Items and Questionnaire Scales Defining the Five Factors[4]

Factor	**Factor definers**		
Name	Adjectives	Q-sort Items	Scales

[4] From MCCRAE & JOHN, 1992.

Extraversion (E)	Active; Assertive; Energetic; Enthusiastic; Outgoing; Talkative;	Talkative; Skilled in play, humor; Rapid personal tempo; Facially, gesturally expressive; Behaves assertively; Gregarious;	Warmth; Gregariousness; Activity; Assertiveness; Excitement seeking; Positive emotions;
Agreeableness (A)	Appreciative; Forgiving; Generous; Kind; Sympathetic; Trusting;	Not critical, skeptical; Behaves in giving way; Sympathetic, considerate; Arouses liking; Warm, compassionate; Basically trustful;	Trust; Straightforwardness; Altruism; Compliance; Modesty; Tender-mindedness;
Conscientiousness (C)	Efficient; Organized; Planful; Reliable; Responsible; Thorough;	Dependable, responsible; Productive; Able to delay gratification; Not self-indulgent; Behaves ethically; Has high aspiration level;	Competence; Order; Dutifulness; Achievement striving; Self-discipline; Deliberation;
Neuroticism (N)	Anxious; Self-pitying; Tense; Touchy; Unstable; Worrying;	Thin-skinned; Brittle ego defense; Self-defeating; Basically anxious; Concerned with adequacy; Fluctuating moods;	Anxiety; Hostility; Depression; Self-consciousness; Impulsiveness; Vulnerability;

Openness (O)	Artistic; Curious; Imaginative; Insightful; Original; Wide interests;	Wide range of interests; Introspective; Unusual thought processes; Values intellectual matters; Judges in unconventional terms; Aesthetically reactive;	Fantasy; Aesthetics; Feelings; Actions; Ideas; Values;

The five-factor model did not start out as a theory of how personality works, but it eventually developed into one, which is called *trait theory*:

> "(...) it implicitly adopts the basic tenets of *trait theory* - that individuals can be characterized in terms of relatively enduring patterns of thoughts, feelings and actions; that traits can be quantitatively assessed; that they show some degree of cross-situational consistency; and so on. The hundreds of studies of personality correlates that employ measures of the five-factor model both presume and confirm that personality traits exist." (MCCRAE & COSTA; 1999; p.140)

So, what does a five-factor trait theory of personality means? First, that individuals vary along these five different and independent traits. So a person with higher measured Extraversion will tend be more *active*, *assertive* or *talkative* than a person with a lesser score. Same goes for all the other traits. And by assembling a profile with these five features we're able to get a clear picture of a person's psyche.

This personality profile is (relatively) stable with regards to variation in time and context, so a person with higher Conscientiousness tends to exhibit the associated behavioral traits (organization, efficiency and reliability) in all sorts of environments, be it at work, at home, in leisure activities, etc. These traits are not directly seen, but inferred from the observation and description of actions. And they're also not *scales of value*: being more or less Neurotic (which is a scale related to negative emotion) is not better nor worse; it's not a moral judgement either; in reality, the different traits reflect different strategies of dealing with the complex situations of the world:

> A second possibility is that individual differences in personality reflect different but equally effective adaptational strategies. Agreeableness makes it easier to acquire allies, but antagonism sharpens one's ability to compete with enemies; open exploration leads to new resources, but closed conventionality exploits the tried-and-true. It is clearly to the advantage of social groups to have a variety of

> talents and dispositions at their disposal, and it may be to the advantage of individuals to occupy different niches in the social environment (MCCRAE, COSTA, 1999, p.148).

If we establish that individuals can vary along these five axis, which can be measured with some degree of reliability, we have the foundations for a personalized, micro-targeted method of political marketing strategy. What the minds behind *Cambridge Analytica* did was draw on research by Kosinski et. al (2014), who designed a procedure to obtain a five-factor analysis of personality using individual Facebook "likes" as the source of data:

> Likes are used by Facebook users to express positive association with online and offline objects, such as products, activities, sports, musicians, books, restaurants, or websites. Given the variety of objects, subjects, brands, and people that can be liked and the number of Facebook users (>1.3 billion), Likes represent one of the most generic kinds of digital footprint. For instance, liking a brand or a product offers a proxy for consumer preferences and purchasing behavior; music-related Likes reveal music taste; and liked websites allow for approximating web browsing behavior. Consequently, Like-based models offer a good proxy of what could be achieved based on a wide range of other digital footprints such as web browsing logs, web search queries, or purchase records (YOUYOU, KOSINSKI, STILLWELL, 2014, p.1)

Just like a questionnaire can offer a window into an individual's personality, and thus provide information about what makes her act and react in the world, the digital footprint left by Facebook users can also be used to extract that information. In fact, if given enough "Likes" as input, Kosinki's model allowed computers to predict an individual's five-factor profile as accurately as an intimate friend or a spouse could (YOUYOU, KOSINSKI, STILWELL, 2014, p.2).

The next step for *Cambridge Analytica* was to gather these data, and here's where the ethical lines became even blurrier. The company set up a personality quiz app, which paid users two to five dollars to get them to answer a series of questions to create a big five personality profile:

> The app recorded the results of each quiz, collected data from the taker's Facebook account – and, crucially, extracted the data of their Facebook friends as well. The results were paired with each quiz-taker's Facebook data to seek out patterns and build an algorithm to predict results for other Facebook users. Their friends' profiles provided a testing ground for the formula and, more crucially, a resource that would make the algorithm politically valuable. (CADWALLADR, GRAHAM-HARRISON, 2018).

This app also collected the user's Facebook data and, unbeknownst to the users and even Facebook admins, *it also collected their friend's likes*. With an initial number of 320.000 United States voters, the database created profiles for over fifty million people overall.

Cambridge Analytica spent an estimated seven million dollars to develop this database because they believed in its potential.

This personalized five-factor model database enabled a new level of micro-targeting:

> What that means in practice is that the same blandishment can be dressed up in different language for different personalities, creating the impression of a candidate who connects with voters on an emotional level. "If you're talking to a conscientious person" – one who ranks highly on the C part of the [five-factor] model – "you talk about the opportunity to succeed and the responsibility that a job gives you. If it's an open person, you talk about the opportunity to grow as a person. Talk to a neurotic person, and you emphasize the security that it gives to my family." (HERN, 2018).

Political advertisement could now be built with individual features instead of general aggregated preferences. This approach guided much of Trump's campaign efforts in battleground states, where every vote counts. The emotional appeal swayed more voters and created more root-level enthusiasm around Trump's bid, which enabled him to get 304 electoral votes, winning the presidency and shocking the world.

3 CONCLUSIONS

When we read about the 4.0 industry, there is no past tense. It is happening right now, so present and future are discussed and speculated in order to better understand where we are and where technology is leading us. The idea of artificial intelligence has been in our minds for a long a time. The "Terminator" franchise has made billions of dollars with its science-fiction films, comics and novels by creating an apocalyptical tale based on synthetic intelligence, capable of understanding (and confronting) human beings.

The present reality of artificial intelligence and machine learning, although it generates some concerns on its effects on jobs, is not as bleak as science-fiction. But the developments presented here raise some concerns.

Big data algorithms are able to understand and predict us in ways we could not expect. The methods used by *Cambridge Analytica* were crucial in influencing public opinion in the "Brexit" vote and the Trump election. Despite the fact the company is now extinct, their methods are sure to be copied and improved upon by other marketing companies. We won't delve into the ethical debate surrounding these practices, but they certainly demand attention and public discussion.

Further developments in this subject could be done by analyzing the specific marketing *content* created with the five-factor model in mind. How exactly can you persuade a more Extraverted person? How does Neuroticism levels influence the way each individual consumes political ads? There's some research being done on the relationship between political preferences and the big five traits, specifically correlations between higher levels of Conscientiousness in more conservative views, and more Openness to experience and liberal views. Any study on political marketing could benefit from these kinds of findings.

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