

About the Bertelsmann Foundation

The Bertelsmann Foundation (North America), Inc., established in 2008, was created to promote and strengthen the transatlantic relationship. Through its research, debate forums and multimedia tools, the Foundation provides analysis and solutions to the most pressing economic, political and social challenges impacting the United States and Europe. As the analog era gives way to the digital revolution, the Foundation must also adapt to a changing environment. By looking at the Euro-Atlantic partnership through a digital lens, the Foundation will explore how technology is shaping the globe, and will use innovative approaches to highlight developments in a rapidly-evolving world.

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Introduction

It is true that the Athenians gave the world *demokratia*, or democracy, but they also gave us two meanings of the word. Among the political class in ancient Greece, "democracy" was used as a pejorative to question the wisdom of deferring to the majority. For some, this was nothing more than elitism. For others, it was a genuine question about whether representatives of the people, or the people themselves, would be best placed to make decisions in the interest of all citizens. Although these pioneers of democracy didn't live long enough to find out which argument would prevail, the legacy of that debate persists to this day.

More than two millennia later, many hold democracy as the only legitimate system of government, though it is practiced in various forms. From direct and representative democracies to presidential and parliamentary systems, countries have adopted structures of government that best reflect their history, culture and national identity. And while each is distinct in its day-to-day implementation of democracy, all have one thing in common: new technology is upending the very notion of what democracy means in the 21st century.

This is where *Disrupting Democracy* begins. In January 2017, the Bertelsmann Foundation embarked on a nine-month journey to explore how digital innovation impacts democracies and societies around the world. This voyage included more than 40,000 miles in the air, thousands of miles on the ground, hundreds of interviews and two sore feet. From the rival capitals of Washington and Havana to the bustling streets of New Delhi; the dynamic tech startups in Tel Aviv to the efficient order of Berlin, this book focuses on key challenges that have emerged as a result of technological disruption and offers potential lessons to other nations situated at various points along the technological and democratic spectra.

This publication is divided into six chapters: five case studies (India, Cuba, the United States, Israel and Germany), and an appendix of online polling data from each case study (excluding Cuba due to internet restrictions). Within each chapter, you will find two parts: the first provides an "outsider's" perspective on the case study through background research, on-the-ground interviews and open source data; the second, written by a local expert, provides an analysis and potential solutions to the challenges highlighted in part one.

The global political environment is constantly evolving, and it is clear that technology is accelerating that process, for better and, in some cases, for worse. *Disrupting Democracy* attempts to sort through these changes to give policymakers and citizens information that will help them navigate this increasingly volatile world.



Overcoming the Digital Dichotomy By Anthony Silberfeld

verything you hear about India is true. And so is the opposite. This admonition is a common refrain that echoes throughout this vast country of more than 1.3 billion people. It is a land of diversity and contrast, impossible to describe as a monolith. With 29 official languages and more than 20,000 local dialects, language is one factor that complicates a deeper understanding of the country. Geography, religion and caste further segment this nation, and pose additional challenges for those attempting to understand the subcontinent.

Looking at India's digital economy magnifies the divisions. Residents of an upscale, leafy New Delhi neighborhood may be whisked off to work each morning in the back of chauffeur-driven sedans while surfing the internet on Apple iPhones. Those in Mumbai's poorest corners connect with friends and family via feature phones, or basic, low-cost smartphones. Young entrepreneurs in Bangalore are on the cutting edge of digital use, driving an idea-based economy that has made this southern city Asia's Silicon Valley. Meanwhile, in rural villages, technology remains a luxury item out of reach for most who struggle to obtain even the most basic needs, such as food, water and shelter.

1 INDIA

Despite the growing gaps in wealth, access, education and connectivity, one unifying source of pride that cuts across faith, language, social status and region is the strength of Indian democracy. Each time Indians go to the polls, they participate in the world's largest democratic exercise. There are about 814 million eligible voters who outnumber the entire population of the European Union.

But Indian democracy is not just about voting. Indians follow the daily grind of politics and hold their leaders accountable. Voters demand transparency not just on Election Day, but every day. The Indian press is a vibrant force on the democratic landscape that serves the dual purpose of informing the people and checking government excess. And civil society groups shine the spotlight on corruption, neglect and need. These are all hallmarks of a durable democracy, albeit not a flawless one. Issues such as graft, dynastic politics and discrimination persist. Additional challenges extend to the social domain: from literacy and primary education to child mortality and basic public health, India's needs are vast in scale and scope.

But forces throughout society are searching for solutions to these shortcomings. In fact, the concerted effort to eradicate nefarious practices and conditions presents an opportunity for a democratic leap forward, one that the introduction of new technology may facilitate. As in all societies, technological innovations are changing every aspect of life, and India's democratic institutions are not exempt. For better or, in some cases, for worse, technology has transformed and continues to reshape Indian democracy.

The country's scale and diversity negate sweeping generalizations, and this chapter will veer away from doing so. Instead, the following pages will explore the unique ways in which Indians are coping with and adjusting to technology's impact on their democracy. Can the government remedy digital exclusion in rural India? What's the story behind WhatsApp? How can illiterate citizens take advantage of the digital dividend? What does "fake news" look like in India? This chapter, which examines disruptions to Indian democracy, focuses on such questions.

Sustaining the World's Largest Democracy

On November 25, 1949, the day before India's Constituent Assembly adopted a constitution, the chairman of the Constitution Drafting Committee, Bhimrao Ramji Ambedkar, warned that his country was entering an era of contradictions. "In politics we will have equality, and in social and economic life we will have inequality," he said. "In politics we will be recognizing the principle of one man one vote and one vote one value. In our social and economic life, we shall, by reason of our social and economic structure, continue to deny the principle of one man one value."

Indians now cast more votes in a decade of general elections than Americans do in half a century.

Universal suffrage cemented political equality in the first parliamentary election in 1951, leading India to become the world's largest democracy. But social inequality remained a harsh reality, with an illiteracy rate of more than 80 percent among voters and more than 60 percent in severe poverty.¹ The illiteracy rate has since dropped to 28 percent, but today half of Indians live on \$3.10 or less a day.² The challenges of poverty and education continue to be defining aspects of Indian politics, just as they were in 1951.

Indians now cast more votes in a decade of general elections than Americans do in half a century. The scale of Indian democracy is a challenge and a wonder, and the political parties that have achieved national success have found ways to reach voters of many religions, languages and castes. Their strategies have recently entered a digital age, in which the prime minister is India's most followed tweeter. But this transformation still leaves in the dark millions whose concerns are not internet access, but the availability of clean water and reliable electricity. Parties that will thrive in Indian politics

A History of

Democracy in India

India holds its first general election. The Indian National Congress, led by Jawaharlal Nehru wins 362 of 489 seats in the first Lok Sabha.



India's states are reorganized. Formerly based on British Indian provinces, the reorganization reflects ethnolinguistic boundaries and leads to more elected governors and state legislatures.





India and Pakistan clash over the Jammu and Kashmir region. The seventeen day war was brought to an end by a UN mandated ceasefire and the Tashkent Declaration.

From 1975 to 1977 Indira Gandhi declares a state of emergency, citing internal disturbances. A declining economy and a guilty verdict for election fraud in her previous campaign place pressure on the PM. In accordance with the constitution, she is granted the right to rule by decree.





Indira Gandhi leads the INC to a resounding victory in the next general election, called early due to a shaky and ineffective coalition government.

In October, Sikh bodyguards assassinate Indira Gandhi at the PM compound in Delhi, Anti-Sikh riots commence and thousands of Sikhs are killed in retaliation for the death of Indira.





Rajiv Gandhi is assassinated while campaigning in Tamil Nadu. The INC wins the election, but the party is weakened and does not win another general election until Rajiv's widow, Sonia Gandhi, leads the INC in 2004.

Manmohan Singh leads the INC and its United Progressive Alliance coalition to a victory in the general election. India's two major parties now acknowledge that they need to formalize party unions to hold power in the Lok Sabha.





The BJP achieves strong results in the state legislature elections. In India's largest state, Uttar Pradesh, they win a majority at the expense of the formerly governing Samajwadi Party.



Nehru dies of a heart attack. After interim PM Lal Bahadur Shastri dies in 1966, Nehru's daughter Indira Gandhi is elected by the INC to lead the government.

A second war with Pakistan culminates in the independence of Bangladesh from former East Pakistan. This war is regarded as a victory for India and solidifies support for Indira.





The INC loses its first election. The Janata Party mobilizes concern over Indira Gandhi's authoritarian rule by decree and wins a slim majority in the Lok Sabha. Morarji Desai becomes PM.

Indira Gandhi orders Operation Blue Star to remove a militant Sikh leader who had taken control of a part of Punjab state. Sikh and government forces were heavily armed and hundreds died in the fighting.





Indira's son Rajiv Gandhi and the INC do poorly in the 1989 election and VP Singh of the Janata Dal Party becomes the second non-INC PM. His coalition falls apart and elections are called in 1991.

The BJP and its National Democratic Alliance (NDA) win the first stable majority in the Lok Sabha since 1984, ending a period of shaky coalition politics that saw five national elections in ten years.





Narendra Modi leads the BJP to the largest win for a non-INC party in India's history. The NDA wins a total of 336 of 543 seats in the Lok Sabha.





in the 21st century are those capable of closing the gap between these extremes, as the meteoric rise of Narendra Modi and his Bharatiya Janata Party (BJP) has demonstrated.

A Post-Congress India

The present state of Indian politics owes much to the 1989 general election that ended the four-decade dominance of the Indian National Congress (INC). The party of Mahatma Gandhi and Jawaharlal Nehru won that year only 36 percent of the seats in India's lower house, the Lok Sabha, after winning 77 percent just five years earlier.³ Since 1991, barring two years of rule by a weak coalition (1996-98) that excluded the INC and the BJP, the two parties have alternated control of the Lok Sabha through broad coalitions. The INC formed such governments after the 1991, 2004 and 2009 general elections, formalizing their bloc as the United Progressive Alliance in 2004. The BJP ruled by coalition after the 1998, 1999 and 2014 elections via their National Democratic Alliance, formed in 1998. While the Lok Sabha is meant to have a five-year term, the five elections held between 1989 and 1999 showcased the uncharted territory of coalition politics in the post-INC era. Stability has since returned, and the BJP even won an outright majority in 2014, though it still governs via its National Democratic Alliance.

The Legacy of Independence

The INC's headstart in national political organization, an inheritance from its central role in the independence movement, was instrumental in the party's nearly unbroken control of the Lok Sabha for more than forty years. Indian politics was built upon the INC's ability to be a focus of national identity. But maintaining this feat proved difficult. Beneath Indian nationhood, rooted strongly in the fight for independence, is a complex, overlapping network of regional, ethnic, linguistic, religious and caste identities. Weaving these diverse strands into one political cloth has been a major obstacle for other Indian parties with national political ambitions. No other party could match the INC's credibility and broad appeal until the BJP rose to prominence in the 1990s.⁴

Top-Down Leadership

Candidacy for the country's highest post is decided at the top levels of India's political institutions, and in many states the top political offices are available only to those within a party's small inner circle. The Gandhi-Nehru family has led the INC since its inception, and candidacy for the prime ministership remains largely a family affair. The BJP, similarly, selects its candidates through an internal process, though that does not always mean a smooth one. The selection of Narendra Modi as the candidate for prime minister in 2013 was never endorsed by BJP founding member and former Deputy Prime Minister Lal Krishna Advani. His concerns were overruled by the other BJP elites.

This manner of candidate selection means that party newcomers have slim chances of being permitted to run for office. They must instead work their way up the party hierarchy to prominent posts. However, as the BJP has recently shown by overtaking the INC, change to India's political traditions can be sudden.

In 2012, anti-corruption activist Arvind Kejriwal founded the Aam Aadami Party (AAP) to run in state-level elections in Delhi after finding no way to advance his anti-corruption platform through existing parties. Three years later, the AAP won 67 of 70 seats in the Delhi Legislative Assembly, and in 2017, it won 20 of 117 seats in the Punjab Legislative Assembly, proving that a grassroots political 6

organization has potential even if only outside of the establishment.

But the evolution of Indian democracy in the past 70 years has been buffeted by other forces, too. The introduction of online technology has played a significant role, testing India's democratic resilience in ways that have shaken the political order.

India Logs On: From Cyber Cafes to Broadband Highways

The CyberCafe at the Leela Hotel in Mumbai was once the place to be. The year was 1996, and the internet had been brought to India the previous year by a public-sector entity named Videsh Sanchar Nigam Limited (VNSL). Few webpages existed then, so users were often limited to chat rooms or sending e-cards. Despite the scant offerings, the internet was a novelty, and queues formed daily to connect with the world via dialup connections with an average speed of 10kbs. The introduction of internet service providers and the explosion of webpages online in subsequent years boosted the popularity of surfing, even in a country in which having computer and internet access were luxuries. Despite the relatively low level of internet penetration in these early days, the Indian government launched a series of initiatives that sought to modernize the delivery of government services and change the interaction between the state and the electorate. These early efforts, which included the computerization of land records and national railways, were limited by the tenuous reach of online services of the time. Acknowledging that restriction, the government set about devising a national infrastructure plan. This vision gave birth in 2006 to the National e-Governance Plan that set out the ambitious goal "[to make] all government services accessible to the common man in his locality,

through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realize the basic needs of the common man." 5

This would be a tall order under the best of circumstances. But it appeared to be purely aspirational in the face of significant geographic, technological and financial challenges. Undaunted, the government set about developing the precursors to a nationwide online infrastructure. It was built upon public IT platforms such as State Wide Area Networks (SWANs), which would provide connectivity from state to street level, and Common Service Centers (CSCs) that aimed to connect communities, rural and urban, with online access to employment opportunities, education, telemedicine and e-governance. Although access in urban areas improved, it remained elusive in rural communities. So, in 2010, the office of Information Infrastructure and Innovation, under Prime Minister Manmohan Singh, released a white paper that created a path toward extending digital connectivity to all gram panchayats (local councils).

The study led to the establishment of the National Optical Fiber Network (NOFN) and the Bharat Broadband Network Limited (BBNL), which oversaw and coordinated the consortium that would eventually create the backbone for a digital India. The three key partners in this consortium were the telecom company BSNL; Railtel, to provide a right of way as cables would be laid alongside the rail lines; and the Power Grid Corporation of India (PGCIL). These partners were then given the latitude to subcontract the laying of cables to private internet service providers that would be responsible for delivering online access to every gram panchayat. Each gram panchayat could then determine how to bring the internet

Building the

National Optical Fiber Network

in India



International Comparison of Average Connected Internet Speeds in Megabits per Second (2016 Q4)

to the "last mile," thereby connecting every household in its jurisdiction.

The ambitious goal "[to make] all government services accessible to the common man..."

The NOFN at its inception sought to provide broadband connectivity to 250,000 gram panchayats in three phases by the end of 2016. But in 2015, the Digital Empowerment Foundation (DEF), an Indian non-profit organization specializing in rural access to technology, conducted a study that determined only 67 percent of 59 gram panchayats in the states of Rajasthan, Andhra Pradesh and North Tripura had a landline connection to a fiber-optic network, while more than 20 percent had no connection. The study also revealed that connectivity speed was half of the 100mbps promised by the NOFN.⁶

With 70 percent of India's population residing in rural areas, unreliable internet access significantly impacts more than 800 million people. Digital exclusion means more than not being able to check one's Twitter feed. It raises obstacles to getting agricultural products to market, and to accessing education and healthcare services. In terms of democracy, it means the voices of villagers are often muted.

Wi-Fi or Water: Explaining the Rural-Urban Divide

Many observers of India rely on stereotypes to understand a diverse and rapidly changing country. The image that most Westerners maintain is that of a startup and call center, or endemic poverty and underdevelopment. These impressions

are reinforced by an economy that has grown unconventionally. Most developing countries move from agricultural to industrial production, then transform into service economies. India leapfrogged the industrial revolution to become a service-sector powerhouse. But it did so before ensuring the basic needs of its citizenry could be met. The obstacles and opportunities from digital transformation are many, and no single factor can explain them all. But in overwhelmingly rural India, examining the differences in technology use between urbanites and villagers can provide insight into the challenges the country continues to face.

Let's start with the basics. More than 30 percent of rural Indians are illiterate – using a definition of literacy that falls well short of the aptitude required for online services. To be deemed literate in India, one need only to be able to read and write his or her name in any of the country's 29 official languages. However, the lack of this basic skill even extends to a significant percentage of city dwellers. The government may have embarked on an ambitious digital literacy plan, but hundreds of millions throughout the country lack traditional literacy.

Even for those among the literate, the cost of a phone and data plan may be well out of reach. The most basic handset may be prohibitive for poor villagers given that two-thirds of Indian GDP is concentrated in urban areas, although just one-third of Indians live there.

The private sector has attempted to counter this by bringing low-cost devices with free data plans to the market. The most successful company to do this, Jio, has offered free data and voice plans, along with a handset, for less than \$100. More than 100 million subscribers have signed on to the Jio plan, but many of these new customers were simply looking to drop

Wireless for Communities

WhatsApp users than any other estimates there are still more than in bridging the urban-rural digital **Empowerment Foundation (DEF)** Society (ISOC), a foundation offline population.

pricier existing plans. Fewer subscribers come from previously underserved and digitally isolated communities. And for others, the cost remains exorbitant.

Accessibility to technology in India, however, goes beyond cost and literacy. Structural issues also widen the gap between urban elites enjoying 4G connections and the digitally excluded on the periphery. The government may have provided much of the infrastructure to bring digital services to all of India, but the private sector dominates the telecoms sector. Traditional business models for

Source: Census of India [http://censusindia.gov.in/2011-prov results/data_files/india/Final_PPT_2011_chapter6.pdf]

private carriers discourage expansion into rural areas. Remote communities must therefore rely on costly public services that offer low bandwidth and no physical security for the main hardline connections that attempt to connect villages. This may result in connections without connectivity. Furthermore, connectivity cost or available bandwidth limit access to video content on which illiterate users rely. This leaves these customers with the sole option of low-cost texting, which is of little use to those unable to read.

Accessibility to technology in India, however, goes beyond cost and literacy.

These are enormous challenges, but not all is lost. In India, even seemingly small percentages translate into big numbers. There are more than 700 million Indians under the age of 30, and many experts point to this demographic as the most disruptive characteristic for technology and democracy in India. Facebook estimates that it has 185 million active users, making the Indian community the world's largest user pool for the company's services. The company also projects it will have in a few years 550 million users as part of a demographic dividend that will change India's economic trajectory. There are also about two million smalland medium-sized enterprises (SMEs) on Facebook. Many of India's approximately 33 million SMEs are migrating online to sidestep cumbersome regulation and high costs associated with starting a business. At the same time, Indians

across the demographic spectrum have overwhelmingly chosen WhatsApp as their preferred social-media platform due to its low cost and ease of use. Domestic startups, such as Hike, have tried to grab market share in this billion-person ecosystem, but have been unable to pry users away from WhatsApp.

A Uniquely Indian Environment: Rupees, Reliance and Refills

Prime Minister Modi's vision of transforming India into a cutting edge, digital society has sought to overturn many conventions. But few policy choices disrupted the Indian economy and its citizens like the November 2016 decision to eliminate the 1,000-rupee note and redesign the 500-rupee note in a process called "demonetization." With the stroke of a pen, 85 percent of currency in circulation became obsolete following a 50-day grace period to allow Indians to exchange bills for new 500- and 2,000-rupee notes. There were four goals to this policy. First, it complemented a scheme to compel poor Indians to open and use bank accounts that could be monitored for taxcollection purposes. Second, it sought to starve the black market of its lifeblood and force transactions to be conducted in a more transparent, taxable and regulated environment. Third, it aimed to remove counterfeit cash from circulation (many reports suggest that Pakistan is a prime source of counterfeit rupees that are used to fund terrorist activities). Fourth, demonetization was intended to convert India into a cashless economy that would use online banking as a gateway to bring all Indians online.

In the world's most cash-dependent country, ordinary citizens rather than black marketeers suffered more during the transition. According to Forbes, "95 percent of all transactions in India were conducted in cash, and 90 percent of 12

vendors didn't have the means to accept anything but. On top of this, 85 percent of workers were paid exclusively in cash, and almost half of the population didn't even have bank accounts."⁷ From wage earners to farmers, shop owners to rickshaw drivers, the average working Indian bore the brunt of this bumpy transition.

But this challenge gave way to many techdriven solutions to facilitate the move toward a cashless economy. A company called Paytm began as a platform for making simple transactions and has evolved into a multi-use application that allows customers to conduct financial transactions ranging from paying utility bills to furnishing their homes through an online marketplace. Following demonetization, Paytm launched localized versions of its app in rural and urban areas, sensitive to linguistic variations throughout India. Three months after demonetization, the platform processed eight million daily transactions, and the site now boasts more than 200 million users.⁸ The expectation is that the next 350 million internet users in India will be brought online through digital payments. And as more users enter the digital space, they will encounter practices that are unique to India.

The cost of data in India has influenced for several years the behavior of mobile subscribers nationwide, and Indians have taken innovative steps to mitigate the expense. According to Nasscom, India's leading tech-sector association, more than 90 percent of mobile users have a dual SIM phone. The SIM card gives each mobile phone its number and establishes the connection between the device and its telecom provider. It is now common for phones to be designed with two SIM card slots to allow a user to toggle between two accounts to take advantage of a lower cost of a given service. For example, a

Paytm

user may have one SIM card connected to a service plan that offers free SMS and voice calls but applies a high rate to data and streaming. Meanwhile, the second SIM card connects to a plan that provides more attractive rates for watching YouTube videos, checking Facebook or sending WhatsApp messages.

A Look a	A Look at			٠
		in India		vodafone
	Data	Prepaid	Postpaid	36% 24%
Vodafone/ Idea	3 GB	₹ 704 (\$11)	₹ 549 (\$8.50)	8% Jio
Airtel	3 GB	₹ 647 (\$10)	₹ 499 (\$7.75)	32% Others
Jio	2.5 GB	₹ 303 (\$4.70)	₹ 303 (\$4.70)	Market Share
8. 		*Data and	price per month	

Many Indians have learned about the extortionate cost of data the hard way. Despite competitive monthly plans that appear affordable at first glance, the arrival of the bill at the end of the month can be shocking. To combat this problem, many providers now offer pre-paid plans that are easily renewed when a balance reaches zero. And top-ups can be done through mobile apps that eliminate a trip to the provider. This makes costs more predictable and the process less timeconsuming.

Access to mobile apps is no longer just for the affluent. Many Indians avail themselves of an Equated Monthly Installment (EMI), or a financing loan, that provides sufficient purchasing power to buy a smartphone or computer. The challenge ahead, however, is to keep advancing India's digital revolution while closing the gap between the haves and have nots. And that requires addressing universal basic needs before the vision of bringing every Indian online can come to fruition. It is an awesome challenge.

Pay Now or Pay Later

India doesn't exist in a vacuum. It is buffeted by the cross-winds of government

policy and private-sector initiatives that constantly change the technological ecosystem. And like every country, India has its own characteristics that dictate the speed with which its citizens can adapt to new technology and the impact of that adoption.

One such characteristic concerns the aforementioned Jio, which flooded the mobile market with inexpensive handsets and plans that offered free voice and SMS services. This reduced costs by forcing competitors to lower rates. It also improved the speed and quality of service. Although Jio's goal was to bring Indians who could not previously afford mobile phones into the market, the pricing structure had another effect: It hastened the explosion of dual SIM phones. Even middle-class Indians acquired a Jio SIM to offset the costs of their other provider. But as the market shifted, it was clear that even Jio's parent company, Reliance (one of India's largest conglomerates), didn't have pockets deep enough to maintain this model forever. And that subsequently brought about another significant development in India's digital revolution.

In a plan comparison reported by India Today in March 2017, the pricing plans of mobile services changed again. According to the magazine, there is now a movement toward post-paid plans that are cheaper than pre-paid options. Consumer behavior may take time to adapt, but the features of the Indian mobile landscape certainly herald more users of online services, with access to more content at more affordable prices. This improved access will undoubtedly be a game changer for Indian democracy, too.

System Overhaul: Tech's Impact on Democracy

India's technological challenges concerning universal internet access are manifest, but that hasn't discouraged politicians and their parties from employing digital tools to reach voters. It may seem counterintuitive to conduct a primarily digital campaign in a country in which the internet penetration rate (including mobile), at the time of the 2014 general election, was just 21 percent. But the BJP bucked conventional thinking and in the process transformed technology's role in politics.

The Campaign of the Future

Following its loss to the INC in the 2009 election, the BJP reflected on its ability to connect with voters across the geographic, religious and linguistic spectra. Holding large, open-air rallies was logistically and financially taxing, and the return on this effort was insufficient. In 2010, the BJP discarded its campaign playbook and shifted entirely to a digital strategy that created the infrastructure to connect with Indian voters more efficiently and more effectively. The party appointed its first chief information officer and hired a lean staff of 25 to manage its activities from a National Digital Operations Center. This new approach focused on four key areas through which technology could improve

the party's performance: party structure, communications, voter mobilization and citizen empowerment.

By the end of the campaign, Modi had conducted an estimated 200 hologram simulcasts that reached tens of millions of prospective voters.

First, the BJP believed that a revamped party structure could improve its appeal by collecting data that would help it better understand individual voter profiles, directing tailored messages to address constituents' most pressing concerns. Since messages to voters were more effective if they came from local contacts in each of the 29 states, rather than from anonymous party officials in Delhi, the BJP established a digital chain of command from top decisionmakers to grassroots activists in virtually every municipality in the country. This digital reorganization improved the flow of information, reinforced discipline to remain on-message, and reinvigorated the party faithful while attracting converts. Through BJP digital portals alone, the party recruited more than one million volunteers to its cause and created an online donation center that raised a record amount through average contributions of \$20 per supporter. No small feat in a country with an average monthly income of less than \$150.9

Second, digital tools transformed the BJP's approach to communications and campaigning. Acknowledging the disparities in internet penetration, the party mapped the country by dividing it into categories based on the level of online access to determine if a digital, conventional or hybrid campaign would be most effective. Through the use of Facebook, Instagram, YouTube, WhatsApp and other platforms, the BJP used a comprehensive strategy to connect with more than 700 million domestic and diaspora voters. From a communications perspective, the party was also fortunate to have a leader in Modi, who was predisposed to the necessity of using technology and had the savviness and charisma to thrive in a digital environment.

Modi was chief minister of the state of Gujarat when violence between Hindus and Muslims flared up in 2002, and he was criticized for not intervening effectively to stop it. This episode, and charges of being a Hindu nationalist, have followed Modi throughout his political career, leading him to embrace social-media platforms to bypass a media sector he perceives as biased. With millions of followers on Twitter (now 28 million), Modi effectively and directly connects with the electorate while forcing traditional media to cover his tweets. He often posts his speeches on YouTube so that voters can hear him without potentially unfavorable commentary.

In the approach to the 2014 elections, the BJP also experimented with less familiar technology to capitalize on Modi's celebrity and ability to captivate voters and the press. The prime minister employed the first use of hologram technology in India while campaigning in Gujarat. This generated significant media coverage and served the party as a pilot for taking this method nationwide. By the end of the campaign, Modi had conducted an estimated 200 hologram simulcasts that reached tens of millions of prospective voters. This was a particularly useful in rural areas without online connectivity or easy access that would allow Modi to visit in person. With the hologram technology, the party needed only a power generator and projector. It was an ideal solution to conducting a digital campaign amid technological limitations.

For those with limited access to technology, the BJP instituted live callin discussions that routinely attracted an audience of 125,000. During the calls, Modi would deliver speeches and answer callers' questions.

The third pillar of the BJP's approach to digital campaigning leveraged access to data to mobilize voters. By 2015, the BJP could boast about a membership of more than 110 million, making it the world's largest democratic political party. Many new members were drawn to the party by its myriad online communications tools. Given India's religious, geographical, caste and linguistic divides, the ability to deliver tailored messages gave the BJP a huge advantage.

The fourth element underpinning the BJP's digital strategy, citizen empowerment, is now particularly useful with Modi as prime minister and the party's majority in the Lok Sabha. To maintain proximity to voters, Modi and the BJP operate as if there were an election every hour. The prime minister, in particular, uses a platform called MyGov and his own app to elicit constant feedback and ideas from the electorate. The platform is also used to increase engagement and accountability through consulting the public on proposed legislative initiatives, disseminating policy ideas and attracting rapid reactions from voters to both.

While the BJP was not the first to explore technology's potential for transforming campaigning and governing, no one in India has done it better. The party triumphed in 2014, winning 282 seats in the Lok Sabha, while the incumbent INC garnered a mere 44 seats. The BJP repeated its success in 2017 in Uttar Pradesh, the country's most populous state, by capturing 312 out of 403 seats (a gain of 47 seats) in the state's legislative assembly. Indian society offers numerous avenues for expressing dissent and protest beyond waiting for the next election.

The digital shift fundamentally changed the BJP's operations, and other parties are beginning to follow suit. Prime Minister Modi has accurately tweeted: "Social media is a fascinating medium, which gives voice to citizens & enables effective & productive citizen-government interaction." Indeed, technology has even profoundly affected the functioning of Indian government institutions.

Accountability One Click Away

On all levels the Indian government has prioritized improving governance and accountability, and reducing corruption. The national online infrastructure plan and efforts to raise digital literacy are evidence of this. But the private sector is also playing a role in these efforts. Tech entrepreneurs have developed platforms that facilitate transparency and responsiveness from elected officials.

Local Circles is an e-governance platform that attempts to make India more governable. The service relies on the 400 million Indians between the ages of 19-25, the new generation that uses digital tools to demand public-sector accountability. Local Circles simplifies engagement with government. It takes minor issues, such as potholes and trash collection, and amplifies them by monitoring and curating resident complaints. Analysts evaluate the data to determine a problem's root cause and if that signals a larger publicpolicy challenge requiring attention. If

the problem involves multiple publicpolicy challenges, Local Circles can survey residents to identify a priority issue. From there, the platform morphs into advocacy by digitally petitioning the government for action, thereby elevating the profile of the voters who created the campaign. The platform can also track the progress of an initiative until resolution.

In recent months, Local Circles has spurred municipal politicians to host online townhall meetings. National party leaders have used the platform to pressure members who are not effectively dealing with issues raised. Local Circles' growth has been driven by tangible results. There are now more than 1.3 million users in 200 cities. The platform can also boast about being India's lowest cost-per-new-subscriber governance or social-media site.

But despite such successes, corruption and opaque government practices persist. Officials allegedly obstruct requests for information, and block internet access in an attempt to hide corruption or potentially embarrassing scandals. Social media has emerged as a solution to overcoming such obstacles.

Mobile Movements: Dissent and Protest Go Viral

Indian society offers numerous avenues for expressing dissent and protest beyond waiting for the next election. Public debate and disagreement have a long and rich tradition, and officials are much quicker to react to public discontent in this technological age.

One such reaction occurred in 2012, when a medical student was gang-raped and beaten on a moving public bus in New Delhi. Historically, these appalling attacks were met with deafening silence by a desensitized public and a government unwilling to address the crime. But in this instance social-media platforms including Twitter and Facebook acted as force multipliers, spurring protests in major cities across India, despite obstacles imposed by local authorities. One student reportedly tweeted, "If it takes numbers for them to listen to us, let's be there in large numbers."¹⁰ And they were. The Indian government quickly announced new measures for a security helpline for women and instituted new police training to handle assaults against women.

The story of Delhi University student Gurmehar Kaur provides further evidence of technology's impact on civic participation. In March 2017, she sparked a fierce debate among Indian social-media users via a Facebook post that urged opposition to the right-wing nationalist student group Akhil Bharatiya Vidya Parishad (ABVP), which has links to the BJP. ABVP also has a reputation for inciting anti-Muslim violence, and threatening students and professors with assault and rape. Kaur's action spurred critics and supporters to circulate a video she made a year earlier in which she details her path to becoming an activist for reconciliation between India and Pakistan. Her video has now garnered over three million views and became instrumental in the campaign to bring Indian and Pakistani leaders together to end generations of hostility. Kaur's anti-ABVP post unleashed a nationwide debate on Hindu nationalism, India-Pakistan relations and sexism. The discussion even drew a statement from BJP State Minister of Home Affairs Kiren Rijiju, who asked on Twitter "Who's polluting this young girl's mind?" Congress leader Rahul Gandhi and AAP Delhi Chief Minister Aarvind Kerjiwal, however, tweeted support for Kaur. Kerjiwal asked, "Threatening our daughters and sisters with rape, is this the BJP's patriotism?" Kaur continued to be in the limelight until safety concerns prompted her to leave Delhi.

Rural communities have less connectivity to the internet and are less directly susceptible to fake news.

The BJP may have exploited social media for political success, but they cannot control the medium. Flashes of protest, such as Kaur's, can rally support and spark action.

A New Media Landscape: From Information to Affirmation

Despite the growth of online information platforms, illiteracy rates mean that traditional media such as television and radio remain predominant news sources. Newspapers, with their reputation for greater credibility, are popular among the literate. As in other countries, competition for ad revenue and readership has forced some print, TV and radio outlets to deliver more sensationalist reporting. Local news programs in dialect appear to be fending off this trend, but that is unlikely to last indefinitely. Public broadcasting, once a mainstay, now has difficulties retaining skilled talent, and the quality of its product has suffered. This has hastened movement toward other news sources.

Where digitally connected, people are increasingly getting their news from WhatsApp, Twitter, Instagram and Facebook. And while increased information can be beneficial, India is not immune from the scourge of fake news. In August 2013, two Hindu youths Sachin and Gaurav, murdered a Muslim named Shahnawaz following a skirmish in the town of Kawwal in Uttar Pradesh. In retaliation, Sachin and Gaurav were reportedly killed by a group of Muslims. Shortly after, a

video was circulated on social media purportedly showing the two Hindu boys being lynched by a Muslim mob, inciting weeks of riots that claimed more than fifty lives. The video was actually more than two years old and wasn't even filmed in India, but was accepted by many as the authoritative account of the murder of Sachin and Gauray. The video was widely shared, including by a member of the Uttar Pradesh Legislative Assembly who remains under investigation for uploading and disseminating the video. The ability to share such content quickly and easily to an increasingly larger audience poses challenges globally, but the combination of internet access and illiteracy in India makes the effects of viral video content worryingly unpredictable.

Rural communities have less connectivity to the internet and are less directly susceptible to fake news. But they also have less ability to separate fact from fiction since many of them receive news by word of mouth or through local and religious leaders. Trends indicate that young Indians are becoming increasingly savvy about filtering news, but many still do not. One "news" item claiming UNESCO had named Prime Minister Modi the world's best prime minister was re-tweeted by billiards champion Pankaj Advani (who now has more than 650,000 followers) and later conceded, in fewer than 140 characters, that "I know I got my facts wrong but this apparently gets more attention than when I win a WORLD TITI F!!"11

Every minute of every day truth and fiction circulate in the same domain with nothing distinguishing one from the other. The Indian electorate's ability to hold leaders accountable and preserve the pillars of their democracy are at risk without measures to help consumers make sense of the online content they encounter.

A Final Word

With a rapidly growing economy and a looming demographic boom, Indian democracy needs to adapt to deliver to more than a billion citizens. Conventional methods alone will be inadequate to meet the demands, and Indian leaders' embrace of technology to do this is encouraging.

From striving for high-speed, universal internet access to shifting toward a cashless economy to bolster financial inclusion, these trends in India are positive. But much work remains. Digital connection without connectivity offers little to the vast majority of rural Indians. The government must still address literacy and basic needs. This chapter has been an exploration of contrasts that reflect an inability to place India neatly into any paradigm. Its modernity and primitiveness exist side by side. More than one billion people, divided by religion, caste, geography and language, can be unified through a digital transformation. But that process is currently socially and economically divisive. The vision for a digital and democratic India is admirable, but the country must move together toward that goal. If not, India will recede from it.

Anthony Silberfeld is the Director of Transatlantic Relations at the Bertelsmann Foundation.

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A REAL PROPERTY

How Connecting the Last Mile Can Change India By Osama Manzar and Udita Chaturvedi

n the last 25 years, the internet, as we know it today, has come a long way. In India, public internet entered a few years later — in August 1995¹ — and has since then largely remained a luxury. However, in the last few years, a change is visible, courtesy of mobile internet. While the mobile phone has been the fifth source of mass communication in terms of evolution (after radio, newspapers, television and computers), it's the first tool of communication for many across the world (including India) in terms of access. More and more people are coming online in India but there's still a long, long way to go to truly reach last mile connectivity.

One major reason for this lack of connectivity is insufficient and inefficient fiber optics to reach rural and remote locations of India. The other is lack of interest on part of the Internet Service Providers (ISPs) who do not see any profit in establishing a tower or extending their connectivity in unconnected parts of the country. The third is a lack of contextualization of the digital literacy curriculum and failure in the strategy of teachers/trainers who view this unconnected population as information consumers and not as information producers.

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Given India's distant and wide geographical and socioeconomic divide, it might be difficult to get every individual online within the next couple of years. However, why not look at connecting India institutionally?

Unconnected Village Councils

There are 650,000 villages in India that are governed under almost 250,000 panchayats or village councils, which further come under 6,000 blocks and 672 district — 250 of which have been classified by the government as backward districts²— across 36 provinces, including Union Territories of India.³ Every village council is made up of five to 17 members, adding up to about three million village councilors. Of these, about one million are expected to be women.

The village councils act as local selfgovernance bodies at the lowest level of

#selfiewithdaughter

One particularly good example that comes to my mind of use of information communication technology (ICT) by a village council member — at an individual level — is of Sunil Jaglan, the head of village council in Bibipur, Haryana a state notorious for female foeticide and female infanticide. Jaglan launched a campaign called #SelfieWithDaughter in his village, which later spread across the nation and was even endorsed by Indian Prime Minister Narendra Modi, to motivate society, especially fathers, to feel proud of their daughters.

governance. These village councils are responsible in their jurisdiction for as many as 29 subjects, ranging from agriculture, land reforms, irrigation and husbandry

to cottage industries, rural housing, roads, education and social welfare.⁴ If an institutional approach to connectivity is adopted by the government in India, it would be able to benefit a larger population — and holistically — rather than an individual-centric approach. Take, for example, the village councils. Delivery of government services should be efficient to ensure that the maximum number of citizens in a region is able to avail itself of benefits and entitlements. At a village level, a good majority of citizens are dependent on government infrastructure and schemes. These village councils are also the source of communication between the government (state and central) and the citizens. Therefore, it is extremely crucial to have an efficient, transparent and accountable service delivery system. For this purpose, provision of connectivity should be seen as a basic infrastructure goal to bring all the 250,000 village councils online for a two-way communication process.

These quarter of a million village councils and its councilors represent the poorest of the poor in India — the more than

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300 million individuals who fall under the category of below poverty line (BPL) who, by definition, earn less than a dollar a day.⁵ This is the same share of the population that directly depends on access to government schemes or entitlements for some of their most basic needs.

Every year, a certain amount of budget is allocated to the village councils under various heads and subjects. If all the village councils are online, they can share the budget with the citizens who cannot only view the subject-specific allocation but also hold the village council and the government accountable for misappropriation or lack of utilization of funds. Further, every village council is supposed to hold a monthly meeting with its members but it's not always executed for various reasons, including the availability of the members on a particular date. In a scenario where all village councils are online, council members will be able to conduct their meetings through videoconferences, with public viewing options. This will ensure that all matters discussed in the meeting are documented/recorded, which will result in transparency in the local governance system. Additionally, if all village council websites hold a repository of information on the local demographics, needs, grievances, solutions offered and projects implemented — besides a clear listing of the village council's roles, responsibilities and progress — imagine the quantity of relevant data that will be available online for citizens and governments to access.

Digitally Devoid Education System

If a person invests in one's education today, its results will be visible 20 years later. That is how the education system works, as a student is taken through kindergarten and middle school to high school and college. However, unless our schools become smart, our country will not be able to create smart citizens in the future.

GIS@SChool

GIS@SChool is an app implemented by the state government of Madhya Pradesh across all its 125,000 government schools in the state. The crowdsourced Android-based mobile app allows students, teachers and government authorities to capture geotagged and timestamped photographs and information about existing, non-functional and missing infrastructure or amenities such as drinking water, separate toilets for boys & girls, clean kitchens for mid-day meals and boundary walls, among others — to ensure schools comply with the various provisions of the Right to Education Act of 2009.

There are about 1.4 million government schools in India with over 227 million students enrolled.⁶ For this vast population of students, there are only seven million teachers. According to a World Bank study, based on unannounced visits to 3,700 schools, researchers found 25 percent of teachers absent.⁷ These rates varied from 14.6 percent in the state of Maharashtra to 41.9 percent in the state of Jharkhand. According to the same report, teachers who don't show up to work cost India \$1.5 billion a year. A UNESCO study, meanwhile, states that as many as 47 million students dropped out of school by tenth grade in India.8 While there are several social and economic reasons that contribute to this high percentage of school dropouts in India, teacher absenteeism is also a reason. So is the lack of proper infrastructure. For

example, many young girls drop out of school after they hit puberty due to lack of proper toilets.

India has a 40 percent dropout rate in elementary schools.

Schools have the moral, social and economic responsibility of engaging India's children in learning to nurture and encourage them to become part of India's future workforce and contribute to its growth. Economist and former prime minister of India Dr. Manmohan Singh, in a recent interaction with media, stated that India needs to create 10 to 12 million jobs annually.⁹ Call it its strength or weakness, India has a vast population that can and should be skilled in digital tools and technology — even if at a basic level — to meet today and tomorrow's need so that our young population is prepared to serve India and the rest of the world — which has a high demand for India's skilled labor.

With the internet having access to unlimited information and learning material in varying formats, it should be the need of the hour to ensure that all teachers at government schools are digitally literate. At the moment, even school headmasters and headmistresses are not digitally literate in most schools; a computer lab in every school is a distant dream. If schools are made smart and equipped with digital labs and broadband connectivity, students and teachers will be able to access content, learning material and "edutainment" resources on the internet for a better and more engaging learning experience. Currently, India has a 40 percent dropout rate in elementary schools, indicating the poor quality of our education system and lack of incentives to finish school.¹⁰ Like several

private schools today, if all government schoolteachers would be able to use tablets, mobile phones and other smart tools for lessons, it would greatly influence the students' motivation to attend classes. Further, teachers' attendance should be geo-tagged and time-stamped, and all facilities and physical infrastructure in schools should be monitored via a crowd sourced app or geo-tagged data collection software application. Teachers, students and visitors should also be able to geo-tag facilities — such as toilets or water coolers — in real time to update information about its functionality.

Mobile Academy

Mobile Academy — a training course developed by BBC Media Action to improve communication skills of Community Health Workers (CHW) and expand their knowledge of 10 life-saving health behaviors. Under this project, a mobile phone-friendly audio course was delivered via Interactive Voice Response (IVR) technology. This eliminated the need for CHWs to travel long distances to receive training. To compliment this training, a multimedia service called Mobile Kunji was also created to combine the IVR service with a printed deck of cards that were designed to resemble a mobile phone. Each card came printed with a unique mobile short code, which corresponded to a specific audio health message on a toll-free number.

Not At the Cost of Health

One cannot but question the quality and services offered by the health workers when India's infant mortality rate stands at 37.9 per 1,000 live births¹¹ and maternal mortality ratio stands at 170 per 100,000 live births.¹² These figures reflect the poor state of affairs in India's health care system.

At the village level, the health care system is divided into sub-centers, primary health centers (PHCs) and community health centers (CHCs). The Sub-Center is the first point of contact between the primary health care system and the community. A PHC is the link between village community and medical officers; these have been envisaged to provide curative and preventive health care to rural populations. CHCs form the third tier of the rural health care network and act primarily as referral centers to make modern health care services available to rural populations and to ease the overcrowding of district hospitals. According to government data of 2015, there are 5,396 sub-centers, 25,308 PHCs and 153,655 CHCs across 36 provinces of India.¹³ Ideally, every subcenter is meant to cater to a population of 3,000 to 5,000; a PHC is meant for 20,000 to 30,000 people; and a CHC covers four PHCs. However, at hundreds of subcenters and PHCs, health care providers are unavailable, adequate health facilities are lacking and even an expert's visit is rare. CHCs, too, are facing a major shortage of staff across the country.

In a scenario where every sub-center, PHC and CHC is connected to the internet and interlinked with each other and the nearest district hospital, the gap between health care seekers and health care providers can be considerably bridged. A simple infrastructure can be put in place to connect local health centers with districtlevel hospitals on a weekly basis via videoconference to make quality medical

Chanderiyaan

six years, DEF has been able to e-commerce. Hundreds of weaver designing for specialized design software like CAD/CAM; learnt to have been impressive. What was a Rs. 650 million (\$10.07 million) more than Rs. 1.5 billion (\$23.25

services available to rural and marginalized patients who require specialized consultation. Further, if a PHC or CHC can also digitally link its supply and stock register, it can electronically communicate to the concerned department in real-time to order depleting medicines or equipment and track the progress of its request.

Further, there are about 860,000 frontline health workers (or ASHA workers) and 1.8 million Aanganwadi workers (or Courtyard Shelters that have been designed as mother-and-child care centers to combat child hunger and malnutrition) in India that have been deployed at the village and hamlet level. These workers, all of whom are women, are essentially hired by the government to maintain maternal and child health care.¹⁴ Their tasks include ensuring women in rural India give birth in hospitals under proper medical supervision, ensuring pregnant and lactating women follow a nutritious diet, ensuring infants receive timely immunization and vaccination, and ensuring children grow up in a clean and healthy environment.

Health workers will be able to access relevant information via a simple Google search.

If a common mobile application is developed for all Aanganwadi health workers across the 36 provinces of India, it will enable these health workers to list their tasks, roles and responsibilities on a daily, weekly, monthly and annual basis. This will set their goals straight, and both the health workers and the relevant health department will be able to monitor their progress. Further, this app should come with built-in interactive and multilingual audio and video files that the Aanganwadi workers can hear/view to train themselves

and to create awareness among women in the community. Additionally, with an internet-enabled mobile phone or tablet, the health workers will be able to access relevant information in a timely manner via a simple Google search as well. Since a lot of diseases are preventable in nature rather than curable, services like these can go a long way to educate men, women and children about health, hygiene, nutrition and lifestyle, thereby creating a ripple effect of preventive health care knowledge.

Local Entrepreneurs and Artisans Have Restricted Markets

There are over 156.4 million micro, small and medium enterprises (MSMEs) in India that employ more than 930.9 million people.¹⁵ As many as 2,000 of these are cluster-based enterprises dealing in handloom, handicraft, leather and craft, among others — most of them are offline. In a scenario where they have access to the internet, each MSME can have its own website and e-commerce portal that will give it access to state and national-level markets, and even global markets for many. The online presence of MSMEs will also assist public procurement, as the government will then be able to interact with them in real-time basis with electronic records of all communication, bringing in more accountability and transparency to the system.

Access to the internet will also give MSMEs a chance to access information related to their sector and trade. Often, most MSMEs live in information darkness with little or no knowledge of market trends and market prices. What they sell at nominal prices to local vendors or in local markets is sold in other markets at much higher prices. Take the handloom sector of India, for example. A simple cotton saree that a weaver makes in four days for a meagre weekly wage of Rs. 350 (\$5.46) — in

clothing as a basic human right. Goonj has gained a social-media

Nuapatna town of Odisha state — is sold in the nearest major city Bhubaneswar for no less than Rs. 1200 (\$18.6).¹⁶ With access to digital tools and the internet, weavers can access relevant information about raw materials, market trends and market prices in a timely manner; design their own patterns rather than be dependent on middlemen for designs; promote their products through social-media channels, including WhatsApp; sell their products through existing and popular e-commerce portals or exclusive websites; find out information about government schemes and entitlements available in their sector; and access global markets.

Civil Society Faces Threat of Lack of Transparency

The civil society is representative of the challenges in a society. In India, there are more than 3.2 million non-governmental and voluntary organizations; and less than 10 percent of them file tax returns.¹⁷ Most of the other 90 percent of organizations are offline; they do not have a Web presence and the staffers and volunteers at most grassroots organizations do not know how to operate a computer, let alone access the internet. If every NGO comes online and sets up an exclusive website, it will firstly bring in a greater sense of transparency and accountability for the civil society — a challenge that India has been facing for the last couple of years with the ongoing government crackdown on civil society. Through their websites, the NGOs can share their registration certificates, financials and annual reports in a public space. Once trained in digital content creation, representatives of NGOs will be able to share updates about their activities and progress with a larger audience and be appreciated for their efforts, and at the same time receive feedback and suggestions to improve. An online presence also opens doors for NGOs to access institutional funding, donations and crowdfunding campaigns. This can be especially motivating for grassroots NGOs that operate on very

small budgets and have limited access to large and credible funders.

Post Offices as Potential Public Spaces for Access

India has the largest postal network in the world with over 154,882 post offices, of which 89.86 percent are in rural areas.¹⁸ While all are supposed to have an internet connection (and be digitized by the end of this year), internet connectivity is non-functional at hundreds and thousands of the post offices, especially those in rural areas, which are largely disconnected from mainstream communication tools. The government-operated institution employs over 466,000 people; and offers a range of mail and monetary exchange facilities.

Plantix

Plantix is an app developed by the International Crops Research Institute for Semi-Arid Tropics to allow farmers to identify pests and diseases using their mobile phones or tablets. Farmers can upload a photo of their infected crop and wait for the app to process the information to offer diagnoses, mitigation and preventive measures. Odaku is another mobile app that caters to the fishing community. Its GPSenabled, easy-to-use interface allows fishermen to store data in the cloud, navigate without internet connectivity to ensure they don't cross international sea borders, access an online market to sell their catch, buy/sell used boats and even access weather updates about seas levels and chances of rain.

With such wide and fairly well-connected networks (especially in rural India) meant to serve areas of about 20 square kilometers and populations of around 8,200 people, it would be ideal if post offices could have access to functional internet connectivity and bandwidth to not just carry out traditional services offered at a post office but also to transform itself into entitlement offices. This way, every post office will also act as a government center that provides citizens with information on various government schemes and entitlements, and enables access to the same by downloading relevant application forms for the schemes, assisting rural communities in filling out the forms and submitting the forms online on behalf of the beneficiaries.

Farmers are Living in Information Darkness

Over 58 percent of the rural households depend on agriculture as their principal means of livelihood.¹⁸ Agriculture,

fisheries and forestry together form one of the largest contributors to India's Gross Domestic Product (GDP). As many as 250 million people are engaged in this sector, according to the Planning Commission of India. Millions of these farmers are living in extreme poverty in remote and underserved regions of India. Simple access to the internet on their mobile phones can open a world of unlimited information for the agriculture community.

With access to the internet, farmers can gain information about market prices, the latest agricultural trends, technological innovations in the sector, suitable transportation channels, weather updates and direct access to the market. The internet will also give them direct access to experts with whom they can share their queries and receive solutions or responses.

In several smaller pockets, innovators have come up with brilliant mobile applications in regional languages to benefit the
farming and fishing community. At the moment, due to lack of awareness, lack of connectivity and lack of digital literacy, these apps — and several others like them — are used by a very small segment of India's farming and fishing community. An institutional approach to digital literacy can help in the adoption of such apps on a mass scale.

We Need a Targeted Approach to Digital Literacy

The Government of India, under the leadership of Prime Minister Narendra Modi, launched an ambitious program in 2014 called Digital India.²⁰ While the Indian government is trying hard to push digital adoption and penetration, its efforts are not targeted strategically to create a ripple effect or a cascading effect for beneficiaries. With the intention to promote the adoption of Digital India, the government launched the National Digital Literacy Mission (NDLM) the same year with a target to make four million Indians digitally literate.²¹ Last year, the government raised its goal to 60 million additional individuals; and, unfortunately, implementing partners have been working day and night to meet numbers and not the vision.

If a more institutionally-targeted approach is adopted by the government in India, it will help make our government officials, government representatives, school teachers, frontline workers, civil society representatives, agricultural community and other institutional members digitally literate, who can then utilize this knowledge to bring efficiency and transparency to the government service and delivery system and, at the same time, share the knowledge with others. This will not only create a pool of digitally literate individuals and institutions, but also incentivize the adoption of digital tools and technology, thus creating a cascading effect.

Excluding the Excluded

Lack of access to the internet means lack of access to information; and this is the reason a large population of India continues to be marginalized. Lack of connectivity restricts a majority of India's population from receiving their entitlements, submitting their grievances, accessing government notices, finding appropriate markets and accessing the thousands of services that the government has now moved online under its Digital India program — thus leading to further exclusion of those already excluded.

Further, India's 1.25 billion population cannot rely on ISPs for mobile internet either since they don't see any return on investment in setting up a tower or extending their connectivity to parts of the country that are still unconnected. This only increases the cost of accessing information or a service online that is much more expensive for the people at

Community Network

In the Baran district of Rajasthan, DEF in partnership with the Internet Society (ISOC) has established a 200-km community network and connected it to a local server, enabling both internet and intranet services to the community. This way, even if the internet is down, the community can share content and access content through the local server, thus creating a system of intranet or community network. This has also encouraged the community to create a localized database and archive for their oral and traditional knowledge, art and culture.

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the bottom of the economic pyramid than for those who have both easy access and financial means to access the same services in semi-urban or urban locations. Further, even in areas where mainstream ISPs are available, the cost for mobile internet is too high.

Lack of access to the internet is the reason a large population of India continues to be marginalized.

One simple example to illustrate this would be accessing the service of a printer/ copier machine. Unlike urban locations

in India, where a printer/copier service is available to people in their homes or a few blocks down the road, people in rural India have to often travel up to 20 km or more to reach the nearest digital services shop. A significant percentage of those in rural India is engaged in the unorganized labor sector. So, to access the service shop, a person would lose the equivalent of a day's wage (average Indian wage is Rs. 200 or \$3), pay Rs. 40 (\$0.62) to travel to the nearest village/town that has this service to offer and then pay another Rs.10 (\$0.16) to get a one-page document photocopied — adding up to a total of Rs. 250 (\$3.88). The same service in urban India would not cost more than Rs 2 or 5 (\$0.03 to \$0.08) because the facility would be available at a walkable distance for much less due to the demand of the service

This is the reason we need to democratize and decentralize infrastructure and adopt community networks on a large scale.



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Establishing Community Networks

Community networks allow public and private institutions — such as village councils, NGOs, community radio stations, small and medium enterprises, entrepreneurs — to buy internet connectivity from ISP and then distribute it within a community. Community networks engage consumers and community members (or depend on grants from funding organizations to meet the cost of infrastructure) to act as participants and help build and use the network by utilizing frugal technology, free and unlicensed spectrum, and alternative equipment like radios and relay boxes and share towers and infrastructure.

The institution or individual who buys the connectivity from the ISP becomes a franchisee for the ISP to sell the service on behalf of the ISP to individuals, households and smaller institutions on a chargeable basis — this could be on a monthly rental basis or a per hour use charge.

This community-driven, communitymanaged and community-owned infrastructure replaces the classic topdown operator-driven paradigm with a bottom-up approach to access. However, infrastructure established through grant money or through alternate technology - such as wireless mesh or Point-to-Point — may not be as robust as fiber optic lines but is more than adequate to provide network services in the access and information-deprived areas of India. Further, the government and the private sector need to allow permission to share existing infrastructure of all kinds and open up ISP licenses to a wide range of institutions such as NGOs, community radio operators, small and medium enterprises, panchayats and even entrepreneurs who can further transform themselves into public wi-fi hotspots.

A public wi-fi system can address the gap of digital access perfectly in India. Just imagine a scenario in which all 250,000 village councils, 1.4 million schools, 600 district libraries, 184,359 health centers, 156.4 million MSMEs, 3.2 million NGOs and 154,882 post offices of India turn into public wi-fi hotspots (or local/rural ISPs) for millions of individuals across India.

Access is a prerequisite for better governance and information. With institutions connected to the internet, there will not only be a better exchange of information within the government department and ministries, but citizens, too, will have more access to information, schemes, rights and entitlements. This will greatly reduce marginalization and exclusion of individuals, and magnify government institutions' role as hubs of connectivity.

A Consultation Paper on Proliferation of Broadband through Public Wi-Fi Networks released by the Telecom Regulatory Authority of India²² (TRAI) cites the examples of Digital Empowerment Foundation²³ and AirJaldi²⁴ as the only two organizations in India that are already leading projects in this area by implementing wireless mesh networks through unlicensed 2.4 GHz and 5.8 GHz spectrums to provide internet connectivity in remote areas of the country.²⁵ The same paper also suggests ideas on how public wi-fi can be converted into revenuegenerating models.

Access Opens a Window of Opportunities

Over the years through our work in rural, remote and underserved regions of India, we've seen some beautiful stories of connectivity which cannot be measured in monetary terms, but hold so much value. We've seen children in Rajasthan traveling the world though Google Images; girls

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in Puducherry taking online courses to become beauticians; women in the slums of Karnataka watching make-up tutorials on YouTube; men learning about organic farming in Andhra Pradesh; tribal communities demanding their rights in Tamil Nadu; weavers digitally designing sarees in Odisha; boys selling craft items through WhatsApp in Uttar Pradesh; women looking up recipes on Google in Bihar; men running online campaigns for better public infrastructure in Assam; and so much more. We've witnessed and collected hundreds of such stories of digital impact.

Further, social-media penetration is rising in India, both in urban and rural areas. Though it cannot be denied that social media penetration in urban India is greater than in rural India, Facebook has become a popular communication tool in rural India as well. Ministries, too, have realized

the importance of their digital penetration and communication through social-media channels. Take the Indian Railways, for example: the Indian Railways ferry 23 million people across the country every year.²⁶ Last year, Twitter opened a special service called Twitter Seva for Indian ministries and government departments. This service, a grievance redressal mechanism, has been particularly welladopted by the Indian Railways and now handles 4,500 to 5,000 tweets per day.²⁷ This allows passengers to tweet their grievances and receive responses/action in real-time. Several other ministries and departments — such as the Ministry of External Affairs, the Ministry of Commerce and Industry, the Uttar Pradesh Police - are leveraging the power of socialmedia, especially with the government being gung-ho about the Digital India initiative. However, unless infrastructure and connectivity go geographically

accessible to a restricted few.

Access to the internet not only opens access to information, rights, entitlements and possibilities of a better livelihood but also enables behavioral and social changes in communities. While the paradox of India and Digital India continue to exist together, it is expected that India may soon make a technological leap to become the most populous connected country, riding the ongoing wave of mobile penetration. All it needs, perhaps, is functional and effective broadband connectivity on mobile phones.

Osama Manzar is the Founder-Director of the Digital Empowerment Foundation.

Udita Chaturvedi is a former print media journalist, and currently a Media Researcher with the Digital Empowerment Foundation.

Note: The views of the author do not necessarily reflect those of the Bertelsmann Foundation.



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The Gray Areas: Navigating a Cuba in Transition By Anthony Silberfeld

t isn't illegal, but it's not exactly legal either." So goes a common disclaimer about many facets of life in today's Cuba.

It was not always this way. For decades after their country's revolution, Cubans understood that most situations involved a binary choice. It was yes or no, black or white. The transfer of power from Fidel Castro to his brother, Raul, in 2008, however, ended the period of stark, clear choices. Incremental reform has led to gray areas – political, economic and social spaces that are navigated safely only with caution and ingenuity.

Make no mistake, this is not a counterrevolution. It is a carefully orchestrated transformation in which the government and its people have roles to play. The former provides limited opportunities for change; the latter pushes the boundaries until meeting official resistance. From microenterprises to political blogging, makeshift social networks to e-commerce, Cubans are testing the limits of government tolerance and driving their country into uncharted waters. Cuba is consequently in flux. It is an island undergoing four distinct yet simultaneous transitions: technological, political, economic and social. This would be an immense challenge in an analog era. In the digital age, however, it means potentially fundamental and permanent change.

What is Cuba, and what does it want to be? Is it an oppressive dictatorship or a benevolent socialist paradise? The answer to these questions leads only to gray areas.

This chapter will delve into the four transitions and explore how digital innovation nudges each of them along. The outcome of this transformation remains unknown, but the following pages are intended to paint a picture of Cuba with unlimited shades of gray, and perhaps a tinge of rose.

The Technological Transition

Cuba was late to the technological revolution that accelerated in the U.S. and

A Brief Timeline of

Modern Cuba

The end of interim U.S. rule of Cuba, begun in 1898 when the Spanish American War ended Spanish rule on the Island.







government.



Batista, while running again for President, leads a military coup and calls off the election. Among many other candidates, Fidel Castro's bid for the House of Representatives ends.

1952

Castro and his revolutionaries return to Cuba aboard a yacht and begin their guerilla campaign in the Sierra Maestra mountains.

Fulgencio Batista is elected

term of four years.

President of Cuba. His government approves a new Constitution that

introduces a limited presidential



1956



The failed Bay of Pigs operation to overthrow the Cuban government pushes the country toward the Soviet Union.

1961

The collapse of the Soviet Union results in economic stagnation in Cuba, Quality of life sinks and the availability of many basic goods



1991



decreases

After assuming presidential duties from the ill Fidel Castro in 2006, Raul Castro officially becomes President following the 2008 election.

2008

President Trump announces a reversal of Obama's policy toward Cuba. These include new travel and commercial restrictions.



2017

Batista flees Cuba and Castro takes power. As his government nationalizes many businesses and farms, relations with the U.S. deteriorate and Cuba begins to strengthen its ties to the Soviet Union.

1959

1944 - 1952

and flee to Mexico.

Fidel Castro leads an attack on

military barracks in Santiago de Cuba. Castro and other revolutionaries are imprisoned, but are released in 1955

The Cuban Missile Crisis is a highpoint for tensions between the U.S. and USSR. In the aftermath, both superpowers pull back their deployed nuclear missiles.



1953

1962



U.S. relations with Cuba erode further under the Bush presidency, with a strengthened embargo, the arrest of the Cuban Five spies, and the inclusion of Cuba in Bush's "outposts of tyranny."

2001

President Barack Obama and President Raul Castro announce the start of a process to restore normal diplomatic and trade relations between the U.S. and Cuba.



2014

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Europe in the 1990s. Following the 1991 collapse of the Soviet Union, the Cuban government was more preoccupied with survival than with logging on. Ideology aside, the USSR's dissolution ended financial aid, price subsidies and favorable export markets. An isolated Cuba, lacking political leverage in the post-Cold War era, had to fend for itself. Havana dabbled with the internet throughout the decade but never formulated any viable policy on it.

By 2006, Cuba's technological lag led to the recognition that economic reform required modernizing the communications infrastructure. The government embarked on a plan to lay fiber-optic cable the following year to jumpstart a digital ecosystem. Indeed, the Castro government launched in 2007 ALBA-1, a joint venture among Venezuela's and Cuba's state-owned telecommunications companies and Alcatel-Lucent Shanghai Bell to run an underwater fiber-optic connection between the two countries. That link, despite widespread reports of graft and malfeasance, is now in place, though it has yet to yield a spike in user access.

Cuba's scant use of the internet is only partly due to technological and structural deficiencies. Policies preventing Cubans from going online are the far bigger

Democracy. August, 2016.



challenges. Purchasing a computer or mobile phone was until 2008 illegal, making the black market or relatives visiting from abroad the only reliable sources for the hardware necessary for connectivity. With that obstacle lowered, Cubans now face the challenge of the high cost of access. With the cheapest mobile phones selling for about US\$60, more than three times a teacher's monthly salary, an internet connection is prohibitively expensive. On top of that, limits on speed and bandwidth, along with content restrictions, provide a distinctly Cuban online experience. Unfettered access to the World Wide Web is unavailable.

Cuba's technological transition is a struggle for control. The government employs a variety of tactics to limit internet access and exposure to counter-revolutionary ideas and information, while many Cubans search for ways to peer into the online world beyond the island. This constant tug-of-war defines the development of Cuba's digital environment and will be a persistent point of friction in the future.

Getting Connected

Without a clear set of rules and regulations on connectivity, we set out on a mission to discover how to get online in Cuba. To do so, we enlisted the assistance of a colleague, whom we'll call Felipe, and whom we shadowed on a trip into the island's gray areas.

The first stop on our mission was the state-owned Cuban telecommunications company, Empresa de Telecomunicaciones de Cuba S.A. (ETECSA). Anyone wishing to activate a mobile phone must first apply at an ETECSA office and pay the equivalent of US\$40. If approved, the applicant receives a SIM card, phone number and approximately US\$10 credit toward online use. It should be noted that no Cuban is permitted to own more

than two SIM cards, which is one way the state controls black-market activity in the mobile-phone sector.

With the cheapest mobile phones selling for about US\$60, more than three times a teacher's monthly salary, an internet connection is prohibitively expensive.

Despite the daunting line at the local ETECSA branch, the office ran efficiently, and within an hour, Felipe's application was approved, and he had a SIM card in hand. He had also obtained a Cuban phone number and credit to access wi-fi networks. He had, however, no phone. That would be more difficult to obtain.

But with our assistance, Felipe had a significant advantage over the average Cuban in the search for a smart phone: a car and driver. Most Cubans rely on public transport, which makes such a mission far more time-consuming.

Our next stop was a state-owned electronics store that seemed remarkably quiet during mid-week peak business hours. We were greeted by an employee who apologetically informed us that this store, filled with high-tech gadgets, was having trouble with electricity that day. We would need to go elsewhere to find the elusive phone.

Twenty minutes later, we came upon a second state-run store specializing in flip and smartphones, but our optimism was short-lived. Alas, the store had run out of telephones. This left Felipe with two choices: he could continue to circle the

city in search of a phone, or he could enter a gray area to find one. Felipe suggested the latter, and off we went.

We found ourselves after a short time idling outside an apartment building. Felipe had jumped out, assuring us that he knew what to do. He returned after 15 minutes with a laptop tucked



protectively under his arm, loaned to him by his curious girlfriend. Felipe instructed our driver to head for the nearest hotel. As we approached the main entrance, Felipe remained outside, strolling right by without giving the bellman or security guards a second glance. Seconds later, we joined Felipe, who had set up a mini-work station on the sidewalk in front of the hotel. We scanned our surroundings and quickly noticed dozens of young Cubans sitting around the hotel's perimeter tapping into a wi-fi signal. Felipe logged on and typed www.revolico.com. The 2G connection required patience, but we eventually downloaded the site and found a treasure trove of online classified listings to rival Craigslist. Under the category "Buy/ Sell," Felipe clicked on the link for mobile phones, where we had the opportunity to purchase anything from a new iPhone (despite the ongoing U.S. embargo) or Samsung device to lesser-known brands such as BLU and Alcatel, which are more common in Cuba. Prices ranged from the equivalent of about US\$60 to US\$300. This was a well-priced market by U.S. standards but expensive in a country in which the average salary is about US\$25 per month.

In one of the most technology-starved corners of the globe, we managed to get connected in just under five hours.

We opted for the modest Alcatel Ideal smartphone for about US\$60, and Felipe called the seller using his current mobile phone. To our delight, the seller was

eager to complete the transaction, gave us his address and suggested a meeting within the next ten minutes. We hopped back into the car and crossed several neighborhoods before arriving at a nondescript apartment block. After five flights of steps in the unimaginatively designed Soviet-era building, Felipe knocked on the door. When it opened, we discovered a small, family-run business. The seller's wife managed inventory and accounting, and the seller himself oversaw a transaction that included a user manual. charging cables and a legal document absolving him from liability should the merchandise break. We paid for the phone, shook hands and quickly moved toward the door. As we departed, the couple prepared for their next customer who arrived just as we were leaving.

With our SIM card and new smartphone in Felipe's pocket, we needed to supplement the balance on our phone to surf the web to our hearts' content. Adjacent to many parks and other public venues are kiosks run by Nauta, ETECSA's internet portal that sell wi-fi credit to mobile-phone users. One can buy directly from the kiosk or get a better rate from the black-market hustlers who lurk nearby. We opted for the latter, making a surreptitious exchange that may appear illicit to outsiders but is a frequent occurrence in Havana. We then made a beeline across the street to one of the city's dozens of parks that offers wi-fi access. A quick login on Nauta, and we were finally online.

In one of the most technology-starved corners of the globe, we managed to get connected in just under five hours. Our car and driver undoubtedly shortened the time normally needed to do this. Perhaps more importantly, we spent the equivalent of US\$110 to accomplish our goal, more than six times a Cuban teacher's monthly income.

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Location, Location, Location

According to a 2016 Amnesty International report, only five percent of Cuban homes are connected to the internet, so proximity to a wi-fi hotspot is key to connectivity. Fortunately for us, the Cuban government initiated only last year a program to provide wi-fi access in select locations. The number of hotspots has grown to more than 300 since then, and a map to find them is unnecessary. In Havana's Parque Coppelia, Cubans, young and old, can be found clustered around an electricity pole that doubles as an entry point to the online world. Internet users surf the web there, or catch up with relatives overseas using video applications. These gatherings are ubiquitous in the city despite the spotty and restricted connections. The challenge in Havana is to find wi-fi in lesser-known locations, as the limited bandwidth in each hotspot can be quickly overwhelmed by the number of users.

Three hours away in the mid-sized city of Santa Clara, wi-fi hotspots also exist, but they are fewer in number and offer slower connectivity. Ironically, the location for one was the city's Plaza de La Revolucion. This sprawling square, which also serves as the final resting place for Ernesto "Che" Guevara, provides Cubans with limited internet access that still far exceeds the offerings of the local print and electronic media.

An hour south of Santa Clara, in the small lakeside town of Hanabanilla, geography severely limits connectivity options. While visitors fortunate enough to stay at the Hotel Hanabanilla can take advantage of its dedicated wi-fi, most locals must rely on public transportation to get to Santa Clara for internet access. Young locals say that they try to pirate the hotel's wi-fi (using nanostations to extend and amplify the signal) or go without a connection. The trek to the "city" is not worth the hassle.



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At the time of this writing, mobile connectivity for Cubans is restricted to voice calls. Internet access comes only via wi-fi hotspots. In a country where few instances of significant gaps between the haves and have-nots exist, the digital divide is pronounced. Urban population centers have benefited from the availability of public wi-fi, but rural Cuba remains a virtual dead zone for coverage. Those approaching retirement age in the farming towns of southern Cuba admitted to knowing little about the internet. But those who were familiar with it expressed ambivalence about their inability to connect to the World Wide Web. They did, however, lament their children's and grandchildren's isolation, and Cuba's digital lag. The Cuban government's Agenda Conectar 2020, with its goal of 60 percent penetration throughout the island may change that. But location is only part of the challenge. The cost of access may be the greater obstacle.

Urban population centers have benefited from the availability of public wi-fi, but rural Cuba remains a virtual dead zone for coverage.

Cost Control

The ETECSA website (www.etecsa. cu) offers information on the internet services offered to its customers through Nauta. There is a wide range of options, depending on who you are and what you do. For those interested in temporary accounts, there is a plan for you. Fear not if you prefer a more permanent arrangement, for ETECSA offers a variety of choices to suit your needs. But there's a catch. At the equivalent of US\$1.50 per hour, the internet is too expensive for most Cubans.

Even those with a decent salary by Cuban standards find it difficult to justify the cost. Take, for example, a computer programmer who completed his university degree in information technology and works as an IT "consultant" for pharmacies around the country. Since none of these pharmacies has internet access, the consultant spends his days tutoring local pharmacists on using the computer to keep track of patient prescriptions and inventory. At US\$40 per month, his salary is more than twice that of the average teacher but hardly enough to justify the cost of buying a mobile phone and the Nauta credit to go with it.

There are some, however, who have controlled internet access at no cost. University students can log on during designated hours in their schools' computer labs but must often compete for the limited hardware. University professors and some medical practitioners are granted access if their professional responsibilities require it.

Students at the University for Information Sciences (UCI) are especially privileged. At this former Soviet military base, Cuba's best and brightest IT students are equipped with relatively modern technology. UCI has become the training ground for the next generation of Cuban tech entrepreneurs, who may create avenues for economic growth and global engagement. Thousands of aspiring programmers there aim to reposition Cuba in the global digital economy.

Censorship

Restricting internet content is another government tool to prevent the dissemination of unwelcome information. Opposition websites and dissident blogs are routinely blocked, and foreign content critical of the Cuban government is also unavailable. The Miami Herald, for example, which often echoes the position of the exiled Cuban community in the U.S., is blocked.

Still, Cubans find their way into a gray area to sidestep some of the obstacles to internet freedom. From setting up makeshift wi-fi networks to connecting through foreign servers, those committed to having unrestricted access have found workarounds. For those not technically inclined, however, there is El Paquete.

Still, Cubans find their way into a gray area to sidestep some of the obstacles to internet freedom.

El Paquete (The Package) is a compendium of media content that can be uploaded to a flash drive or hard drive. It contains up to one terabyte of news and entertainment and is available to Cubans in virtually every city and town for a cost of about US\$2-US\$6. The purveyors of El Paquete provide a wide range of tailor-made packages to suit customers' needs. For children, El Paquete may include cartoons and storybooks from the U.S., Spain and elsewhere. Teenagers may opt for the latest action movies from Hollywood or the FC Barcelona soccer game played the night before. Interestingly, the most frequent customers are Cuban housewives who prefer hours of telenovelas from Mexico and Brazil. Given that the Cuban media landscape is government-controlled through print outlets such as Granma and Juventud Rebelde, El Paquete may also include The New York Times, El Pais or the BBC.

El Paquete is the quintessential gray-area product, straddling the line between legal and illegal. Its vendors are well known to residents in each neighborhood. They have developed a comprehensive network for content acquisition and distribution, and even arrange home deliveries. They are also well known to authorities who allow them to operate with the understanding that they don't cross certain red lines. El Paquete dealers we met mentioned three ways to avoid having their operations shut down: no politics, no pornography and no excess. The first two are obvious, but the third requires a brief explanation. Vendors who become known for making excessive amounts of money and show it off ostentatiously quickly find themselves out of business.

Impact on Democracy

Despite being one of the least connected countries on Earth, Cuba is no hermit kingdom. The country has been exposed for many years to news, culture and entertainment from beyond the island's shores. This exposure to American, Latin American and European content, along with the influx of tourists who arrive daily in Cuba's main cities, both confirm and contradict the images Cubans see in their media.

Cubans in urban and rural areas nationwide made clear in conversations that access to foreign content does not necessarily translate to a desire to overthrow the current system. In fact, some continued to express hope in the promise of postrevolutionary Cuba. All, however, exuded pride in being Cuban. One student said that after looking at other countries in the region, he has no interest in being in the Dominican Republic, Puerto Rico or Brazil. The technological transition may be advancing incrementally, but a corresponding movement toward political transformation remains an open question.

The Political Transition

To understand Cuba's political transition, a brief look at the island's history is necessary. We won't begin the story with Christopher Columbus' claiming Cuba for Spain. Instead, we'll fast forward just over four centuries to the Spanish-American War in 1898, which resulted in a U.S. victory and introduced American sovereignty over Cuba. It also marked the beginning of U.S. influence on the island that persists to today.

Between 1902 and 1958, Cuba struggled with establishing an independent government, and containing political corruption and social uprisings. Depending on the scenario and one's perspective, the U.S. government attempted to stabilize or destabilize Cuba at various moments along the way. In 1958, Washington provided military aid to Fulgencio Batista's corrupt and oppressive government that America nevertheless preferred to communist rule. But even Washington's support wasn't enough to prevent the Batista regime's downfall. That came in 1959, when Fidel Castro led his guerrilla army into Havana and installed himself as prime minister. Joining him in the new Cuban leadership were his brother Raul, and Guevara, the revolution's hero. They nationalized U.S.owned businesses, which led to a severing of diplomatic relations with Washington. Two years later, the U.S.-sponsored Bay of Pigs operation failed to overthrow the Castro government. The effort, however, was the final nudge Cuba needed to

ally itself with the Soviet Union for the remainder of the Cold War.

The 1960s was marked by a superpower competition in which Cuba often found itself a proxy. Cuba's alliance with the Soviet Union created many security pitfalls, but it provided economic aid and benefits that sustained the island's economy for three decades. Moscow's largesse would end only in 1991 with the Soviet Union's collapse.

Economic stagnation, the absence of basic goods and a severely reduced quality of life characterized the 1990s, euphemistically called in Cuba the "Special Period." Havana's downing of two American passenger planes exacerbated the crisis, which was worsened by an expanded U.S. embargo of foreign companies doing business with Cuba via the Helms-Burton Act. Despite these developments, the end of the 20th century saw embryonic steps toward an economic opening. That, along with economic support from Venezuela, helped stabilize the Cuban economy, which consequently bolstered the position of the Castro regime.

Between 2001 and 2006, under the George W. Bush administration, relations between the U.S. and Cuba deteriorated further. The Bush Doctrine, forcing countries to choose sides between the U.S. and terrorists in the wake of 9/11, made Havana a pariah. The U.S. again tightened sanctions, this time restricting family visits and remittances. Fidel Castro still pressed ahead, using his defiance against the U.S. as a badge of honor and a rallying cry for Cuban patriotism. But in 2006 the Cuban president fell ill and temporarily turned over power to his brother, Raul, leading to widespread speculation of a transfer of power for the first time since the revolution.

In 2008, Raul Castro officially became Cuban president and began changing the country's direction. He started by eliminating the ban on owning computers and mobile phones, a political risk that would help bring the nation into the digital era. He then changed salary structures and allowed ownership of land. Later the same year, the government benefitted from the European Union's lifting of sanctions and the conclusion of economic agreements with Russia and China.¹ In addition, newly elected U.S. President Barack Obama signaled a willingness for rapprochement.

A series of additional political and economic reforms would follow. These included the easing of travel restrictions, allowing Cubans to travel more freely at home and abroad, and the release of some political prisoners. In the midst of this reform program, Cuba's National Assembly in 2013 reappointed Raul Castro as president to a term that will conclude in 2018. (He is expected at that point to retire and make room for new leadership.) In 2014, Castro and Obama declared their intention to normalize bilateral relations after more than five decades of estrangement. This reconciliation culminated in the re-opening of embassies in July 2015 and Obama's visit to Cuba in 2016.

Digital Debate

Technological innovation has begun to slowly transform all aspects of Cuban life including the political realm. Havana needs to address the question of internet freedom and its potential impact. Despite one-party rule, there is a diversity of views about online access. Three highprofile leaders provide a useful primer on the range of perspectives on Cuban digital policy. José Machado Ventura, the former vice-president of the Council of State, has said that "[s]ome want to give us [the internet] for free. However, they're not offering this as a way to help the Cuban people communicate, but as a way to penetrate us and do ideological work for a new conquest. We must have the internet, but in our own way."² Former Communications Minister Ramiro Valdés has echoed this sentiment, saying "The internet is like a wild colt that can't be

tamed. If businesses such as Verizon, Google or AT&T invest, and access to broadband is made available to everyone at reasonable prices, the state loses a great deal of control over information."³

The younger generation that came of age after the revolution reflects a more progressive approach. Miguel Diaz-Canel, expected by many to be Raul Castro's successor, leads the view that technological innovation and online access is necessary if Cuba is to be competitive in the 21st century. Diaz-Canel has remarked that "[t]he development of information technology is essential to the search for new solutions to development problems... but the digital gap is also a reality among our countries and between our countries with other countries, which we must overcome if want to eliminate social and economic inequalities."4

Havana has attempted to transform this debate into policy with its Agenda Conectar 2020. The rhetoric and the trend lines are positive, but the continued content restrictions, price limitations and access make Cuba's goals far-fetched at best. Given that technology is moving at lightning speed, reform at a snail's pace will continue to put the island at a disadvantage.

Cuba's Fourth Estate

Despite restricted internet access, Cuban journalists and bloggers are becoming an increasing and influential presence in the island's body politic. The wide range of issues covered in the countless Cuban sites includes Havana nightlife and civilrights advocacy. A blog-curating site, Desdecuba.com, trumpets itself as the portal for citizen journalism. From worldrenowned activists such as Yoaní Sanchez of 14yMedio.com, an online media outlet, to anonymous political satirists, Cubans on and off the island are leveraging technology to expand their reach.

Overview of

Cuban Government



- · Head of State,
- Head of Government,
- · First Secretary of the Communist Party,
- Commander-in-Chief of the Revolutionary Armed Forces

Revolutionary Armed Forces The military controls much of the Cuban economy and is the strongest institution in the country. It has significant political influence.

State Council

Responsible for legislation when the National Assembly is not in session, the Council's 31 members are the core lawmaking body.

Elects Members





Nominates Ministers Cuba's media landscape can be divided into three segments: official blogs, independent blogs and media outlets. Official blogs generally serve as avenues for the government's message. Independent bloggers range from those regarded as dissidents to those raising social issues considered within the scope of permissible public discourse. Cuba also has sophisticated independent online media outlets, such as *Periodismo del Barrio* and *El Estornudo*, that cover a wide range of issues deemed unacceptable for public consumption by the Cuban government.

On Puertasabiertas (Open Doors), for example, bloggers focus on the plight of the LGBT community. Juventudresiliente (Resilient Youth) highlights existing and emerging issues in telecommunications, technology and entrepreneurship as a means of transforming society. Meanwhile, SomosMas (We Are More) addresses Cuba's democratic deficiencies and human rights, though ETECSA has blocked it and many other politically oriented blogs.

A significant number of the Cuban bloggers reside in exile communities in Miami and elsewhere around the globe. In discussions with locals, we were told that the blogosphere is also a gray area for those who post ideas online. ETECSA, however, perhaps surprisingly, may make a regulatory distinction between locally written blogs and those supported with foreign financing. The former, in many cases, remain acceptable provided they don't cross the ill-defined line between policy differences and treason. Foreignsponsored sites, on the other hand, are heavily scrutinized given their explicit intent to subvert the communist system.

Why do bloggers spend so much time and effort given Cuba's low internetpenetration rate? The simple answer is that the Cuban government is often the consumer of the information on blogs, and this gives Havana insight into social

Desde Cuba

un portal de periodismo ciudadano



DISRUPTINGDEMOCRACY

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debate and discussion. According to a political blogger from the island's interior, government officials commonly contact bloggers to talk about issues they have raised online. There are, of course, limits to officials' leniency. But the recognition of disparate ideas and their potential influence on Cuban society is a step in the right direction.

Cuban-Style Democracy

Cuba would not qualify as a democracy even under the most lenient of definitions. Yet, there are those on the island who assert that Cuba is, in fact, democratic, just not in a traditional sense. Their argument is based on Cuba's universal suffrage, direct election of local leaders and a healthy, well-educated public that is prepared to make choices based on the limited information it receives. Although only the Cuban Communist Party may contest elections, many suggest that there is enough ideological diversity within the party to make elections genuinely competitive. With this limited parameter, one might agree that Cuban democracy exists. However, elements such as the rule of law, separation of powers and basic rights, all hallmarks of traditional western democracies, remain notably absent.

Ironically, the Cuban education system has created a highly intelligent and qualified society that will be well positioned to embrace technology and democracy once restrictions are lifted. Cuba has a literacy rate of 99.7 percent and spends more than 12 percent of its GDP on education, according to UNESCO. The United States and Germany, as a percentage of GDP, spend less than half that on education. Since an educated public tends to be politically active, it isn't surprising that Cuban community and church groups have emerged as catalysts for progress.

For most of the post-revolutionary period, civil society and critics were branded as traitors, and were treated accordingly.

Civil society organizations of the past, often supported by the U.S., were viewed as nothing more than Washington's Trojan horses for hastening the overthrow of the Castro regime. This approach to civil society and dissent polarized public debate and left room only for pro-government voices. In recent years, however, reformers within the Cuban government have argued for expanding the public space for dissent, particularly related to societal issues such as race relations and inequality. Even debate about government performance and the future of democracy can fall into a gray area. With no clearly defined boundaries, opposition voices remain at risk of running afoul.

The Ladies in White provides a case in point. This weekly march following Sunday mass to protest the detention of political prisoners and advocate for human rights is routinely broken up. Marchers are detained by authorities, but punishments can vary. More than 50 were arrested and detained in the days leading up to President Obama's historic visit.⁵ Those who opt for dissent via digital means often meet the same fate.

For most of the post-revolutionary period, civil society and critics were branded as traitors, and were treated accordingly.

The internet has provided Cubans with ideas (though limited by government intervention) from overseas, and it has

allowed previously unheard messages to be circulated within Cuba. But the obstacles to an open, democratic forum to debate ideas are formidable. The aforementioned cost and accessibility challenges are insurmountable for most, but those hurdles combined with oppressive practices, in both the virtual and physical worlds, prohibit opportunities for the seeds of conventional democracy to flourish.

The Economic Transition

Following the transfer of power from Fidel Castro to his brother, the Cuban government acknowledged that the socialist economy was not delivering for the Cuban people and was in need of reform. With that in mind, Raul Castro spearheaded the government's effort to open the economy. He relaxed state control of key sectors such as tourism, agriculture and technology, and introduced a gradual shift in the entrepreneurial ecosystem and opportunities available to the workforce. The younger Castro also took an initial step toward injecting elements of capitalism by permitting small business licenses in more than 200 categories, from hair salons to tech startups. But the Cuban president has had to walk a fine line between the public and reformers in his own government looking for economic opportunity, and party hardliners adhering to the fundamental principles of the revolution. He alluded in 2016 to yet another gray area by declaring that economic progress would be made "without haste, but without pause."

The number of Cuban entrepreneurs in the years that followed rose to more than 500,000, many of whom tapped into the booming tourist sector. For taxi drivers, tour guides, bed-and-breakfast hosts and restauranteurs, foreign visitors to the island have provided additional sources of income that dwarf paltry state salaries. Despite reforms, Cubans continue to rely on the black market to supplement their income. Remittances from abroad provide another supplement; U.S. remittances to Cuba in 2016 reached \$3.4 billion.⁶

At the same time, the island is stuck with an outdated financial system. The country has a cash-only economy with, confusingly, two currencies: the peso (CUP) that Cubans use and the convertible peso (or CUC) that visitors use. A skewed pricing system, in which some products and services require payment in CUP and others in CUC, provides another opportunity for the government to control what average Cubans can purchase and where they may go. Most restaurants and hotels, once off limits to Cubans by law, are now priced in CUC, again leaving most Cubans out in the cold. They cannot afford items priced in a currency that is pegged to the U.S. dollar at a ratio of 1:1. Add in a 10-percent exchange fee to obtain CUCs, one of which is equal to 25 CUPs, and it becomes apparent that the greatest opportunity for Cubans to obtain CUCs and bridge the pricing gap is through the tourism sector and interaction with foreigners. This is often the key to gaining access to CUC-priced items such as tablets, mobile phones, computers and even some household staples.

Although the start-up scene in Havana has been stunted by the slow pace of economic and political reform, an increasing number of tech entrepreneurs is looking for creative ways to make a quick CUC. Revolico.com offers more than just mobile phones online. It also offers – on- and offline – a wide variety of services including domestic help, rooms for rent, English tutors and computer repair. Another online/offline app that has become popular for tourists and locals alike is IslaDentro, which provides information about restaurants and entertainment. A La Mesa has also taken a page out of the Zagat guides and the TripAdvisor website to point tourists toward the best restaurants in Havana and beyond. International sites have found a foothold on the island as well, capitalizing on reforms that allow homeowners to rent rooms to guests. Airbnb now has thousands of Cuban listings and bypasses the country's cash-only restrictions by marketing to foreigners who pay through an online portal.

In a country where direct e-commerce transactions are non-existent, creative Cubans have found space in the gray area to make it work. Although money cannot be transferred from one mobile phone to another, some Cubans use their Nauta access credit, also known as saldo, to make purchases. For example, one can purchase a bookcase from Revolico for 35 CUC and transfer payment in saldo, rather than hand over cash.

Understanding Cuba's economic situation is critical to predicting the island's democratic trajectory. Reforms, though incremental, across a variety of sectors have exposed more Cubans to foreign visitors and provided tourism-sector workers with disposable income that allows them to connect with previously inaccessible people and ideas. Spending more time online has the power to facilitate economic growth and expand the space in which public debate can thrive. Progress in the political and economic spheres has been steady but slow. But in the social domain. Cubans have found connections with potential to disrupt the status quo.

The Social Transformation

Cuban society has never been homogeneous. It is a vibrant combination of color, religion, ideology and sexual orientation. In Cuba, the word mejunje means "mixture," and it is a source of pride in a hemisphere where social and economic divisions are common.

In analog Cuba, communities thrived through neighborhood unity, durable family bonds, and public cultural and social gatherings. The slow introduction of technology has provided additional avenues to interact. The lifting of the ban on mobile phone ownership shifted habits, as Cubans abandoned their outdated and unreliable fixed-line phone for mobile networks. Overall, mobile telephone subscriptions increased from about 330,000 in 2008 to more than 2.5 million by the end of 2014, an increase of over 600%.7 Mobile coverage is now available to more than 85 percent of the population, so voice calls via mobile phones have become for many a gateway to technology adoption.

The lifting of the ban on mobile phone ownership shifted habits, as Cubans abandoned their outdated and unreliable fixed-line phone for mobile networks.

The leap from using low-tech flip phones to surfing the internet via smartphones may not be happening as quickly as in other countries, but Cubans, well aware of the potential value of social networks, have created a "mini-replica of the online world that most can't access."⁸ A group of young Cubans began constructing in 2001 an intranet, called SNET, using officially banned equipment smuggled into the country, primarily by visiting relatives. The goal was to connect as many computers as possible through cables and wi-fi, and create a user community that would share information and entertainment. Sixteen years later, this makeshift network has thousands of users in Havana, and replicas of SNET can be found throughout the country.

In Havana, we interviewed an SNET administrator to gain a better understanding of the network and its impact on young Cubans. The site's content is wide-ranging, comprising copied Wikipedia entries and video games such as "Call of Duty." It has the capability of hosting social networks reminiscent of AOL chatrooms of the 1990s. It also offers movies from a vast library that rivals Netflix. Flowing from the administrator's computer were dozens of cables connected to a router that served as the nerve center for the neighborhood's SNET connection. We followed the cables around the apartment and through a hole drilled into a wall leading to the exterior of the third-floor walk-up. Outside, the cables are strung across an alley to an adjacent building. We were told that this connection provides SNET service to all residents in both buildings. Thousands of computers are linked in Havana alone through such ingenuity and homemade engineering.

For young Cubans who are otherwise without internet access, SNET provides an opportunity to obtain information online and connect with others. But using SNET is not without risks. The architecture of this intranet includes equipment that is strictly illegal without a permit from the Ministry of Communications. SNET administrators do not have a permit.

Still, this gray area pays dividends. By all accounts, the Cuban government is aware of SNET but allows it as long as certain



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red lines are not crossed. In an interview with the Associated Press, one of SNET's engineers, Rafael Antonio Broche Moreno, noted that "[w]e don't mess with anybody. All we want to do is play games, share healthy ideas. We don't try to influence the government or what's happening in Cuba... We do the right thing and they let us keep at it."⁹

Imo is another innovation popular in Cuba. This video and instant-messaging application is a creation of two Silicon Valley entrepreneurs, Georges and Ralph Harik, who, respectively, got their start at Google and Oracle. At every Cuban wifi hotspot, young people use the app to speak with relatives in Miami and beyond. Imo competes with WhatsApp and Skype, but its ease of use and the absence of an email and password requirement seem to work well in the Cuban context.

Twitter is surprisingly unpopular on the island, in part due to the low internetpenetration rate and the high cost of access.

Facebook and Twitter may be the dominant social platforms in many countries, but it's different in Cuba. Twitter is surprisingly unpopular on the island, in part due to the low internet-penetration rate and the high cost of access. Neither site is blocked, but those on social media have gravitated toward Cubared, a homegrown Facebook. With more than 100,000 users, Cubared is popular despite its minimal functionality. And, in another nod to political reality, Cubans avoid using the platform to broach topics that the government may deem sensitive or controversial.

The Pace of Change

Cuba is an outlier concerning technology's impact on democratic development. The country's low internet-penetration rate, poor digital infrastructure, censorship and pricing structure all hinder progress. But there is reason for optimism. Raul Castro's government has taken steps to facilitate a digital transformation. From allowing the ownership of computers and mobile phones to upgrading the telecommunications infrastructure and cementing service agreements with U.S. companies, Havana is micromanaging a technological revolution. At the same time, a creative and inventive grassroots community continuously tests the limits of governmental tolerance. Those who push the boundaries of the permissible provide momentum to the four transitions affecting Cuban society.

In the years ahead, the government will likely add to this momentum by piloting residential internet connections. Perhaps the cost of internet access will also continue to fall. Either way, the digitization of Cuba will be a trickle, not a tsunami. And in the meantime, the Cuban people will continue to separate black from white to take advantage of all things gray.

Anthony Silberfeld is the Director of Transatlantic Relations at the Bertelsmann Foundation.

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Cuba's Internet Policy: Slow, Steady and Centralized By Alejandro D. González

avigating the World Wide Web in Cuba is still a complex phenomenon where users face a series of challenges, including a limited number of points of access, high connectivity costs, slow navigation speeds, and censorship of certain content, among others.

These barriers have tested Cuban ingenuity, prompting citizens to find alternative ways to use the internet in their country. Cuban techies use anonymous VPNs to bypass government censorship and wi-fi amplifiers to connect entire neighborhoods. Software developers have created peer-to-peer file sharing apps to transfer files offline. Everyday citizens have learned how to use the textonly or mobile versions of websites to overcome slow connection speeds. More tech and business savvy Cubans have created and profit from an offline media and entertainment distribution system that reaches millions of people on the island.

This underground tech movement has been quietly unfolding in Cuba

throughout much of the last decade. After the reestablishment of relations between the United States and Cuba in December of 2014, however, the island's technological ecosystem has received growing attention by international media outlets, governments, think-tanks and foundations. Each, from their own perspective, has shed light on how the internet works in Cuba and how Cubans interact with it in their daily lives.

Cuban techies, its citizens, and international actors continue to ponder what the future holds for the internet in Cuba. While it is still difficult to predict how internet policy will unfold on the island, this article will highlight some of the key factors that are playing a key role in how that evolution takes place. To achieve this, this article will begin by briefly describing the current internet ecosystem on the island. Then, it will outline the Cuban government's position on the future of internet policy in the country. Lastly, it will analyze some of the key challenges the country must overcome in order to further develop its Internet policy.

After reading this paper, readers should gain an initial understanding of some of the complexities affecting the future of the internet in Cuba and identify key issues that policymakers and citizens might grapple with in the coming years as the country becomes more connected to the World Wide Web.

Cuba's Internet Landscape

Cuba's internet infrastructure is managed by ETECSA, a state-owned monopoly that oversees all telecommunication activities in the country.

With an estimated 15 to 40 percent of the population using the internet, Cuba has one of the lowest internet penetration rates in the world. Less than 10 percent of the population has internet in their homes and fewer than one percent of Cubans have access to broadband high speed internet. Mobile subscriptions are among the lowest in Latin America, with about 30 percent of the population having access to cell phones.¹

Cubans have several points of access to the internet. The public at-large can access internet mostly at wi-fi hotspots, computer clubs, and, more recently, certain homes. As of June 2017, Cuba has 383 public wi-fi hotspots, over 600 computer clubs² and around 600 homes in Havana with internet connection.³

For many Cubans, it is still cost-prohibitive to connect online. With an average salary of about 25-30 CUCs (1 CUC=1 US\$) per month, many citizens can find it difficult to pay upwards of 2 CUCs for an hour of internet connectivity at a wi-fi hotspot.

When Cubans are able to overcome the access and affordability challenges, they connect to an internet at speeds of about 1Mbps, and pages that are censored if they do not align with the interests of the State.

While it is true that more Cubans are going online, Cuba still faces significant challenges moving forward to ensure that its citizens fully immerse themselves in the web.

The Cuban Government Discourse

The Ministry of Communications has outlined ambitious goals to develop the internet in Cuba.

However, the Communist Party of Cuba and the State, as evidenced by the discourse from key government leaders who shape Internet policy in the country, are signaling a more cautious approach to increasing access. There is a clear intent in centralizing the spread of the internet and ensuring that it is used to further State and Party interests.

In addition, government leaders are also emphasizing the threat that cyber militancy poses to national sovereignty, which may also help them make the case that the State and the Party should control how the Internet further develops on the island and explain the reason why this development is only happening "gradually, according to [the country's] economic possibilities."⁴

Government leaders are adopting similar talking points and moving forward very carefully.

Towards Establishing a National Strategy

In 2015, the Ministry of Communications issued its National Strategy for the Development of the Infrastructure for Broadband Connectivity in Cuba, a 15year plan that outlines a series of goals for improving internet connectivity on the island, in accordance with the International Telecommunication Union's (ITU) Agenda 2020.

The objective of the National Strategy is to "organize, regulate and trace the lines for

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the integral development of Broadband in Cuba."⁵ It lays out a vision to "augment the impact of telecommunications/ information and communications technology (ICT) on the transformation and modernization of the Cuban economy and society [...] within the scope of reasonable security."⁶

Among other goals, the document, issued by Cuba's Ministry of Communications, outlines that Cuba should guarantee:

- 50% of broadband access for homes by 2020;
- 60% penetration of mobile devices by 2020 for the Cuban population, of whom 60% will have access to internet by mobile broadband;
- 100% of broadband connectivity by 2018 in Party entities on National provincial and municipal levels to ensure the interests of the digital government and the government sector.

The following year, the Cuban government released an update to its *Economic and Social Policy Guidelines*, approved at the Seventh Congress of the Communist Party of Cuba and reaffirmed by the National Assembly of the People's Power.⁷ The document states that the advancement of internet in Cuba would be maintained by a cybersecurity system "that protects [Cuba's] technological sovereignty and assures enforcement against the illegal use of information technologies."⁸

Government Leaders Speak Out

Cuban government leaders have been addressing the island's internet policy publicly in recent years. These statements signal that improving access to the internet will be handled by the Party and the State, and alert citizens of the threat that the internet poses to Cuba's national sovereignty.

In a speech at the First National Workshop on Informatization and Cybersecurity in



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February 2015, Vice-President Miguel Díaz-Canel stated that Cuba should have an "accessible and affordable" internet used by its population in a "safe and wide" manner as a "a tool for the sustainable human development."⁹ The strategy to reach that goal, according to Díaz-Canel, "must be led by the Party and should involve all institutions" of the Cuban government. In the eyes of the vice-president, having the right to use the Internet ultimately implies a "responsibility to care for the defense of the country."¹⁰

Jorge Luis Perdomo Di-Lella, Vice-Minister at the Ministry Communications has also echoed similar sentiments. At the ITU's Plenipotentiary Conference in 2014, Perdomo Di-Lella stated that, "Cuba has been a victim of the illicit use of the telecommunications for the purpose of undermining the socio-economic and political order established freely by its people."¹¹

Moreover, José Ramón Machado Ventura, Second Secretary of the Communist Party of Cuba, has also alluded to the preservation of national sovereignty when referring to the use of the internet. In an interview with state-owned newspaper *Juventud Rebelde*, Machado Ventura said, "There are some people who want to give it to us for free, not for Cuban people to communicate but rather to ideologically penetrate us for a new conquest."¹²

President Raúl Castro further elaborated on this point during the Summit of the Americas in 2015, stating that the covert use of the internet would not cause Cuba to be "blinded and colonized again."¹³ Castro believes that "the internet can be used in the best way and is very useful, but in turn, can also be used for the worst."¹⁴

Beyond the Rhetoric: Key Factors Affecting Internet Policy

While independent Cuban techies have created ingenious ways to benefit from

the internet in spite of limited access and cost-prohibitive prices, these measures are only tactics to alleviate and circumvent a more deeply-rooted problem.

During the next five to ten years, the internet in Cuba will be largely in the hands of the Cuban government. In order for Cuba to fully benefit from a readily available, uncensored and more affordable internet, the Party and the State must decide that doing so is a national priority and in turn direct the Ministry of Communications and ETECSA to execute a plan that achieves such a goal.

There are several factors that have short-, medium- and long-term implications on how the future of internet in Cuba unfolds. During the next five to ten years, Cuba's limited telecommunications infrastructure and strict legal telecommunications laws will influence how the country moves forward in accomplishing its goals for the internet.

Technological infrastructure

Cuba's goal to expand broadband access to most of its population by 2030 is not sustainable given its aging infrastructure.

The Cuban government itself has highlighted several problems with the island's current internet infrastructure, including:¹⁵

- reduced capacity in the national fixed network to support demand;
- high level of obsolete technology in all layers of the network;
- limited amount of investment in infrastructure;
- local fiber optic cables that do not have sufficient capacity; and
- low level of fixed-line and mobile penetration rate.

The hardware, financial resources, and scale of reach that would allow the Cuban government to meet its internet goals are not currently available. The current

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broadband-first strategy is dependent on ADSL connections through fixed phone lines in a country where only 24.5 percent of the population has a fixed phone service. Meanwhile, mobile phone subscriptions continue to grow steadily, surpassing three million users last year, but still rely on an outdated 2G network in most of the country.

If the Cuban government does, in fact, adopt its current strategy, it would need to invest in costly broadband infrastructure over the next decade that would become obsolete by the time it is deployed nationally. The current plan puts Cuba in the position of "catching-up" to more recent methods of delivering the internet instead of learning from other developing countries that have "leapfrogged" into a wireless or mobile-data internet infrastructure.

Nevertheless, ETECSA has contracted the Chinese telecom operator Huawei to

deploy wireless and fiber optic technology that currently connects wi-fi hotspots and home internet service in Havana. The state telecom giant has signaled that in 2017 it will create 180 new wi-fi hotspots and continue to increase its capacity to deploy home internet service in more homes throughout the country.¹⁶

Given current indicators, it seems that ETECSA will, at least in the near future, continue to grow its investments in ADSL home service and wi-fi hotspots before turning its attention to further developing mobile internet.¹⁷ In order to spread the use of mobile data, the Cuban government will need to invest in a more robust cell tower system. Although there is limited information publicly available about the current capacity for mobile cellular towers, the fact that most of the country still relies on 2G networks is a good indicator that the island suffers from an aging cellular infrastructure. International telecommunications providers are leveraging the Cuban government's delay in deploying mobile data by offering roaming data to Cuban citizens. ChatSim and Digicel, both foreign companies, have released SIM cards that can be used in Cuba for data. text and voice. Cuban entrepreneurs, artists, and other independent actors are beginning to use these roaming plans to communicate within Cuba and with the outside world. It is not clear how many current ChatSim users are in Cuba, but the company's CEO Manuel Zadella has said that ChatSim welcomes around 10,000 new users in Cuba per month and hopes to reach one million by the end of 2017.18

Given that contracting with foreign SIMcard providers does not depend on ETECSA, the growth of mobile roaming could continue to be the most direct way in which Cubans can access mobile data in the near future. These plans, however, are still cost-prohibitive for the average Cuban.

Legal Framework

Over the last five years, the Cuban government has created a series of laws that have made it possible for the internet to reach more people on the island. In 2013, for example, the Ministry of Communications authorized ETECSA to commercialize internet access to individuals.¹⁹ This measure allowed the state-owned monopoly to offer national email accounts to individual users, sell connection cards that Cuban citizens now use to connect at wi-fi hotspots, and install internet service in certain homes. A year later, the Ministry of Communications gave ETECSA the ability to begin offering internet services to non-agricultural cooperatives.



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New legislation has not been enacted since 2014 to allow ETECSA to commercialize additional products and services to other segments of the population.

The current legislation continues to leave access to the internet in Cuba in the hands of a single provider that determines services, prices and rollout of new technologies. Government rhetoric has not signaled that the State is willing to create, in the near future, a legal framework to allow for international service providers to enter Cuba. Huawei has been allowed to develop hardware but does not have control over distribution or services. Furthermore, there are currently no investment opportunities for the telecommunications sector in the country's most recent foreign investment portfolio.²⁰ Given Cuba's aging telecommunications infrastructure, having a legal framework that allows for greater foreign investment in telecommunications might help fuel new investments and accelerate access to more up-to-date technologies.

Furthermore, Cuba's current legal telecommunication framework does not recognize the commercialization of internet services for businesses who are not part of a cooperative. In the immediate future, it would seem reasonable that additional legislation would be considered to decide whether or not independent entrepreneurs, for example, may contract with ETECSA to purchase internet services. While the Cuban government has made no indication that it is considering these changes, it would serve as an important milestone in continuing to commercialize internet access. They could allow more private businesses, for example, to offer wifi for customers, thereby expanding points of access across the country.

While laws pertaining to service providers will continue to affect how Cubans come online in the future, legislation censoring online content continues to affect how Cubans use the internet in their daily lives. In order for a more open internet to exist on the island, the Cuban government would need to revise existing laws that limit the publication and dissemination of online content. The internet is not open if it is censored. However, the legislation governing the control of content are decades-old laws that have only become stricter in recent years. The government has not enacted any changes to legislation in the last decade that signal an easing of censorship to content and websites that do not promote the interests of the socialist society.

ETECSA, for example, is authorized to "take the necessary steps to prevent access to sites whose contents are contrary to social interests, ethics and morals, as well as the use of applications that affect the integrity or security of the state."²¹ Furthermore, the Ministry of Culture has dictated that any serial publication (books, magazines, etc.) must first be approved by the National Registry of Serial Publications before being published online.²²

Based on the established precedent, it seems that the Cuban government is prioritizing changes, albeit slowly, to a legal framework that favors ETECSA growing its customer base instead of allowing for a more open and uncensored internet. If this proves to be true, then Cuban laws may gradually change to allow ETECSA to offer new services to not only Cuban citizens but also to attract more foreigners to the country.

Conclusion

Raúl Castro has said that economic and social reforms in Cuba will continue forward "without pause, but without haste." Reforms in internet policy will not be any different.

The Cuban government has not signaled any rush to significantly improve internet penetration and affordability in the country. Policymakers recognize the importance of informatization, but cite similar talking points that call for caution in the spread of the internet. ETECSA is improving access, but with slow and costly technology. The government is making changes to certain laws related to service providers, but keeping a tight grip on censorship online.

It is not clear if significant changes will be made to internet policy before the departure of Raúl Castro from power in 2018. Cuba's new leader will likely follow existing reform plans until he or she can consolidate power and prepare for the 8th Congress of the Communist Party of Cuba in 2021. Therefore, reforms to the internet will likely continue "gradually, according to [the country's] economic possibilities"²³ until more significant political and economic changes occur on the island.

In the meantime, Cuban citizens will continue to develop their expertise at

using the internet without the internet. As ETECSA continues to expand access to new wi-fi hotspots and homes across the country, Cubans will find savvy ways to replicate internet signals with Nano Stations, create mesh networks and launch new mobile apps that further connect the population. Cubans are hungry for the internet, and they will not wait around for a State apparatus to formulate a progressive internet policy. They will create their own.

Alejandro D. González leads development and innovation at 14ymedio, Cuba's first independent digital news outlet. He is grateful to Paola Pesant for assisting in gathering the primary source research that has been used to produce this article.

Note: The views of the author do not necessarily reflect those of the Bertelsmann Foundation.





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Apps and Apathy in America: Technology and U.S. Elections By Nathan Crist

pproximately 90 million votingeligible Americans did not vote in the 2016 U.S. presidential election. With margins of victory over the last seven presidential elections amounting to between 500,000 and 9.5 million votes, tapping into a few percentage points of this inactive electorate is an attractive proposition for Democrats and Republicans alike. But motivating non-voters is no easy task. Put simply, there is no one reason why so many Americans do not vote. There is instead a wide range of explanations for American disregard for Election Day, from the inconvenience of registering and going to the polls to political apathy and the belief that voting makes no difference.

The U.S. is home to all the technological tools needed to operate the world's most modern, inclusive and reliable election system. But participation rates still fall below many other developed nations. How can technology be exploited to increase democratic participation? And can technological innovation and capacity contribute to overcoming the main challenges to voting in America?

How can technology be exploited to increase democratic participation?

Some innovation is already under way. Electronic voter registration and coordinated voter list oversight help ease registration and keep records current. Computers evaluate and redraw constituencies to shine a spotlight on partisan redistricting. Social media and smartphone apps inform voters about politicians, issues and polling-station locations. Still, American voter turnout in the digital age has not substantially changed. In fact, it has been largely constant since the 1960s. Between 50 and 60 percent of the American population participates in presidential elections, and a smaller portion, only 35 to 45 percent on average, votes in midterm elections. In 2016, turnout was an estimated 60 percent, calculated

using the total ballots cast (138.8 million) and the voting-eligible population (230.6 million).¹

Despite these numbers, there is reason to believe that technology has vast potential to impact democratic participation in the U.S. One reason is technology's evergrowing reach. Over the 16 years spanning the last four presidential elections, the percentage of Americans with internet access has risen from 63 percent to 88 percent.² Smartphone ownership more than doubled in the last five years alone, increasing from 35 percent to 77 percent of the population.³ So, how can these trends be harnessed to motivate more voters?

Tech's impact on turnout could manifest itself in two ways: it could be used to mobilize presidential-election voters to participate in midterm elections, or it could attract greater numbers of firsttime voters to participate in one or both elections.

Apart from boosting turnout statistics, technology could have another impact: increasing the diversity of the electorate. Turnout may have remained constant for decades but the electorate has not. In 2016, it was larger and more diverse than ever. More than one-quarter (28 percent) of approximately 230 million eligible American voters were black, Hispanic, Asian, or of another racial or ethnic minority, an increase of seven percentage points since 2000.

This increasingly diverse electorate could be deemed a win for democracy in itself. Efforts to modernize the voting process, from the redistricting of constituencies to registering first-time voters and helping them cast their ballots, could best benefit democracy by fostering belief in an understanding of the American political system and improving voting opportunities for more Americans from all walks of life. Existing technology has already had a hand in holding turnout steady, when it might have otherwise fallen.

Harnessing America's leading global position in technological innovation, however, should not be about maintaining the status quo. It should instead be about developing an increasingly inclusive and trustworthy election system.

There is, however, a dark side to technology's role in the U.S. democratic system. Fake news peppers social-media feeds with polarized and polarizing opinions on political candidates. News has become noise, and the American voter can hardly be expected to tune out the nonsense in favor of the truth.

Still, this barrage of information does not seem to ultimately affect who votes and, only marginally, how they vote. Two FiveThirtyEight surveys conducted before and after the 2016 presidential election revealed that nearly 70 percent of voters did not change their minds about their preferred candidates between January and October 2016. Of those polled, 37 percent said they supported Clinton in January and October, while 31 percent said they supported Trump in both months. The ten-month campaign had a relatively small effect.⁴

This chapter does not dwell on technology's role in spreading news and opinion. It instead focuses on using tech to improve the voting process. Increasing turnout can have a major influence on election outcomes and the shape of American democracy, but many technological solutions for election logistics are still in their infancy. U.S. democracy will be transformed, just as in previous eras of technological progress, as these solutions are developed and implemented. The guestion is, how?

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This chapter explores the ways in which technology is already changing American elections, and provides a glimpse of what the future may hold for the integration of technology into democracy in the U.S.

Democratic Participation in a Changing Country

It is important to understand the origins of American democracy before examining its future. America's political system was, after all, different when George Washington won his first election to political office. In 18th century America, many states discouraged "electioneering," the efforts by candidates to influence voters by any means, including giving a speech or printing a campaign poster. Politicians campaigned anyway, but treating a crowd to an open bar was more common than delivering talking points. Washington doled out a guart and a half of spiced rum per vote in his first election to the Virginia General Assembly in 1758, plying the local landowners with alcohol to win them over. And when voters travelled to the polls, leaving home on Monday after the Sunday Sabbath to arrive Tuesday, the day the Constitution designates for elections, they voted for the candidate who showed them a good time.

The 18th century voter would find few familiar aspects in today's American elections, but may be comforted by the continuing tradition of Tuesday voting. Everything else would be startling, given that much about American democracy has changed in 250 years. Politicians no longer win votes with rum but steer a complex array of campaign tactics to attract voters to the polls. In some ways, American politics is still about who can throw the biggest party, but it's also about who is on the guest list and who isn't. Beneath the glossy surface of professional campaigning is an electoral system run largely by the states with their own politically controlled ecosystems for

running elections in which parties employ tools for limiting the influence of opponents while maximizing the impact of supporters. These tactics, deeply entrenched and adaptive to changes in American law and society, are in place for elections to all levels of government, from the federal to the local. Some have made voting easier, while others, intentionally or not, make it more difficult.

In some ways, American politics is still about who can throw the biggest party, but it's also about who is on the guest list and who isn't.

Today's American election system is the result of an extended learning process. Parties and politicians have consistently responded to opponents' strategies by using the latest technology.

Transforming Elections

Democracy in America has a remarkably long, continuous history by global standards, but it has never stayed the same for long. When James Madison lost a 1777 election for the Virginia Assembly by running a dry campaign, he learned an important lesson (maybe Washington could have told him) about campaigning and alcohol. Just a few decades later, delivering a political speech was more widely accepted for a campaign gathering, a change that came just in time for Madison's own 1816 race for the presidency.

Both winning and losing have proven fruitful ground for political innovation in American politics. In 1812, Massachusetts Governor Elbridge Gerry redrew a statesenate district to secure victory for his Democratic-Republican Party against surging Federalist opponents by packing into the district more Democratic-Republicans than Federalists. The ploy gave rise to a now well-known political term: gerrymandering (Gerry combined with salamander), which was coined by a journalist who wrote that the new district oddly resembled a winged dragon. Today's Democrats and Republicans openly employ this tactic to solidify support and judge where to expend campaign resources.

More innovation emerged at the end of the 19th century, when William Jennings Bryan, facing limited financial support, no newspaper backing and an anticipated Republican landslide victory, took to the road and visited 27 of 45 states. He spoke to an estimated five million people in a more rigorous, nationwide campaigning effort than had ever been attempted. Though Bryan never reached the White House, it is now hard to imagine anything less in a presidential campaign.

Finally, John F. Kennedy used primaries and the technological advances in television to rally support for his presidential candidacy after party organizational backing lost importance in the 1950s and 1960s. This gave way to what we now call grassroots campaigning. Today, primaries are the undisputed way to gather momentum for a party nomination, and professional media specialists and pollsters have transformed politics into a public-relations business to capitalize on the power of an open race.

Rock the Vote/Block the Vote

Politicians adapt to changing circumstances, as do policy positions

undertaken to increase and limit voter turnout. This capricious relationship with voter participation seems to pair each leap forward with a step back. Sweeping federal enfranchisement laws have boosted the voting population on several occasions, while state and local authorities sometimes seek to roll back voting reforms one regulation at a time.

A major leap for America was the 1870 passage of the Fifteenth Amendment, which outlawed denying Americans the right to vote based on their race. However, this was soon followed by the Jim Crow laws of the Reconstruction-Era South that stifled African-American political participation through the 1960s, with residual elements plaguing voters in many southern states even now.

Short or early-closing voting periods, poorly staffed polling stations with long lines, strict photo ID requirements, and the disenfranchisement of felons are methods frequently cited as forms of modern voter repression. Even outdated traditions, such as voting on Tuesday, still perplex and inconvenience Americans.

Voting in America has become a balancing act between a more magnificent, modern and climactic national democratic pageant, and the persistent, bureaucratic and obstructive measures used to squeeze and stall the process on the ground level.

Voting Differences: States' Power in Elections

U.S. elections today—midterms and presidential elections—are open to more Americans than ever before, and voting is generally easier than at any other time in American history. Although varying practices across the fifty states place different requirements on how voters cast their ballots.

KEY EVENTS IN VOTING AND ELECTIONS IN THE UNITED STATES



Elbridge Gerry approves redrawn statesenate districts that give his Democratic-Republican Party certain victory over Federalist opponents. "Gerry"-mandering is born in America.

1812

William Jennings Bryan travels to 27 states in his presidential campaign. His opponent, William McKinley, runs a more traditional "front porch campaign" receiving visitors at his home in Ohio. Despite his travels, Bryan loses the election.



1896

A DECEMBER OF COMPANY

The National Association for the Advancement of Colored People is founded with the initial focus of opposing the disenfranchisement of African-Americans in the South.

1909

Five years after the Voting Rights Act, the percentage of African Americans registered to vote in Southern states closed to within ten points of whites. As recently as 1950 there had been a gap as high as 60 percent in some states.



1970



Arizona is the first U.S. state to offer online voter registration. Today, 34 states have online voter registration.

2002

Oregon is the first U.S. state to add Automatic Voter Registration, which builds on "Motor Voter" practices by changing voter registration from opt-in to opt-out. Now, eight states automatically register individuals with a driver's license.



2015



President Trump creates a commission to examine voting and registration practices. The commission asks states to submit lists of registered voters for review. Many refuse, and the commission is currently being sued by several civil rights organizations.



The Fifteenth Amendment expands voting rights in the U.S. to all male citizens. It prohibits federal and state government from denying these citizens the right to vote based on race.

1870

The fifth African-American to hold a seat in Congress, George Henry White, decides not run for the House of Representatives for a third time since Jim Crow laws have disenfranchised his supporters in his home state of North Carolina. For almost three decades afterwards there are no African-Americans in Congress.



1901



The Voting Rights Act gives the federal government the ability to intervene when a state's voting practices discriminate against people based on color, race or language. It also provides the means for individuals to challenge gerrymandered districts in federal court.

1965

The Voter Registration Act requires states to assist citizens in registering by providing a mail-in form, the option to register when they apply for a driver's license, and by providing special assistance to those with disabilities.



1993



The Supreme Court Case Shelby County v. Holder overturns provisions of the Voting Rights Act that required preclearance from the federal government before certain states change voting laws.

2013

The Supreme Court rules that North Carolina's 1st and 12th Congressional Districts were drawn with racial bias. They unfairly concentrate African-American votes within their boundaries to limit the overall impact of those votes in the state



2017

2017

Almost no two states have the same voting practices. Instead, each state has a combination of restrictions and conveniences that form their residents' voting experience. Factors often examined when evaluating a state's voting practices include photo-ID requirements for voter registration, an online voter-registration option, automatic voter registration (AVR) when acquiring a license or other government issued identification, and the ability to register at a polling station on Election Day. There's good reason why these factors are deemed important. Although voting is vital to democracy, it can be inconvenient in the U.S. Twenty percent of Americans who did not vote in the 2012 presidential election said they were too busy to do so, according to a subsequent U.S. Census survey. Other top reasons cited were: A disability or illness, no interest in politics or the candidates, away

from home, and difficulties registering.⁵ The effort it takes to register and vote and the long wait times at the polling station can be huge deterrents. In addition, many of the solutions involve the application of fairly simple technology. Using online voting or AVR to simplify registration by cutting the time and effort needed to vote can be key steps to increasing democratic participation.

The inconsistency across states reflects the decentralized efforts to improve voting turnout. Two states in the presidential race, lowa and New Hampshire, both of which are important because they hold early contests that help choose the individual party candidates, differ markedly in election administration. Voters in these two states have starkly different options for registering. Iowa has online voter registration, while New Hampshire falls



DISRUPTINGDEMOCRACY



in line with the majority of other states that do not. New Hampshirites must go to a town or city clerk's office and register on paper. Iowa also has early voting and requires employers to give some time off on Election Day for voting. New Hampshire currently lacks both.

also differ in their The states redistricting procedures, the redrawing of congressional and state-legislature election districts. New Hampshire's legislature is tasked with determining state and federal constituency lines after each ten-year census. This is the case in 37 U.S. states and results in gerrymandering. In Iowa, however, a non-partisan Legislative Services Agency (LSA) holds redistricting authority. The LSA (all U.S. states have an analogous body) is directed by a five-member commission, whose members cannot simultaneously hold partisan public office, maintain an official position within a party, or be a relative of a state or federal legislator. This independent commission and the LSA develop a redistricting plan and submit it to the legislature for a vote, without the option to amend.

Despite their differences, Iowa and New Hampshire are nearly identical in one way. Both have higher than average voter turnout, with Iowa at 69 percent and New Hampshire at more than 70 percent in 2016. If the differences between the elections run by these two states do not result in a difference in turnout, what might?

Looking at states with significantly different turnouts could provide a clue. Minnesota had the highest turnout in the 2016 presidential election, 74 percent, while Hawaii had the lowest, a mere 43 percent. But Hawaii is unique for reasons of history, geography and culture. A state since only 1959, many Hawaiians do not feel connected to U.S. politics, and, since it is six hours behind the U.S. eastern time zone, national election results are sometimes announced before Hawaiians finish voting. It is, therefore, more instructive to look at the state with the second-lowest turnout rate: West Virginia.

Slightly more than 50 percent of eligible West Virginians voted in the last presidential election, well below the national turnout rate of 60 percent. Perplexingly, they face similar procedures to voters in high-turnout Minnesota. In both states, online voter registration and early voting is possible, no photo ID is required at the polling station, and employers are required to give some time off for voting on Election Day. Beyond that, West Virginia, not Minnesota, is one of just eight states with automatic voter registration (AVR), meaning citizens who acquire or renew a driver's license are automatically registered to vote.

So, why, despite the shared practices, is there still such a vast difference in turnout? One explanation is the two states' respective speed in implementing reforms to simplify voting. Minnesota had a substantial head start in technologybased election reform. It implemented electronic voter registration in 2004 and online voter registration in 2013, while West Virginia adopted both in 2015. Minnesota started same-day voter registration in 1974, and this has had an impact. In 2014, voters who registered on Election Day in Minnesota comprised 7.2 percent of all voter registrations in the preceding three years in the state. West Virginia has yet to offer same-day registration.

Iowa and New Hampshire exhibit significant differences in voting practices and yet have nearly identically high turnout rates. Minnesota and West Virginia have starkly different turnouts but share some common voting practices. Clearly, there is neither a simple explanation nor a clear set of best practices for increasing voter participation.

The search for answers may lie in the way some reforms of registration, voting and redistricting procedures have yielded positive results.

Registering to Vote

This would be a short process for a German or a Swede. In both cases, 18-year-olds are automatically added to the voter list. However, an American citizen is responsible for registering to vote. Making this an easier process is a primary vehicle for those seeking to increase election turnout.

The U.S. ranks behind 18 EU member states, Canada, and Mexico in the percentage of eligible citizens who voted in the most recent national election. On the other hand, the U.S. ranks high in the proportion of registered voters who vote (86 percent). This signals that those who make the effort to register are already engaged and motivated to vote, and implies that increasing voter registration has a strong chance of improving turnout.

The U.S. ranks behind 18 EU member states, Canada, and Mexico in the percentage of eligible citizens who voted in the most recent national election.

According to the Pew Research Center, around 157.6 million Americans, or 64

percent of the voting-age population of approximately 245 million, are registered to vote,⁶ and 55.7 percent of the voting age population voted in the 2016 presidential election (compared to 60 percent of eligible voters). In their last national elections, 87 percent of voting-age Belgians (for whom voting is compulsory) and 82 percent of votingage Swedes (for whom voting is not compulsory) voted.⁷ Belgians and Swedes are in this regard Europe's top performers.

Adding all unregistered Americans to voter lists is difficult. Just the effort to register appears to be for some a sufficient deterrent to participating in elections. If 60 million or more unregistered yet eligible Americans are to be registered, changes to the process of registration must be a focus.

There is certainly room for improvement since some states still lack basic digital tools to address the issue of voter registration. Eighteen U.S. states currently do not offer online voter registration, though that is down from 30 in 2014. Voters in only 15 states and the District of Columbia can take advantage of registering on Election Day, meaning residents in the other 35 states must be aware of registration deadlines that vary from several days ahead of an election to nearly a month before.⁸

AVR is one way to confront the challenge since it removes the burden on the individual to find the time to register. In fact, countries with AVR, such as Sweden (turnout rate of 82 percent) and Germany (turnout rate of 66 percent), for example, show higher voter participation.

AVR in the U.S. is still young. Oregon became the first state to implement AVR in 2015, and California followed later the same year. Eight states in total, including low-turnout West Virginia, now have AVR.

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Residents in those states are automatically added to the voter list when receiving or renewing a driver's license, unless they choose to opt out.

Measuring AVR's impact in the U.S. is difficult since it has existed for such a short time. However, Oregon has already seen improvement in voter turnout. In the first seven months after AVR was officially implemented in January 2016, 95,605 new voters registered at Department of Motor Vehicles (DMV) locations, giving the state a nine-percent increase in registered voters in that period.⁹ Just over 68 percent of Oregon residents voted in the 2016 presidential election, an increase of four percentage points over the 2012 race. This is a promising start.

Initiatives to increase the reliability of voter lists are also under way. Twenty states and the District of Columbia have joined forces to support an Electronic Registration Information Center (ERIC), a non-profit created in 2012 by election and technology experts with the initial support of seven states and the Pew Charitable Trusts.

ERIC's founders saw that voter registration in the U.S. was largely a low-tech process susceptible to error. One in eight voter records was incorrect when ERIC was launched. Human error when completing or copying voter registration information is a likely source of mistakes, as are inconsistencies due to the millions of Americans who move, change their names or die annually. Since many citizens do not check the accuracy of their voting registrations until an election approaches, records remain incorrect for months or even years before anyone notices. If anyone ever notices, that is.

Coordinating voter information oversight to maintain accuracy is a significant step towards making elections more reliable and

ERIC

The algorithms behind ERIC use records from voter-registration lists, states' Departments of Motor Vehicles, and Post Office records to compile and crosscheck voter information. Using a person's name, date of birth, address, the last four digits of their social security number and other data, ERIC can determine if someone has moved, married or changed genders (as it did in one Utah case). Records are collected from each source, meaning that as the number of ERIC users increases, so will the system's accuracy. Informing the states of inaccurate records can help save money and help election administrators connect with voters via new addresses. Such notifications can be hugely beneficial since nearly two million Americans in states using ERIC moved in 2016. Any method that allows states to communicate with voters more reliably can contribute to smoother election processes.

reducing concerns about voter fraud and voter-list errors. Most voter registrations today are processed at DMVs or county election boards, or are collected by thirdparty registration groups, which forward the information to central state election boards. The U.S. has approximately 13,000 election jurisdictions that are covered by thousands of county election boards and DMVs. The result is an extremely decentralized voter registration system, in which thousands of records must be

compiled at the state level. ERIC seeks to better organize this effort, but the flow of information remains at the state and substate level. This means that states provide ERIC with lists drawn from local officials, while ERIC informs states of residents who need to re-register or update their information. But ERIC and states cannot simply fix inaccurate data themselves. If states find mistakes, they prompt the correction from the individual. ERIC's contribution to the effort is increasing the probability of finding mistakes well before elections and giving registered voters the chance to correct their records well ahead of deadlines.

ERIC can also improve registration rates by informing states of residents eligible but unregistered to vote. In its first year, ERIC helped participating states increase voter registration 1.23 percent and voter turnout 2.36 percent over non-ERIC states.¹⁰

Making registration easier and improving voter list accuracy contributes to a more manageable election process, but the impact of a vote is another matter. On this issue, the main challenge is gerrymandering.

Gerrymandering and the Impact of a Vote

Redistricting is a sensitive topic in the U.S. because it can significantly impact elections. The country's expansion from the original 13 to today's 50 states has required many changes to the number and size of electoral districts to maintain proportional representation as outlined in the American Constitution. Districts are redrawn after each decennial census to maintain, as much as possible, a uniform distribution of population across the nation. State legislatures in most cases control this process, which has come to be associated with gerrymandering. Gerrymandering is employed in two main ways. Either adherents of a desired party are grouped together in a district, thereby giving that party a majority, or adherents to an opposing party are divided amongst districts where they would only constitute a minority.

Giving rise to outrageously redrawn districts with nicknames such as "the gimpy leg" and "amoeba convention," gerrymandering has become as much an amusement as an affliction for American politics. If done effectively, it can convert a small popular-vote majority in a state into dominance in a legislative body, skewing a near equal partisan split into a controlling majority. Due to its influence on the impact of votes, some political observers believe that gerrymandering disenfranchises and discourages voters. Though, while it certainly has an effect on election outcomes, some scholars argue that gerrymandering amplifies rather than distorts politically important changes such as shifts in public opinion or regional political composition.

The Great Gerrymander of 2012

The 2010 census led to significant redistricting efforts, most notably by the Republican Party. The Republican State Leadership Committee's Redistricting Majority Project even had its own website and catchy acronym: REDMAP. The party used census information on Americans' voting patterns to design strategies for winning majorities in state legislatures, thereby controlling the redistricting process. And they were successful. In seven states in which Republicans redrew the electoral map, the 2012 general election saw a slim 16.7 million to 16.4 million Republican to Democrat vote majority translated into 73 Republican and 34 Democratic House of Representatives victories. The Republicans utilized America's first-past-the-post voting, in which the candidate with the most votes

GERRYMANDERING

How district lines are drawn can change an election result.





Securing election outcomes often comes at the expense of compactness.

Source: WashingtonPost.com/WonkBlog, adapted from Stephen Nass

wins and other votes are discounted, to their advantage.

As the Republicans demonstrated, gerrymandering can greatly influence such a system by dispersing opposition votes among several districts, ensuring they account only for a losing minority. Moving constituency lines so that certain blocs of opposition votes are reliably neutralized against solid majorities is a clever use of the winner-take-all framework.

Overall, in the 2012 general elections, Democrats won 51 percent of the popular vote for all House of Representatives elections but were nevertheless 17 seats short of a majority. But while some contend that this was a feat of clever gerrymandering, others believe that electoral districts from the previous decade would still have led to a Republican victory.

The full impact of gerrymandering is difficult to measure, in part because there is no counterfactual to the long history of partisan influence on redistricting and voting practices. There is no historical neutral case.

Analyzing election results and votes cast in each general election since 1952 shows that Republicans have been more efficient in winning elections for the majority of years.¹¹ Republicans have won, on average, more seats than Democrats in tight races. In a Washington Post article about the 2012 election, John Sides and Eric McGhee assert that the tendency for Democratic voters to cluster in urban areas gives them more landslide victories there. It also means fewer contested districts nationwide. The 2016 presidentialelection map confirms this. Republicans were more broadly distributed in contrast to the compact Democratic blocs in major urban areas.

Gerrymandering takes advantage of these voter blocs, but legislatures do not have free rein to do what they please when redrawing districts. Strict rules determine the drawing of constituencies.

The Voting Rights Act of 1965 outlines the most important rules. Passed at the height of the U.S. civil rights movement, the law is the primary safeguard against using redistricting to restrict the right to vote on the basis of race. The Act thereby makes it illegal to redraw constituencies to disperse opposition voter blocs along racial lines.

But gerrymandering also commonly produces visually irrational results that defy the understanding of a coherent voting community.

Gerrymandering aside, some districts will inherently have landslide victories while others will be close calls. A nation of 50-50 political equilibrium across all districts would not be the solution; it would make elections more expensive and divisive than ever before. People naturally tend to group along social, economic and political lines, and gerrymandering mimics this process. But gerrymandering also commonly produces visually irrational results that defy the understanding of a coherent voting community. To combat this trend, technology is now being

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deployed in an effort to find new ways of drawing electoral districts.

Slaying the Gerrymander with Math

Human hands ultimately draw the lines on America's electoral maps, but sophisticated mathematical models can now help to ensure the process meets relevant legal requirements and resulting districts pass the eye-test.

Programmer Brian Olson has developed district maps that are mathematically optimized for "equal population and compactness," two requirements outlined in the Voting Rights Act.¹² Once a webmaster for a Congressional campaign in California, Olson found that the outcome in many U.S. Congressional races is largely predetermined, to the detriment of American democracy. Explaining his maps in a 2016 TEDx talk, Olson urged more equal political representation in Congressional districts to benefit the electoral process. Citing 32 unopposed Congressional races, he set out to optimize redistricting to increase partisan competitiveness. The result is an online reference for his interpretation of district fairness for every state.

Tufts University Professor Moon Duchin's "Metric Geometry and Gerrymandering Group" is another project addressing compactness. The group is refining mathematical approaches to the Voting Rights Act's redistricting requirements. Duchin works on calculations of compactness and contiguity, and is organizing a nationwide series of workshops to bring her team's research to public officials, scholars and others interested in a new approach to redistricting. The workshops began in August 2017 with events in Wisconsin, North Carolina, Texas and California. The group plans to provide direction for individuals with redistricting responsibility, be they state legislators,

Solving for Compactness

brought Brian Olson his mathematical approach to all 50 U.S. states, and North Carolina exhibited especially egregious gerrymandering. This had not gone unnoticed, even before a mathematical assessment. A 2016 federal court ruling led to an emergency redistricting effort in the state that prompted a threemonth delay in the Congressional and presidential primaries, with many voters afterwards finding themselves in a new electoral district. Working with the primary goal of compactness, Olson's new districts keep regions and communities together. His electoral map of North Carolina reduces the average distance per person to a district's geographical center - the definition of compactness - to 25 miles from a gerrymandered 36 miles. The result is an even, equal spread of districts that looks coherent and logical. It may also more accurately reflect compact political communities.

election commissioners or members of independent redistricting bodies.¹³

The Public Mapping Project is another effort. This do-it-yourself online platform for redistricting assistance is backed by a diverse array of supporters including members of Congress, the Brookings Institution, the American Enterprise Institute and George Mason University. Rather than using complex calculations for redistricting, the Public Mapping Project



Solving for Compactness in North Carolina





offers guidelines for legally redrawing districts and a map reflecting the most recent U.S. census data. Districts are formed by grouping and arranging census blocs, the smallest unit of population analysis in the U.S. census. Users of this free software, which include legislators, election officials and news outlets, can reorganize districts and examine the results, creating alternative maps. The project's creator, Dave Bradlee, hopes it can facilitate discussion and reevaluation of the redistricting process.¹⁴

Despite their usefulness, these tools may still not ease the effort of overturning the centuries-old practice of gerrymandering. Both parties have benefited from it, and certainty in some election outcomes reduces overall campaign expenses. Source: http://bdistricting.com/2010/NC_Congress/

Mathematically drawn, impartial districts may lead to more moderate politicians, but increased competition between the parties could also create tighter races that are costlier to win.

Getting People to the Polls

Having Americans registered to vote in fair, competitive districts is the basis for democratic participation. Getting them to cast votes on Election Day, however, is another challenge.

Many approaches to elevating civic participation have been small-scale and without the technological overhaul that is likely required to stimulate electoral innovation. One exception to this is Facebook's efforts through banners on news feeds to inform voters about how to

Facebook and Voter Registration



Source: https://www.usatoday.com/story/tech/news/2016/09/23/facebooklaunches-first-nationwide-voter-registration-drive/90866726/ register and cast a vote, including polling locations and hours. In September 2016, Facebook experimented with banners about registering to vote in several states. In California, on Friday, September 23rd, 2016, Facebook circulated a banner reminding Californians to register to vote. That day, 123,279 Californians either registered or updated their registrations online. Since 2008, the daily average for online registration traffic in September had been only 9,307. There was also evidence that Facebook's banners had an impact in Minnesota, Kentucky, Indiana and Connecticut.¹⁵

Another approach is the Voting Information Project, which is supported by Pew Charitable Trusts and Google. It provides apps and a simple SMS service to aggregate and disseminate important voting registration and polling information. The idea sprang from the Pew Charitable Trusts' 2008 study, "Being Online Is Not Enough," which found that internet access was insufficient for improving the dissemination of accurate information on voting times and locations. As a result, the organization created online tools to do this. These include "Get to the Polls," an app, website and text-messaging service that provides polling-station locations and voter-registration information. In addition, the Voting Information Tool can be embedded easily into any website to provide the same information.

While the Voting Information Project aims to increase voter turnout, other efforts take aim at improving voters' understanding of candidates and issues. Austin, Texasbased ThinkVoting has developed the Voting App, which provides voters with information to make informed election decisions. The app includes plain-text versions of ballot propositions, and nonpartisan arguments for and against the issue at hand. The Voting App is currently available only in Texas, but with nationwide smartphone ownership nearing 80 percent, it could eventually have a significant impact throughout the U.S.

The sample-ballot option represents another approach to informing voters. Los Angeles County has experimented with methods allowing voters to prepopulate ballots at home and use a digital copy or printed pass to scan and complete the ballot at a polling station.

It is easy to imagine the emergence of multiple partisan digital platforms used in an attempt to sway voters as some media outlets and social-media feeds do now.

Such innovation addresses a challenge confronting many American voters: long and complex ballot forms. These may include minor races involving a list of candidates from the same party or candidates without party affiliation. Furthermore, lengthy texts about niche local initiatives or ballot propositions, which can relate to controversial issues such as gun control, marijuana legalization and taxation, may be too complicated for some voters to understand. Voters may consequently skip these parts of the ballot. Smartphone apps and digital sample-ballot options could reverse this

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by providing voters with background information and simplified explanations.

So what's to keep aids such as ThinkVoting's Voting App from reflecting partisan bias or targeting specific audiences if they become more widespread? And what's to keep tools like these from gathering more data on voters for targeted information campaigns? It is easy to imagine the emergence of multiple partisan digital platforms used in an attempt to sway voters as some media outlets and socialmedia feeds do now.

Some apps are, in fact, already doing this. VoteWithMe helps users identify friends and contacts who are likely to abstain from voting and can even identify those in districts with competitive races. It is then up to the app's user to conduct the outreach. Here is the most interesting part: it tries to identify friends most likely to vote for "progressive" candidates. VoteWithMe takes a partisan political approach to find and motivate voters with political views similar to the user's. The app was designed by Chicago-based Civis Analytics, which was founded by the chief analytics officer for Barack Obama's 2012 re-election campaign. The firm is transparent about using big data to understand effective voter outreach and works with other companies and organizations on market analytics, consumer insights and message effectiveness.

Another app open about its partisan political approach is Brigade, developed by Napster creator Sean Parker and Causes (an online campaigning platform) CEO Matt Mahan. The app, still in development but beyond a beta test, is a social network focused on encouraging people to share their political views. It offers a series of statements with which users can indicate agreement or disagreement. The app then shows the number of similar-minded Brigade users, along with arguments for and against the expressed opinion. Brigade seeks to find issues that energize its users to engage non-voters. Its creators are wary, however, of the basic premise—that people actually like sharing political opinions with friends and acquaintances—and are cautious about how to bring the platform to a larger audience. A core problem for any app hoping to increase voter engagement is the danger of highlighting difference over and above discussion.

Other technology applications work on improving the American election system through more specialized initiatives. Geographic information services software maker ESRI hopes to reduce lines at polling stations by giving users real-time updates on waiting times. ESRI noted that, as recently as 2012, districts relied on volunteers to email county officials with waiting times that would then be posted online. Now, voters can obtain more accurate information before heading to the polls.¹⁶

To get there, car-sharing and taxi companies such as ZipCar and Lyft have offered discounted or even free rides to Election Day voters. Individual entrepreneurs have also gotten into the game with apps that help voters reach polling locations, like Carpool2Vote. It's a free service that relies on volunteer drivers to start carpools to voting locations, with safety features to help identify users and inform riders about the vehicle that will transport them.

These approaches all chip away at the inconveniences of voting, or provide a platform for citizen oversight and engagement, with the goal of increasing voter participation. The measurable impact of such apps remains limited, since many of them are still new. But major social-media and tech players may yet assume a larger role in America's democratic process.

Conclusion: The Case for Change

Boosting voter participation in the next election has as much to do with the structures of U.S. politics as technological innovation. While higher participation of Americans in presidential elections compared to midterms is the result of the high-stakes drama and pageantry of the presidential race, an increasing voterregistration rate - up over the past five decades from around 60 percent to 80 percent of eligible Americans - lays the foundation for greater civic involvement at all levels.¹⁷ Technology's role in further informing, assisting and motivating voters, especially those who already vote regularly in presidential races but not in midterms, is vital to continuing this rise in democratic participation.

Continued attention to registration, gerrymandering and voting is not just about the long-overdue modernization of U.S. election practices. It's also about applying technology to effect meaningful change. Practices such as strict voter ID laws or narrow early-voting windows may not individually prevent significant numbers of Americans from voting, but any obstacle that keeps a voter from casting a ballot runs counter to democratic principles. Each of these challenges facing the American election system is a part of why 40 percent of eligible voters do not vote. For that reason, it remains imperative to explore technology's ability to boost electoral participation.

Nathan Crist is a research assistant at the Bertelsmann Foundation.

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Harnessing Technology for the 21st Century Voter By David Becker

he last decade has seen remarkable technological and policy innovations in the field of American elections. Spurred by federal funding, innovative election officials, and demand from voters, elections in the U.S. are now easier to participate in than ever before, for almost all Americans. Yet despite this innovation, voter turnout in the U.S. is declining, particularly outside of presidential elections, and participation among young voters is at an all-time low.

For many years, those of us who work in elections had thought that if we simply brought elections into the 21st century, making elections more convenient for voters, that alone would increase turnout. And in the U.S., we've been enormously successful in modernizing our elections and offering voters more choices in how and when to vote. Until recently, keeping accurate voter lists was a nearly insoluble problem, due to the high rate at which Americans move between election cycles. But today, two-thirds of the states allow citizens to register to vote or update their voter information entirely online at any time, day or night. More American voters than ever can register to vote even on Election Day itself. And states now have access to tools like the Electronic Registration Information Center, or ERIC, which informs states when one of their voters moves or dies, or when a newlyeligible voter could be registered. These reforms have led to vastly improved voter lists that are more accurate and more inclusive, and in so doing, have greatly reduced problems many voters experience during an election.

In addition, election information is spread over social media and digital platforms as never before, with tens of millions of Americans getting information easily through Google, Facebook and others. Most American voters have the option to easily cast a ballot early in the weeks before Election Day, and can do so either in person, or by mail, if they choose. In fact, nearly 50 million ballots were cast before Election Day in November 2016, over one-third of all votes cast. And we have been very successful in expanding voting



options for voters with disabilities, those with need for assistance in languages other than English, and those residing abroad or serving in our military.

American elections are of course not perfect, but the fact remains that it is now easier to vote in the U.S. than ever before in our history, and yet, turnout is in decline. Why? Is it due to sustained barriers? Is it because our ballots are longer and more complex than almost anywhere in the world, filled with pages of contests and referenda? Is it because we are so comfortable with democracy that we are now bored with it? Or, more likely, is it due to a much more complex combination of factors? In this piece, we'll review the technological innovations that have been brought to American voters in recent years, and their impact, and then consider how technology might help answer these and other questions.

Technological Innovations in Elections

Over the last decade, U.S. elections have become more accessible and election administration more streamlined.

Information about candidates, issues and logistical matters, like polling place locations and voting hours, are at voters' fingertips. At the same time, state and local election officials have adopted various innovative tools that perform a variety of tasks ranging from facilitating registered voter list maintenance to speeding up the check-in process on Election Day. The technological tools that have made these strides possible are numerous, but a few stand out as exemplars of how technology has greatly enhanced portions of the U.S. election process.

Keeping Accurate and Inclusive Voter Lists: Online Voter Registration and ERIC

There is no more important element to foster voter satisfaction and avoid problems at the polls than the maintenance of an accurate, inclusive voter list. Most problems at the polls originate from a bad voter record, resulting in voters getting inaccurate information, going to the wrong polling place or having difficulty obtaining a ballot.

In the United States, each state is responsible for maintaining its own voter list – there is no single federal voter

registry. States therefore have a great incentive to maintain accurate lists, while at the same time they lack the tools necessary to identify when voters in their state have died, moved, or when new eligible voters have come of age or moved into their state.

We determined that approximately one out of eight voter records was no longer accurate, due mostly to the mobility of Americans between elections.

In 2012, when I directed the Election Initiatives program at the Pew Charitable Trusts, we endeavored to define and quantify that challenge. We determined that approximately one out of eight voter records was no longer accurate, due mostly to the mobility of Americans between elections. We also reported that approximately one out of every four eligible voters wasn't on the voter lists at all. These problems, we concluded, were a substantial driver of problems voters experienced on Election Day, and also decreased efficiency of election offices while artificially driving up costs.¹

Fortunately, by 2012, states had already begun to address this problem. Voter registration was still largely locked in a 20th century paradigm, requiring a voter to fill out a paper form, after which a

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government worker would then need to enter the voter's data, often by hand, into a voter registration system. In 2002, however, the state of Arizona was the first to offer voter registration entirely online, allowing any voter with a driver's license or state identification card the ability to complete their voter registration (or update an existing registration after a move) via the internet. This was revolutionary, but it wasn't until 2008 when the second state - Washington joined Arizona in offering that service. But by 2012, the number of states offering online voter registration had grown to 13, and today, is nearing 40, including states as large as California and small as Vermont, and states across the political spectrum, from highly-Democratic New York to Republican-dominated Utah.² Well over half of all American voters can now register online, and when Florida goes live with its online registration system later this year, that number will grow significantly.

But while online voter registration was a giant step forward in bringing elections into the 21st century, it still required that voters affirmatively seek registration or realize that their voter registration record needed to be updated after a move. But we also know from extensive survey research that most voters don't realize that their voter records aren't automatically updated after a move. Therefore, it was necessary to build a new tool to fix this problem.

The result was the Electronic Registration Information Center, or "ERIC."³ I led a several-year process of research and collaboration amongst a group of state and local election officials, researchers, and technology experts, and the result was ERIC's state-of-the-art data center, which twenty states in the U.S. have joined as of November 2016, representing about one-third of all American voters. ERIC securely uses sophisticated software and
In only five years, states in ERIC have been able to accurately update over 6.5 million voters' records.

data-matching to enable states to keep voter records up-to-date even as citizens move throughout the country. Like online voter registration, ERIC's membership spans the political spectrum, from states as Republican as Alabama and Louisiana, to states as Democratic as Connecticut and Oregon. And the benefits to the states that participate have been impressive.

In only five years, states in ERIC have been able to accurately update over 6.5 million voters' records.4 This includes over 1.5 million voters who had moved to another state, nearly 200,000 who had died since they last voted, and nearly 5 million voters who still resided in the same state, but at a different address than that on file. This means that millions of voters in the states that participate in ERIC had correct election information sent to their current residence, rather than an out-ofdate address, and could vote without difficulty. Perhaps just as importantly, ERIC member states have contacted tens of millions of eligible citizens who were not registered to vote, resulting in millions of them registering. In assisting states in getting more eligible voters onto the lists, while updating out-of-date information, ERIC has been one of the most successful technological innovations in American elections. More and more states are noticing, and it is expected that state membership will grow in the next few years, exceeding well over half of the American electorate.

Getting Voters Accurate Information on Elections: The Voter Information Project

Founded in 2008, the Voter Information Project (VIP) addressed a major problem with modern elections: finding election information was not easy for the average voter. Though many voters were searching for election information online, there was no uniform way that information was being presented. Each state had its own unique hodgepodge of online election tools. The usability of state websites was subpar, and the sites were often poorly optimized for search engines, meaning those looking for information had to sift through search results to find relevant information.⁵ VIP brought together state and local election officials, Pew and Google to find a way to bring voters the information they were seeking in a way that was far more accessible. Specifically, VIP has focused on the election information research most voters sought - where and when to vote, and what is on the ballot.

Since its inception, VIP has developed a variety of open source tools that have not only allowed voters greater access to election information, but have also given other civic organizations the ability to develop their own derivative tools. During the 2016 general election, tens of millions of voters accessed VIP data through platforms like Google, Facebook and many others. By using modern technological capabilities, VIP has been able to reach an ever-growing portion of the electorate, lowering the barriers to getting vital election-related information.⁶

Has Technology Improved Voter Participation?

Thanks to technological advances, it's never been easier for the majority of U.S. voters to get election information and cast their ballots. Although critical work remains to be done to extend the reach of these advances, they represent dramatic

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steps toward modernizing the field of election administration. In spite of this progress, voter turnout across the United States is declining, and there's no sign of impending improvement.

For decades, the United States has seen steadily declining voter turnout, particularly in elections other than those for President. In presidential elections, the U.S. sees about 60 percent of eligible voters turn out, and that has held fairly steady over the years, sometimes dropping to around 55 percent, but rarely going higher. This is the high-water mark for voter participation in the U.S., with two out of five eligible voters sitting out of all elections, even those for President.

And once every four years is the only time when even a bare majority of eligible voters show up to the polls in the U.S. In other elections, turnout is far lower, and declining. In November 2014, when elections were held for every seat in the U.S. House of Representatives and over a third of the U.S. Senate, as well as most state governor and legislative seats, fewer than 36 percent of eligible voters cast a ballot. Nearly two in three citizens stayed home, including nearly 50 million who had voted only two years earlier. Nearly two in three eligible voters, or approximately 144 million American citizens—more than the population of Russia—chose to sit out that election. This represented the lowest turnout in a federal election in the United States since 1942, when 18- to 20-yearolds could not yet vote, and many young men were serving in World War II.⁷

In 2014, the states of California, Nevada and New Mexico illustrated the trend. Despite high-profile statewide races at several levels (governor, lieutenant governor, and secretary of state, as well as a U.S. Senate race in New Mexico), all of these states saw their lowest turnout in a federal election since before 1980. Turnout in California and Nevada plummeted to less than 32 percent, falling 15 and almost 10 percentage points, respectively, compared with the previous midterm election in 2010. And it's important to note that in all three states, voting is widely accessible, with few ID requirements and multiple options to conveniently vote early or by mail.



Low turnout in 2014 was not the exception - it is the rule. Since 1972, the first election where 18-year-olds were permitted to vote in the U.S., turnout in non-presidential federal elections has been very low, never exceeding 42 percent. Turnout is even lower in primary and local elections. Only about 30 percent of eligible voters cast ballots in the partisan primaries for President in 2016, and primary turnout in non-presidential years is significantly lower. And then there are local elections-for mayor, city and county government, and in some cases, state government—which may not coincide with federal elections, and where turnout can sometimes dip below 10 percent of eligible voters. For instance, in March 2017, barely over one in ten eligible voters turned out to vote for Mayor of Los Angeles, the second largest city in the U.S., just four months after the presidential election.

50 million Americans will choose not to vote in 2018, despite having voted in the presidential election only about 700 days earlier.

As turnout declines, the American electorate becomes less and less representative of its diversity. In presidential years, white turnout can exceed minority turnout by 10-30 percentage points. And in midterm elections, primaries and local elections, that disparity grows even greater. There are also significant age disparities in the electorate, where voting citizens are significantly older than those eligible to vote. Since 1972, turnout among eligible voters age 18-29 has only once exceeded 50 percent (in 2008), and it is in decline. In fact, only one in three eligible 18-yearolds voted in 2016, the first election in which they were eligible to cast a ballot.

Roughly speaking, about two out of five eligible Americans never votes, about one in five votes only once every four years, another one in five votes every two years, and only the remaining one in five - 20 percent - votes in virtually all elections in which they are eligible. Whereas around 140 million Americans voted in November 2016, we can expect only around 90 million to vote in November 2018 in the midterm Congressional elections, when not only Congress is at stake, but also the majority of governorships and state legislatures. 50 million Americans will choose not to vote in 2018, despite having voted in the presidential election only about 700 days earlier.

The Dark Side of Technology

Meanwhile, there's another side to technology that could impact turnout in the future. Newspaper stories in the United States, and around the world, are currently filled with stories of attempts to hack into voting machines and voter lists, political manipulation through "fake news" and misinformation through social and other media, and alleged rampant voter fraud. While there's no evidence to suggest the vote counts in the recent U.S. presidential election were hacked—and substantial evidence that voter fraud in the U.S. is an extremely rare occurrence-there is conclusive evidence that anti-democratic forces from Russia and elsewhere are a threat, using free speech and technology to undermine democratic institutions.

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In just the past year, the Russian government hackers were undoubtedly successful in diminishing confidence in our system of democracy. In October 2016, well over one-third of all American voters were significantly concerned about the integrity of our election machinery and the vote counts.8 By March 2017, that percentage grew to 43 percent of Americans not trusting that our elections are fair, and now, in July 2017, nearly half of all Americans - 47 percent - do not trust in our election system.9 The rates of distrust among those who are already underrepresented in American democracy - minorities and young people - are significantly higher, well exceeding 50 percent, with, for instance, only 28 percent of African-American voters having confidence in our election system.

The Russians didn't need to be successful in altering the vote counts to achieve their goal – they just needed to sow the seeds of distrust among American voters. The technological threat that exists has further been exacerbated by widespread speculation and rumor-mongering, often aided by some in the media too prone to sensationalize rather than inform on this issue. Therefore, it is entirely possible, even probable, that some in the U.S., well-intentioned though they may be, are helping to convince our own voters that their votes don't matter. If this occurs, we will have done the hackers' work for them, further depressing turnout.

How Can Technology Improve American Elections and Voter Participation?

In 2015, I hosted a meeting of state election officials, and asked them a simple question - why don't people vote? One of them suggested that voters just don't like the candidates, and they don't think their votes make a difference. While there might be something to both points, I asked the election officials in the room another question: How many of us had voted in an election in favor of a candidate we personally disliked, and where we knew our single vote wouldn't make a bit of difference in the outcome? Every single one of us raised a hand. Why were those of us around that table in that small group of citizens who would always vote, no matter what was on the ballot and no

matter what outcome was likely, when others would not?

The answer is that we still have no idea. If we look at the decision of whether to vote as a "cost-benefit" analysis each of us is consciously or subconsciously making, we've focused so much on successfully reducing the "cost" of voting to the individual to nearly zero, thanks in part to many technological innovations, while in most cases we haven't demonstrated the "benefit" to citizens. If the perceived benefit is zero, or virtually zero, we won't convince more citizens to participate, no matter how easy we make it to vote.

If the perceived benefit is zero, or virtually zero, we won't convince more citizens to participate, no matter how easy we make it to vote.

And if the benefit is solely communicated in terms of a particular partisan outcome, in a particular election, we will continue to fail to encourage more voters to participate. For instance, the Obama campaign was extraordinarily successful in driving high turnout in 2008, his first presidential election – turnout exceeded 61 percent, the highest the U.S. had seen since 1968, before 18-20 year-olds could vote. But we then subsequently saw turnout dip to 41 and 36 percent, respectively, in 2010 and 2014, despite the enthusiasm just a few years earlier. If we rely solely upon driving partisan outcomes or a candidate's charisma, we may create voters for one election—Obama voters, Brexit voters, anti-Obama or anti-Brexit voters—but we will not create voters, like that small number of citizens who will participate regardless of whether they can change the outcome or whether their passions have been inflamed.

What is the solution? How can we encourage more participation in democracy, even in the absence of a charismatic candidate, and even when one's favored candidate might lose? There is reason for hope, and it comes from a strange place – citizens' willingness to lie about whether they vote.

Pollsters and census-takers routinely ask Americans whether they are registered to vote and whether they voted, and Americans routinely over-report their participation by a significant percentage. There is similar over-reporting bias when they are asked whether they voted-and most Americans don't realize that whether they voted is part of the public record. This is not a sad commentary on the state of American democracy, but rather a heartening fact. This means that citizens know they should vote, even when they aren't, and this further means that it may be possible to move that "civic lever," as I call it, to encourage them to see the benefits of voting.

Since most citizens already know there is inherent value in participating, this may not require massive efforts of persuasion. Rather, constructive civic outreach by the entity that already contacts every voter before each election—government—can be the difference in convincing millions of citizens to vote when they otherwise might not. Using technology, including electronic means of communication and sophisticated methodologies, we can partner with government to test different

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civic and informational messages and different modes of outreach to determine whether government itself can drive an increase in turnout. Importantly, each of these tests must be done with a control group, so we can isolate the effect against the many other factors that can impact turnout. If successful, over time, we can persuade many non-voters to become occasional voters and persuade occasional voters to become regular voters, and share these methods with anyone who would seek to engage with the electorate. This will not lead us to 100 percent turnout, or even 80 percent turnout (which the U.S. hasn't seen since 1888, well before women and most minorities experienced full enfranchisement), but it could result in millions of more votes, and gradually lead to a larger, more representative electorate. If these efforts convince just one out of ten of those 50 million voters from 2016 who would otherwise have stayed home in 2018, we could see turnout increase by five million voters.

Harnessing Technology and a Path Forward

Though there are significant challenges we face, some of which derive from technological threats, technology can be a positive force in building a more sustainable, more inclusive democracy. There are several efforts that could be constructive.

First, we must all be vigilant against efforts to tamper with the machinery of elections, and as the efforts continue and perhaps expand, we must be sensitive to the impacts of those efforts on voter confidence. We should encourage the use of auditable technology with a permanent ballot record, independent of the voting technology, which usually means a paper ballot. This does not mean that we cannot encourage use of electronic interfaces, recognizing that such tools are particularly important for voters with disabilities or those who have need for assistance in minority languages, but that the ballot itself must be recorded in a way that is independently auditable, which again, usually means paper. And then we must encourage robust independent and transparent audits to confirm that technology counted the ballots properly. In doing so, we can secure the election systems from interference, and also demonstrate to voters that the system is resilient and resistant to tampering. But we should also be careful about the language we use in discussing any such threats, making sure to rely only on facts, rather than hyperbole. If we acknowledge the problem, and address it, while resisting the urge to foster hysteria, we may be able to increase voter confidence and lessen the potential impact on voter turnout.

We must also engage with citizens to ensure they feel confident in that system, and that they see the value in participating.

Second, we must continue to improve the technology that underpins the foundation of our election system. This means we work to encourage more states to join ERIC, implement secure online voter registration, and make voting information widely available through a variety of electronic platforms. We must ensure that election officials have access to and funding for state-of-the-art



voting technology that is auditable and secure, while also being accessible to all voters. Technology has helped states make unprecedented strides in keeping more complete and up-to-date voter lists, making ballots and voting systems easier to use and more understandable, and guaranteeing voting that is more convenient and private. This work must continue in partnership with the states.

Third, these recommendations alone will not be enough to change the dynamic of democratic participation. We must also engage with citizens to ensure they feel confident in that system, and that they see the value in participating. Government must partner in this effort, since governmental outreach is the most effective and most widespread. And these efforts to engage must leverage new technologies and methods of outreach, and be measured against a control group, so we can confirm whether they really work.

Democracy in this century will look different than democracy in previous centuries, and leveraging of technology, as well as, in some cases, protection from

technology, will be necessary to guarantee free, fair, inclusive and secure elections. Similarly, we will need to demonstrate the value of participating to the 21st century voter, so we can enjoy a broad, inclusive electorate. The value we demonstrate must transcend partisan considerations in any particular election, and instead be based on citizen investment in governance itself. Democracy is strongest not when passions are inflamed and partisans can spend hundreds of millions of dollars to fan those flames. Democracy is strongest when citizens feel the responsibility to vote and participate in public affairs even when those flames have been reduced to mere embers. Technology is and will be an absolutely essential element in fostering the continued strength of our democracy.

David Becker is the Executive Director of The Center for Election Innovation & Research in Washington, DC. Special thanks to Jacob Kipp, Project Manager at the Center for Election Innovation & Research, for his invaluable assistance with this piece.

Note: The views of the author do not necessarily reflect those of the Bertelsmann Foundation.

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Israel's Fragmenting Democracy By Anthony Silberfeld

he first vision of Israel went viral more than a century ago.

In 1902, Theodore Herzl published Altneuland (Old-New Land), a novel that describes a utopian homeland for the Jewish people in Palestine after two thousand years in exile. Over the decades that followed, Altneuland was circulated widely and became the inspiration for the creation of the modern state of Israel. But the gap between fiction and reality was significant. Herzl's image of an Arab population welcoming the new Jewish arrivals with open arms turned out to be mere fantasy.

Many wars would be fought over this ancient land, not least the one following the 1947 United Nations resolution that partitioned Palestine into Jewish and Arab areas. But when the dust settled in March 1949, the State of Israel emerged intact. With the existential threat put on hold temporarily, Israelis turned their attention to creating a nation from scratch. The land had few natural resources, and the people had no experience building democratic institutions, especially in one of the planet's most unstable neighborhoods.

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Driven by its hightech sector, Israel now ranks among the world's top ten most innovative economies.

Israelis have built since then a nation with a dynamic economy, strong military and high living standards. Driven by its high-tech sector, Israel now ranks among the world's top ten most innovative economies.¹ Despite its relatively small population of just over eight million, it boasts a military that ranks in the top twenty globally.² Israel also scores well in the United Nations' Human Development Index, ranking in the same class as Norway, Canada and the U.S.³ Yet, these accolades belie a weakening of democratic institutions and civil society that undermines the tremendous strides Israel has made since independence.

Although the politicization of media, security and society has existed for many years, the use of technology to amplify divisive messages is testing the durability of Israel's democracy. This chapter explores this topic from several angles. It looks at the influence of politics and demography on Israel's democratic system before turning to the government's use of technology and its impact on trust in Israeli institutions. The chapter then explores the dramatic changes in Israeli media and the effect of that on politics and civil society.

Evolution of the Democratic System

Former Israeli Prime Minister Golda Meir famously told U.S. President Richard Nixon, "You are the president of 150 million Americans; I am the prime minister of six million prime ministers." The quotation may be decades old, but the sentiment persists to this day.

The Israeli political spectrum can be sliced and diced in countless ways. The most straightforward analysis divides the electorate into two camps: Right and Left. More complicated variations consider various ideological stripes on both ends of the spectrum. Regardless of the method of slicing and dicing, however, Israel's political continuum is defined primarily by a single issue: the Palestinian question. Those on the Left tend to favor a twostate solution of Israel and Palestine living side by side. They prioritize a balance between human rights and security, and favor diplomatic dialogue over military engagement. The Right places security above all else and is prepared to rely on military force to ensure Israel's safety

and security. The Right's rhetoric pays lip service to a two-state solution, but its deeds seem to favor preserving the status quo. But, of course, the situation is not so simple.

That's because Israel's political spectrum can be further sub-divided by religious persuasion. The Left comprises secular Jews, Christian Arabs, Muslim Arabs, Druze and traditional Jews. The Right also comprises secular and traditional Jews but also ultra-orthodox Jews, and the occasional Arab voter. The degrees to which this fragmented electorate prefers to engage with the Palestinians or maintain the status quo vary greatly. On one extreme are those seeking a negotiated settlement based on the landfor-peace formula that includes territory taken by Israel in the 1967 Arab-Israeli War. On the other end of the spectrum are the Jewish settlers who advocate for the annexation of the entire land currently in control of the Palestinian Authority.

Although Israelis have a wide range of views, voters agree that, at election time, security and the Palestinian question are the defining issues. A rising cost of living, integration of new immigrants and the economy have featured in recent campaigns, but these issues are secondary concerns that fail to move the electoral needle.

Following independence in 1948, the Left (first Mapai, then Labor) dominated Israeli politics for 30 years. The Left was a natural fit for the electorate as Israel was founded as a country dedicated to a strong social welfare system, and its hold on power was solidified by victories in the 1948 and 1967 wars. But the Left could not escape charges that it mishandled the 1973 Yom Kippur War. Nor could it escape allegations of corruption against senior figures in the mid-1970s. A 1977 election gave the Right, under the auspices of the Likud party, its

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first opportunity to govern, with Prime Minister Menachem Begin at the helm. For the remainder of the 20th century, power alternated between Left and Right. But the back and forth ended with a confluence of events in 2000 that directly impacted the fortunes of Labor and the Israeli Left. The collapse of the U.S.-brokered Camp David Summit, during which Prime Minister Ehud Barak made a series of significant concessions to entice Yasser Arafat to reach a final status agreement, opened the door for Likud and the Israeli Right. Arafat's rejection of Barak's offer confirmed what many on the Right had long-suspected - that the Palestinian Authority had no interest in concluding peace with Israel. Shortly thereafter, Likud leader Ariel Sharon made a provocative visit to the Temple Mount in Jerusalem, igniting the Second Intifada and a wave of Palestinian terror attacks against Israel.

Israelis rally around the Right in times of rising insecurity, and Likud was poised to take advantage of the times. The party has governed ever since, with the exception of a three-year interim between 2006 and 2009.

Strong Right? Weak Left? Both?

Despite Likud's recent dominance of Israeli politics, the party has never held so far this century more than 38 seats out of the Knesset's total 120. Short of the requisite majority, Likud has tacked further to the right in coalition governments that have included fringe parties. The current coalition comprises the center-right Kulanu party, which distinguishes itself by focusing primarily on social and economic issues; the nationalist and pro-settler Jewish Home party, which opposes any Palestinian state west of the Jordan River; the ultra-orthodox Shas party, which is the coalition "wild card," having previously joined right and left coalitions; United Torah Judaism, another ultra-orthodox party that prioritizes issues of religion and state; and Yisrael Beiteinu, a secular, rightwing populist party that caters primarily to Russian immigrants. Although these parties may differ on social, economic and religious issues, they are aligned on prioritizing security and the status quo on the Palestinian question.

The Left has meanwhile splintered into several parties that dilute its power and messaging. The once-dominant Labor party has ceded influence to the Zionist Union, a social-democratic alliance that includes Hatunuah, a progressive party, and the Green Party. The Left is further fractured by the presence of Meretz, a secular, socially liberal party that sits on the fringe of Israel's progressive movement. Finally, there is Yesh Atid, the rare centrist party.

The outlier in Israeli politics is the Joint List. Comprising four predominantly Arab parties, this alliance was created in 2015 to bolster the Israeli Arab community's influence in the Knesset. In terms of political ideology, the party represents a wide range of views on issues spanning from the two-state solution to social and economic issues.

Likud's current Knesset majority is just a handful of seats, meaning any of its coalition partners can bring down the government at will. The government can teeter on any issue, from expanding West Bank settlement construction to exempting the ultra-orthodox from military service. A cloud of uncertainty consequently hangs over the current government as partners constantly play games of brinksmanship.

Demographic Trends

Israel's population is highly diverse even if approximately 80 percent of it is Jewish. The Jews themselves are divided into Haredi (ultra-Orthodox), Dati (religious), Masorti (traditional) and Hiloni (secular) communities. There is also a further division between Ashkanasi (descendents

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from Central and Eastern Europe) and Sephardic (descendents from the Middle East and North Africa) Jews. The Arab population is also heterogeneous, comprising Muslims, Druze and Christians. And this panoply is further enhanced by African and Asian migrants. That this demographic tapestry elicits a broad array of beliefs and values that creates points of agreement and friction in the Israeli political landscape is unsurprising.

A 2016 Pew Research Center study revealed clear divisions within the Jewish community alone on key cultural and political issues. Those who identify as Masorti or Hiloni, for example, opposed the idea of making Halacha (Jewish Law) state law, while 86 percent of Haredi expressed support. On basic issues such as transportation, religious communities overwhelmingly (96 percent) believe that such services should not operate on the Sabbath, while 94 percent of secular Jews disagreed.

The ideological polarization within the Jewish community extends beyond the intersection of religion and public policy. According to the same survey, 97 percent of religious Jews (Haredi, Dati or Masorti) identify with the political center or right in Israeli politics. By contrast, 74 percent of secular Jews align themselves with the center or left.⁴

The Israeli Arab community is also no political monolith. In Israel's 2015 election, 82 percent of Israeli Arabs voted for the Joint List. But of those who supported the Jewish parties, 22.8 percent voted for the Zionist Union, 15.3 percent for Likud, 13.7

Political Landscape of Israel

Prime Minister Benjamin Netanyahu

In office 1996 - 1999 and 2009 - present

> Chairman of the Likud Party

The 2015 Knesset Election





Unicameral National Legislature First convened 1949

Elections held every four years

Selects Prime Minister based on nomination by the President

The Knesset has had more than 111 parties, though none has secured more than 56 seats.

The Knesset

No party has won more than 38 in the last 20 years.



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percent for Yisrael Beytenu, 11.8 percent for Kulanu, 11.2 percent for Meretz, 8.8 percent for Shas, and 4.1 percent for Yesh Atid.⁵ Israeli Arabs have a variety of reasons for crossing the sectarian divide, but the primary explanation is the lack of influence and delivery of Arab political parties. Some have calculated that despite holding 13 seats in the current Knesset, the parties' exclusion from coalition politics and key decisions means that a vote for the Joint List is a waste. Such voters reckon it's better to support a Jewish party to help shape the country's ideological direction.

At the same time, Israel's electorate is a rapidly changing one. The country's population has increased more than tenfold since its founding in 1948. It has one of the developed world's highest birthrates that will bring forth serious policy choices and test the strength of Israeli democracy and social cohesion. From overcrowded schools and highways to the extortionate cost of food and housing, the strain on the population, regardless of religious or ethnic identity, will rise. This trend will also continue to widen the gap between rich and poor. Already more than a quarter of children, a majority of whom come from families with five children or more, live below the poverty line.⁶

It has one of the developed world's highest birthrates that will bring forth serious policy choices and test the strength of Israeli democracy and social cohesion.

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The Israel Democracy Institute forecasts 18 million Israelis by 2059, almost half of whom will be Arab or Haredi.⁷ What will Israeli policies be when shaped by the Arab and ultra-Orthodox communities, who are now on the political fringe, and the other half of the population falls somewhere in between?

Disparate Democratic Roots

The origin of the Israeli people is another demographic point to consider, and one that directly impacts the Israeli definition of democracy. Many Israelis hail from countries with strong democratic traditions, such as the U.S., Canada and France. But the top five countries of origin for Israelis are actually Russia, Ukraine (both of which were part of the Soviet Union), Morocco, Algeria and Tunisia.⁸ The immigrants from these nations may also have high democratic aspirations, but they have less experience with democratic norms and traditions. They may, therefore, have different democratic standards and benchmarks. Freedom of speech, the press, assembly and religion may be fundamental for some. For others, however, selective censoring of journalists or non-governmental organizations may be merely minor infractions rather than an assault on basic rights.

A citizenry's interpretation of democracy matters because it is ultimately responsible for ensuring the maintenance



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of democratic norms. Is government transparency and accountability a priority? Is a free and independent press essential to a functioning system? Should civil-society groups be able to serve as government watchdogs without being branded traitors? And what is the right balance in a democracy between security and freedom? Israel's responses to these questions cannot be summed up in a tweet. They require more nuance, which the pages ahead provide.

From Defense to Offense

In 2010, Israelis paid on average \$300 monthly for phone and data service. But reforms initiated by Moshe Kahlon, thenminister of communications, precipitated a 90-percent reduction in costs. He paved the way for new competition in the mobile-phone industry, which challenged the previous oligopoly. The policy shift created opportunities for citizens on all socio-economic levels to participate in the digital marketplace of ideas, whether to engage government or to found a successful company.

Reforms of this nature, in many democracies, would face significant resistance from industry incumbents, often exerting enough pressure to scuttle the proposal. In Israel's case, however, campaign-funding laws, which cap the amount companies may donate, diluted the power of the country's telecommunications giants. They were unable to exercise the degree of influence they might have elsewhere. That provided the government with greater freedom to maneuver. But it still did not take full advantage of the opportunities to connect with voters that these new technological tools afforded.

The government did, however, take advantage elsewhere. Little in Israel

is disconnected from security, and the development of the nation's tech sector is no exception. Military service is compulsory for most citizens, and the government has used this requirement as an opportunity to tap into the best and brightest minds. At the age of 17, men and women are subjected to a series of psychological and physical exams to determine aptitude and suitability to serve in a range of capacities. The top performers may be selected to enter the elite intelligence unit 8200, which was created following failures during the 1973 Yom Kippur War. The unit is responsible for employing the latest technology to confront the most critical threats to the state. According to a recent profile in Forbes, "8200 became the country's internal R&D hub--the fuel for "Start-up Nation" – with staffing numbers that grew apace and an expanding mission in an internet-driven world."9

The selection process for 8200 rivals that of the world's most prestigious academic institutions. The unit draws from the top "1 percent of the 1 percent" of prospective soldiers and favors those who can adapt quickly to a rapidly changing environment. Not coincidentally, successful tech entrepreneurs in Silicon Valley, Bangalore and other start-up hubs exhibit the same qualities. Unit 8200 alumni include the creators of Waze, a globally used navigation app, and other start-ups bought by Microsoft and Facebook.

The great minds of 8200 work in the service of the nation for three years. But after that, the lure of the private sector is hard to resist. The Israeli military may specialize in data analytics and cybersecurity, but the public sector's use of technology still lags that of the corporate sector. The state teaches the skills, but the corporate world attracts the graduates. The upshot of this is the government's substandard digital engagement with its people. According to the 2016 UN E-Government Survey, Israel ranked a disappointing 20th in using information technologies to promote public access and inclusion.¹⁰ This mediocre performance has not gone unnoticed. The Israeli government has recently taken steps to reverse the trend – to harness its domestic intellectual pool and use technology to engage more effectively and meaningfully with its citizens.

Digital Israel: One Gig Per Second

The Israeli government initiated in 2013 a plan to establish what would become a world-class fiber-optic network. The infrastructure would be capable of internet speeds as high as one gigabyte per second (Gbps), or 1,000 megabytes per second (Mbps). That would place Israel far ahead of the current top internet speed performer, South Korea, which offers an average speed of 28.6 Mbps. Israel's average internet speed today is a disappointing 13.7 Mbps, so creating the potential for speeds as high as 1,000 Mbps appears out of reach for the moment. No timeline for the completion of this internet upgrade exists anyway, and progress toward it has fallen behind expectations. The joint-venture established to build the fiber-optic infrastructure, the Israel Broadband Company (IBC), had only 2,500 customers as of 2016 and operated in just a few areas, including Tel Aviv, Be'ersheba and the Sharon region. IBC has also struggled with debt and sought additional investors to keep operating. The company accepted in 2016 Israel's two largest cellular providers, Partner Communications and Cellcom Israel, as additional controlling shareholders. They join the Israel Electric Company and ViaEurope of Sweden, and should inject new life into this ambitious project.

This planned improvement of internet speed is central to the country's Digital Israel initiative, which has several aims. It is meant to reduce the gap in access to digital services between major cities and outlying areas, support Israel's dynamic technology sector with necessary upgrades to the country's internet capabilities, and pave the way for further developments in e-governance.

The technological improvements can also help the country's plan for more transparent and accountable government. As a member of the Open Government Partnership (OGP), a group of 75 nations founded in 2011, Israel is obliged to improving the integration of technology into its governance to achieve the OGP's overarching goals of increasing trust in government and establishing greater transparency. Current commitments feature improving online government databases and unifying government information websites. This includes a website for freedom of information, part of an effort to provide transparency on public procurement projects. The Israeli government's efforts, however, do not end there. Engagement is happening on several fronts.

Civic Participation

Investment in a range of platforms to increase and facilitate public participation is under way and technological innovations will bolster the process as it moves forward. In 2015, for example, the Israeli E-gov Unit designed a smartphone application, called the Elections 2015 App, to provide voters with information on polling stations and results for the general elections. This app also had its limitations since it was only available in Hebrew, but it represented a concerted effort by government to encourage more citizens to participate in the country's democratic process.

Freedom of Information Online

The government launched a Freedom of Information (FOI) website in 2014 to provide access to most agencies in a onestop-shop format. The platform also serves as a clearinghouse for all government information made available to the public, with or without a formal FOI request. The government's central challenge now is to increase public awareness of the portal and to improve the site's navigation, in part to allow the average citizen to find content more easily.

Virtual Government Silos

The commitment to provide access to all government departments through a single website also needs work. A search today for "Government of Israel" yields an assortment of fragmented government sites. The cabinet, the Knesset, the Ministry of Foreign Affairs and the Israeli Science and Technology office are among the agencies offering their own portals, and identifying the proper destination for an information need can be trying. The prime minister's office has made an initial effort to list all ministry webpages on its website, but finding even that requires clicking through several layers of information. The path getting there is not obvious to a user, but it nevertheless represents an improvement and a nod toward greater transparency and accountability.

Data.gov

Another initiative to improve openness is data.gov.il, which brings together more than 240 databases of various government departments. Users can find information on a wide range of sectors including transportation, justice, health, the economy and the environment. The site, however, is navigable primarily only in Hebrew, though some data is available in English. Arabic speakers face obstacles since there is no option in their language.

Public-Sector Investment, Private-Sector Success

Although Israel has fallen short in increasing citizens' trust in government through greater digital engagement, transparency and accountability, it has long succeeded in this area by bolstering the economy and aiming to provide a high standard of living. To that end, the Israeli government created in 1974 the Office of the Chief Scientist within the Ministry of the Economy, which has since evolved into the Israel Innovation Authority (IIA). The IIA manages the country's high-tech and innovation-driven business sectors.

IIA's main objective is developing resources and infrastructure to support knowledgebased industries. To accomplish this goal, the department has six divisions:

- Startup Division: Supports entrepreneurial activity and promotes the transformation of ideas into actionable plans
- Growth Division: Provides research and development support to help companies expand
- Technological Infrastructure Division: Focuses on facilitating mutually beneficial links between academia and industry
- Advanced Manufacturing Division: Helps bring research and development support to companies seeking to conduct research on new product design
- International Collaborations Division: Aids the creation of joint ventures
- Societal Challenges Division: Applies the agency's innovation expertise to public-sector services provided by companies and non-profits¹¹



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All these efforts are designed to provide the foundation for a dynamic and productive economy.

Impact on Citizens

Still, Israeli public trust and confidence in government remains mixed. The Israeli Democracy Institute notes that "there is a general consensus that Israel's democratic regime should be maintained, if only to deal with the major challenges confronting the country."12 That is hardly a rousing endorsement. In fact, more than 80 percent of Israelis consider their ability to influence government to be "negligible." The bad news extends to the legislative branch, with about 65 percent indicating disapproval of the work of Knesset members. More troubling, perhaps, is that voters overwhelmingly (80 percent) believe that politicians are entirely selfinterested and neglect the needs of those who elected them.¹³

In fact, more than 80 percent of Israelis consider their ability to influence government to be "negligible."

The government fares no better on corruption. The vast majority of Israelis (Arab and Jewish) believe that Israel's leadership is corrupt and that having connections to politicians is the only way to get things done. Only the securityrelated agencies, including the IDF, earn high marks from citizens across political, religious and ethnic divides. 90 percent of those polled expressed faith in the IDF, which stood in stark contrast to the 14 percent who said they trust the political parties.¹⁴

What does this mean for the future of Israeli democracy? One thing is clear: The Israeli government has much work to do to increase the public's trust and confidence. Although economic opportunity can help mitigate some of the resentment, it is insufficient on its own to be a comprehensive solution. Economic growth combined with a comprehensive strategy to increase transparency and provide avenues, beyond elections, for citizens to hold government accountable are critical precursors for trust in government institutions and democracy. But other factors also play a role, and the media is chief among them.

Israeli Media: Teetering on the Edge

The Israeli media landscape has changed dramatically in the past decade, but many of its characteristics are similar to those of its western European and American counterparts. What is unique in Israel is the speed at which traditional media outlets are collapsing.

With a total market of a mere 8.5 million, every weakness in the media's business plans is magnified. Subscriptions and advertising are declining, and there is simply insufficient revenue to sustain the current model. Even the Hebrew-language media faces a small consumer base amounting to only about 60 percent of the population. Most print media outlets have consequently reallocated their resources to an online presence, with some relying on digital advertising while others opt for a mix of ads and content behind a paywall. As in other countries, this approach also affects editorial decisions. Israeli media need clicks to generate revenue, and they have succumbed to varying degrees to the lure of clickbait.

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Several media experts argue that factbased, professional, non-partisan Israeli journalism is dead. Facebook is, by far, the most used social-media platform in the country, and it has a direct impact on the press. Most outlets now tailor their headlines to get on Facebook and appeal to its users. But this has created an echo chamber since the social network is notorious for filtering news to users' feeds in a way that gives those users news that affirms their beliefs. The result is a contribution to rising polarization in Israeli politics and society.

Two traditional broadsheets, however, still have life in them: Yediot Aharonot and Israel Hayom. Yediot Aharonot is the country's mainstream paper, though many suggest it leans left. The paper is often described as the Israeli New York Times, and it maintains about a 35-percent share of the market, Israel's second-largest readership figures. Yediot has been the leading voice in holding accountable the administration of Prime Minister Benjamin Netanyahu, and the paper has come under fire from right-wing politicians and Netanyahu himself for its reporting.

Israel Hayom is the country's most widely circulated paper, but it operates under a different model. It relies almost entirely on its print publication and is distributed nationwide for free. Its right-leaning positions are ingested daily by a plurality of Israelis.

How can Israel Hayom survive by giving its content away for free? The paper is funded by businessman and casino magnate Sheldon Adelson. Adelson is a well-known donor to U.S. conservative candidates and causes, so it is unsurprising that he positions himself to shape the Israeli Right. But Israel Hayom pursues an especially narrow agenda by rallying Israelis around the prime minister with whom Adelson has a longstanding relationship. Adelson reportedly spends US\$50 million annually on Israel Hayom, which some may see as a violation of Israel's strict rules on campaign donations. Although no significant increase in support for Likud has emerged from the effort – the prime minister's party received just 25 percent of the vote in the last election – it was sufficient to keep Netanyahu in power.

As voters gravitate toward online news, a mix of traditional and social media predominates.

While newspapers and television undoubtedly remain important sources of information for Israelis, consumption patterns are changing. A 2016 Interdisciplinary Center Herzliya survey revealed that 30 percent of Israelis prefer to get their news online, compared to 23 percent from television, 14 percent from radio and 13 percent from print newspapers. As voters gravitate toward online news, a mix of traditional and social media predominates. Leading the way is Facebook and ynet.co.il, a digital subsidiary of Yediot Ahranonot. They are followed by Vkontakte, Russia's most popular social network, which has a significant following among Israel's Russian-speaking population. LinkedIn and Ok.ru, another Russian site, round out the top five.15

As mentioned, Facebook is by far Israel's most popular social-media site. With approximately four million Israeli Facebook accounts out of 5.9 million total internet users,¹⁶ it is clearly the online platform of choice for politicians and political parties. Prime Minister Netanyahu uses his Facebook to connect directly with his more than two million followers, thereby avoiding the bias he perceives in most media outlets. He is the third-most popular Israeli on the social network, bested only by supermodel Bar Refaeli and Wonder Woman, Gal Gadot.¹⁷

Twitter, on the other hand, is seldom used in Israel. Some have suggested that the platform is not convenient for languages written from right to left, but widespread use in Arabic-speaking countries dispels that assertion. Others claim that Israelis can't say anything in fewer than 140 characters, so the format is not conducive to the way they communicate. Regardless of the reason, Twitter hasn't hit its stride in Israel.

But there is one interesting and notable exception, and it can be found, perhaps surprisingly, among Israel's ultra-Orthodox. The community has a singular focus, intense study of the Torah. Living according to the teachings of this ancient text runs counter to many of the technologies discussed in this volume. In fact, many secular Israelis label the Haredi as anti-technology. In response to this perceived misunderstanding, 20year old blogger Melech Zilbershlag uses Twitter to debunk the stereotypes of his community. With nearly 20,000 Twitter and Instagram followers, Zilbershlag tells stories about ultra-Orthodox Israelis who use technology without violating their traditions and beliefs. He describes "kosher" mobile phones that are sold with certain restrictions, allowing access only to sites that have been "blessed" by a local rabbi.

Zilbershlag attempts, most importantly, to bridge the significant gap between Israel's secular and ultra-Orthodox communities, who are at odds over sensitive issues such as compulsory military service (Haredi are currently exempt) and public services that operate on the Sabbath. The effort has the potential to increase understanding of the Haredi, an important, growing and occasionally marginalized segment of the population.

Zilbershlag's efforts aside, the movement toward online media, in the main, creates news bubbles in which users are fed the ideological perspective with which they and their closest contacts align. The result is not just increased polarization. Trust is also reduced. And both trends bode ill for the strength and stability of Israeli democracy.

Rent, Cottage Cheese and Facebook

As media and government have widened the gulf between Israeli Left and Right, individuals and grassroots organizations have stepped in to fill the void. Their success has come by effectively leveraging an array of digital tools.

In 2011, a series of social protests involving approximately 500,000 people kicked off in Tel Aviv and spread quickly nationwide. A 40-percent spike in cottage-cheese (an Israeli staple) prices, the eviction of a charismatic young woman named Daphni Leef from her Tel Aviv apartment, and a Facebook page created a perfect storm. Homeless, Leef pitched a tent on some of the most expensive real estate in the country along Tel Aviv's Rothschild Boulevard. Many were moved to action by learning about this protest through Facebook and decided to join her on the street that was known as Silicon Boulevard due to the many nearby startups. She was soon joined by thousands also protesting the sharp increase in housing prices that made Tel Aviv's market among the world's most expensive. Others joined to protest the high cost of food.

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The profiles of the protesters were particularly notable since they cut across religious, ethnic and socio-economic lines, making the demonstration the largest in Israeli history. Some Israelis suggest on reflection that this was an anti-government action, while others argue it was progovernment. One's political orientation tends to dictate which assertion is the better description, but the social-media catalyst behind the demonstration is indisputable.

Many politicians subsequently took up the protestors' cause and joined the demand for more affordable housing. The government established a commission to address the cost of living issues, and took further steps by dismantling a number of food cartels that had been raising prices despite unchanged production costs. Still, the issues persist to this day.

Israelis had long been preoccupied with survival, occasionally leaving quality-of-life issues aside. But they found their voice in this protest and discovered that government could be moved to action.

The display of people power is seen nevertheless as a watershed for the country's civil society. Israelis had long been preoccupied with survival, occasionally leaving quality-of-life issues aside. But they found their voice in this protest and discovered that government could be moved to action. Numerous platforms that capitalize on this citizenled movement exist in Israel today, and they highlight the need for Israeli government accountability, transparency and engagement.

Public Knowledge Workshop

The Public Knowledge Workshop (PKW) sought to re-define how citizens consume government documents. It began by focusing on disparate sources of information that made any coherent narrative difficult to cobble together. In response to this challenge, it shifted its attention to writing code to help translate government information that was unintelligible to most. This effort quickly bore fruit as others took notice and volunteered to join the workshop. Soon hundreds of volunteers from a wide range of professional sectors, political orientations and social classes collaborated on making government information available and accessible. The ultimate aim is to mobilize the public, decrease social apathy and spark civic participation.

This work, however, is not without its challenges. Making information more accessible in Israel is not the norm. Information may not be available in a timely fashion despite FOI laws. And even if it is, it may not be in an easily comprehensible format. FOI requests are out of step with the digital age in which the public demands information online without necessitating a request. PKW argues that people should be able to constantly search archives and analyze data on government operations.

PKW's first project was "Open Knesset." It sought to clarify the deeds – and not

just the words – of legislators. Another PKW project, "Open Budget," highlights government expenditures and allocations, and funding recipients. "Open Budget" also flags spending irregularities that might otherwise go unnoticed. Consumers of this information come from the public and government, and the platform has become a useful tool across the political spectrum. It's an unusually successful tool in an era of extreme polarization, and one that reinforces the notion that Israelis generally agree on the need for greater government transparency.

Citizen's Empowerment Center

The Citizen's Empowerment Center in Israel (CECI) is a non-partisan and nonprofit organization that aims to provide information about government process, policy and spending in a format easily digestible by the electorate. CECI has positioned itself as an objective arbiter, rather than a critic, of government performance and delivery. The Center is geared toward improving government effectiveness and accountability.

One way CECI achieves its goal is through the EZ Gov application, which converts complicated government data into reports tailored to a user's unique interests and priorities. The app allows the public to select issues of concern and receive alerts via text message as relevant legislation advances in the Knesset. Activists use the tool to track every legislative stage of a bill or law including eventual implementation by government ministries.

CECI's Monitor project is also key to raising government transparency. The Monitor establishes data-collection methods to identify barriers and failures in the implementation of public decisions. The project is supplemented by a platform that strengthens the capabilities and civil involvement of Israeli organizations, groups and individuals. One issue that has benefited from this is the effort to combat air pollution.

Anyone who has tried to drive in Israel knows that routes provided by Waze will inevitably land you in the middle of a Tel Aviv traffic jam, a near-omnipresent situation that has made air pollution a major urban problem. In 2013, the Israeli government began a multi-year national initiative to address the issue. The government committed 140 million shekels (US\$40 million) for four years and introduced milestones to measure progress through 2020 (see screenshot of example). The Monitor provides an overview of the plan, a link to the text, and an analysis of the proposal with status updates. The objective is to build trust between the government and its citizens by providing information that informs citizens and holds public officials accountable. The undertaking is massive and relies on 50 volunteer University of Tel Aviv students who leverage technology to gather empirical information and distribute reports. The Monitor has successfully tracked 140 government decisions in its three years of existence.

Molad 61

Political fragmentation on the Israeli Left has entirely ceded the field to the Right. Some of those interviewed for this publication put it in a slightly different way: there is a civil war in Israeli politics, but only one side knows it. The absence of a credible opposition has allowed the Netanyahu coalition to behave in ways that some consider to be antidemocratic. The bullying of human-rights organizations, the vicious attacking of political opponents and the demonizing of media critics show a need to restore political balance and to restore a crucial check on potential abuses of power.

Religion, Politics, and Social Media

MELECH ZILBERSHLAG

Just by being a Twitter star with more than 8,000 followers, Melech is fighting stereotypes of the Ultra-Orthodox community.

@ze_lama · Jul 26 @ 2e_lama · Jul 26
): אינסטגם קרס ועכשיו אני אשכרה צריך לאכול את האוכל שקניתי
() ערשיו אני אשכרה צריך לאכול את האוכל שקניתי



MOLAD 61

The Molad Center's project 61 seeks to infuse the Left with enthusiasm and hard factchecking of the political Right.

Netanyahu and Facebook

PM Netanyahu has embraced social media as a way to circumvent the media to reach his over 2 million followers.

His page invites visitors to send him a personal message and promises they will get a response in less than a day.



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The Molad Center seeks to do just this via its 61 project, which uses socialmedia platforms to inject enthusiasm and fact-based messaging into the political Left. The project name comes from the number of seats required for a Knesset majority, but the Center's short-term goals are more modest. It uses Facebook as the primary avenue for responding to some of the Netanyahu government's alleged excesses. Eschewing policy briefs and party manifestos, the 61 project innovatively uses infographics and videos to convey critical messages targeting the political Left and Center. With more than one million Facebook followers, the effort is attracting eyeballs. Whether clicks will translate into more support for the Left at the next election remains an unknown.

Insights

The non-profit sector is not the source of all tools to improve government functioning. In fact, one of the most successful platforms for greater government efficiency is a private-sector consulting firm with a social mission. Like any good startup story, Insights was born in a garage, albeit one in Tel Aviv. Its founding trio set out to use technology to help leaders make decisions that included the best-quality information available and that most accurately reflected stakeholder views. The startup would do this by creating algorithms that crowdsource opinion from a wide range of sources and generate a report for policy makers based on those views. Insights won contracts to provide this platform to Israel's Ministries of the Economy, Health, Environmental Protection, among other departments, after only three years in operation.

As the technology improved, Insights launched a self-service version of the platform that allows a manager in any public- or private-sector entity to introduce crowdsourced input into his or her decision-making process. In Israel's highly polarized political environment, such innovation could be applied to give voters a greater role in the governing process.

According to Insights statistics, users changed 82 percent of their decisions once they took comprehensive feedback from stakeholders into consideration. Such direct influence of government could lure more citizens into the process and help reverse their skepticism of government.

A Final Word

Israel's economy may be thriving, but its democracy is fraying. Political and social fragmentation on a range of issues including security, cost of living, religion and welfare has weakened the delicate balance that has sustained the state for almost 70 years. Complaints of government excess and authoritarian tendencies are as troubling as the media's precarious condition. At the same time, Israel's geographic location continues to mean that every policy decision raises existential questions. How will it strike a balance between privacy and security? Will the Palestinian guestion continue to define the nation's politics? How will it cope with a demographic shift that will necessitate greater inclusion of its Arab and ultra-Orthodox communities?

There are reasons for optimism. Israel is a young democracy, the only one in a region of autocracies, and growing pains are inevitable. Israelis are increasingly politically active and not shy about demanding change when certain lines are crossed. Social movements, civilsociety groups and the business sector all provide important democratic safeguards, and digital avenues have amplified their individual and collective influence.

As the self-proclaimed "Start-up Nation," Israel has embraced technology to make

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itself an economic success story in the midst of a troubled region. It's uncertain if technology can also be used to foster equally impressive political successes. It is certain, however, that Israeli entrepreneurial spirit and perseverance give democracy the best chance to thrive.

Anthony Silberfeld is the Director of Transatlantic Relations at the Bertelsmann Foundation.

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The Canary in the Coal Mine By Shilo de Beer

ne hundred years ago, coal miners would take a caged canary bird underground. The three-inch creature was not a lucky charm. It was a living sensor. Being so small in size and mass, but able to inhale oxygen even when exhaling, the canary would be "always on," pumping air in and out of its lungs. Underground, carbon monoxide and other colorless, odorless toxic gases would often spread, putting miners at risk of a silent poisoning. A dead bird in the cage would signal one thing: evacuate.

In many ways, Israel is an internet canary. With an 88 percent smartphone penetration rate, average landline bandwidth of 65Mb, and low-cost data plans (10GB cost US\$8.25), Israel is one of the most connected societies in the world. Because it's highly-connected and so small, some of the effects of the internet simply hit Israel more drastically – and often sooner – than they hit other communities. This essay will take a look at some of these effects on Israeli society, which may serve as an early warning system to other nations buffeted by the winds of technological change. On a personal note, I'm in love with the internet. I love the untamable nature of it. In fact, I'd go so far as to say that the internet is THE blessing of our generation. But the internet also impacts other aspects of our society, including democracy, social structures, intra-community dialogue, free press and public discourse, in both benign and malignant ways. In some cases, the internet shakes up the foundations of centuries-old communities to their very core.

Within the internet canary's cage, oxygen is abundant. Bandwidth is available and cheap. But this canary also detects potentially harmful elements, as global internet giants become more and more "the internet" itself, dominating the market, threatening journalism and shaping politics and society.

In order to fully understand this ecosystem, I will begin by describing Israel's size and its relevance to this discussion. Then I will explore three broad effects of these "harmful elements" on Israeli society and culture. The first is the decline of
journalism and the rise of Facebook and Google. The second is the interplay of uber-connectivity and social norms within the context of political discourse and social structure. The third is the unusual relationship that Ultra-Orthodox Jews have developed with the internet – what happens when you let a 4G smartphone into a ghetto?

This is a cautionary tale above all else. The internet tsunami is shaping Israeli society in ways that should serve as a bellwether for other societies. And like a tsunami, the internet's effect on Israel seems unstoppable, unmanageable. Yet, it can be harnessed.

Israel's reputation as a startup nation and digital innovation hub is rightfully hyped worldwide, but the vast majority of Israelis are not actually taking part in the startup economy. They do, however, live, work and raise families in a society that is more and more affected and shaped by internet intoxication.

Small and Connected

Israel's land mass is roughly equal to the size of the small U.S. state of New Jersey. Its compact size makes cellular network deployment rather easy - just a few thousand cell towers provide nationwide coverage, compared to 250,000 cell towers in the U.S. yielding spotty, and sometimes no, coverage in many parts of the country. There was a time when Israel was the only country in the world deploying nationwide coverage of three different wireless technologies in parallel. Fiber, cable and copper networks spread across the country, enabling high-speed internet service on a national level. Israel's size, therefore, plays a role in its interconnectedness.

The second dimension worth noting is Israeli's population and language. Israel is the only country in the world in which Hebrew is an official language – the mother tongue of 6 million out of 8 million



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Israelis. That's less than the population of Arizona. Arabic is the mother tongue of approximately 1.5 million Israelis, but is spoken by millions more throughout the Middle East. Rates and applications of internet use are often determined by the amount, diversity and quality of content available in the user's language. Israel's Hebrew-content ecosystem has a very small user base, which poses an economic sustainability challenge for Hebrew journalism.

Its compact size makes cellular network deployment rather easy – just a few thousand cell towers provide nationwide coverage.

Whatever the business model, be it ad sales or subscription fees, Israel's relatively miniscule Hebrew-speaking population is too small in size to support a local internet economy, and is less and less able to compete financially with U.S. corporate heavyweights to secure ad dollars. This has become a modern-day contest between David and Goliath, but David is losing.

In the past, the old media (print, TV, radio, cable) was protected from non-Israeli ownership by legislation and regulation. New media is practically immune to both. As cloud companies, Facebook and Google don't need a permit or a license to reach Israeli users. WhatsApp does not need a carrier license. Netflix has no need or incentive to produce Hebrew content, unlike local cable and satellite providers that are required to do so as part of their licensing agreements.

As to the divide between Arabs and Jews, while both communities are hooked on the internet, the internet has failed to connect them with each other. Each community is basically cocooned geographically and culturally in its own separate realm. While most Arabs speak Hebrew as a second language, few Israelis choose to learn Arabic. This creates additional barriers to interaction online, where the two cultures seldom meet.

Each community experiences a different media and social-media environment, and in many cases, the internet actually fosters divides through hate-filled posts and virtual separation between the communities. The internet in Israel is not acting as a magic glue for Arab-Jew bonding, bringing people and cultures together, or spreading harmony and unity. In fact, social-media – mainly Facebook – tends to create an echo-chamber effect in which information, ideas or beliefs are amplified and reinforced by repetition inside one's newsfeed.

Journalism, Facebook and Politics

Israel's small population hampers the media and journalism industries. With competition from multinational corporations like Google and Facebook, Israeli companies that provide only Hebrew-language content have difficulty competing for consumers and advertisers, the traditional lifeblood of media enterprises. In other words, the internet has crippled the business model for Hebrew-language journalism.

The possible business models for journalism are advertisement and/ or subscription. Advertisement means selling ads that will appear before users' eyes – more users equals more revenues. Subscription means charging users monthly for access to content. Given the going rates for ads and the general tendency of users NOT to buy subscriptions, a publisher needs a huge amount of users to support journalism. We just don't have the numbers.

The problem with subscriptions is that the internet has cemented a sense that iournalism is a free service to be found primarily in social-media newsfeeds. So if one million readers translate into 10,000 paying subscribers, at best, it is clear that the figures don't add up to sustaining a business in the long-term. The problem with online advertisement as a business model for journalism is basically the same. There are not enough consumers of local media to attract the investment from advertisers. This creates a situation in which the cost of journalism production is so high that it forces publishers to amass millions of users to make a profit. Again, there are simply not enough Israelis to support a sustainable local online journalism industry.

Meanwhile, more consumers and revenue flow to Facebook and Google. These global giants have penetrated the market and now dominate distribution. In the absence of reliable statistics, I can only estimate that few, if any, of the local media companies in the country with a journalism focus turned a profit on a regular basis in recent years, despite high internet penetration and economic growth. While most local media companies have moved to low-rent areas and downsized operations, Facebook and Google rent floor after floor in the highest, most expensive modern office towers in Tel-Aviv, designed lavishly with prime ocean views. Those floors are manned mainly by sales and marketing teams, and most of every dollar they sell to local businesses is eating some other local's lunch. Given the size of the market, it's

easy for the global gorillas in the room to crush the local industry. Our room is much smaller than most, so the traditional Israeli competitor is being squeezed out.

The effects of monetization are as interesting as its mechanics. The internet (alongside users) has made professional journalism financially weaker, more exposed to competitive pressure from multinational corporations, unable to draw talent (often with less integrity), less committed to editorial purity, and in general, less and less effective in informing readers and the public at large.

These conditions have allowed Google, and to a greater extent, Facebook to become dominant media forces in Israel. Israel is a Facebook country. And by Facebook, I mean the Facebook family of apps, including Messenger, Instagram and WhatsApp. According to a 2015 Facebook memo, 4.4 million Israelis were active monthly users.¹ In the absence of official statistics, I can only estimate that, with all the apps, Facebook is approaching 100 percent penetration.

Facebook's newsfeed is designed in a way that irons out brands and makes all traditional publishers look visually identical online.

A "state of the internet survey"² conducted by Bezeq, the largest telecom company in the country, indicated that 86 percent of high school students use WhatsApp to connect with their teachers on a regular basis.³ Other social networks such as Twitter and Pinterest are less popular, while Snapchat is briskly picking up users among the younger demographic. The reason for Facebook's dominance in the category of social networks is unclear. My view is that the country is simply too small for more than one social network. There are not enough Israelis to drive a need for more networks. Moreover, we were wellnetworked to begin with, so Facebook was a natural fit.

Facebook's newsfeed is designed in a way that irons out brands and makes all traditional publishers look visually identical online. It's great for new voices, loud voices, viral voices and wealthy voices, but bad for professional journalists' newsrooms. In order to stand out, outlets often use clickbait headlines. Longform reads are rare and celebrity news is overhyped. Israel's established media outlets tend not to traffic in this type of journalism, and have suffered financial consequences as a result.

Facebook and Google drive most of the traffic to local online publishers, resulting in declining homepage traffic. When Facebook and Google change their algorithms, news publisher traffic may soar or sink; in most cases, the latter occurs. This all leads to an existential threat for newsrooms. On the other hand, Facebook has also created a movement toward civic engagement, activism and other forms of modern journalism. For example, one late-night TV show amassed one million "likes" by going viral on social-media. It racked up more fans than any other news outlet in the country - a rare case of Facebook-backed journalism success. But the newsroom's revenues come from ads and not from Facebook traffic, and ads hardly pay the rent, let alone the payroll.

To illustrate the dominance of Facebook



in Israel's media landscape and its direct connection to democracy, take a look at the page of Prime Minister Benjamin Netanyahu. In fact, he has two pages, and they are very different. One page is "personal" with 2.1 million "likes," and the other is from the Prime Minister's office and has a much smaller fan base. While Mr. Netanyahu avoids free-press interviews as a policy, he uses Facebook on a regular basis as his main vehicle to communicate directly with the public, using a different tone of voice for each page. His personal page is very political and argumentative, often picking personal fights with journalists and his political opponents. His official page is more, well, official. The personal page is very active: 2016 started with 40 posts per month, and ended with 91 each month. It's also very viral: Mr. Netanyahu's personal page is the most popular in the country. For many Israelis, a post from the prime minister is news in itself.

"Hold power accountable" was once the mission statement of classic professional journalism. This mission is becoming more and more complicated to perform in a Facebook-dominated environment. It seems that professional journalism's new mission in Israel is financial survival.

This is the canary effect in action: the internet is killing the Israeli journalism industry, putting at huge risk an institution that is essential for democracy.

Social Norms

Internet connectivity dominates Israel's family life, politics and social discourse, so the stakes are high when the digital public domain becomes vulgar, violent and abusive. Hate speech is on the rise. Polarization is on the rise. A single Arab politician, for example, was the target of over 60,000 racist Facebook posts in 2016, according to a recent study.⁴ 60,000! According to a social-media monitoring agency, almost 50 percent of the hate speech online is directed at Israeli-Arabs, which means that an incitement against Arabs is posted every 46 seconds.⁵ Verbal abuse, shaming and hate speech are pervasive online. According to a recent survey, 68 percent of Israeli users were exposed to shaming online in 2016, up from 56 percent in the previous year.⁶ It



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seems that the internet has unleashed some deeply negative sentiments, and has created an environment that undermines well-entrenched social norms and modes of public discourse.

Search on Google for "Facebook shaming" in Hebrew, and thousands of links pop up, including blog posts, lawsuits, court hearings, business slander, personal slander and dozens of law firms marketing their services. It happened so fast that there's not even a word for "shaming" in Hebrew. Shaming in Israel's schools is exacerbated by WhatsApp - by far, the preferred communication platform for young students. It is worth noting that the vast majority of users do not engage in shaming. They are simply glued to the screen. No statistics can clearly convey the attachment Israelis have to their phone, but I can tell you that it is absolute.

One school headmaster once told me that pupils forget everything in school, clothes and shoes, money and bags, but never their phone.

It is common to see a family having dinner in a restaurant while all of the family members – adults and kids alike – are using their smartphones, watching full episodes of YouTube videos and reading Facebook newsfeeds while push notifications ping constantly. One school headmaster once told me that pupils forget everything in school, clothes and shoes, money and bags, but never their phone. Children's social status is often linked to their socialmedia status: how many likes, how many fans, how many followers. Raising a family in Israel generates dozens of WhatsApp notifications per day: school group, class group, soccer group, family group, subfamily group, friends gathering for BBQ group, buying a present for somebody group. The list goes on and on. One of the most popular weekly columns in Israel is a fictional, satirical WhatsApp group, which both captures and mocks this phenomenon.

It should be noted that social norms in Israel were loose and rather informal to begin with. In contrast, when booking a train ticket, for example, on the website of the German national train company, Deutsche Bahn, a user has to choose his title from the dropdown menu - be it Dr., Prof., and naturally, Prof. Dr. Such formality is alien to most Israelis. It's somewhat out of the norm to call one "mister," be it your boss, your headmaster or even your president. In fact, if the word "mister" is used, it's often in an ironic sense, to ridicule someone who "thinks he's royalty." Hebrew doesn't have a "formal" mode like the German language. Dress code is mainly informal. Ties are rare. Flip-flops are socially acceptable in many work places. The lack of strict norms and the prevalence of legitimately informal behavior have facilitated connectivity in Israel. Israelis use their smartphones all the time – from the delivery room to the cemetery.

I argue that the lack of formality and respect in Israel's language and culture affects not only the quantity of internet usage, but its quality, as well. It seems to have an adverse knock-on effect that drives some of the hate and shame speech online. It's astonishing sometimes



to encounter the stark differences between a person's profile and the hate the same person spreads. Such a profile may superficially project an image of a wholesome, educated, loving person, while his or her actual online activities are hateful, violent and out-of-step with acceptable behavior. Therefore, it follows that the internet has lowered the standard of what is considered legitimate discourse. As a result, social norms have shifted in lock-step.

To counteract this phenomenon, I encourage the creation of positive feedback loops: social norms drive internet usage, which in turn shape social norms. The converse of this, currently taking place, is a disturbing trend. This serves as another potential lesson from Israel, the internet canary: provide internet access to a community with limited regard for formality, and face the risk of public discourse that is littered with hate and violent undertones. Views that were once considered extremist have found a platform, an audience and a sense of legitimacy on social-media.

The Ultra-Orthodox Community

Hunger for data is oddly demonstrated in the case of the Ultra-Orthodox community. Think Amish, but Jewish: true commitment to traditional values plus a deep religious conviction. In fact, this is literally their name in Hebrew, their brand: "those who tremble" at the word of God.

A special telecom council of Ultra-Orthodox leaders was assembled, which contemplated the impact and potential use of this new technology.

Like the Amish, Ultra-Orthodox Jews – mainly the hardliners – choose to insulate themselves from many aspects of modernity, such as technology and fashion. So how does an 18th century outfit mesh with 21st century communication?

At the beginning of this intra-communal debate, there were just landline phones. Community leaders approved landline phones for both family and work needs. They also permitted use of the first generation of mobile phones, which were regarded as mere cordless phones. Then came the internet and the introduction of the smartphone. A special telecom council of Ultra-Orthodox leaders was assembled, which contemplated the impact and potential use of this new technology.

The response was innovative in its own right: the kosher phone was invented. Kosher, the word describing faith-approved food and dietary rules, entered the technology lexicon in Israel. There is now an actual market for kosher phones in Israel. Many mobile shops carry them and people from the community actually use them. Kosher phones are modified by the phone maker or the carrier to comply with Ultra-Orthodox self-regulations. Such phones (or kosher SIM cards) restrict internet access. disable cameras, and are emblazoned with a big black and white sticker on the device declaring: "Approved by the Rabbi's Committee for Communication."

Global manufacturers have taken notice and responded accordingly. The South Korean phone maker Samsung, for instance, introduced in Israel a unique version of a browser-less kosher smartphone. The phone even has a rabbi-censored app store, which serves as the primary gateway to the internet. Users can't download unapproved apps, as Samsung has blocked them on the device by changing its operating system. As creative and innovative as the Samsung phone is, the internet is nonetheless affecting the Ultra-Orthodox way of life, sneaking up through the ghetto walls, through locked SIM cards and cameradisabled phones. In reality, customers can easily find another mobile shop around the corner that unlocks the phone via software, so that the phone can access barred apps and content, but remains legitimate from outward appearances, with the big "Approved" sticker intact.

More and more young Ultra-Orthodox with vibrating smartphones in their pockets are drawn to the internet and face a new challenge: how to balance strict rules of faith with the open, lawless nature of the internet. Some in this community feel that "the end is near," that the long-term existence of the community is challenged by the internet. When a community that defines itself as anti-modern finds itself with access to ample bandwidth, human nature kicks in and challenges centuriesold traditions.

The canary lesson for religious and conservative communities the world over is that you can't manage the internet, even if you have God at your side. Once connectivity is provided by corporations that are in the business of providing access, people will want more and more of it, no matter how much law and regulation are imposed.

Conclusion

Israel is not a dead canary.

Overall, the internet has a tremendously positive effect on Israel and its people. The internet drives the innovation economy and GDP, and delivers so much efficiency and happiness (not to mention the dating scene that is powered by the internet). However, there are many issues associated with the internet that demand careful thinking, and the Israeli case has the potential to yield critical lessons.

One lesson is that journalism must find a new business model in order to survive in the age of the internet. In the absence of a sustainable model, there will be less honest and impactful journalism. Disreputable and unreliable news sources will fill the void, thereby undermining the quality and durability of Israeli democracy.

One possible solution is to move toward a non-profit model that places the financial burden for fact-driven media outlets on civil society and wealthy donors who have an interest in preserving this public good. A non-profit approach may work as a business model, as it does for museums.

But one must be cautious with this remedy, as the cure could have negative effects, as demonstrated in the case of Israel Hayom. This is a free conservative daily broadsheet that has lost an average of 10 cents on every issue it has printed in the past 10 years. That translates into an aggregate loss of approximately US\$200 million.⁷ This newspaper is backed by Mr. Sheldon Adelson, a Las Vegas casino tycoon. Why would a smart businessman spend US\$200 million on a failing business in a declining industry? The answer is ideology. Mr. Adelson put his money where his personal beliefs and agenda are. By serving as a megaphone for conservative views, the paper plays an important role in Israeli politics and society. But the price is high. Years of abusing editorial integrity and obvious political bias to the point of parody have tainted the body politic to the detriment of democracy in Israel.

The second lesson is that the seemingly unstoppable dominance of Facebook and Google calls for creative, cross-country thinking. Their services are great for users and for many businesses (and for their shareholders), but their dominance also comes at a steep price. All of Facebook's revenues come from advertisements, which means that every ad dollar Facebook generates comes at the expense of local businesses competing for that same dollar. Small media organizations (and in a small country such as Israel, all the publishers are small) are exposed to this daunting situation with the cards stacked against them. The U.S. internet giant cornered the market in a way that limits effective competition. This was achieved through Facebook's user-generated data, also known as the social graph.



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The social graph is basically what Facebook knows about its users on a personal basis: likes, friends, shopping habits, lifestyle and a trove of other data points. At the same time, online publishers barely know anything about their users.

Facebook software has perfected adbuying with the social graph; advertisers get unimaginable access to users' data, which enables marketers to optimize their ad spending so that only relevant customers see their ads. No publisher has so much actionable data to sell to his advertisers, hence the inability to compete effectively. In other words, Facebook's ownership of the social graph is its leverage on the market. One possible solution is to have Facebook sell or share the social graph data with other companies and publishers, and by doing so, level the playing field.

A third lesson from the Israeli perspective is that we should leave the internet, as such, alone. There is no point in blocking or regulating mere access to the internet. Everybody and everything should have an IP address. However, the challenge is how to encourage people, mainly children, to use their IP-enabled devices in a more relaxed and respectful way. This calls not for blocking, but for society-level intervention and education. Finally, we must wake up from the euphoric sense that the internet is a unifier of people and communities. The Arab-Israeli conflict was not caused by the internet and is not likely to end because of it. If anything, it seems that the internet has exacerbated the conflict on both sides.

As in mining, there is equal potential for riches and disaster. The global internet experience is no different. There are those who have leveraged digital platforms to enrich themselves, and others who have used it as a tool to benefit society. At the same time, there are users who utilize technology for nefarious means to degrade and disrupt democracy and the international order. As the internet canary, Israel is well placed to offer the world early signals of the opportunities and dangers that lie ahead.

Shilo de Beer was the editor-in-chief of the Yedioth media group, chairman of YIT technology group, VP content channel 10 TV news and board-member HOT cable Company. He is a consultant for digital innovation to companies around the world and serves on the boards of several internet startups.

Note: The views of the author do not necessarily reflect those of the Bertelsmann Foundation.

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Do Not Disturb: The Paradoxes of Digital Democracy in Germany By Anthony Silberfeld

he streets of Berlin are haunted by history.

Standing in the shadow of the Brandenburg Gate, reminders of Germany's turbulent past are in every direction. The skyline to the east is dominated by the Alexanderplatz television tower. The East German government built it as a symbol of the socialist system's alleged strength and efficiency. On the western horizon, the sunset is often obstructed by the Victory Column, which commemorates the 19th century wars of German unification. A 90-degree pivot north provides a glimpse of the glass dome of the Reichstag building, a beacon of hope for a united country divided for decades. And to the south lies the labyrinthine stone tribute to the millions murdered by the Nazis during the Holocaust.

History has meaning in Germany, and the lessons are passed from one generation to the next. How do these constant reminders shape the values and behavior of a modern democratic country? Every nation's identity is a reflection of its collective experience, and Germany is no exception. In fact, the country is unique in the way its history and culture have established parameters for online engagement in the digital era.

Germany is a complex case. Its social, economic and regional diversity complicates any understanding of the country. Yet, certain core values are clearly pervasive: a demand for privacy, risk avoidance, a preference for stability and the need for consensus. With such deeply ingrained principles, many Germans are unsettled by the very notion of technological disruption. The digital revolution has arrived nonetheless, and it has created a series of paradoxes that are shaping the trajectory of German democracy.

Democracy Interrupted: Weimar, War and the Wall

Any analysis of Germany's present and future requires an understanding of its past. Democratic norms and practices in all countries are distinct, and eccentricities are often byproducts of history. The need for consensus and stability in German politics, for example, is a direct result of the trauma of the country's 20th century experiences. German democracy has gone through many iterations since the end of World War I, and that's where our story begins.

Experimental Democracy: The Rise and Fall of Weimar

After four years of battle and millions dead, a vanguished Germany sought to rebuild itself in the aftermath of "the war to end all wars." It had to do so, however, under conditions imposed by the Allies under the Treaty of Versailles, one of which was the abolishment of the German monarchy. This left the parliament, or Reichstag, to deal with issues of peace, reconstruction and the establishment of a new government. Meeting in the city of Weimar, a constitutional assembly drafted a framework for a democratic system that would be named after the city of its birth. Discussions about the emerging Weimar Republic were held against a backdrop of violence between the political Left and Right, and widespread malnutrition and poverty. Delegates to the assembly, which included philosophers, legal scholars and historians, faced the immense challenge of creating a representative democracy that would eschew past authoritarian tendencies while striking an ideological balance that left and right could accept.

In the end, the assembly drafted a progressive constitution that called for a president, chancellor and two legislative bodies – upper and lower houses of parliament – whose members would be elected every four years. The document also included a list of rights common in most Western democracies, including freedom of speech and freedom of the press. The assembly was actually ahead of its time by including clauses that

provided a social safety net and language preventing employment discrimination on the basis of gender, religion or party affiliation. This was welcomed on the left, but the right needed something else.

The need for consensus and stability in German politics, for example, is a direct result of the trauma of the country's 20th century experiences.

In an effort to bring conservatives into the fold, the framers of the Weimar constitution strengthened the presidency. The holder of that office would be elected every seven years and have the authority to dissolve parliament. The assembly also introduced Article 48, which ominously noted, "If public security and order are seriously disturbed or endangered within the German Reich, the President of the Reich may take measures necessary for their restoration, intervening if need be with the assistance of the armed forces."1 The constitution also empowered the president to suspend civil liberties and essentially rule by decree. During the Weimar Republic, presidents would invoke Article 48 dozens of times in response to the era's chronic economic, political and social crises.

The Treaty of Versailles had disastrous consequences for Germany. In addition to stipulating a loss of territory and placing significant restrictions on the

size of the German military, the treaty imposed economic penalties that would reverberate for a generation. The Weimar government was saddled with a reparations bill amounting to about 96,000 tons of gold² without any practical way of paying that debt while rebuilding the country. Faced with the possibility of raising taxes on an already-destitute population, Berlin decided instead to print money to ease its financial situation. The resulting hyperinflation only increased the political, economic and social instability. In July 1914, four German Reichsmarks bought one U.S. dollar. By January 1923, a greenback was worth 353,000 Reichsmarks. By November that year, the exchange rate was more than four trillion to one.3

Disillusioned by the government's response to economic crisis, Germans narrowly elected a former Prussian general, Paul von Hindenburg, as president in 1925. Von Hindenburg showed little enthusiasm for the new democratic institutions, especially the Reichstag, and took full advantage of Article 48 as political and economic pressures continued to rise. He effectively ruled by decree by the end of his first term; years of governing through executive fiat had continually weakened the power of the legislature.

The volatility opened the door to a shift in German politics that would forever change the country. Running on a platform of restoring order and economic prosperity, Adolf Hitler challenged von Hindenburg in the 1932 presidential election. And though Hitler was defeated in this race, his Nazi party gained sufficient momentum to become the largest party in the Reichstag following a parliamentary election several months later. Within a year of that, after much political maneuvering, von Hindenburg named Hitler chancellor. Germany's democratic experiment had come to an end.

Descent into Dictatorship

Hitler took steps to solidify his stranglehold on the German political system shortly after assuming power. Within weeks of becoming chancellor, his party cohorts began rounding up parliamentary opponents to prevent them from voting against "The Law to Remedy the Distress of the People and the Reich," also known as the "Enabling Act." This measure effectively gutted the power of the president and the parliament, sealing the transition from democracy to dictatorship. It required a supermajority to pass, which the Nazis ensured would happen. The Supreme Court, which should have acted as a check on this obvious abuse of power, stood by idly and allowed the law to stand.4

With the levers of government under Hitler's full control, German democracy was a sham. Parliamentary elections took place during the Nazi period, but the results were pre-determined. In fact, a decree signed by Hitler ensured a favorable outcome. Article 1 of the "Law Against the Founding of New Parties" declared that "[t]he National Socialist German Workers Party is the only political party in Germany." Article 2 cemented Nazi control: "The maintenance of the organizational cohesion of another political party or the founding of a new political party is punishable with prison of up to three years, or with jail from six months to three years, insofar as the act is not punishable with a higher penalty under other provisions of the law."5 In November 1933 elections, the Nazis won all 661 seats in the Reichstag.⁶ The farce was repeated three years later with the same result. And in 1938, after Germany annexed Austria, parliamentary elections, the last until after the end of World War II, were again held, allegedly to rally support of the Third Reich's newest citizens.

Violations of democratic norms were not confined to the ballot box. The litany of human rights abuses and war crimes committed by Hitler and the Nazi regime are far too numerous to list here. It should be noted, however, that the genocide, elimination of privacy rights and the culture of suspicion and fear that defined this dark period in German history would be felt by generations well beyond those who personally experienced the atrocities. Even today, successor generations of Germans point to the Nazi era as central to shaping the way they view their country and the world.

After Destruction... Division

The end of World War II in 1945 brought the American, Russian and British allies together in Potsdam to determine defeated Germany's fate. Keen to discourage German recidivism, they divided the country into administrative zones, effectively partitioning the country between the democratic west and communist east. The American, British and French (who demanded a role in the occupation of Germany) zones eventually formed the Federal Republic of Germany (West Germany) while the Soviet zone became the German Democratic Republic (East Germany).

West Germany adopted in 1949 its Basic Law (equivalent to a constitution), which established the framework for a democracy. The Basic Law's first section reflects the legacy of Nazi violations and atrocities, and a commitment to prevent any repetition of them. That section enshrines freedom of religion, expression, assembly and association. It also stresses the right to privacy, to property and to petition the government.⁷ The Basic Law was intended to apply to all Germans in all of Germany, but the Soviet Union had different plans for its zone. Despite West Germany's relative freedom and the strength of its democratic institutions, an outbreak of student movements there in the late 1960s challenged the status quo.

As West Germany worked to establish its democracy, East Germany underwent a methodical transformation into a Sovietstyle authoritarian state. The communist Socialist Unity Party (SED) held nominal power in East Berlin, but actual authority resided in Moscow. A constitution established two legislative chambers - the States Chamber and the People's Chamber - but the SED selected representatives to both, and voters could approve only those candidates. Dedication to Marxist-Leninist ideology in all facets of public life defined suitability for political participation. The early days of the country, officially known as the German Democratic Republic, also saw the creation of the State Security Service (Stasi), which was tasked with monitoring citizens and eliminating opposition to the SED.8

As East Germany's dictatorship solidified, a monthly average of 37,000° of its citizens fled westwards in 1952. That same year, the East German government closed the intra-German border with the exception of the crossing into Allied-occupied West Berlin. The effect was akin to squeezing a balloon at one end, as East Germans flocked to Berlin to escape. The situation eventually became untenable for the SED, which led to the construction of the Berlin Wall in 1961.

Despite West Germany's relative freedom and the strength of its democratic institutions, an outbreak of student movements there in the late 1960s challenged the status quo. Students, dismayed by the presence of former Nazis in positions of influence, rising economic inequality and perceived undemocratic legal reforms, took to the streets. Government accountability and responsiveness to the electorate would thereafter be a prerequisite for German democracy.¹⁰ East Germany had its share of political volatility at about the same time, but its source came from within the ranks of government and culminated in a change in SED leadership in 1971. Still, East Germans, subjected to the Stasi's near-omnipresence, continued to be denied basic democratic rights. The Stasi was not a benign intelligence service seeking to preserve order, but a malevolent and brutal government apparatus used to suppress political opposition or protest through a network that forced neighbors to spy on neighbors and family to betray family. Even the most innocuous shred of information, manufactured or otherwise, could be used to incriminate.

The system remained strong for decades until the Soviet Union ushered in a period of *glasnost* (openness) and *perestroika* (restructuring). Demand among East Germans for similar reforms took root in 1989 in Leipzig, which manifested in a series of peaceful marches that attracted growing numbers of protestors. The decision by the government and security services not to intervene lent additional momentum to this pro-democracy movement, which soon emerged elsewhere in the country.

Many factors eventually contributed to the collapse of the Berlin Wall, and that story has been told in scores of other publications. It is important to note, however, that on that night in November 1989 when the Wall opened, East and West Germans came together to support democracy in a country that had mixed experiences with this form of government. Within a year of the Wall's fall, Germany would be reunified and democratic.

Two Sides of the Same Coin

German unification in 1990 did not mark the end of the transition from authoritarianism to democracy. It was, rather, the starting point. Merging two countries with vastly different political, economic and social experiences, attitudes and expectations would prove difficult to manage. Both sides in general supported democracy, but there was less consensus on its basic characteristics. "While in West Germany a model of liberal democracy was favored, which was in line with the institutionally implemented structure, a model of socialist democracy was mostly preferred in East Germany."11 Expectations that this split would soon evaporate proved wrong. Studies conducted as recently as 2014 indicate that those socialized in the east and west still maintain distinct, and sometimes incompatible, definitions of democracy.¹² Nevertheless, the Basic Law of 1949 was applied to the newly unified Germany and democratic rights and responsibilities were finally extended to all Germans, despite the reservations of some.

Germany's two parts still shared a history that placed great value on consensus, stability and pragmatism. And these virtues have been most evident in the choices Germans have made at the ballot box since reunification. They have had

A BRIEF TIMELINE OF GERMANY



The Federal Republic of Germany, or West Germany, adopts its Basic Law. The German Democratic Republic, or East Germany, becomes a separate, Soviet-style communist state.

Years of East Germans fleeing to West Germany and West Berlin lead to stricter border controls. Construction of the Berlin Wall begins.





Willy Brandt leads the Social Democratic Party to form the first non-Christian Democratic government of West Germany. He launches a program of rapprochement with Eastern neighbors, including East Germany, called Ostpolitik.

Brandt resigns when it is discovered that a member of his cabinet is an undercover Stasi agent. Helmut Schmidt takes over as Chancellor. Economic recession hits, especially hurting the steel-producing Ruhr region.





Following the collapse of the East German Communist regime and the fall of the Berlin Wall, Kohl adopts a plan for the quick reunification of Germany. East and West Germany reunite, merging into one state.

Angela Merkel is elected as the first female Chancellor in German history. Over the next three elections the Union parties (CDU and CSU) increase their lead over the SPD and secure control of the Bundestag.





Asylum applications in Germany surge to over 400,000 for the year, making it the top European destination for migrants from the Middle East and North Africa. Merkel maintains unrestricted entry amidst criticism.



The Ministry for State Security, or Stasi, is formed in East Germany. It becomes known for its work paralyzing and stifling dissent, its massive surveillance operations and its infiltration of West Germany.

Prominent student leader Rudi Dutschke is nearly killed when shot on the streets of Berlin. Already widespread antiestablishment protests intensify. Students demonstrate against the government, which they deem increasingly undemocratic.





Erich Honecker becomes leader of East Germany and works to improve living conditions and relations with West Germany. However, he continues the suppression of political dissent and supports using deadly force to prevent emigration to West Germany.

Helmut Kohl leads the Christian Democrats back into power. He fosters close ties with French President Mitterrand, which lays the foundation for closer European integration.





The SPD's Gerhard Schröder defeats Helmut Kohl, ending a 20-year period of Christian Democratic governments. Schröder pulls the SPD towards the political Center with huge reforms of the welfare state.

Edward Snowden reveals that the U.S. National Security Agency had been tapping German Chancellor Angel Merkel's phone. The revelations hurt U.S.-German relations and contribute to Germans' suspicions of U.S. tech companies that collect data.





Concern over terror attacks in Germany and across Europe leads to stronger surveillance laws that give the federal government greater access to data collected by telecommunications and technology companies. three chancellors since then – Helmut Kohl, Gerhard Schroeder and Angela Merkel – compared to Italy's 15 prime ministers in the same time. Today's coalition between the center-right Christian Democrats and center-left Social Democrats exemplifies the model of consensus and stability that Germans prize.

From public demonstrations on issues ranging from workers' rights to trade, to endless deal-making in the Bundestag, Germany has all of the hallmarks of a dynamic democracy, even if some of them betray a dark side of society.

The desire for predictability in German democracy does not mean that the electorate is inactive or placid. On the contrary, contemporary German democracy is robust in many ways. From public demonstrations on issues ranging from workers' rights to trade, to endless deal-making in the Bundestag, Germany has all of the hallmarks of a dynamic democracy, even if some of them betray a dark side of society.

Free speech, despite its legal limitation, has given rise to anti-immigrant and

anti-Muslim hate speech, with the rightwing, nationalist Alternative for Germany party finding a place for itself on the political spectrum. But Germany is not the only democracy witnessing such developments. From the Tea Party in the U.S. to the National Front in France, extremist movements have managed to capitalize on public discontent with their respective national economic and social situations. Their presence does not signal a weakening of democracy, but rather the system's strength and durability.

History is at the core of Germans' views of themselves and the world. It has shaped their social and political interaction with one another, and it has come to determine German national identity. In the next section, we will briefly put Germany "on the couch," and delve into the impact of the country's experiences and values to gain insight into the choices Germans make.

Don't Rock the Boat: Exploring German Core Values

The trauma of the 20th century remains in the German psyche. Prominent signs of patriotism were avoided for decades. Not until the 2006 World Cup, when Germans draped themselves in the national colors of red, black and yellow, was such behavior deemed acceptable. But the weight of history goes much deeper. A national sentiment of "never again," a reference to war and genocide, is a common thread that runs through German core values. Decades of academic research and interviews for this publication have repeatedly confirmed that most Germans have three core values: stability, risk avoidance and privacy. Each of these influences how Germans use technology and how government and citizens interact.

The German People: Products of History

In the 1960s, Dutch social psychologist Geert Hofstede created a methodology for defining national cultures and values.

STABILITY IN GERMAN POLITICS



DISRUPTINGDEMOCRACY



Hofstede originally developed five indicators to define a nation's identity: a Power Distance Index (PDI), Individualism versus Collectivism (IDV), Masculinity versus Femininity (MAS), Uncertainty Avoidance Index (UAI) and Long-Term Orientation versus Short-Term Normative Orientation (LTO).¹³ Hofstede later added another dimension to his study, Indulgence versus Restraint (IND). Each of these characteristics is present, to varying degrees, in the countries covered by Hofstede's study. The German case, however, reveals results consistent with core national values.

A national sentiment of "never again," a reference to war and genocide, is a common thread that runs through German core values.

Hofstede defines the PDI as "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally."14 Germany's score suggests that inclusion in governance and decision-making is a priority. Its decentralized form of government, which devolves significant authority to the state (Land) level, has the potential to increase participation and input of the electorate through increased voter contact with representatives. The PDI is closely linked to the core value of stability. It presumes that civic participation produces a sense of inclusion that, in turn, fosters consensusbuilding and political stability.

IDV is an indicator of "the degree of interdependence a society maintains among its members."¹⁵ For Germany, this definition means that the individual maintains a high degree of autonomy and personal responsibility. In some countries, this characteristic may translate into a disintegrating social fabric, but in Germany it manifests itself as the individual's self-defined obligations to the community. IDV, therefore, becomes closely linked to the notion of *preserving* stability, but it also touches on the concept of personal privacy. Germany scores well above the global average in this category.

The Masculinity versus Femininity indicator is less chauvinistic than its name implies. This is a comparison between a competitive society and a cooperative society, and Germany's score reflects heightened competition.¹⁶ This result is less consistent with self-proclaimed core German values, but it does align with the strong work ethic often associated with the country.

Germany is also famous for risk aversion, and many entrepreneurs point, as an example of this, to the belief that venture capital is risk capital. In addition, the consequences of bankruptcy are far more serious in Germany than in countries such as the U.S., where risk and failure are key drivers of a start-up culture. But German risk avoidance extends beyond economics. It is also pervasive in government and the personal sphere. According to Hofstede, the Uncertainty Avoidance Index reflects "the extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these."17 Hofstede points to German philosophers to explain the presence of this phenomenon in Germans, but their experience with political and economic volatility also plays a significant role. To

provide some comparison, the results for Germany indicate that it is substantially more risk averse than both the United Kingdom and the United States. Does this avoidance of risk create significant obstacles for adopting new technology? Would a government seeking to mitigate risk experiment with digital platforms?

A country's long-term and short-term orientation is relevant to its digital revolution, and this is particularly true for Germany. In Hofstede's analysis, LTO is the extent to which "every society has to maintain some links with its own past while dealing with the challenges of the present and the future."¹⁸ This concept – that the past influences the approach to present and future challenges – is prevalent in Germany, and the numbers in Hofstede's study reinforce this assertion. The country cannot distance itself from its history despite the passage of time. Today's Germans may not have experienced the horrors of World War II, but the legacy of that time passes to succeeding generations in the classroom.

Those who doubt the connection between the past, present and future may look to two comparative cases in Hofstede's study for evidence that it exists. Japan, with its own belligerent 20th century history, has yet to accept full responsibility for the atrocities committed in its name. It has an LTO five points higher than Germany's, meaning that history weighs even more heavily on Japanese society than German. By contrast, Ireland's LTO score reflects an environment in which most policy and personal choices are independent of the republic's history.¹⁹ This mirrors statements by Irish politicians about not dwelling on a chronically troubled relationship



Source: https://geert-hofstede.com/national-culture.html

DISRUPTINGDEMOCRACY



with the British that was long marked by occupation and conflict.

The final indicator in Hofstede's index, Indulgence versus Restraint, explores "the extent to which people try to control their desires and impulses"²⁰ to adhere to social norms. Germany's history makes its placement on the IND spectrum predictable. The score reflects a highly restrained society. From its excessive personal savings to a general aversion to ostentatiousness, Germany shows virtues associated with stability, risk avoidance and consensus. The U.S. and Brazil, for instance, score quite differently than Germany on the IND scale, an indication of their notorious indulgence.

One particularly pronounced German trait not covered by Hofstede is an insistence on privacy. This is an issue, along with data protection, that inevitably arises in any public discussion about the digital space. Violations of privacy, first by the Nazis then by the Stasi, have left deep scars in the German psyche. More recent revelations of spying by the U.S. National Security Agency, and frequent revelations of data stolen by hackers or sold by corporations, reinforce a reflexive desire to protect one's identity and information. But there is more to this story.

James Q. Whitman, a prominent American law professor, writes in the Yale Law Journal that "German privacy law grew in large part out of an effort to create a richer German alternative to the ideas of liberty that grew up west of the Rhine, and especially to English ideas of liberty."²¹ This means that German law evolved differently than in other western countries and drew important lessons from the Nazi period that must not be preempted. Perhaps because of the loss of individual identity in the 1930s and 1940s, Germans have re-defined privacy in personal terms. Whitman suggests that liberty in Germany does not have the same meaning as in the U.S. or the U.K. To Germans, liberty is centered on the individual's ability to maximize his or her potential or personality. Whitman goes on to argue that German tradition "treated the protection of privacy simply as one aspect of the protection of personality more broadly."²² This idea has become rooted in a legal system that codifies the rights of an individual's privacy – rights that have endured the test of time and now form a cultural norm in Germany.

Still, a burgeoning startup scene has recently emerged in Germany, with Berlin alone attracting more than US\$3 billion in investment in the past two years.

With an understanding of the historical and cultural features that make German identity unique, we can explore the benefits and consequences of German identity – and uncover the paradoxes that make Germany's approach to the digital revolution distinct.

Paradox 1 – Digital or Analog: If it Ain't Broke, Don't Fix It

Germany is well known for being the home to some of the world's most technologically advanced companies. From Siemens to SAP to Bosch to BMW, large German corporations thrive in the digital economy. The German *Mittelstand* (medium-sized enterprises) continues to be the foundation upon which economic success is built, and technological advances in manufacturing have greatly enhanced these companies' ability to compete. At the same time, they tend to stay focused on core operations. When asked about his approach to the Internet of Things, one business owner responded, "You've got the internet, we've got the things."

Although there is general satisfaction in Germany with the delivery of public services, government and residents recognize the need to expand the digitization process.

Still, a burgeoning startup scene has recently emerged in Germany, with Berlin alone attracting more than US\$3 billion in investment in the past two years.²³ Global successes, such as Sound Cloud, Zalando and Rocket Internet, have served as inspirations for aspiring tech entrepreneurs, and the government has sought to cultivate this environment. In fact, approximately 50 percent of funding for German startups comes from the state. The tech sector has consequently become a critical voice in encouraging the government to adopt more digitalfriendly policies, to transform Germany from tech followers into tech leaders, and to change the structural and emotional roadblocks to risk.

The public sector, however, shares little of the flexibility and ingenuity required to provide online government services, engage with the electorate or provide the level of transparency that is now common among modern, digital democracies. Chancellor Angela Merkel best encapsulated the lagging government effort on the digital front when she called the internet "Neuland,"24 which can be translated as new or uncharted territory. That she made the statement only in 2013 is notable. Despite efforts to improve German e-government, most transactions between federal officials and citizens continue to be documented on paper. Some "smart" cities exist, and they are making significant leaps with e-governance on the local level, but federal bureaucracy remains largely analog.

Although there is general satisfaction in Germany with the delivery of public services, government and residents recognize the need to expand the digitization process. But this must be done within the parameters of history and culture, both of which impede the transition. In the United Nations e-Government Knowledge Database, Germany ranks 15th out of 193 counties for e-government development, and 27th for e-participation.²⁵ But those rankings obscure the realities with which most Germans must contend to complete an official task. Kafkaesque stories abound of endless queues, stacks of paperwork and bureaucrats whose sole responsibility is to service citizens with surnames beginning with a particular letter.



There are several explanations for maintaining this antiquated bureaucracy. First, the structures and processes have developed over 140 years, and there is consensus among Germans that the system works despite all the paper. Many government officials therefore question the need for a solution to a non-existent problem. Second, the federal bureaucracy lacks the personnel to carry out a digital transformation on the national level. Employment protections for public-sector employees are particularly generous, so it is difficult to replace or re-skill the current workforce to obtain the technical expertise to run an effective e-government operation. The inherent aversion to risk and protection of data and privacy is a

third factor. Germans look at the current global landscape and see hackers stealing data from government databases and entire systems collapsing. Without absolute certainty of secure e-government platforms, Germans' concerns will persist.

A final reason for maintaining current systems is linked to Germany's federal structure. Germany's sixteen states (Länder) each have their own constitution, parliament, government structures and judicial bodies. Governmental structures are further sub-divided at the local level for the country's 12,200 cities and communities and 301 rural districts.²⁶ Each structure has varying competencies on different issues. Imposing a national

GERMANY'S POLITICAL SYSTEM



e-government system on all these authorities would be an immense challenge even without a national reluctance to do so.

Paradox 2: Google Anti-American Bias

The post-war relationship between the U.S. and Germany has seen plenty of ups and downs. The Marshall Plan and American support for reunification have been highlights; the Vietnam War and NSA scandal have been lowlights. Still, for decades, Germany has consistently counted the U.S. among its closest allies, given a shared history, common values and a strong commitment to democracy. Yet, a pervasive undercurrent of anti-Americanism exists, and the 2016 election of President Donald Trump has only exacerbated it.

The anti-American bias is not limited to politics. A 2014 Bertelsmann Foundation-Pew Research Center survey revealed that Germans overwhelmingly prefer their own products over American equivalents. On the technological front, 85 percent of Germans expressed trust in their own data privacy standards, while just three percent preferred American standards.²⁷ German trust in American companies follows a similar trend. While Amazon had the confidence of 58 percent of Germans, Facebook garnered a paltry 17.5 percent. Twitter earned the trust of just 11.6 percent of those polled.²⁸

There is a disconnect, however, between what Germans tell pollsters and their online behavior. Amazon, for example, generated US\$14.1 billion in German sales in 2016.²⁹ Google, often a target of German ire, has an 87-percent market share of online searches on computers and a 97-percent market share for smartphone searches. Facebook and Twitter count 42 million German users despite the high level of distrust.

How does this paradox impact the digital democracy landscape in Germany?

The widespread use of social-media and other technology platforms means that the German electorate has every technological tool available to connect with government, to collect information and to engage in public-policy debates. The challenge, of course, is that the communications channels must be twoway operations. Government must also embrace digital tools to maximize the impact of its work and demonstrate efficiency, transparency and accountability.

Paradox 3: Privacy Has Its Limits

Germans will often tell you that they do not trust corporations with their data, but many do trust their government to handle personal information responsibly. Given the country's history, that may be a surprising position. But the pre-unification West German government's record on privacy was an example for others to follow. In accordance with the spirit of the Basic Law and its guarantee of privacy, the German bureaucracy continues to safeguard personal data by storing it in silos so that no one department or entity has access to too much data on any individual.

A 2016 survey conducted by Open Exchange found that 80 percent of Germans agree that everyone has a fundamental right to privacy. In the same study, 75 percent of respondents indicated that they pay close attention to the balance the government strikes between surveillance and data privacy.³⁰ Given the importance of privacy to Germans and the vigilance with which they protect these rights, a series of recently enacted laws seems to create a paradox between national values and government policy. This legislation includes:

Telecommunications Data Retention Law

Passed in 2015, this law was intended to require telecommunications companies, starting July 1, 2017, to gather user data and make it available to authorities for the purposes of fighting crime or stopping dangerous activities. After a court found that it violated EU law, the legislation was suspended.

Flight Passengers Data Law

This legislation requires airlines to collect information on passengers, maintain it for five years and share it with the Federal Criminal Police. The measure was meant to conform to EU guidelines, but many Germans believe it goes too far. It nevertheless came into force on June 20, 2017.

Source Telecommunications and Online Surveillance Law

The so-called Staatstrojaner (state trojan) Law permits wider use of malware to capture data from potential criminals. Once inside a phone or computer, authorities may read emails, texts, phone calls, notes and files stored on the device. In practical terms, the Federal Criminal Police (Bundeskriminalamt) could place a state trojan on the devices of those who pose a concrete and serious danger to others. The law was largely intended to be used to investigate potential terror attacks. Now, the state trojan can be installed to monitor individuals suspected of a wider range of crimes (all crimes designated as "serious crimes," as listed under paragraph 2 of the Criminal Trial Rules (Strafprozessordnung)).

Law for the Better Enforcement of a Duty to Leave

After the 2016 attack on a Berlin Christmas market, carried out by a Tunisian whose deportation was waived after his home country refused to guarantee repatriation, this legislation was proposed to give authorities the ability to deport even without a commitment from the receiving country. It also permits authorities to use metadata from asylum seekers' phones to determine their origins. While authorities could previously inspect migrants' phones, they can now access data concerning where migrants have been, and when. The Bundestag approved this law on May 18, 2017.

Video Surveillance Improvement Law

Also coming in the aftermath of the Berlin Christmas market attack, this law gives the state greater latitude to use video surveillance in public areas. This includes the increased use of body cameras on lawenforcement officials.

Network Implementation Law

This legislation, also known as the Facebook Hate Speech Law, allows the government to fine Facebook up to 50 million euros if the company does not remove content with hate speech on its platform within a fixed period of time.³¹

These three paradoxes illustrate the social complexities of digital-era issues. The path to e-government, or digitization of services, is not linear for all countries. Germany's trajectory directly reflects its history, its culture and even the paradoxes of its society. This uniquely German combination, however, does not just frustrate the implementation of new technologies. By contributing to an environment that fosters digital-era democratic experimentation, these forces also exercise a positive influence.

Democracy without Disruptions

The very concept of "disruption" runs counter to the modern German ethos. Order, stability and predictability are valued, particularly in government and public service. That does not prohibit a German digital transformation, but it does indicate a need to manage the transformation in a particularly German way.

Chancellor Merkel has eschewed Twitter as an active user, but recently quipped that she closely follows President Trump's tweets to help her understand American foreign policy.

The country's small, liberal (in the European sense) Free Democratic Party (FDP) was for years the sole proponent of digitization in the German legislative establishment. The party was recently consigned to the political wilderness, but its revitalization has coincided with the placement of globalization and digitization at the forefront of its platform. Party Chairman Christian Lindner is leading by example with an active social-media presence that has attracted more than 300,000 followers on his Twitter, Facebook and Instagram accounts. Chancellor Merkel has eschewed Twitter as an active user, but recently quipped that she closely follows President Trump's tweets to help her understand American foreign policy. Nevertheless, the chancellor and her

party, the Christian Democratic Union, have taken note of the FDP's digital agenda, and have co-opted the issue into their party platform for upcoming federal elections. Their manifesto commits to spending 12 billion euros by 2021 to expand the broadband network³² in a country with spotty urban service and significant rural dead zones. These steps are incremental, and Germany is unlikely ever to replicate the major technology overhaul seen in "E-stonia."

Still, a modest Digital Administration plan is being implemented, and it aims to make visits to authorities for bureaucratic purposes largely superfluous by 2020. The plan includes an E-Government Law (EGovG), which sets out requirements for federal government agencies to develop centralized portals for email correspondence, electronic IDs and an expanded payment platform. The Bundestag, for its part, is also trying to expand its digital links with constituents, but those efforts have been tempered by recent incidents of hacking of websites associated with politicians and the parliament.

Filling the Void

Where government has fallen short, the German non-profit sector has stepped in. NGOs have undertaken successful initiatives that are shaping German digital democracy, and these efforts include:

FragDenStaat

In the center of the *FragDenStaat* (Ask the State) homepage is an offer to search thousands of requests and agencies. *FragDenStaat*, a project by the Berlinbased non-profit Open Knowledge Foundation, has developed expertise in organizing and managing freedomof-information requests to simplify the process for anyone with a question for the state. The website provides information

BEST PRACTICES IN LOCAL E-GOVERNMENT



gathered from previous requests or forwards a query to the relevant agency, thereby contributing to greater government transparency.

OParl – Politik bei uns

OParl, or Open Parliament, another project by the Open Knowledge Foundation, gives local governments the digital tools needed to increase the transparency of their decision-making processes. One such tool, the website *Politik bei uns*, or "Politics near us," brings up-to-date information on local government to the citizens they serve. While the platform has a long way to go to cover every locale in Germany, it already offers a wealth of information for the numerous towns and cities it currently covers. With a few clicks, a user can quickly find the most recent city documents on Ulm's water-park renovations or Bochum's plans for green infrastructure.

Bureaucrazy

Bureaucracy is daunting in many countries, and Germany is no exception. When two young Syrian refugees, Munzer Khattab

OPEN KNOWLEDGE FOUNDATION PROJECTS



and Ghaith Zamrik, arrived in Berlin, they faced an already overwhelmed asylum system that had little capacity to enact reforms. The duo set out to develop an app and online platform to help those confronting bureaucratic hurdles. With no programming skills, they enrolled at the ReDi School of Digital Integration, a non-profit that provides free coding lessons. Khattab and Zamrik used their education to create an app that provides forms that migrants and refugees are likely to need. The Bureaucrazy app also offers English and Arabic versions of the forms and advice on completing them. A map function shows the locations of relevant government agencies. The developers hope the app will be useful not just for those seeking asylum, but for any newcomer needing help with German bureaucracy. The app serves as a model for greater access to government services.

A Final Word

Some countries have started from scratch to create an all-encompassing e-government system. Other countries are moving swiftly to reform existing systems,



and migrating all documents, data and services onto digital platforms. Germany now also recognizes the need to digitally modernize government but must tackle its history, culture, law and political structure if it is to achieve full digital transformation.

Germany is making progress in e-government, but the country is already decades behind others. Ever newer technologies in algorithmic decisionmaking and artificial intelligence are now finding their way into governments worldwide that had the foresight and flexibility to get ahead of the curve. Germany has much catching up to do. There is a happy medium between keeping technology at bay and turning government entirely over to robots. Policymakers in Berlin have the responsibility to determine the locus of that compromise if they are to provide a government fit for the 21st century.

Anthony Silberfeld is the Director of Transatlantic Relations at the Bertelsmann Foundation.

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Transforming, Not Digitizing: Germany's Path to Digital Democracy By Laura-Kristine Krause

hile Germany is an economic powerhouse within the European Union and worldwide, it is far from pioneering when it comes to digital transformation. Political efforts regarding digitalization mostly focus on regulating digital industries and weathering the digitalization of the SMEs that drive Germany's economy. While practically all political stakeholders emphasize the importance of the digital transformation, it is still treated rhetorically as a novelty,¹ and Germany lags behind other European Union countries in many areas of digitalization.² The importance of digitalization beyond internet politics and in advancing "classical" policy fields (e.g. social and labor affairs, investment policy, education, etc.) is slowly being understood, but is not yet mirrored in the way political administrations organize and recruit talent.

In this environment, digital democracy and digitalization opportunities within the democratic process and social change have, at best, taken a backseat, while debates concerning other aspects of digitalization have been given priority. The discussion around digital democracy remains buzzwordy and abstract, especially within organized politics. While civil society has started to embrace the opportunities offered by digital tools – in terms of different forms of engagement and local initiatives – only a few official institutions have looked beyond digitalization as a means of providing information and grasped its full potential.

At present, liberal democracies are facing challenges in Europe and beyond. This is also true for Germany, despite its stable government coalitions and administrative structures. By way of example, the *Alternative für Deutschland* (AfD, Alternative for Germany), a rightwing populist party, is represented in 13 out of 16 state parliaments for the first time, having gained more than 20 percent of the votes in recent state-level elections. This is especially remarkable, given that the AfD was only founded in 2013. The refugee situation, which saw 890,000 refugees entering Germany in 2015, according to the German Ministry of Interior, has spurred both a wave of civic engagement as well as one of xenophobic crime.³ German political parties, gifted with a stable party system, see their membership dwindling and are faced with the challenge of providing an attractive place for political engagement.⁴ Germany is faced with the same transformation of the public sphere through digitalization as other nations. Political stakeholders, as well as the media, are still searching for their place in this new landscape.

At the same time, Germany is currently seeing a surge of civic engagement towards the strengthening of democracy and the protection of an open society. The Brexit vote in June 2016, the election of Donald Trump as the 45th president of the United States, and neighbors Austria and France almost electing right-wing presidents, have caused many Germans to ask themselves if their democracy is also less stable than it seems. Many new organizations concerned with this issue have formed in recent months, and major parties have seen an influx of new members in winter 2016-2017.

It would, therefore, be an understatement to say that there is fertile ground for a debate on digital democracy in Germany. Finding answers to political disenchantment and populism for the modernization of institutions and the revitalization of political parties in digital transformation seems promising. However, this debate is, at best, taking place on individual aspects of digital democracy, such as e-government or e-participation. What is missing in Germany is an overarching conceptualization of the potential of "digital democracy" and a debate on how ongoing efforts within public administration and civil society could be combined to truly "digitally transform" Germany's liberal democracy.

Making a Case for Digital Democracy

Political actors need to respond to increasingly complex challenges. Our democratic system has to be - today more than ever - responsive to global challenges and able to handle an increasingly complex and digital political environment. Rising populism, increasingly radical mindsets, waning confidence in political institutions, and increased expectations toward political participation, add extra challenges to the established processes and structures of liberal democracies that were set up decades ago. While digital transformation will not be the only answer to these challenges, it will be key to democratic institutions and political stakeholders acting decisively in an increasingly digital world.

But what does a digital transformation of democracy actually entail? Does it mean digitizing the current political system and taking advantage of the new communication channels the internet provides? To define digitalization simply as digitizing existing processes and structures would disregard the opportunities the technological and social innovation of digitalization affords. It is important to digitize what is already in existence, but this should only be the first step. It must also be recognized that the new information and communication infrastructures emerging through digitalization profoundly shape our understanding of politics, political organization, institutional designs, and therefore, the democratic process itself.⁵ This needs to be reflected in a debate on digital democracy.

In this regard, lessons can be drawn from the French philosopher Derrida. "New technologies are more than just more efficient techniques or means to perform a certain function or task. Rather, they are effecting profound transformations in the public sphere, changes that alter the dimensions of public space as well as the very structure of res publica."⁶ In other words, digitalization might be both the trigger as well as the agent for the transformation of liberal democracies.

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Looking at digital democracy from this perspective does not mean that democratic processes are transformed simply through the incorporation of digital tools. While tools can certainly trigger further process innovations, a debate on digital democracy should look beyond a tool-orientated approach. Moreover, it is important that transformation is understood as a change in attitude and as experimentation in process, and that a full agreement that a "digitized democracy" – while never fully digital – will look different than democratic systems built in the 20th century.

Thinking Beyond Participation -What Does a Digital Democracy Entail?

The digital transformation of democracy could serve as an opportunity to provide answers to a binary choice that has occupied the debate on the future of democracy in Germany for a good part of the past few decades. Direct democratic measures – for which digitalization truly served as a stepping stone – are often framed as antithetical to representative democracy. At the same time, direct democracy and participation may offer a chance to bypass frustration and annoyance with political institutions that increasingly seem clumsy, opaque and outdated.7 The result is an either-or framing of representative democracy and civic participation.

Digital democracy could essentially enhance both, strengthening representative democracy and its institutions while responding to demands for political participation beyond elections and opening new and sustainable avenues to participation. One of the leading questions in this context is how to use digital devices for engaging more citizens in a "user-friendly" way. The rise of digital technology does not only call for new forms of participation and deliberation, but also requires a discussion on the adequate political organization and institutional designs of democracy. In response to quickly evolving digital communications, structural innovation in liberal democracies is highly relevant and required.

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In this spirit, the potential for digital democracy in Germany should be comprised of three pillars:

- Information: Digitalization and the (mobile) internet create quick and easy opportunities to obtain information. Political institutions and stakeholders now have the opportunity to directly (and remotely) connect with and inform citizens on a large scale. The power of the internet to offer access to knowledge is unmatched, and seizing the opportunity to inform oneself (either directly or through media outlets) is the first step to actively participating in a democratic society. Providing this access to citizens is not limited to news and current events, but should also include information on institutions and political processes themselves.
- **Participation:** The internet creates a virtual space for deliberation and is therefore a powerful source for new forms of political organization. Online petitions, mobilization platforms of political parties, and local initiatives organized with the help of digital tools are only some examples of digital opportunities for participation. Communications technology can also be applied in public assemblies, mini-publics, or for legislative consultation.⁸ Furthermore, digitalization is useful in forging connections with the

"offline world," by combining digital and analog participation concepts. The digitalization of participation holds the promise of eventually involving and including each and every citizen in the political process.

• Transformation: Today's democracy needs to be agile, resilient and capable of responding swiftly to outside challenges. The digital transformation of democracy calls for a "user-centered" approach to democracy, reorganizing (or at least experimenting with the reorganization of) structures in the administration, party organization and established political processes. This approach can be applied to inter-institutional interactions and interactions between institutions and citizens. One example of this approach is the internal transformation of government institutions so they are able to incorporate the results of direct democracy and participation into administrative and political processes. Without this user-centric focus, participation is at risk of getting lost in structures that - at least in the case of Germany - were conceived in the Bismarckian era. Transformation is therefore necessary to provide an organizational counterpart to participation and to fully incorporate other (digital) innovations to democracy.

The State of Digital Democracy in Germany

So where does Germany stand on the possibility of embracing the concept of digital democracy, and do the necessary prerequisites exist for its transformation? While this paper cannot serve as a full assessment of the ongoing efforts on digital democracy (something which is much needed), it is safe to say that German stakeholders ought to contribute more effort towards developing all three dimensions addressed above.

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Eighty-seven percent of German citizens use the internet on a regular basis, with surveys attributing digital competency to 68 percent of them.⁹ Compared to other European Union countries, Germany is clearly above average, ranking seventh in the regional grouping. This assessment stands, despite the fact that Germany is not on track to fulfill its goal of providing 100 percent of the country with broadband internet by 2018.10 The high numbers on overall use of the internet among citizens stands in stark contrast to the digitalization of the public sector. Germany has one of the lowest rates of online interaction between citizens and public administrations in the EU. Only 19 percent of Germans use electronic services offered by the public administration, ranking Germany near the bottom in the EU. Part of the reason for this is that e-government services in Germany are not user-friendly.¹¹ Citizens are also often unaware of the online opportunities

already in place, although this information deficit is declining.¹² When the European Commission analyzed the overall state of digitalization in all European Union member states, it concluded, "[t]his [digital public sector] is the area in which Germany does worst and makes practically no progress."¹³

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DISRUPTINGDEMOCRACY

Efforts to Digitize the Administration

There have been a number of efforts by the federal government to advance e-government services, some of which are still ongoing. The German Ministry of the Interior launched the initiative Digitale Verwaltung 2020 (Digital Administration 2020) in 2014 and previously supported e-government initiatives. In 2013, the German parliament passed an act to promote electronic government, intended to establish the requirements for digital administrative services.14 Expanding digital administrative services and working on a country-wide portal network is also part of a recent agreement among the German states and the federal government on the restructuring of the federal financial relationship. But a completion of these goals is still a long way off, and e-government maintains its status as an evergreen political demand in German politics. This is also evident in

the run up to the 2017 federal elections.¹⁵ Digitalization of the administration is one of the election promises that both major parties have brought forward,¹⁶ while the Ministry of the Interior has promised a digitalization of all proceedings by 2022. Many critics, however, wonder whether this plan ought to, instead, be undertaken at the local level.

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E-government obviously does not equate to digital democracy. But the early stage of political debate in Germany, combined with the fact that the digitalization of the administration is still an ongoing task, shows that the path toward an actual transformation of the administration will take even longer. Furthermore, government and public institutions are mostly concentrated on digitizing existing structures and procedures, rather than creating new ones. Examples range from services, such as applying for a passport or filing tax return forms, to ensuring reachability via secure email (De-Mail), or facilitating digital file management. This is also true for one of the few participatory tools at the federal level, the opportunity to file e-petitions to the German parliament.¹⁷ The e-petition is practically a digitized version of the analog petition, which has a long history in Germany. In digital democracies, providing a digital administration should not be an end in and of itself, but should be a precondition for implementing innovations that serve the previously discussed dimensions: information, participation and transformation.

Efforts to Think Broadly about Digital Democracy in Germany

The most recent effort to think broadly about the context of digitalization and democracy on a federal level was the Special Commission of the German parliament "Internet and Digital Society," which ran from 2010 to 2013. The bipartisan special commission worked closely with experts from civil society and academia. The sub-group "Democracy and State" made proposals on a wide range of issues, including, but not limited to, e-government, online-participation, transparency of the political process, and the transformation of the public sphere.¹⁸ Some of the proposals were taken up (such as live-streaming every session of the plenary of the German Bundestag), but many of the bipartisan working group's ideas have not been implemented. At the very least, the reports of the special commission should be revisited by the incoming government and serve as a reservoir of ideas, as participatory tools are scarce on the federal level and digital efforts for democracy in the German parliament currently focus mostly on providing information online.

The major German political parties experiment with some aspects of digital democracy. Practically all federal parties have launched online platforms for party members and make wide use of social communication channels. The right-wing, populist AfD owes much of its success to social-media, and has a stronger following there than larger parties.¹⁹ The German Pirate Party, successful in the years 2010-2015, is also organized primarily online.

While all established parties search for new ways to interact with voters and offer attractive formats for (new) party members, this search is mainly focused on finding tools, not on making parties more attractive through organizational changes, including changes through digitalization. The German Parteiengesetz (Party Act) sets strict limitations on party organization. For example, the current regulatory framework does not allow remote party membership in place of membership in one's local chapter, nor permit the creation of digitally organized issue-focused working groups on the federal party level. The legal framework thus hinders the incorporation of innovative elements into party processes that could make party engagement appealing to a more diverse population. So far, no concrete political will has formed to amend the Party Act in the upcoming years.

Similar to government administration,

Pulse of Europe

Pulse of Europe is a civil society movement that organizes demonstrations on the first Sunday of each month, asking citizens to meet at a central location in their city and to "demonstrate" for Europe. The goal of Pulse of Europe is to preserve and shape a united Europe and to show publicly that broad pro-European support in society does exist. With this in mind, it aims to counter populist, Euro-critical movements that claim to represent citizens' attitudes. Pulse of Europe does not put forward specific policy demands. It was founded in Frankfurt in November 2016 and quickly spread to more than 60 cities in Germany, and more than 20 outside of Germany. Pulse of Europe explicitly wants to be a civil movement, offering alternatives to elected representatives as key actors. Through the onlineplatform www.pulseofeurope.eu, everyone can start a new Pulse in their own city.

German political parties have not substantially transformed their structures to provide an organizational framework to accommodate increasing civic participation. Until this occurs, online tools and platforms will be limited to consulting party members and citizens (in a form that basically constitutes opinion surveys), and will fall short of full participation (e.g. two-way communication). Even in the dimension of information, Germany's parties and government institutions have room to improve. Most online activity takes for granted that citizens have a fundamental understanding of the party's structure, institutions and democratic processes. It is critical that online platforms serve, furthermore, as an information resource about the democratic process itself.

Many best-practice examples for digital democracy (beyond e-government) can be found at the state and local levels, an indication that it is easier to implement them at lower tiers of government. A number of cities experiment with *Bürgerhaushalten* (citizens budgets), inviting citizens to make proposals for budgetary decisions, and often, to vote on them. Other efforts include combining information on local initiatives and participation processes on one digital, state-level platform,²⁰ and efforts to include e-participation in the legislative process.²¹

Some of the 16 German states have launched overarching digital strategies, most notably the states of Rhineland-Palatinate, Hesse, and Thuringia. All of these programs cover different aspects of digitalization, such as e-government and the digitalization of administrative processes. One of the most notable strategies regarding digital democracy is the Rhineland-Palatinate government's "Digital Dialogue," which deals with societal participation more broadly.²² What the advancement of digital democracy in Germany needs is a broader understanding of what falls under this concept, including bolder experiments, and a strategy to make best practice approaches at the local level widely known. To put it simply, democracy requires constant learning.

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Germany's Civil Society Experiments with Digitalization

Cognizant of the Brexit vote in the United Kingdom, the U.S. presidential election, successful populist candidates in France, Austria, the Netherlands, and neighboring Eastern countries whose democracies seem fragile these days, German civil society has become more involved in defending liberal democracy. Germans demonstrated an increase in civic engagement during the 2015 refugee situation, and a multitude of initiatives on democracy subsequently emerged in Germany during 2016 and 2017. Many of them²³ rely on digital communication and online platforms to organize, like Pulse of Europe, a pro-European demonstration that takes place every Sunday in many German and other European cities). Civil society can also leverage platforms for initiatives like die Offene Gesellschaft, a fact checking portal,²⁴ or hold demo-days to call for ideas to counter populism.

Germans demonstrated an increase in civic engagement during the 2015 refugee situation, and a multitude of initiatives on democracy subsequently emerged in Germany during 2016 and 2017.

Not all of these initiatives span across Germany, and many focus on maximizing local impact. They show that civil society is embracing digital tools for engagement, which allows for a degree of organization, knowledge transfer and mobilization that would otherwise not be possible. The challenge now remains how these efforts can be connected with the digitalization of political processes, and how digital tools and platforms can serve to increase and widen political engagement particularly beyond an already active civil society. Some studies suggest that digital platforms do not mobilize new people, only those who are already engaged in the political process.²⁵

What Shapes German Digital Democracy

A transformation process like digitalization is obviously also influenced by the political landscape and the political culture of a country. Most assessments of the slow advance of e-government in Germany attribute it to a German specialty: federalism. The German Norms Control Council reports on a yearly basis on de-bureaucratization and on the implementation of e-government.²⁶ It names the "scattered" German administrative landscape as the main obstacle for e-government. It urges a modernization and a close cooperation among the federal level, the German states and local communities.

An overall reluctance to digitize the political process could also work toward the advancement of e-government and other forms of digital democracy. This reluctance stems from a German culture that shapes attitudes towards data protection and skepticism of government surveillance in Germany. Germans traditionally place high value on their privacy and are skeptical of government data collection. The experience of two

totalitarian regimes (the fascist Nazi Regime and the communist German Democratic Republic) has rooted skepticism for public collection of personal data into German culture. The most notable example of the emotional potential of the issue is the federal census that was carried out in West Germany in the 1980s. Originally intended to take place in 1983, the census caused heavy protests and was boycotted by a broad movement of parties and civil society actors. At the time, almost half of the population rejected the census²⁷ on the basis of concerns over privacy and the creation of "glass citizens" (the state having a wide array of data on its citizens) through data collection. The protests were accompanied by a case before the Federal Constitutional Court that ordered the census to be held again on the grounds of "informational self-determination," the German legal construct for the right to privacy. The census was conducted again in 1987, and was once again met with protests.

While data protection does not spark the same emotions today, sentiments surrounding the high value of data protection still stand. Germans are very skeptical of information-sharing between German companies and governments,²⁸ and place a higher value on their personal data than citizens of other countries.29 Analyses also show that while the fear of becoming glass citizens is declining, almost half of German citizens remain worried about this possibility.³⁰ More than half of Germans favor the protection of the right to personal privacy as highly as the protection of national security, with 22 percent even preferring personal privacy to the latter.31

There are, however, certain signs that Germans have become more carefree when it comes to their privacy protection. Overall, concerns about data protection and security of online administrative practices fell by half between 2014 and 2016.³² Use of online media and social networks by Germans during this timeframe remained comparable to other European populations.

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Despite some trends in this field, Germany maintains a de facto ban on electronic voting machines. The Federal Constitutional Court ruled in 2009 that the use of voting machines in the 2005 federal election was unconstitutional.³³ The court did not ban the use of machines but placed relatively high restrictions on their use (e.g. citizens needed to be able to check that their vote was counted correctly after casting it).

The most recent public debate on digital democracy focused on the negative effects of digitalization in the transformation of the public sphere. In an effort to regulate political debates on the internet, the German parliament passed the *Netzwerkdurchsetzungsgesetz* (network

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enforcement law) in its last session before the federal elections. It intends to hold social-media platforms accountable for content and asks them to remove prosecutable content within 24 hours (in drastic cases) or 7 days. The measure was widely criticized by net activists, NGOs and organizations such as Reporters without Borders, mainly for "outsourcing" the decision on prosecutable content to the private sector. The debate around the bill mainly focused on the surge of hate speech, filter bubbles, fake news and other digital phenomena. During the debate, the internet and new communication channels were mostly framed as a threat to democracy, and, at best, as a magnifying glass for societal developments.

The extent to which concerns on data protection and privacy influence the course of digital democracy in Germany will need to be studied in greater depth. It would be particularly interesting to look more closely at attitudes on modernization and the transformation of government. Nevertheless, digital democracy is still possible despite these concerns, as long as it is understood as a combination of the dimensions of information, participation and transformation.

Four Pledges to Digital Democracy

As the assessment of digital democracy in Germany oscillates between skeptical and negative, forward movement on digital democracy is necessary - and possible. Digitalization still holds substantial potential for a (re)vitalization of political processes and institutions already in existence. To seize this potential, it is necessary to continue unpacking the notion of digital democracy itself, and thereby make the concept more tangible when we talk about it. Most importantly, digital transformation will demand that we start working with each other outside of learned structures. and that we incrementally work towards new best practices. These four pledges on digital democracy will hopefully make this feasible in Germany's case:



• Thinking Beyond Tools: Digital democracy can take the form of introducing digital tools into the political process, but is not limited to this alone. When addressing digitalization, we need to think beyond how current processes and structures can be complemented by technical improvements, and focus on how digitalization might allow for entirely new processes and offer new resources that will help us to come up with new ideas. For example, despite digitalization, political parties do not know enough about their members to provide them with tailored participation offers or to actually benefit from their expertise in a systematic manner. Digitalization could help change the status quo. Party members from all over the country could work together on issues through digitalization if given a platform and - more importantly a say in the party's decision-making process. This would require changes in policymaking procedures and greater

power-sharing, but it would ultimately strengthen German democracy itself.

 Strengthen Institutions and **Civic Participation Concurrently:** Strengthening institutions, and representative democracy for that matter, is not the antithesis of allowing and enabling more public participation. On the other hand, participation should not merely serve as a quick fix for institutions that are perceived as outdated. Digital democracy ultimately holds the potential to organize participation on a large scale. But participation can only be consequential if it is accompanied by functioning and modern institutions. This will require further organizational changes within institutions, such as hiring more staff to process input gathered through civic participation, and more (semi-) formalized ways for institutions to interact with civil society and citizens. Both parties and administration ought to establish more formats in which they receive input and

- most importantly - converse with civil society. Digitalization can help, both in establishing these formats online as well as in making it easier to set them up offline.

- Innovation Happens in Small Steps: Digital democracy does not mean abolishing analog democracy, nor should it mean imposing a new system on citizens and institutions. Digital democracy is not one large concept, but rather, many small innovative steps. Trying a new form of public deliberation, creating more transparency in political decision-making processes, offering more possibilities for political engagement within parties and beyond - all of this has become easier thanks to digitalization, and offers a reservoir of new concepts. In this approach lie the resources for democratic innovation that have not been sufficiently utilized. Taking an experimental approach to digital innovation in democracy might result in some failed initiatives, but it will also eventually give rise to additional best practices. Not everything has to be created from scratch. Building on current experiences with innovative political projects elsewhere (in Germany and beyond) will help bolster the concept of digital democracy and seize the opportunities it offers.
- Don't Just Digitize What is Already There, Innovate within Organizations: Organizational innovation will be crucial for progress in the field of digital transformation. How political problems are solved and how public

administration is organized are not set in stone. Especially on the federal level, political parties and institutions need additional or alternative structures. One such structure could be a division within all institutions that examines output through a citizen-centered approach, taking psychological and sociological aspects of users into account. Are administrative services effectively serving the users (citizens)? Are procedures outdated, and could they be improved? Are there incentives for different kinds of political engagement? Another target area would be organizational transformation, which could establish a democratic innovation council, a government committee solely responsible for dealing with innovations for democracy and with the authority to undertake change processes in public administration.

Laura-Kristine Krause is head of the program "Future of Democracy" at Das Progressive Zentrum e.V., a German think tank based in Berlin. Das Progressive Zentrum recently opened a Democracy Lab. She has also published on the future of political parties and on digital agenda and is co-chairwoman of the grassroots think tank D64 – Center for Digital Progress e.V.

Note: The views of the author do not necessarily reflect those of the Bertelsmann Foundation.

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POLLING DATA NUMBERS BEYOND THE NARRATIVES



About the Report

This report, developed by Questia Group in association with the Bertelsmann Foundation (North America), Inc., analyses the impact of technology on civic engagement and democratic participation in the United States, Germany, Israel and India. Its conclusions are based on an online survey conducted by Questia Group in the four aforementioned countries between July 10 to July 23, 2017, among a representative online sample of 1,000 persons/country, aged 18 and older.

This report is a collaborative effort based on the input and analysis of: Andrada Nimu, Chief Research Officer Andreea Nedelcu, Chief Business Development Officer

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INDIA





2. Does your phone have dual SIM?





3. What type of data services (2G/3G/4G) do you have on your mobile phone?

4. Do you have data services (2G/3G/4G) on both SIM cards?







203 POLLING DATA

6. How often do you watch TV?



7. What types of content do you watch on TV? (More than one answer)



8. What type of fixed internet services do you have in your household?



DISRUPTINGDEMOCRACY

9. How often do you access the internet?



10. In general, from where do you access the internet? (More than one answer)



205 POLLING DATA

11. Which of the following types of content do you access on the internet? (More than one answer)



12. Which of the following websites/apps do you access? (More than one answer)





13. How often do you listen to the radio?

0%

10%

I don't listen to the radio

14. In general, where do you listen to the radio? (More than one answer)

14.8%

20%

30%

40%

50%

60%

70%

80%

90%

100%



15. What types of radio shows do you listen to? (More than one answer)



DISRUPTINGDEMOCRACY

207 POLLING DATA

16. How often do you read newspapers?



17. In general, where do you read newspapers? (More than one answer)



18. What types of newspapers do you read? (More than one answer)



19. Generally, from where do you get informed? (More than one answer)



Civic and Political Engagement

1. How many hours per day do you have access to electricity?



2. How would you define democracy in India? (More than one answer)



DISRUPTINGDEMOCRACY

208

209 POLLING DATA

3. Generally speaking, would you say the political/social/economic conditions in India are heading in the right direction, or are they off on the wrong track?



4. In your opinion, what are the main issues facing India today? (More than one answer)





5. Have you been involved in solving such problems in your community?

6. Have you volunteered in a group or a non-governmental organization (NGO)?



211 POLLING DATA

7. In which of the following areas did you do volunteer work? (More than one answer)



8. How many interactions have you had with local (panchayat) councils in the last 12 months?



9. How satisfied are you with the interaction/s with local (panchayat) councils?



DISRUPTINGDEMOCRACY
10. Some people are members or donate money to political parties or political candidates. Are you a member or do you donate money to such an organization?



11. Are you actively involved in the volunteer organization of which you are member?



12. Have you volunteered for a political organization or in a campaign for a candidate?



DISRUPTINGDEMOCRACY

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13. Voting is a way through which citizens take part in the decision-making process. However, voting involves various costs (information, traveling, etc.). Do you usually vote?



14. In which elections did you vote? (More than one answer)



15. How often do you vote?



16. Please rate the likelihood to vote in the next Legislative Assembly elections.



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17. If elections were held next Sunday, for which party would you vote?



18. Have you ever volunteered for a political organization or in a campaign for a candidate?



19. When elections take place, do you try to convince others to vote for those with whom you sympathize?



20. People often take to the streets to protest. Have you ever participated in a protest march or demonstration?



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21. The following list contains several institutions in India. Please tell us how much trust you have in each one: very much, neutral or very little.



Impact of Technology on Democracy

1. To what extent do you agree with the following sentence: Technology has a positive impact on.



Don't know/No answer

2. Which of the following actions have you performed on online platforms or social media in the last 12 months? (More than one answer)



3. To what extent would you use the following methods to cast your vote?

Electronic voting machines located at polling stations		56.69	%	29.4%	<mark>8.6%</mark> 3.5%	
Automatic voting registration (a to registe	37.0%	30.3%	14.69	6 <mark>7.8%</mark> 10.3%		
Internet based voting (voting by e-mail) Voting by mobile phone/ smartphone (voting by text messages) Portable registration (allowing registered voters who have moved to update their address at their new		35.1%	24.1%	14.5% 11	.8% 14.4%	
		31.5%	26.5%	13.1% 13.	7% 15.1%	
		30.9%	33.0%	16.5%	<mark>7.9%</mark> 11.7%	
	local polling station) 0%	10% 20% 30%	% 40% 50%	60% 70% 8	0% 90% 100	
To a very great extent	To a great extent	To a small e	extent	To a very sr	nall extent	

Don't know/No answer

4. To what extent would you be interested in the following information regarding elections?



5a. Have you ever heard of the National e-Governance Plan of the Indian Government?



5b. How satisfied are you with the National e-Governance Plan of the Indian Government?



6a. Now that you know this information, would you be interested in using the e-Governance plan?



6b. What is the main reason you never used the National e-Governance Plan of the Indian Government?



7. In an average month, how often do you go online to access government services?



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Socio-Demographic Profiling

This online survey has been conducted among 991 Indians aged 18+. Understanding their socio-demographic profile is vital when interpreting the results.

1. What is your gender?



2. What is your age?





3. What is your permanent residence or the one where you spent the last 12 months?

4. What is the highest degree/level of school that you have completed?





5. How many members live in your household (including yourself)?



6. How many people in your household are children under 18 years of age?

7. What is the total household net monthly income, considering all available sources of income in your household?



8. What is the total personal net monthly income, considering all available sources of income?



UNITED STATES

Media Usage

1. What types of devices do you own? (More than one answer)



2. What type of data services (2G/3G/4G) do you have on your mobile phone?



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3. What type of TV services do you have in your household?



4. How often do you watch TV?



5. What types of content do you watch on TV? (More than one answer)



6. What type of fixed internet services do you have in your household?



7. How often do you access the internet?



8. In general, from where do you access the internet? (More than one answer)



9. Which of the following types of content do you access on the internet? (More than one answer)



10. Which of the following websites/apps do you access? (More than one answer)



11. How often do you listen to the radio?



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12. In general, where do you listen to the radio? (More than one answer)



13. What types of radio shows do you listen to? (More than one answer)



14. How often do you read newspapers?



15. In general, where do you read newspapers? (More than one answer)



16. What types of newspapers do you read? (More than one answer)



17. Generally, from where do you get informed? (More than one answer)



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18. Generally, how do you obtain information on one candidate's policy positions (e.g. on education, healthcare, social security issues etc.? (More than one answer)



Civic and Political Engagement

1. How would you define democracy in the United States? (More than one answer)



2. Generally speaking, would you say the political/social/economic conditions in the United States are heading in the right direction, or are they off on the wrong track?



3. In your opinion, what are the main issues facing the United States today? (More than one answer)



4. Have you ever been involved with fellow citizens to solve a problem in your community?



5. Have you volunteered in a group or a non-governmental organization (NGO)?



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6. In which of the following areas did you do volunteer work? (More than one answer)



7. Some people are members or donate money to political parties or political candidates. Are you a member or do you donate money to such an organization?



8. Are you actively involved in the organization of which you are member?





9. Have you volunteered for a political organization or in a campaign for a candidate?

10. Voting is a way through which citizens take part in the decision-making process. However, voting involves various costs (information, traveling, etc.). Do you usually vote?



11. How often do you vote?



12. In which elections did you vote? (More than one answer)



13. Which one of the following best describes how you voted?



14. Through which method did you last cast your vote?



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15. On which day of the week and time of the day do you usually vote?

16. How do you usually get to the voting station?



17. Please rate the likelihood to vote in the next Congressional elections.



18. If elections were held next Sunday, for which party would you vote?



19. People often take to the streets to protest. Have you ever participated in a protest march or demonstration?



20. When elections take place, do you try to convince others to vote for those with whom you sympathize?



21. Have you ever voted for a party different from the one which for you've registered?



22. The following list contains several institutions in the United States. Please tell us how much trust you have in each one: very much, neutral or very little.

	The President	15.	4%	15.3	%	24.8		13.2%	31.3		3%	
The United State	s election system	12.8	3%	20.0	%		33.2%		17	6%	16.4%	6
Banks and fin	ancial institutions	10.09	0% 23.1		35.6		35.6%	6%		6.5%	14.8	%
International organizations (World Trade		7.5%	17	.4%	6 43.3%			15.8		5.8%	% 16.0%	
Drganization, International Mo Busine	sses/corporations	7.4%	15.	2%		41.8	3%		19.	5%	16.2	%
	Media outlets 7.		14.5	5%	3	1.6%		20.7	1%	2	5.9%	
The Congress 7.4		7.4%	12.5	%	3	3.6%	_	21.5	5%	2	4.9%	
Non-governmental organizations (NGOs) 7		7.1%	19	19.9% 0.5% 32.2%				49.9%		12.6	12.6% 10.5%	
	Political parties		10.5%			22.9%			28.8%			
	0	1%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100
1 - I trust it very much	=2		3 - Neutral			al	=4					
5 - I trust it very little	Don't know/	No an	swer									

Impact of Technology on Democracy

1. To what extent do you agree with the following sentence: Technology has a positive impact on:



2. Which of the following actions have you performed on online platforms or social media in the last 12 months? (More than one answer)



3. If possible, to what extent would you prefer to:



4. To what extent would you be interested in the following information regarding elections?



Don't know/No answer

5a. In a regular month, how often do you go online to access government services (like USA. gov, Federal Citizen Information Center etc.)?



5b. What is the main reason you never access online government services (like USA.gov, Federal Citizen Information Center etc.)?



Socio-Demographic Profiling

This online survey has been conducted among 982 Americans aged 18+. Understanding their socio-demographic profile is vital when interpreting the results.

1. What is your gender?



2. What is your age?



11.1% California New York 8.6% Florida 7.9% 5.1% Ohio Texas 5.0% Pennsylvania 4.8% Illinois 4.2% Michigan 3.6% 3.3% Washington Georgia 3.2% New Jersey 2.9% North Carolina 2.9% Maryland 2.6% 2.5% Massachusetts 2.2% Virginia Wisconsin 2.2% 2.0% Arizona Indiana 1.9% 1.9% Tennessee Colorado 1.6% Kentucky 1.5% 1.5% Nevada Oregon 1.4% Connecticut 1.3% South Carolina 1.3% Alabama 1.2% Minnesota 1.2% Missouri 1.1% Louisiana 1.0% Utah 1.0% lowa 0.8% Oklahoma 0.8% 0.7% Arkansas Idaho 0.5% West Virginia 0.6% Delaware 0.5% Mississippi -0.5% Rhode Island 0.5% 0.4% Maine New Hampshire 0.4% New Mexico 0.4% Kansas 0.3% Montana 0.3% Nebraska 0.3% Vermont 0.2% Wyoming 0.2% South Dakota 0.1% Alaska 0.0% Hawaii 0.0% North Dakota 0.0% 6% 0% 2% 4% 8% 10% 12% 14% 16% 18% 20%

3. What is your permanent residence or the one where you spent the last 12 months?



4. What is the highest degree/level of school that you have completed?

5. How many members live in your household (including yourself)?



6. How many people in your household are children under 18 years of age?



7. What is the total household net monthly income, considering all available sources of income in your household?



8. What is the total personal net monthly income, considering all available sources of income?




Media Usage

ISRAEL

1. What types of devices do you own? (More than one answer)



2. What type of data services (2G/3G/4G) do you have on your mobile phone?



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3. What type of TV services do you have in your household?



4. How often do you watch TV?



5. What types of content do you watch on TV? (More than one answer)



6. What type of fixed internet services do you have in your household?



7. How often do you access the internet?



8. In general, from where do you access the internet? (More than one answer)



9. Which of the following types of content do you access on the internet? (More than one answer)



10. Which of the following websites/apps do you access? (More than one answer)



11. How often do you listen to the radio?



DISRUPTINGDEMOCRACY

12. In general, where do you listen to the radio? (More than one answer)



13. What types of radio shows do you listen to? (More than one answer)



14. How often do you read newspapers?



15. In general, where do you read newspapers? (More than one answer)



16. What types of newspapers do you read? (More than one answer)



17. Which newspapers do you read? (More than one answer)



DISRUPTINGDEMOCRACY

18. Generally, before an election (e.g. Parliamentary) from where do you get informed? (More than one answer)



Civic and Political Engagement

1. How would you define democracy in Israel? (More than one answer)



2. Generally speaking, would you say the political conditions in Israel are heading in the right direction, or are they off on the wrong track?



3. Generally speaking, would you say the social conditions in Israel are heading in the right direction, or are they off on the wrong track?





4. Generally speaking, would you say the economic conditions in Israel are heading in the right direction, or are they off on the wrong track?



5. In your opinion, what are the main issues facing the Israel today? (More than one answer)



6. Have you ever been involved with fellow citizens to solve a problem in your community?



DISRUPTINGDEMOCRACY

7. Have you volunteered in a group or a non-governmental organization (NGO)?



8. In which of the following areas did you do volunteer work? (More than one answer)



9. Some people are members or donate money to political parties or political candidates. Are you a member or do you donate money to such an organization?



DISRUPTINGDEMOCRACY



10. Are you actively involved in the organization of which you are member?



11. Voting is a way through which citizens take part in the decision-making process. However, voting involves various costs (information, traveling, etc.). Do you usually vote?



12. How often do you vote?



13. In which elections did you vote? (More than one answer)



14. How do you usually get to the voting station?



15. Please rate your likelihood to vote in the next Parliamentary elections.



DISRUPTINGDEMOCRACY

16. If elections were held next Sunday, for which party would you vote?



17. On a scale from 1 to 5, to what extent do you identify with the following political parties?





18. Have you volunteered for a political organization or in a campaign for a candidate?

19. When elections take place, do you try to convince others to vote for those with whom you sympathize?





20. People often take to the streets to protest. Have you ever participated in a protest march or demonstration?



21. The following list contains several institutions in Israel. Please tell us how much trust you have in each one: very much, neutral or very little.

The Prime minister Banks and financial institutions		9.7% 19.1%			27.4%		17.	17.3%		26.5%		
		25.3%			34.8%		1	18.9%		14.8%		
International organizations (World Trade Organization, . International Monetary Fund etc.) The Knesset Media outlets Non-governmental organizations (NGOs)		18.6%			46.6%			17.2%		12.5%		
		18.4%			35.2%		24.1%			17.9%		
		17.1	%	3	3.7%	1	2			22.5%		
		20.0%			53.5%					13.6% 9.1%		
	Political parties		7.9% 31.5		% 33.0		3.0%	6 2		26.1%		
	Businesses/corporations	14.0%	-		47.5%			22.7%		14.5%		
	0%	6 10%	20%	30%	40%	50%	60%	70%	80%	90%	1009	
=1 - I trust it very much	2	3 - Neutral					=4					
5 - I trust it very little	Don't know/No answ	er										

Impact of Technology on Democracy

1. To what extent do you agree with the following sentence: Technology has a positive impact on.



2. Which of the following actions have you performed on online platforms or social media in the last 12 months? (More than one answer)



3. If possible, to what extent would you prefer to:.



4. To what extent would you be interested in the following information regarding elections?



Don't know/No answer

5a. In a regular month, how often do you go online to access government services (like gov.il etc.)?



5b.What is the main reason you never access online government services (like gov.il etc.)?



Socio-Demographic Profiling

This online survey has been conducted among 984 Israelis aged 18+. Understanding their socio-demographic profile is vital when interpreting the results.

1. What is your gender?



2. What is your age?



3. What is your permanent residence or the one where you spent the last 12 months?



4. What is the highest degree/level of school that you have completed?



5. How many members live in your household (including yourself)?



6. How many people in your household are children under 18 years of age?



7. What is the total household net monthly income, considering all available sources of income in your household?



8. What is the total personal net monthly income, considering all available sources of income?







GERMANY

1. What types of devices do you own? (More than one answer)



2. What type of data services (2G/3G/4G) do you have on your mobile phone?



3. What type of TV services do you have in your household?



4. How often do you watch TV?



5. What types of content do you watch on TV? (More than one answer)



DISRUPTINGDEMOCRACY

6. What type of fixed internet services do you have in your household?



7. How often do you access the internet?



8. In general, from where do you access the internet? (More than one answer)



9. Which of the following types of content do you access on the Internet? (More than one answer)



10. Which of the following websites/apps do you access? (More than one answer)



11. How often do you listen to the radio?



DISRUPTINGDEMOCRACY

12. In general, where do you listen to the radio? (More than one answer)



13. What types of radio shows do you listen to? (More than one answer)



14. How often do you read newspapers?



15. In general, where do you read newspapers? (More than one answer)



16. What types of newspapers do you read? (More than one answer)



17. Generally, from where do you get informed? (More than one answer)



DISRUPTINGDEMOCRACY

18. Generally, before an election (e.g. Parliamentary) from where do you get informed? (More than one answer)



Civic and Political Engagement

1. How would you define democracy in Germany? (More than one answer)



0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2. Generally speaking, would you say the political/social/economic conditions in Germany are heading in the right direction, or are they off on the wrong track?



3. In your opinion, what are the main issues facing the Germany today? (More than one answer)



4. To what extent are you concerned with the protection of personal data in Germany?



DISRUPTINGDEMOCRACY

5. What are the most important factors that affect your concern with the protection of personal data in Germany? (More than one answer)



6. Which of the following topics is your major area of concern?



7. Have you ever been involved with fellow citizens to solve a problem in your community?



DISRUPTINGDEMOCRACY



8. Have you volunteered in a group or a non-governmental organization (NGO)?

9. In which of the following areas did you do volunteer work? (More than one answer)



10. Some people are members or donate money to political parties or political candidates. Are you a member or do you donate money to such an organization?



11. Are you actively involved in the organization of which you are member?



12. Voting is a way through which citizens take part in the decision-making process. However, voting involves various costs (information, traveling, etc.). Do you usually vote?



13. How often do you vote?



14. In which elections did you vote? (More than one answer)



15. How do you usually get to the voting station?



16. Please rate your likelihood to vote in the next Parliamentary elections.



DISRUPTINGDEMOCRACY

17. If elections were held next Sunday, for which party would you vote?



18. On a scale from 1 to 5, to what extent do you identify with the following political parties?



19. Have you volunteered for a political organization or in a campaign for a candidate?


20. When elections take place, do you try to convince others to vote for those with whom you sympathize?



21. People often take to the streets to protest. Have you ever participated in a protest march or demonstration?



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285 POLLING DATA

22. The following list contains several institutions in Germany. Please tell us how much trust you have in each one: very much, neutral or very little.



Impact of Technology on Democracy

1. To what extent do you agree with the following sentence: Technology has a positive impact on.

The spread of information in the media		40.5%				13	35.5%	(15.3% 3.6% 5.1%			
Relationships between people and the way they		20.5%		39.1%			24.0%			6 10.6% 5.7%		
Personal privacy and security		16.7%	28.1%		6	24.7%			22.5% 7.9%			
Our society (like increase in transparency, participation) Citizens involvement in society issues		16.4%	46.3%					23.	9%	6.8%	6.6%	
		12.7%	39.8% 43.2% 34.9% 28.3%			31.5% 29.4% 32.6% 32.6%			1	3.1%7	.8%	
	12.7%	7.8% 6.9%							6.9%			
	11.8%	14							14.8% 5			
Homeland security		11.2%							14.4% 13.4%		1%	
	09	% 10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
To a very great extent	To a great extent		To a small extent				To a very small extent					

Don't know/No answer

2. Which of the following actions have you performed on online platforms or social media in the last 12 months? (More than one answer)



3. If possible, to what extent would you prefer to:



4. To what extent would you be interested in the following information regarding elections?



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DISRUPTINGDEMOCRACY

287 POLLING DATA

5a. In a regular month, how often do you go online to access government services (like bund.de etc.)?



5b. What is the main reason you never access online government services (like bund. de etc.)?



Socio-Demographic Profiling

This online survey has been conducted among 974 Germans aged 18+. Understanding their socio-demographic profile is vital when interpreting the results.

1. What is your gender?



2. What is your age?



289 POLLING DATA

3. What is your permanent residence or the one where you spent the last 12 months?



4. What is the highest degree/level of school that you have completed?



5. How many members live in your household (including yourself)?





6. How many people in your household are children under 18 years of age?

7. What is the total household net monthly income, considering all available sources of income in your household?



8. What is the total personal net monthly income, considering all available sources of income?



DISRUPTINGDEMOCRACY

Survey Methods Questia Group, July 2017 Survey

This report is based on an online survey conducted in the United States, Germany, Israel and India under the coordination of Questia Group.

The interviews were conducted July 10 to July 23, 2017, among a representative online sample of 3,931 respondents, aged 18+. Interviews were done in English, German and Hebrew.

The margin of sampling error for the complete set of weighted data is \pm 3.1 percentage points. The margin of sampling error reported is based on all interviews conducted in a country. The margin of error takes into account the design effect due to weighting. For results based on the full sample in a given country, one can say with 95% confidence that the error attributable to sampling and other random effects is plus or minus the margin of error. The margin of error is larger for results based on subgroups in the survey. Sample sizes and sampling errors for subgroups are available upon request. In addition to sampling error, one should bear in mind that question-wording and practical difficulties in conducting surveys can introduce errors or bias into the findings of opinion polls.

This report considers information available as of July 2017. The analysis and research findings are those of the contributing staff and should not be attributed to other sources. Every effort is made to ensure, but not guarantee, their timeliness, accuracy and completeness.

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To our guest authors, who provided a window into their country's history and future, we sincerely appreciated their guidance and expertise throughout this year-long process. We'd also like to thank our online polling team at Questia for going beyond the numbers, and adding depth to the stories told in these chapters.

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Irene Braam Executive Director Bertelsmann Foundation